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CHEMICALS AND ALLIED PRODUCTS IN CANADA

1927

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Minister of Trade and Commerce.

OTTAWA
F. A. ACLAND
PRINTER TO THE KING'S MOST EXCELLENT MAJESTY
1929

NOTES ON STATISTICS OF PRODUCTION

In the collection of production data, the Dominion Bureau of Statistics makes a division between primary and secondary production. In the first-named class, there are separate sections for the collection of statistics on (a) **Agricultural Products,** (b) **Furs,** (c) **Fish,** (d) **Forest Products,** (e) **Mineral Products.**

In the second are included (a) **Manufacturing** and (b) **Construction.**

Manufacturing is subdivided into nine groups of industries, producing concerns being classified according to the principal component material of their major products. For example, manufactures of leather goods are classified under "Animal Products"; the pulp and paper industry under "Wood and Paper," etc. An outline of the scheme of classification in use for manufacturing industries is given below:—

Manufactures of:

(1) **Vegetable Products,** including—Coffee and Spices; Cocoa and Chocolate; Preserved and Canned Products; Pickles, Vinegar and Cider; Flour and Cereals; Bread and other Bakery Products; Macaroni and Vermicelli; Distilled and Brewed Liquors and Wines; Rubber Products; Starch and Glucose; Sugar; Tobacco Products; Linseed Oil and Oil Cake.

(2) **Animal Products,** including—Fish and Fish Products; Dairy Factory Products; Meat and Meat Products; Leather and Leather Products; Furs and Fur Products.

(3) **Textiles and Textile Products,** including—Cotton Textiles (Cloth, Yarn, Thread and Waste); Woollen Textiles (Cloth, Yarn, Blankets, Felt and Waste); Silk Products; Factory-Made Clothing; Carpets, Rugs and Mats; Cordage, Rope and Twine.

(4) **Wood and Paper,** including—Pulp and Paper Mill Products; Paper Goods; Printing, Publishing and Lithographing; Saw and Planing Mill Products; Furniture; Carriages, Wagons and Sleighs; Wooden Containers; Woodenware; Turned Wood Products; and the Output of Similar Wood-Using Industries.

(5) **Iron and Steel and Their Products,** including—Pig Iron and Ferro-Alloys; Steel and Rolled Products; Castings and Forgings; Boilers, Tanks and Engines; Agricultural Implements; Machinery; Automobiles; Auto Parts and Accessories; Bicycles; Railway Rolling Stock; Wire and Wire Goods; Sheet Metal Products; Hardware and Tools; Miscellaneous Iron and Steel Products.

(6) **Manufactures of Non-Ferrous Metal Products,** including—Aluminium Products; Brass and Copper Products; Lead, Tin and Zinc Products; Precious Metal Products; Electrical Apparatus and Supplies; Miscellaneous Non-Ferrous Metal Products; Non-ferrous Smelting and Refining.

(7) **Manufactures of the Non-Metallic Minerals,** including—Aerated Waters—Asbestos and Allied Products—Cement—Cement Products—Coke and By-Products—Gas, Illuminating and Fuel—Glass (blown, cut, ornamental, etc.)—Lime—Petroleum Products—Products from Domestic Clays—Products from Imported Clays—Salt—Sand-Lime Brick—Stone, Monumental and Ornamental—Miscellaneous Non-Metallic Mineral Products, including (a) Artificial Abrasives (b) Abrasive Products (c) Artificial Graphite and Electrodes (d) Gypsum Products (e) Mica Products (f) Miscellaneous Non-Metallic Mineral Products, n.e.s.

(8) **Chemicals and Allied Products,** including—Coal Tar and its Products; Acids, Alkalies, Salts and Compressed Gases; Explosives, Ammunition, Fireworks and Matches; Fertilizers; Medicinal and Pharmaceutical Preparations; Paints, Pigments and Varnishes; Soaps, Washing Compounds and Toilet Preparations; Inks, Dyes, and Colours; Wood Distillates and Extracts; Miscellaneous Chemical Products including (a) Adhesives, (b) Baking Powder, (c) Boiler Compounds, (d) Celluloid Products, (e) Flavouring Extracts, (f) Insecticides, (g) Polishes and Dressings, (h) Sweeping Compounds, (i) Chemical Products n.e.s.

(9) **Miscellaneous Products,** including—Brooms and Brushes; Electric Light and Power; Musical Instruments, etc.

The statistics of manufactures are also classified according to the **use** or **purpose** of the end product as follows:—

(1) **Food,** including—Breadstuffs; Fish; Nuts; Fruits and Vegetables; Meats; Milk Products; Oils and Fats; Sugar; Infusions; Miscellaneous.

(2) **Drink and Tobacco,** including—Beverages, alcoholic; Beverages, non-alcoholic; Tobacco.

(3) **Clothing,** including—Boots and Shoes; Fur Goods; Garments and Personal Furnishings; Gloves and Mitts; Hats and Caps; Knitted Goods; Waterproofs; Miscellaneous.

(4) **Personal Utilities,** including—Jewellery and Time-Pieces; Recreational Supplies; Personal Utilities, n.e.s.

(5) **House Furnishings.**

(6) **Books and Stationery.**

(7) **Vehicles and Vessels.**

(8) **Producers' Materials,** including—Farm Materials; Manufacturers' Materials; Building Materials; General Materials.

(9) **Industrial Equipment,** including—Farming Equipment; Manufacturing Equipment; Trading Equipment; Service Equipment; Light, Heat and Power Equipment; General Equipment.

(10) **Miscellaneous.**

PREFACE

Increased outputs and a slightly downward trend in prices, are features of the 1927 statistics on chemicals and allied products in Canada, revealed in the present report, issued in continuance of the annual series on this subject. The growing importance of the chemical industries is reflected in the gain shown in the apparent consumption of these products in the Dominion; in 1927 the apparent absorption reached a value of nearly 143 million dollars, or more than $5 millions in excess of the total for the preceding year.

While the present report has been prepared along the lines followed in previous issues, some of the tabular matter has been compressed into less space; the number of pages in the report has been reduced, thus effecting a saving in printing costs without loss of important material.

Some new tables have been introduced; for example, imports and exports are shown for the calendar years 1926 and 1927 instead of for the fiscal years ending March 31, as in previous issues. Alphabetical lists of materials used and products made in the group as a whole, provide a convenient and comprehensive consolidation of data from the individual industries; and more detailed information on imports and exports has been included in the various chapters throughout the report.

A directory showing the names, addresses and plant locations of the firms reporting to the Bureau in this industry has been included; this definitely indicates the scope of the report and is useful to the reporting firms.

Another feature of the report is the inclusion of summary statistics relating to those industries which use chemical processes in the manufacture of products not usually described as chemicals. If the larger definition of the chemical industry be taken as including all industries using chemical processes, the field covered represents not less than one-fifth of the aggregate of Canadian manufactures.

On the next preceding page will be found a description of the Bureau's classification of industries for the collection of production statistics indicating the place of the chemical industries in the general scheme.

Preparation of the present report has been carried out under the direction of Mr. S. J. Cook, B.A., A.I.C., F.C.I.C., Chief of the Mining, Metallurgical and Chemical Branch of the Bureau, by Mr. H. McLeod, B.Sc., who is in charge of the work on chemicals and manufactures based on mineral products.

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DOMINION BUREAU OF STATISTICS,
OTTAWA, November 1, 1928.

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DOMINION BUREAU OF STATISTICS, CANADA

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CHEMICALS AND ALLIED PRODUCTS IN CANADA IN 1927

CHAPTER ONE

GENERAL REVIEW

(a) Summary

A further advance in the production of chemicals and allied products in Canada was recorded in 1927 when the output value of such commodities reached $127,484,672, a gain of nearly $5 millions over 1926 and the highest value reported since the close of the great war. The 561 factories in operation during 1927 represented a capital investment in fixed assets and working capital amounting to $134,618,839 and gave steady employment to 14,559 people throughout the year. Raw materials at a delivered cost of $63,630,588 were converted into products worth $127,484,672, so that the value added by manufacturing amounted to $63,854,084.

Prices of chemical products showed a downward trend during the year. The Bureau's index number for chemicals and allied products, based on 1913 prices as 100, declined from 155·7 in January to 155·2 in May, 153·7 in August, 152·4 in October and 151·0 in December. The average for the year was 153·8, or 4 points below the mean for 1926. This point was the lowest level reached by the index since 1916; the highest 222·3 was attained in 1920.

Comparison of output values over a period of years does not give a true picture of industrial trends; variation in commodity prices must also be considered in order to get a fair indication of volume production. By applying the Bureau's index numbers to the actual production values it is possible to obtain figures which more nearly represent the volume relation. That is, the values for each year are computed in terms of prices prevailing in 1913 so that a direct comparison can be made. The output in 1917 had an actual sales value of $236,053,928; but in that year prices were high and when the index number of 154·8 is applied, $152,490,000 is the figure obtained as the value at 1913 quotations. In millions of dollars, the values for the years 1917-1927, computed on this basis were as follows:—

Year	Millions of dollars	Year	Millions of dollars
1917	152·4	1923	67·4
1918	180·0	1924	67·0
1919	53·1	1925	71·8
1920	55·9	1926	77·7
1921	48·1	1927	82·9
1922	57·6		

Thus, disregarding the war years of 1917 and 1918, it will be seen that, except in 1921, there has been a steady growth in the volume of production of chemicals and allied products in Canada year by year, and that the quantity output in 1927 was higher than in any other year since the war.

With only one exception, the industries in the chemicals and allied products group reported higher total output values in 1927 than in 1926. Production from the acids, alkalies, salts and compressed gases industry which is the most important of the group, amounted to $30,740,846, an increase of half-a-million dollars over the total for 1926; paints, pigments and varnishes gained a like amount to $25,229,454; soaps, washing compounds and toilet preparations advanced nearly a million dollars to $19,993,453; medicinal and pharmaceutical preparations sold for $16,249,191 as against $15,382,475 in the preceding year; the miscellaneous chemicals industry showed an output value of $11,900,521 or slightly more than in the preceding year; coal tar and its products gained three-quarters of a million dollars to a total of $3,796,715; inks, dyes and colours showed further improvement and production was valued at $3,221,677; the output value of the fertilizer industry was higher at $1,844,032; explosives, ammunition, fireworks and matches

at $12,921,079 marked an advance of more than three-quarters of a million dollars. The one exception in the list of industries showing improvements was the wood distillates and extracts industry with an output of $1,587,704 or slightly less than in 1926.

Canada's chemical industry is largely centred in Ontario and Quebec. In 1927, there were 299 plants in Ontario having an aggregate production worth $74,233,806 or nearly $3·0 million more than in the preceding year while in Quebec there were 170 plants with an output valued at $39,843,250, or $1·5 millions more than the value of the output from chemical plants in this province in 1926. British Columbia ranked third among the chemical-producing provinces with 32 plants in operation and an output valued at $5,174,902, and Manitoba came next with 31 factories and a production worth $4,614,198. Nova Scotia's 10 establishments produced $2,086,346 worth of chemical products; 8 plants in New Brunswick made goods worth $953,169; and the provinces of Saskatchewan and Alberta were represented by 11 plants having an output valued at $579,001. As compared with 1926, the number of plants in operation showed gains of 2 concerns in Ontario; 2 in Quebec; 2 in New Brunswick; and 1 in Manitoba; while there was a loss of 1 in British Columbia and 1 in Alberta. All but New Brunswick and Manitoba reported a greater production of chemical products than in 1926.

Capital employed in the chemicals and allied products group was $1·2 millions above the figure for 1926 and amounted to $134,618,839. The value of lands, buildings, fixtures, machinery and tools was $75,763,649; the value of material on hand and stocks in process at the end of the year was $28,652,076; and cash, trading, operating accounts and bills receivable totalled $30,203,114. Ontario's plants reported a total investment of $72,742,913 or about the same as in 1926, and Quebec accounted for $47,918,692, an increase of $1·4 millions over the previous year. British Columbia was credited with an investment of $5,889,971; Manitoba, $4,636,117; Nova Scotia, $2,050,522; New Brunswick, $794,194; and Saskatchewan and Alberta, $586,430.

Including both salaried employees and wage-earners, the average number of persons employed in the manufacture of chemicals and allied products in Canada during 1927 was 14,559. This figure represented an increase of 214 or 2 per-cent over the average number employed in the previous year. Plants in Ontario gave work to 7,757 people; in Quebec, 5,429 people; in British Columbia, 488; Manitoba, 485; Nova Scotia, 216; New Brunswick, 100; and Saskatchewan and Alberta, 84. The 3,842 salaried employees were paid $7,791,994 during the year and the wage-earners averaging in number 10,717 received $10,864,857, making a total of $18,656,851 expended for salaries and wages by the various companies.

Employment trends as reflected by the records of the total number of wage-earners on the rolls as at the fifteenth of each month showed 9,980 wage-earners (excluding salaried employees) on the rolls in January from which total the number gradually increased to 10,666 in May, then declined to 10,435 by August, improved again to a maximum of 11,124 in November, and closed the year at 10,995. The average for the year was 10,717.

Fuel and electricity is an important cost item in the chemical industries. In 1927 a total of $1,628,263 was expended for electric power and $1,784,782 was spent for fuel such as coal, coke, gas, fuel oil, etc. A total of 254,945 tons of bituminous coal, 12,980 tons of anthracite coal, 8,012 tons of coke, 19,108 gallons of gasoline, 11,455 gallons of kerosene, 878,051 gallons of fuel oil, 52,196 M cu. ft. of gas, 5,851 cords of wood and $81,014 worth of other fuel were used in the various plants during the year. The greatest consumption of fuel and electricity was in the acids, alkalies, salts and compressed gases industry; this group used $1,340,873 worth of electric power, principally in the several electro-chemical plants, and fuel costing $591,023.

Imports into Canada of chemicals and allied products in 1927 were valued at $33,313,500, a gain of $2 millions over the total for 1926. Purchases in this class from the United States showed an advance of nearly two millions to a total of $22,022,946, while chemical products imported from the United Kingdom were worth only $4,347,931 as compared with a total of $5,022,633 in the next preceding year. Chief among the other countries as sources of chemical supplies for Canada, were Germany and France. Imports of chemicals from Germany were valued at $3,063,050; from France, $1,162,758. In the same year Canada's imports of chemical products from the Netherlands amounted in value to $632,614; from Chile, $473,154; from Argentina (tanning extracts such as quebracho, etc.), $436,628; Switzerland, $264,741; from Japan, $92,307; from Norway, $92,032; and from Italy, $82,072.

Main classes of imports were as follows: cellulose products, $2,502,768; drugs, medicinal and pharmaceutical preparations, $2,907,266; dyeing and tanning materials, $3,886,163; fer-

tilizers, $4,138,053; paints, pigments and varnishes, $4,964,468; soaps, $1,189,040; inorganic chemicals, n.o.p., $6,484,886.

Exports from Canada of chemicals and allied products during1927 had a value of $17,854,915, comprising exports to the United States valued at $8,834,844 and to the United Kingdom, $3,926,063, and $1,676,417 to Mexico. Other countries to which Canada exported chemical products in quantity, were: Japan, $595,500; Portuguese Africa, $481,012; Newfoundland, $477,751; Cuba, $260,774; Australia, $195,868; Belgium, $135,442; and New Zealand, $121,400. Canada also exported chemical products in less amount to about a score of other countries.

Principal items on the export list were: acetic acid, $2,860,393 ; cyanamide, $4,623,461; soaps, $851,258; calcium carbide, $913,498; sodium compounds, $3,889,640; cobalt oxide and cobalt salts, $668,788; and creosote oil, $588,663.

Computed as the sum of production and import values for chemicals and allied products, less the value of similar articles exported, the apparent consumption of chemicals in Canada in 1927 reached a total value of $142,943,257, or 5·48 million dollars more than the corresponding figure for 1926. In this computation there have been included only those products that are generally recognized as coming under the industrial classification of chemicals and allied products.

In addition to the industries thus far reviewed, there are a great many other plants using chemical processes; in order to provide comprehensive statistics on all these other industries as well as on those more generally thought of, as coming under the title "Chemical Industries," another table has been included to show the principal statistics in this field in so far as data are available. Among the principal industries in this group of "other industries using chemical processes" are: manufactures of pulp and paper, of rubber footwear, automobile tires and other rubber goods; the refining of sugar; the brewery industry; the tanning of leather; the manufacture of illuminating gas; the dyeing, cleaning and finishing of textiles; the by-product coking of coal; and the manufacture of glass. Many other industries of less importance are also represented in the tables.

Progress in the ten groups of industries which may be conveniently regarded as representing the "Chemical Industry," in Canada, may now be considered in further detail. Chief among these, in point of production values in 1927, was the heavy chemical industry producing acids, alkalies, salts and compressed gases, while the paint industry was a close second. In order of production values in 1927, the others ranked as follows: (3) the manufacture of soaps, washing compounds and toilet preparations industry; (4) production of medicinal and pharmaceutical preparations; (5) the explosive industry, including the manufacture of ammunition, fireworks and matches; (6) a miscellaneous group of industries embracing all those not classified in other groups; (7) the distillation of coal tar; (8) the compounding of inks, dyes and colours; (9) the manufacture of commercial fertilizers; and (10) the wood distillation industry.

(b) By Industries

Coal Tar Products.—Firms in Canada engaged principally in the distillation of crude coal tar and in the manufacture of such commodities as disinfectants are included in this group Production from the 17 factories in operation in 1927 reached the record value of $3,796,715, a gain of 23 per cent over the output of $3,088,053 for 1926.

(a) Coal Tar Distillation.—In 1927 the same 9 tar distillation plants were in operation as in 1926 while in addition there has been included also a small concern which made roofing preparations from crude tar; 4 were in Ontario, 3 in Quebec and 1 in each of Nova Scotia, Manitoba and British Columbia. Production value totalled $3,616,532 as against $2,967,281 in 1926; fixed and working capital increased slightly to $4,115,151 and the number of employees was 179. About 24 million gallons of crude tar were distilled during the year to make such commodities as creosote oils, pitch, refined tar, etc.

(b) Disinfectants.—Five plants in Ontario and 2 in Quebec made disinfectants as their main products in 1927. These factories employed 43 people and produced commodities valued at $180,183 including disinfectants worth $84,470 and insecticides, liquid soap, and other products to a value of $95,713. There was also a production of disinfectants valued at $38,996 from firms classed in other groups.

Acids, Alkalies, Salts and Compressed Gases—Heavy chemicals and compressed gases for industrial use were the main products of this group which includes all factories making these commodities as their main product. Forty-two establishments representing a capital invest-

ment of $35,312,251 and employing 2,285 people were in operation in 1927. Production totalled $30,740,846 in value or half-a-million dollars more than in 1926.

(a) Acids, Alkalies and Salts.—Industrial chemicals such as sulphuric, nitric, hydrochloric, and glacial acetic acids, calcium carbide, cyanamide, soda ash, caustic soda, phosphorus, bleaching power, etc. were the main products of this industry which, in 1927, included 17 factories distributed by provinces as follows: 9 in Ontario, 4 in Quebec, 3 in British Columbia, and 1 in Nova Scotia. In these plants, which represented a capital of $31,134,457, an average of 1,881 people were employed and chemicals worth $28,115,148 were produced during the year. Of the total production, $17,086,788 represented the value of products made for sale and $11,028,-360 was the value placed on intermediates such as calcium carbide for further use in the manufacture of cyanamide, acetaldehyde for making acetic acid, etc.

In 1926, there were 19 plants in this group and 2,040 people were employed in making products worth $27,809,836.

(b) Compressed Gases.—Oxygen, hydrogen, acetylene and carbon dioxide were the main products from the 25 plants covered by this classification in 1927; nitrogen, aqua ammonia and anhydrous ammonia were produced in smaller quantites. The total value of production in 1927 was $2,625,698 as against a corresponding figure of $2,422,486 from the 24 concerns in operation in 1926. Employees numbered 404 and the capital investment was given at $4,177,794.

Production of acetylene was 3·4 million cubic feet greater than in 1926; output of hydrogen increased by 3 million cubic feet; oxygen, by 26 million cubic feet, and carbon dioxide by a million pounds.

In addition to the output in this group which includes only concerns making these gases as their main product, there was a considerable production of acetylene by Canadian Electro Products Limited, at Shawinigan Falls, P.Q., while liquid chlorine was manufactured in large quantities by the Canadian Salt Company at Sandwich, Ontario.

Explosives, Ammunition, Fireworks and Matches.—Production from this industrial group in 1927 was valued at $12,921,079 as against $12,155,220 in 1926. The value of explosives made was higher by about three-quarters of a million dollars; ammunition and fireworks showed small gains, while the production of matches was lower in value than in the previous year.

(a) Explosives.—Only 6 factories in Canada made high explosives in 1927. The plant of Canadian Explosives, Limited, at Nobel, Ontario, was re-opened after being closed for a number of years but their factory at Dragon, P.Q., was not operated during the year. The plant of the National Explosives Company, Ltd., at Deseronto, Ontario, was absorbed by Canadian Explosives, Limited, and closed at the end of July.

Output during 1927 was valued at $8,664,745 including explosives for sale worth $6,279,436 and intermediates valued at $2,385,309. Employees numbered 508 and the capital represented was reported at $9,043,308. In the previous year, the number of workers was 689 and production was valued at $7,979,765.

Production of powder and explosives in bulk amounted to 39,787,397 pounds in 1927 as against 36,034,928 pounds in 1926.

(b) Ammunition.—The same 3 firms that manufactured ammunition in 1926 were in operation during 1927; all were located in Quebec. Production valued at $2,237,975 was slightly higher than in 1926.

(c) Fireworks.—Only 4 concerns in Canada held licences to manufacture fireworks during 1927 and 2 of these had very small plants which were operated intermittently throughout the year. Forty-one people were employed in this industry and production was valued at $143,652.

(d) Matches.—Three match factories were in operation during 1927 and an average of 762 people were employed to produce matches worth $1,874,707. In December, 1927, a merger of the operating companies was effected; the new corporation is known as the Eddy Match Company, Limited.

Fertilizers.—This group includes only those factories which made fertilizers as their principal product. In 1927, there were 12 such establishments in Canada which produced complete fertilizers, basic slag, superphosphate and similar fertilizers worth $1,844,032 or 27 per cent over the output value for the same concerns in 1926. The average number of employees in 1927 was 233 as against 221, and the capital employed was $1,998,811 as compared with $1,891,054 in the previous year.

Output of complete fertilizers was 49,593 tons in 1927 and 37,033 tons in 1926.

In addition, there are numerous plants in Canada that produce, as a minor part of their output or as a by-product of their main business, such commodities as ammonium sulphate, calcium cyanamide, animal tankage, fish fertilizers and ground bone which are used for fertilizer purposes. The value of fertilizers made in other industries was $6,338,046 in 1927 as against $6,749,974 in the previous year.

Medicinal and Pharmaceutical Preparations.—Final data show an increase of nearly a million dollars in the value of medicinal and pharmaceutical preparations made in Canada during 1927 when the total production figure stood at $16,249,191 as against $15,382,475 in the previous year. Reports were received from 136 establishments of which 81 were in Ontario and 41 in Quebec. Fixed and working capital was given at $17,542,111 and the average number of employees was 2,578.

Patent medicines made during the year were worth $6,990,127; pharmaceutical preparations were worth $5,583,508, and the value placed on toilet preparations made in these plants was $1,389,588. Various other preparations such as hydrogen peroxide, vaccines, serums, insulin, casein, silver nitrate, disinfectants, potassium, iodide, etc., made up the rest of the output.

Paints, Pigments and Varnishes.—Output value of paints, pigments and varnishes was reported at $25,229,454 in 1927 or about 2 per cent higher than in 1926. Sixty-two factories operated during the year and employed 2,563 people to whom $3,552,586 was paid in salaries and wages. Capital invested was $23,162,090. Thirty plants in Ontario had a combined output valued at $10,769,678 while 17 concerns in Quebec produced paints and pigments worth $10,419,-371.

Canada's imports of paints, pigments and varnishes during the calendar year 1927 totalled $4,964,468 in value as compared with $4,377,998 in 1926. Export values declined slightly to $428,548 from $502,183 in the preceding year.

Soaps, Washing Compounds and Toilet Preparations.—Active plants in this industry in 1927 numbered 110 of which 40 manufactured soaps of all kinds as their main product, 22 produced washing compounds and 48 were engaged chiefly in manufacturing perfumes, cosmetics, and other toilet preparations. These concerns represented a capital of $19,252,665, and employed 2,106 workers to convert materials worth $11,387,719 into the finished products. The value added by manufacturing was $8,605,734.

(a) Soaps.—The 40 soap factories in Canada in 1927 represented a capital investment of $15,626,944 and employed an average of 1,423 persons in each month of the year. Twenty-two of these establishments were located in Ontario and together accounted for products worth $11,004,163 or 74 per cent of the total.

Output of household soaps, 47,568,013 pounds, was lower by 3 million pounds than in 1926, but the weight of laundry soap and soap chips increased to 56,076,973 pounds from 42,396,197 pounds and toilet soaps gained 2 million pounds to 18,514,258 pounds. Production of refined glycerine was higher by one-third at 4,598,093 pounds and the output of crude glycerine was slightly lower at 2,308,984 pounds.

Imports of soaps into Canada were worth $1,189,040 and exports were valued at $851,258.

(b) Washing Compounds.—Javelle water, ammonia powder and preparations of a similar nature made up the output of firms in this group. Twenty-two firms made such commodities as their major products in 1927 and their total output was valued at $580,597. Most of the concerns were comparatively small as the total capital involved was only $501,512 and the number of employees was 126. Ontario had 9 plants; Quebec, 9; Manitoba, 3; and British Columbia, 1.

(c) Toilet Preparations.—Forty-eight plants in Canada made toilet preparations as their main product in 1927, but in addition the soap manufacturers and many other concerns made similar preparations as a minor product of their business. The total production of toilet preparations (including perfumes and tooth paste) from all sources in 1927 was worth, $5,750,567.

This industry covers the operations of concerns chiefly engaged in the manufacture of toilet preparations. Production in 1927 amounted in value to $4,465,353, capital was given at $3,124,209 and employees numbered 557.

Inks, Dyes and Colours.—Data for this group cover the manufacture of writing inks, printing inks and rollers, soap dyes and food colours. In 1927, this classification included 30 establishments of which 16 made printers' inks and rollers as the main products, 8 made writing inks chiefly, and 6 produced dyes and colours. The total output was valued at $3,221,677 as compared with $2,819,945 in 1926.

(a) Dyes and Colours.—Soap dyes, caramel, butter colour and food colour were the main products in this industry. Three firms in Quebec and 3 in Ontario reported a total production worth $391,452 in 1927 as against $383,888 in 1926. Capital employed was given at $600,199 and the number of employees was 54.

(b) Printing Inks.—Sixteen factories came within this classification in 1927; printing inks and printers' rollers were the main products. Output was valued at $2,529,437 in 1927 or 18 per cent above the figure for the previous year. Capital employed was $2,124,758 and the average number of workers was 340.

Eleven of the factories were located in Ontario; these units accounted for 95 per cent of the total production for Canada.

Imports of printing inks in 1927 amounted to 1,238,584 pounds worth $283,270.

(c) Writing Inks.—The 8 concerns in this group reported a production valued at $300,788 and a payroll of only 61 people. Writing inks and adhesives were the principal products. In addition, there was an output of writing inks to a value of $170,725 from plants in other industries.

Imports of writing inks were worth $41,621 in 1927.

Wood Distillates and Extracts.—A decline of 8.5 per cent was recorded in this industry in 1927 when production value was reported at $1,587,704. The eleven plants including 6 distilleries, 1 refinery, 3 charcoal burners and 1 turpentine plant gave work to 291 people. A total of 56,292 cords of hardwoods were used during the year. Gray acetate of lime, charcoal, methyl hydrate, formaldehyde and turpentine were the main products.

Miscellaneous Chemical Industries.—A number of firms operating in Canada produce chemicals or allied products which do not naturally fall in any of the previous groups; a miscellaneous group has accordingly been made and the industries therein have been divided into 9 main classes, namely: adhesives, baking powder, boiler compounds, celluloid products, flavouring extracts, insecticides, polishes and dressings, sweeping compounds and chemical products not elsewhere specified.

Data for the 125 firms in this group are shown by industries in a separate chapter but in the general tables, only the group totals are shown. The production totals given in these tables do not necessarily represent the entire output in Canada of the commodities mentioned, but only the outputs of the industries producing these articles as their principal products. For example, baking powder, polishes and dressings and insecticides are also made in other industries whose principal products place them in other categories. Production in this group in 1927 totalled $11,900,521 in value and employment was given to 1,872 persons throughout the year.

(c) By Provinces

Nova Scotia.—In 1927, Nova Scotia had 1 coal tar distillery, 1 sulphuric acid plant, 1 carbon dioxide plant, 1 plant making oxygen and acetylene, 2 making medicinal preparations, 1 making complete fertilizers, 1 grinding basic slag, 1 paint factory, and 1 establishment making flavouring extracts. These 10 factories representing a capital of $2,050,522, employed an average of 216 people to produce commodities valued at $2,086,346 at the works. Materials used in manufacturing cost $826,956, expenditures for fuel and electricity totalled $52,117, and payments for salaries and wages amounted to $233,221.

In 1926 the 10 plants in the chemical industry in this province employed 209 people and had a combined output worth $1,820,543.

New Brunswick.—Chemical plants in New Brunswick in 1927 were as follows: 1 fertilizer factory, 2 plants for making medicinal preparations, 1 soap works, 1 establishment making printers' rollers, 1 making flavouring extracts, 1 liquid glue factory and 1 small concern making sweeping compounds. Output from these concerns was valued at $953,169. Capital employed was $794,194 and the number of employees was 100. Salaries and wages totalled $123,237. The soap factory was by far the more important in this group.

In 1926, there were only 6 plants in this province and production was valued at $995,358.

Quebec.—With 170 different plants in this class in 1927 and a total production valued at $39,843,250, Quebec ranked second to Ontario in the manufacture of chemicals and allied products. The distribution of the plants by industries was as follows: medicinal and pharmaceutical preparations, 41; paints, 17; toilet preparations, 17; polishes, 15; soaps, 9; washing compounds 9; flavouring extracts, 7; adhesives, 7; compressed gases, 6; baking powder, 4; insecticides,

4; wood distillates, 4; acids and salts, 4; celluloid products, 4; coal tar distillation, 3; ammunition, 3; dyes and colours, 3; disinfectant, 2; matches, 2; printing inks, 2; sweeping compounds, 2; fireworks, 1; explosives, 1; fertilizers, 1; writing inks, 1; and wood extracts, 1. These concerns represented a capital of $47,918,692 and employed 5,429 persons the year round. Materials used in manufacture cost $18,501,220.

Manufacture of paints and pigments was the most important industry as the 17 factories employed, 1,095 people and produced goods worth $10,419,371. Explosives, ammunition, fireworks and matches reached a combined value of $7,732,605 and acids, alkalies, salts and compressed gases were worth, $8,548,937.

In 1926, chemical plants in Quebec numbered 168, employees totalled 5,400, and production aggregated $38,350,256.

Ontario.—Output of chemicals and allied products from plants in Ontario amounted in value to $74,233,806 or 59 per cent of the total for Canada. Reports received from 299 plants indicated a capital investment of $72,742,913, an employment roll of 7,757 people and a consumption of raw materials costing $38,178,305. Leading industries were: acids, alkalies, salts and compressed gases at $21,003,442; soaps, washing compounds and toilet preparations at $13,504,684; paints, and varnishes at $10,769,678; and mecidinal and pharmaceutical preparations at $10,749,925.

The distribution of factories by industries was as follows: medicinal and pharmaceuticals, 81; paints, 30; toilet preparations, 25; soaps, 22; polishes and dressings, 20; printing inks, 11; compressed gases, 11; acids, alkalies, and salts, 9; washing compounds, 9; miscellaneous chemicals, n.e.s., 10; flavouring extracts, 9; insecticides, 7; adhesives, 6; celluloid products, 6; fertilizers, 6; wood distillates, 6; disinfectants, 5; coal tar distillation, 4; explosives, 4; writing inks, 4; fireworks, 3; boiler compounds, 3; dyes and colours, 3; sweeping compounds, 2; baking powder, 2; and matches, 1.

Fuel and electricity used in chemical plants in Ontario cost $2,118,475 in 1927.

In 1926, a total of 297 plants in the chemical industries reported a production valued at $71,322,203 was employed 7,642 people the year round.

Manitoba.—Production of chemicals and allied products in Manitoba reached a value of $4,614,198 in 1927. The 31 factories in operation gave regular employment to 485 poeple during the year and used materials which cost $2,515,937 in the manufacturing operations. Fixed and working capital involved in the year's operations was $4,636,117.

The paint industry was the most important of the chemical industries in this province; 5 factories in this line of work produced commodities worth $1,984,083. Preparation of medicinal and pharmaceutical needs was of next importance, there being 6 producers with a total output valued at $1,166,603. There were also factories in the following groups: tar distillation, 1; soaps, 2; toilet preparations, 4; compressed gases, 3; washing compounds, 3; printers' rollers, 1; writing ink, 1; polishes, 1; insecticides, 2; sweeping compounds, 1; antifreeze, 1.

In 1926, the 30 plants in this group reported an output valued at $4,698,451.

Saskatchewan.—Saskatchewan had only 2 plants in the chemical group; one manufatures soaps and the other made antifreeze and insecticides.

Alberta.—In 1927, there were 9 factories in Alberta which were classified as manufacturers of chemicals and allied products. These concerns employed 72 people and reported a total output worth $455,695. There were in operation 1 paint factory, 2 soap works, 3 small concerns making gopher poison, 1 making toilet preparations, 1 making medicinal compounds, and 1 making compressed oxygen and acetylene.

British Columbia.—Thirty-two plants in British Columbia made chemical products worth $5,174,902 in 1927. Steady employment was given to 488 people and $2,661,026 was expended on materials for use in manufacturing processes.

In the paint industry there were 8 establishments which employed 147 people and had an output worth $1,298,708; acids and compressed gases worth $448,990 were made in 2 sulphuric acid works, 1 hydrofluosilicic acid factory, 1 carbon dioxide unit and 1 plant making oxygen and acetylene. The other plants were in the following groups: coal tar distillation, 1; explosives, 1; fertilizers, 2; medicinal preparations, 3; soaps, 3; washing compounds, 1; toilet preparations, 1; printing inks and rollers, 1; writing inks, 2; flavouring extracts, 2; polishes, 1; and insecticides, 1. In 1926, there were 33 chemical plants in British Columbia and their total production was valued at $4,879,376.

TABLE 1.—PRINCIPAL STATISTICS

(a) Chemicals and Allied Products in Canada by Industries 1923-1927

Year	Number of plants	Capital employed $	Number of employees	Salaries and wages $	Cost of materials $	Selling value of products $	Value added by manufacturing $
Coal Tar and its Products							
1923	14	3,205,780	239	334,965	1,381,724	3,166,106	1,784,376
1924	14	3,099,995	208	280,728	1,137,497	2,637,573	1,500,076
1925	15	3,281,339	190	275,416	1,418,892	2,622,821	1,203,929
1926	15	4,147,163	183	257,305	1,859,879	3,088,053	1,228,174
1927	17	4,298,391	222	314,279	2,358,228	3,796,715	1,438,487
Acids, Alkalies, Salts and Compressed Gases							
1923	47	36,436,315	2,788	3,789,445	11,636,321	23,912,992	12,276,671
1924	41	34,298,071	2,413	3,463,320	11,616,643	26,241,722	14,625,079
1925	40	35,656,528	2,409	3,174,290	12,843,256	27,483,395	14,640,139
1926	43	38,389,663	2,400	3,597,473	13,360,268	30,232,322	16,872,054
1927	42	35,312,251	2,285	3,463,061	15,661,786	30,740,846	15,079,060
Explosives, Ammunition, Fireworks and Matches							
1923	18	15,131,953	2,463	2,588,874	9,270,641	14,428,390	5,157,749
1924	18	17,184,725	2,350	2,489,248	8,787,392	13,310,315	4,522,923
1925	15	16,827,321	2,249	2,322,049	6,848,921	12,313,155	5,464,234
1926	14	16,857,120	2,109	2,243,455	6,827,317	12,155,220	5,327,903
1927	16	18,328,869	1,954	1,926,852	6,871,855	12,921,079	6,049,224
Fertilizers							
1923	18	3,616,001	329	310,441	831,470	1,487,244	655,774
1924	14	2,072,488	166	159,310	730,158	1,277,145	546,987
1925	13	2,095,608	201	205,173	1,045,294	1,437,787	392,493
1926	12	1,891,054	221	210,427	1,047,641	1,449,589	401,948
1927	12	1,998,811	233	224,564	1,200,030	1,844,032	644,002
Medicinal and Pharmaceutical Preparations							
1923	104	14,655,699	2,271	2,667,741	4,474,487	12,256,608	7,782,121
1924	104	15,156,479	2,193	2,666,997	4,895,352	13,350,347	8,454,995
1925	120	16,037,286	2,273	2,892,975	4,798,120	13,987,849	9,189,729
1926	130	17,194,519	2,365	2,875,677	5,552,699	15,382,475	9,829,776
1927	136	17,542,111	2,578	3,160,802	5,762,019	16,249,191	10,487,172
Paints, Pigments and Varnishes							
1923	57	20,806,909	2,591	3,665,823	10,754,273	21,553,158	10,798,885
1924	55	20,587,856	2,287	3,044,228	11,674,837	20,200,824	8,525,987
1925	62	21,460,431	2,355	3,093,191	12,613,995	22,234,268	9,620,273
1926	64	22,890,807	2,484	3,375,961	13,105,367	24,803,237	11,697,870
1927	62	23,162,090	2,563	3,552,586	12,934,639	25,229,454	12,294,815
Soaps, Washing Compounds and Toilet Preparations							
1923	70	15,668,592	2,032	2,459,655	9,400,752	17,909,011	8,508,259
1924	66	16,367,069	1,904	2,359,060	8,782,085	15,965,318	7,183,233
1925	88	16,731,558	2,050	2,618,507	10,033,741	17,388,506	7,294,765
1926	108	17,351,378	2,068	2,589,460	10,959,995	19,072,528	8,112,533
1927	110	19,252,665	2,106	2,661,705	11,387,719	19,993,453	8,605,734
Inks, Dyes and Colours							
1923	26	2,252,370	415	659,336	1,141,102	2,876,347	1,735,245
1924	24	2,391,859	377	632,607	942,325	2,656,400	1,714,075
1925	27	2,669,720	403	677,077	968,830	2,749,807	1,780,977
1926	27	2,729,166	441	728,273	1,069,957	2,819,945	1,749,988
1927	30	2,915,682	453	756,046	1,184,921	3,221,677	2,036,756

TABLE 1.—PRINCIPAL STATISTICS—Continued

(a) Chemicals and Allied Products in Canada by Industries 1923-1927—Concluded

Year	Number of plants	Capital employed $	Number of employees	Salaries and wages $	Cost of materials $	Selling value of products $	Value added by manufacturing $
Wood Distillates and Extracts							
1923	9	2,814,015	344	332,026	976,621	2,743,295	1,766,674
1924	12	2,784,681	367	384,050	1,055,658	2,283,422	1,227,764
1925	10	2,287,109	309	238,848	847,667	1,989,996	1,142,333
1926	9	2,217,049	255	214,694	827,575	1,734,993	907,418
1927	11	1,907,514	291	275,301	865,081	1,587,704	722,623
Miscellaneous Chemical Industries							
1923	112	10,691,455	1,800	2,091,252	4,770,671	10,911,011	6,140,340
1924	109	9,270,747	1,707	2,018,587	4,689,966	10,294,171	5,604,205
1925	120	9,436,455	1,689	2,089,911	4,820,507	10,699,162	5,878,655
1926	134	9,739,972	1,819	2,216,652	5,513,881	11,851,164	6,337,280
1927	125	9,900,455	1,872	2,321,655	5,404,310	11,900,521	6,496,211
Total Chemicals and Allied Products							
1923	**475**	**125,279,119**	**15,322**	**18,890,556**	**54,638,067**	**111,244,156**	**56,606,094**
1924	**457**	**123,222,970**	**13,972**	**17,504,135**	**54,311,913**	**108,217,237**	**53,905,324**
1925	**510**	**126,483,348**	**14,128**	**17,887,437**	**56,299,219**	**112,936,746**	**56,607,527**
1926	**556**	**133,407,891**	**14,345**	**18,309,377**	**60,124,582**	**122,589,526**	**62,464,944**
1927	**561**	**134,618,839**	**14,559**	**18,656,851**	**63,630,588**	**127,484,672**	**63,854,084**

(b) Other Industries Using Chemical Processes Classified According to Their Principal Products 1923-1927

Year	Number of plants	Capital employed $	Number of employees	Salaries and wages $	Cost of materials $	Selling value of products $	Value added by manufacturing $
Malt							
1923	5	2,473,818	184	364,134	1,504,187	2,599,966	1,095,779
1924	5	3,553,042	134	245,550	2,047,500	4,308,631	2,261,131
1925	5	3,580,979	172	302,941	2,503,525	4,015,634	1,512,109
1926	5	3,470,215	175	283,115	2,105,700	3,943,101	1,837,401
1927	5	5,437,053	177	316,174	3,382,740	4,787,879	1,405,139
Brewery Products							
1923	52	38,384,708	3,100	4,308,550	9,846,130	29,260,243	19,414,113
1924	57	45,375,529	3,820	5,317,563	15,168,618	33,532,783	18,164,165
1925	62	51,222,456	4,073	5,633,935	14,692,473	38,897,995	24,205,522
1926	63	53,893,942	3,945	5,733,569	14,448,510	43,602,960	29,154,450
1927	73	62,358,117	4,662	6,436,720	17,471,299	51,528,024	34,056,725
Tallow and Animal Oils							
1923	8	797,414	110	132,444	254,667	595,331	340,664
1924	5	734,006	104	120,210	350,156	527,237	177,081
1925	6	761,483	107	124,304	395,830	589,764	193,934
1926	6	754,214	111	137,880	329,303	525,120	195,817
1927	6	691,332	113	145,093	281,816	553,989	272,173
Textiles—Dyed, Cleaned and Finished							
1923	605	10,793,737	7,969	7,156,359	1,824,628	15,551,684	13,727,056
1924	518	14,930,859	8,065	7,469,786	2,218,899	15,577,050	13,358,160
1925	343	15,857,978	7,827	7,314,822	2,433,053	15,578,482	13,145,429
1926	350	17,278,327	8,972	8,225,691	2,104,176	17,642,268	15,538,092
1927	355	20,029,231	9,959	9,132,118	2,584,884	20,101,889	17,517,005

TABLE 1.—PRINCIPAL STATISTICS—Continued

(b) Other Industries Using Chemical Processes Classified According to Their Principal Products 1923-1927—Continued

Year	Number of plants	Capital employed $	Number of employees	Salaries and wages $	Cost of materials $	Selling value of products $	Value added by manufacturing $
Pulp and Paper							
1923	110	417,611,678	29,231	38,382,845	71,322,722	184,414,675	113,091,953
1924	115	459,457,696	27,627	37,619,528	72,233,876	179,259,504	107,025,628
1925	114	460,397,772	28,031	38,560,905	76,514,990	193,092,937	116,577,947
1926	115	501,184,714	31,279	44,175,502	85,365,465	215,370,274	130,004,809
1927	114	579,853,552	32,876	45,674,293	84,813,080	219,329,753	134,516,673
Wood—Creosoted or Otherwise Preserved							
1923	6	2,133,137	213	175,478	1,285,733	1,973,705	687,972
1924	8	2,700,646	238	159,599	1,446,870	2,148,818	701,948
1925†	10	-	-	-	-	-	-
1926†	10	-	-	-	-	-	-
1927	†	-	-	-	-	-	-
†Only 2 operating companies.							
Coke							
1923	5	20,494,442	598	842,376	11,437,863	13,901,445	2,463,582
1924	6	24,315,744	530	900,992	6,879,516	10,438,462	3,558,946
1925	6	23,905,454	583	885,637	7,112,311	11,020,298	3,907,987
1926	6	24,769,899	615	1,013,752	9,744,081	15,261,474	5,517,393
1927	6	29,879,157	652	1,118,538	10,436,112	15,318,880	4,882,768
Illuminating and Fuel Gas							
1923	45	45,526,495	3,021	3,801,832	9,024,084	19,605,340	10,581,256
1924	44	42,818,276	3,648	4,835,351	6,772,576	18,101,724	11,329,148
1925	44	46,129,651	3,804	5,057,702	6,178,609	17,874,479	11,695,870
1926	44	54,273,267	3,678	4,883,521	6,226,100	18,264,860	12,038,760
1927	42	50,231,873	3,494	4,750,581	6,178,791	18,725,869	12,547,078
Distilled Liquors							
1923	9	16,135,724	409	556,560	1,714,716	4,226,465	2,511,749
1924	13	22,556,007	806	1,023,522	3,322,878	10,711,801	7,388,923
1925	16	24,506,712	834	1,049,985	3,212,010	9,897,863	6,685,853
1926	15	26,422,006	1,015	1,287,122	3,676,197	12,216,906	8,540,709
1927	17	37,528,954	1,401	1,895,084	6,351,689	25,660,985	19,309,296
Wines and Grape Juice							
1923	16	2,257,413	159	197,388	675,090	1,624,382	949,292
1924	22	2,636,728	155	231,875	612,521	1,325,333	712,812
1925	24	2,944,943	171	246,746	781,307	1,624,742	843,435
1926	27	3,678,458	204	294,820	1,349,787	2,485,135	1,135,349
1927	30	4,405,027	246	323,121	1,526,018	2,531,227	1,005,209
Linseed Oil and Oil Cake							
1923	8	2,818,291	249	299,906	4,697,051	5,761,840	1,064,789
1924	8	2,231,954	217	286,977	4,851,264	5,911,530	1,060,266
1925	8	2,490,462	213	280,846	4,876,835	6,005,969	1,129,134
1926	8	2,691,550	231	282,632	5,364,364	6,485,924	1,122,560
1927	8	2,341,733	239	308,602	4,840,168	5,839,314	999,146
Rubber Footwear and Rubber Goods							
1923	40	56,061,625	11,646	12,329,117	26,335,306	56,512,947	30,177,641
1924	38	56,160,930	10,778	11,413,632	24,468,736	57,411,446	32,942,710
1925	40	65,562,734	12,964	14,143,165	38,389,352	78,229,574	39,840,222
1926	39	62,061,702	13,587	14,708,023	49,902,189	86,508,137	36,605,948
1927	44	66,266,054	15,039	16,621,740	44,724,502	91,413,730	46,689,228

TABLE 1.—PRINCIPAL STATISTICS—Concluded

(b) Other Industries Using Chemical Processes Classified According to Their Principal Products 1923-1927—Concluded

Year	Number of plants	Capital employed	Number of employees	Salaries and wages	Cost of materials	Selling value of products	Value added by manufacturing
		$		$	$	$	$
Starch and Glucose							
1923	8	4,380,179	579	654,133	3,146,245	5,135,103	1,988,858
1924	7	4,803,122	556	649,980	3,665,350	5,211,908	1,570,558
1925	7	4,764,140	523	616,355	3,490,016	5,095,040	1,605,024
1926	3	4,964,775	511	638,408	3,199,603	4,988,860	1,789,857
1927	4	5,121,901	493	611,893	3,379,075	4,936,025	1,556,950
Refined Sugar							
1923	7	45,618,182	2,393	3,329,662	61,847,862	77,004,026	15,156,164
1924	7	46,229,188	2,387	3,399,826	55,071,573	67,292,122	12,220,549
1925	8	50,089,717	2,784	3,828,442	54,457,385	68,445,879	13,988,494
1926	8	49,748,404	2,918	3,968,140	48,848,507	64,270,687	15,422,180
1927	8	50,039,122	2,711	3,839,488	47,138,854	60,502,664	13,363,810
Tanned Leather							
1923	123	30,348,468	3,787	4,302,069	16,458,674	23,633,165	7,174,491
1924	114	30,031,624	3,997	4,416,572	16,486,261	25,655,675	9,169,414
1925	104	30,095,917	3,523	4,151,058	17,904,138	26,141,217	8,237,079
1926	108	29,348,291	3,921	4,299,870	18,869,383	27,747,605	8,878,222
1927	98	32,320,323	4,038	4,498,206	22,347,228	32,489,889	10,142,661
Glass							
1923	46	14,892,372	3,350	3,778,802	3,714,515	11,098,026	7,383,511
1924	48	13,301,814	3,137	3,666,213	3,667,660	10,776,816	7,109,156
1925	52	12,691,338	2,778	3,291,912	4,029,035	10,117,601	6,088,569
1926	52	11,432,823	3,033	3,443,644	4,884,559	11,670,269	6,785,710
1927	54	12,733,057	3,120	3,876,959	5,257,950	14,164,086	8,906,136
Petroleum Products							
1923	20	61,027,704	4,257	5,648,320	36,816,696	46,280,534	9,463,838
1924	25	53,795,794	3,669	5,749,705	37,092,711	49,411,067	12,318,356
1925	21	50,580,519	3,738	5,775,046	38,261,024	50,762,127	12,501,103
1926	23	57,178,125	3,753	5,892,399	51,172,159	71,196,331	20,024,152
1927	23	59,135,564	3,856	6,188,226	53,059,921	64,528,820	11,468,899
Artificial Ice							
1923	24	3,422,571	244	313,549	48,179	1,010,363	962,184
1924	25	4,557,912	309	424,665	102,452	1,202,344	1,099,892
1925	26	4,616,317	303	443,055	101,991	1,338,554	1,233,563
1926	27	4,653,742	278	418,404	89,825	1,309,779	1,219,954
1927	28	4,595,623	279	402,292	60,682	1,272,968	1,212,286
Totals for Other Industries Using Chemical Processes							
1923	**1,137**	**775,182,958**	**71,503**	**85,603,524**	**264,924,348**	**590,189,240**	**238,264,892**
1924	**1,065**	**830,191,871**	**70,087**	**87,991,516**	**256,659,408**	**498,831,251**	**242,174,843**
1925	**896**	**853,717,395**	**72,789**	**91,978,039**	**277,585,189**	**542,291,461**	**264,706,272**
1926	**919**	**958,404,454**	**78,228**	**99,686,492**	**327,679,308**	**603,499,674**	**295,811,363**
***1927**	**945**	**1,019,979,683**	**83,435**	**106,140,038**	**313,834,809**	**633,685,991**	**319,851,182**
GRAND TOTAL—All Industries							
1923	**1,612**	**909,162,077**	**86,823**	**105,191,080**	**316,562,410**	**611,433,396**	**294,870,986**
1924	**1,522**	**953,416,811**	**81,059**	**105,495,681**	**310,971,321**	**607,051,488**	**296,080,167**
1925	**1,406**	**980,700,717**	**86,917**	**109,865,476**	**333,884,108**	**655,198,207**	**321,313,799**
1926	**1,465**	**1,041,812,345**	**92,573**	**117,995,869**	**367,833,890**	**726,681,197**	**358,276,307**
***1927**	**1,476**	**1,154,589,522**	**97,991**	**124,796,889**	**377,465,397**	**761,170,653**	**383,705,266**

*Data for wood creosoted or otherwise preserved, not included.

Table 2.—Principal Statistics of Chemicals and Allied Products in Canada, by Provinces, 1924-1927

Year	Number of plants	Capital employed $	Number of employees	Salaries and wages $	Cost of materials $	Selling value of products $	Value added by manufacturing $
Nova Scotia							
1924	11	2,058,565	209	205,293	738,681	1,808,531	1,069,850
1925	12	2,193,140	211	227,686	701,110	1,461,152	760,042
1926	10	2,056,099	209	237,724	722,622	1,820,543	1,097,921
1927	10	2,050,522	216	233,221	826,956	2,086,346	1,259,390
New Brunswick							
1924	9	1,305,674	125	145,807	746,892	1,300,114	553,222
1925	9	820,252	103	136,882	734,941	1,166,908	431,967
1926	6	802,849	101	116,102	645,221	995,358	350,137
1927	8	794,194	100	123,237	623,901	953,169	329,268
Quebec							
1924	129	44,048,116	5,246	5,853,826	18,722,758	36,253,426	17,530,668
1925	140	43,671,393	5,351	6,251,112	16,679,967	34,799,853	18,119,886
1926	168	46,529,563	5,400	6,453,896	17,357,304	38,350,256	20,992,952
1927	170	47,918,692	5,429	6,446,096	18,501,220	39,843,250	21,342,030
Ontario							
1924	244	64,150,460	7,221	9,502,654	28,735,764	59,046,932	30,311,168
1925	278	68,618,224	7,422	9,919,720	32,991,217	65,524,984	32,533,767
1926	297	72,781,119	7,642	10,183,353	35,949,586	71,322,203	35,372,617
1927	299	72,742,913	7,757	10,513,169	38,178,305	74,233,806	36,055,501
Manitoba							
1924	25	5,457,453	444	603,871	2,300,182	4,414,528	2,114,346
1925	27	4,868,479	501	630,111	2,559,737	4,887,107	2,327,370
1926	30	4,996,097	448	594,591	2,531,341	4,698,451	2,167,110
1927	31	4,636,117	485	615,324	2,515,937	4,614,198	2,098,261
Saskatchewan and Alberta							
1924	10	538,090	65	87,436	234,562	463,092	228,530
1925	11	559,618	71	97,528	280,705	461,572	180,867
1926	12	557,030	82	112,741	285,645	523,339	237,694
1927	11	586,430	84	110,824	323,243	579,001	255,758
British Columbia							
1924	29	8,937,327	486	675,642	2,833,074	4,930,614	2,097,540
1925	33	5,752,242	469	624,398	2,351,542	4,605,170	2,253,628
1926	33	5,685,134	463	610,970	2,632,863	4,879,376	2,246,513
1927	32	5,889,971	488	614,980	2,661,026	5,174,902	2,513,876
CANADA							
1924	**457**	**126,495,685**	**13,796**	**17,074,529**	**54,311,913**	**108,217,237**	**53,905,324**
1925	**510**	**126,483,318**	**14,128**	**17,887,437**	**56,299,219**	**112,906,746**	**56,607,527**
1926	**556**	**133,407,891**	**14,345**	**18,309,377**	**60,124,582**	**122,589,526**	**62,464,944**
1927	**561**	**134,618,839**	**14,559**	**18,656,851**	**63,630,588**	**127,484,672**	**63,854,084**

Table 3.—Principal Statistics Relative to the Manufacture of Chemicals and Allie Products in Canada, by Industries and by Provinces, 1927

Industry	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan and Alberta	British Columbia	*Canada
COAL TAR AND ITS PRODUCTS—								
Number of plants	1	–	5	9	1	–	1	17
Capital employed $	–	–	1,794,349	1,689,144	–	–	–	4,298,391
Number of salaried employees—								
Male	–	–	14	18	–	–	–	37
Female	–	–	1	5	–	–	–	8
Number of wage-earners—								
Male	–	–	50	69	–	–	–	175
Female	–	–	–	2	–	–	–	2
Total employees	–	–	71	94	–	–	–	222
Salaries $	–	–	30,052	47,459	–	–	–	93,835
Wages $	–	–	72,193	81,257	–	–	–	220,444
Total $	–	–	102,245	128,716	–	–	–	314,279
Cost of fuel and electricity	–	–	45,726	57,923	–	–	–	136,406
Cost of materials $	–	–	801,051	1,042,213	–	–	–	2,358,228
Value of products $	–	–	1,233,037	1,623,891	–	–	–	3,796,715
ACIDS, ALKALIES, SALTS AND COMPRESSED GASES—								
Number of plants	3	–	10	20	3	1	5	42
Capital employed $	383,271	–	10,405,094	23,543,573	–	–	575,450	35,312,251
Number of salaried employees—								
Male	11	–	100	253	–	–	15	408
Female	5	–	25	54	–	–	3	98
Number of wage-earners—								
Male	17	–	585	1,105	–	–	37	1,770
Female	–	–	–	9	–	–	–	9
Total employees	33	–	710	1,421	–	–	55	2,285
Salaries $	28,612	–	327,770	601,781	–	–	31,690	1,058,303
Wages $	29,285	–	697,615	1,597,455	–	–	51,137	2,406,758
Total $	57,897	–	1,025,391	2,199,236	–	–	82,827	3,463,061
Cost of fuel and electricity $	13,190	–	504,476	1,390,474	–	–	11,195	1,931,896
Cost of materials used—								
Purchased $	101,921	–	1,912,257	2,354,907	–	–	176,969	4,641,304
Firms' own make $	–	–	2,205,868	8,814,614	–	–	–	11,020,482
Total $	101,921	–	4,118,125	11,169,521	–	–	176,969	15,661,786
Value of products—								
Made for sale $	283,848	–	6,343,069	12,180,950	–	–	448,990	19,712,486
Made for use $	–	–	2,205,868	8,822,492	–	–	–	11,028,360
Total $	283,848	–	8,548,937	21,003,442	–	–	448,990	30,740,846
EXPLOSIVES, AMMUNITION, FIREWORKS AND MATCHES—								
Number of plants	–	–	7	8	–	–	1	16
Capital employed $	–	–	–	3,404,651	–	–	–	18,328,869
Number of salaried employees—								
Male	–	–	–	19	–	–	–	155
Female	–	–	–	7	–	–	–	23
Number of wage-earners—								
Male	–	–	–	245	–	–	–	1,209
Female	–	–	–	81	–	–	–	567
Total employees	–	–	–	352	–	–	–	1,954
Salaries $	–	–	–	76,422	–	–	–	375,830
Wages $	–	–	–	282,445	–	–	–	1,551,022
Total $	–	–	–	358,867	–	–	–	1,926,852
Cost of fuel and electricity $	–	–	–	33,212	–	–	–	230,479
Cost of materials used—								
Purchased $	–	–	–	1,164,981	–	–	–	4,486,546
Firms' own make $	–	–	–	520,169	–	–	–	2,385,309
Total $	–	–	–	1,685,151	–	–	–	6,871,855
Value of products—								
Made for sale $	–	–	–	2,225,921	–	–	–	10,535,770
Made for use $	–	–	–	520,162	–	–	–	2,385,309
Total $	–	–	–	2,746,083	–	–	–	12,921,079
FERTILIZERS—								
Number of plants	2	1	1	6	–	–	2	12
Capital employed $	–	–	–	959,335	–	–	–	1,998,811
Number of salaried employees—								
Male	–	–	–	13	–	–	–	29
Female	–	–	–	9	–	–	–	13
Number of wage-earners—								
Male	–	–	–	100	–	–	–	190
Female	–	–	–	1	–	–	–	1
Total employees	–	–	–	123	–	–	–	233
Salaries $	–	–	–	42,422	–	–	–	80,912
Wages $	–	–	–	81,692	–	–	–	143,652
Total $	–	–	–	124,114	–	–	–	224,564
Cost of fuel and electricity $	–	–	–	4,210	–	–	–	14,736
Cost of materials $	–	–	–	877,995	–	–	–	1,290,030
Value of products $	–	–	–	1,320,062	–	–	–	1,844,032

*Where fewer than three firms in one province were engaged in the same industry, the data for these companies are not shown by provinces, but they are included in the Canada totals for each industry.

Table 3.—Principal Statistics Relative to the Manufacture of Chemicals and Allied Products in Canada, by Industries and by Provinces, 1927—Continued

Industry	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan and Alberta	British Columbia	*Canada
MEDICINAL AND PHARMACEUTICAL PREPARATIONS—								
Number of plants	2	2	41	81	6	1	3	136
Capital employed $	–	–	4,601,814	11,039,477	1,661,982	–	19,207	17,542,111
Number of salaried employees—								
Male	–	–	163	332	20	–	1	531
Female	–	–	60	226	15	–	1	305
Number of wage-earners—								
Male	–	–	272	475	38	–	11	804
Female	–	–	271	589	41	–	20	938
Total employees	–	–	766	1,622	114	–	33	2,578
Salaries $	–	–	464,617	1,053,511	52,069	–	2,700	1,601,084
Wages $	–	–	446,896	986,109	81,109	–	33,414	1,559,718
Total $	–	–	911,513	2,039,620	133,178	–	36,114	3,160,802
Cost of fuel and electricity $	–	–	32,471	65,216	4,850	–	788	104,264
Cost of materials $	–	–	1,393,424	3,652,192	644,615	–	22,092	5,762,019
Value of products $	–	–	4,057,655	10,749,925	1,166,603	–	81,189	16,249,191
PAINTS, PIGMENTS AND VARNISHES—								
Number of plants	1	–	17	30	5	1	8	62
Capital employed $	–	–	11,972,810	8,507,753	–	–	1,344,042	23,162,090
Number of salaried employees—								
Male	–	–	218	312	–	–	31	614
Female	–	–	52	108	–	–	13	189
Number of wage-earners—								
Male	–	–	720	576	–	–	91	1,538
Female	–	–	105	82	–	–	12	222
Total employees	–	–	1,095	1,078	–	–	147	2,564
Salaries $	–	–	666,443	968,526	–	–	71,667	1,795,696
Wages $	–	–	791,697	696,043	–	–	84,170	1,756,890
Total $	–	–	1,458,140	1,664,569	–	–	155,837	3,552,586
Cost of fuel and electricity $	–	–	188,767	90,105	–	–	6,178	312,774
Cost of materials used—								
Purchased $	–	–	4,427,526	4,383,824	–	–	626,853	10,471,908
Firms' own make $	–	–	425,563	1,727,271	–	–	56	2,459,731
Total $	–	–	4,853,089	6,111,095	–	–	626,909	12,931,639
Value of products—								
Made for sale $	–	–	9,831,381	9,042,407	–	–	1,298,652	22,606,061
Made for use $	–	–	587,990	1,727,271	–	–	56	2,623,391
Total $	–	–	10,419,371	10,769,678	–	–	1,298,708	25,229,454
SOAPS, WASHING COMPOUNDS AND TOILET PREPARATIONS—								
Number of plants	–	1	35	56	9	4	5	110
Capital employed $	–	–	3,452,096	12,959,742	1,444,532	–	439,420	19,252,665
Number of salaried employees—								
Male	–	–	120	252	27	–	13	439
Female	–	–	31	131	13	–	3	182
Number of wage-earners—								
Male	–	–	250	590	63	–	41	1,004
Female	–	–	177	271	9	–	14	484
Total employees	–	–	578	1,244	112	–	71	2,106
Salaries $	–	–	350,369	632,295	72,062	–	31,933	1,156,939
Wages $	–	–	365,283	939,798	75,475	–	54,191	1,504,766
Total $	–	–	715,652	1,572,093	147,537	–	86,124	2,661,705
Cost of fuel and electricity $	–	–	44,659	192,617	19,591	–	3,591	282,452
Cost of materials $	–	–	1,543,637	8,322,628	485,420	–	270,029	11,387,719
Value of products $	–	–	4,049,865	13,504,684	829,959	.....	463,435	19,993,453
INKS, DYES AND COLOURS—								
Number of plants	–	1	6	18	2	–	3	30
Capital employed $	–	–	207,097	2,627,714	–	–	25,969	2,945,682
Number of salaried employees—								
Male	.....	.....	16	94	.....	.....	3	117
Female	–	–	5	28	–	–	1	35
Number of wage-earners—								
Male	–	–	19	232	–	–	5	263
Female	–	–	21	19	–	–	–	40
Total employees	–	–	61	373	–	–	9	455
Salaries $	–	–	39,737	364,404	–	–	3,680	419,177
Wages $	–	–	32,290	294,976	–	–	4,381	336,869
Total $	–	–	72,027	659,380	–	–	8,061	756,046
Cost of fuel and electricity $	–	–	5,459	29,537	–	–	361	36,046
Cost of materials $	–	–	119,213	1,012,765	–	–	19,615	1,184,921
Value of products $	–	–	329,369	2,775,500	–	–	56,410	3,221,677

*Where fewer than three firms in one province were engaged in the same industry, the data for these companies are not shown by provinces, but they are included in the Canada totals for each industry.

Table 3.—Principal Statistics Relative to the Manufacture of Chemicals and Allied Products in Canada, by Industries and by Provinces, 1927—Concluded

Industry	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan and Alberta	British Columbia	*Canada
WOOD DISTILLATES AND EXTRACTS—								
Number of plants	–	–	5	6	–	–	–	11
Capital employed $	–	–	957,751	949,763	–	–	–	1,907,514
Number of salaried employees—								
Male	–	–	8	10	–	–	–	18
Female	–	–	–	–	–	–	–	–
Number of wage-earners—								
Male	–	–	84	189	–	–	–	273
Female	–	–	–	–	–	–	–	–
Total employees	–	–	92	199	–	–	–	291
Salaries $	–	–	15,208	19,876	–	–	–	35,084
Wages $	–	–	83,397	156,820	–	–	–	240,217
Total $	–	–	98,605	176,696	–	–	–	275,301
Cost of fuel and electricity $	–	–	67,179	135,564	–	–	–	202,743
Cost of materials used—								
Purchased $	–	–	171,061	377,878	–	–	–	548,939
Firms' own make $	–	–	316,142	–	–	–	–	316,142
Total $	–	–	487,203	377,878	–	–	–	865,081
Value of products—								
Made for sale $	–	–	622,349	625,941	–	–	–	1,248,290
Made for use $	–	–	170,242	169,172	–	–	–	339,414
Total $	–	–	792,591	795,113	–	–	–	1,587,704
MISCELLANEOUS CHEMICAL INDUSTRIES—								
Number of plants	1	3	43	65	5	4	4	125
Capital employed $	–	–	2,586,169	7,061,761	60,793	87,940	42,127	9,900,455
Number of salaried employees—								
Male	–	–	132	284	7	12	3	440
Female	–	–	42	157	1	1	–	201
Number of wage-earners—								
Male	–	–	283	570	5	3	3	873
Female	–	–	113	240	–	–	2	358
Total employees	–	–	570	1,251	13	16	8	1,872
Salaries $	–	–	342,156	794,074	10,022	23,510	4,200	1,177,134
Wages $	–	–	326,990	795,804	5,597	2,160	3,222	1,144,521
Total $	–	–	669,146	1,589,878	15,619	25,670	7,422	2,321,655
Cost of fuel and electricity $	–	–	38,467	119,617	194	120	739	161,219
Cost of materials $	–	–	1,321,628	3,926,867	21,582	72,894	21,930	5,464,310
Value of products $	–	–	2,672,620	8,945,428	42,217	134,968	43,026	11,900,521
All Industries—								
Number of plants	10	8	170	299	31	11	32	561
Capital employed $	2,050,522	784,194	47,918,692	72,742,913	4,636,117	586,430	5,889,971	134,618,839
Number of salaried employees—								
Male	39	29	889	1,587	118	34	92	2,788
Female	16	4	231	725	50	6	22	1,054
Number of wage-earners—								
Male	153	47	3,136	4,151	248	35	326	8,096
Female	8	20	1,173	1,294	69	9	48	2,621
Total employees	216	100	5,429	7,757	485	84	488	14,559
Salaries $	85,343	66,237	2,494,937	4,600,770	268,425	68,263	208,019	7,791,994
Wages $	147,878	57,000	3,951,159	5,912,399	346,899	42,561	406,961	10,864,857
Total $	233,221	123,237	6,446,096	10,513,169	615,324	110,824	614,980	18,656,851
Cost of fuel and electricity $	52,117	20,299	1,088,561	2,118,475	59,737	9,109	64,744	3,413,045
Cost of materials used—								
Purchased $	826,956	623,901	14,327,997	27,146,258	2,209,096	323,243	2,021,473	47,448,924
Firms' own make $	–	–	1,173,223	11,062,047	306,811	–	639,553	16,181,664
Total $	826,956	623,901	18,501,220	38,478,305	2,515,937	323,243	2,661,026	63,630,588
Value of products—								
Made for sale $	2,086,346	953,169	35,653,500	62,994,709	4,306,121	579,001	4,535,349	111,108,198
Made for use $	–	–	1,189,750	11,239,097	308,074	–	639,553	16,376,474
Total $	2,086,346	953,169	39,843,250	74,233,806	4,614,198	579,001	5,174,902	127,484,672

*Where fewer than three firms in one province were engaged in the same industry, the data for these companies are not shown by provinces, but they are included in the Canada totals for each industry.

Table 4.—Historical Summary of the Chemicals and Allied Products Industry in Canada, 1880-1927

Year	Number of plants	Capital employed	Number of employees	Salaries and wages	Cost of materials	Value of products	Value added by manufacturing
		$		$	$	$	$
1880-81	474	3,449,287	2,340	711,413	3,516,364	5,836,556	2,320,192
1891	143	5,317,777	2,318	926,580	-	7,459,511	-
1901	136	8,444,975	2,389	832,972	-	9,132,990	-
1911	225	28,574,364	5,352	2,384,563	13,775,634	27,243,926	13,468,292
1917	557	185,549,026	57,189	52,797,644	102,658,636	236,053,928	133,395,292
1918	528	165,768,410	55,501	66,616,257	179,482,701	337,316,631	157,833,930
1919	429	111,760,019	15,607	16,384,429	50,384,133	98,554,310	48,170,177
1920	457	118,840,897	17,283	21,736,132	62,838,463	124,545,772	61,707,309
1921	469	120,066,467	12,669	16,279,589	43,345,790	88,901,547	45,555,757
1922	469	119,009,125	14,287	17,294,465	46,919,968	95,944,185	49,024,217
1923	475	125,279,119	15,322	16,890,556	54,638,062	111,244,156	56,606,094
1924	457	123,222,970	13,972	17,504,135	54,311,913	108,217,237	53,905,324
1925	510	126,483,348	14,128	17,887,437	52,299,219	112,906,746	56,607,527
1926	556	133,407,891	14,345	18,309,377	60,124,582	122,589,526	62,464,944
1927	561	134,618,839	14,559	18,656,851	63,630,588	127,484,672	63,854,084

Table 5.—Comparison of Actual Sales Values, of Chemicals and Allied Products in Canada 1917-1927, with the Calculated Value for Each Year Based on 1913 Prices.

Year	Actual value of production	Value based on 1913 prices	Index number 1913 prices = 100
	$	$	
1917	236,053,928	152,490,000	154·8
1918	337,316,631	180,091,300	187·3
1919	98,554,310	53,157,700	185·4
1920	124,545,772	55,990,000	223·3
1921	88,901,547	48,140,000	184·7
1922	94,944,185	57,650,000	166·4
1923	111,244,156	67,480,000	164·8
1924	108,217,237	67,091,000	161·8
1925	112,906,746	71,869,000	157·1
1926	122,589,626	77,687,000	157·8
1927	127,484,672	82,890,000	153·8

Table 6.—Imports into Canada and Exports of Chemicals and Allied Products During the Fiscal Years Ending March 31, 1895-1928

Imports					Exports				
Fiscal year	United Kingdom	United States	Other countries	**Total imports**	Fiscal year	United Kingdom	United States	Other countries	**Total exports**
	$	$	$	$		$	$	$	$
1895	1,174,298	1,612,692	679,774	**3,466,764**	1895	174,489	195,666	58,306	**428,461**
1896	1,276,358	1,758,147	802,995	**3,837,500**	1896	235,294	182,026	59,061	**476,381**
1897	1,204,844	1,851,534	745,742	**3,802,120**	1897	142,119	157,797	82,750	**382,666**
1898	1,311,358	2,195,329	994,379	**4,501,566**	1898	120,434	171,670	99,614	**391,718**
1899	1,479,523	2,445,462	1,046,273	**4,971,261**	1899	164,682	197,632	128,302	**490,617**
1900	1,743,300	2,672,019	1,006,458	**5,421,805**	1900	232,025	112,753	109,867	**454,645**
1901	1,770,415	2,920,075	994,509	**5,684,999**	1901	245,905	377,982	167,968	**791,855**
1902	1,601,403	3,369,314	1,268,382	**6,239,189**	1902	240,375	579,861	181,308	**1,001,544**
1903	1,849,620	3,753,649	1,374,040	**6,977,309**	1903	213,173	653,951	268,197	**1,135,324**
1904	1,828,049	3,838,623	1,441,792	**7,108,164**	1904	178,779	702,266	324,966	**1,206,011**
1905	1,988,511	4,203,729	1,463,967	**7,656,207**	1905	292,171	776,468	332,725	**1,401,364**
1906	2,395,465	4,376,862	1,496,842	**8,269,169**	1906	411,925	902,430	470,445	**1,784,800**
1907	2,421,395	3,493,661	1,133,868	**7,048,924**	*1907	327,688	712,524	320,991	**1,361,203**
1908	3,310,629	5,020,255	1,535,757	**9,896,641**	1908	390,329	1,054,104	601,006	**2,045,439**
1909	3,016,594	5,090,863	1,307,501	**9,414,361**	1909	418,487	1,079,065	663,850	**2,161,402**
1910	3,234,962	6,131,284	1,393,041	**10,759,290**	1910	583,212	1,470,843	727,015	**2,781,150**
1911	3,551,035	6,968,534	1,952,161	**12,471,730**	1911	619,045	1,684,410	785,385	**3,088,840**
1912	3,855,728	7,927,817	2,129,168	**13,912,713**	1912	655,702	1,606,526	912,497	**3,174,785**
1913	4,405,464	10,195,044	3,010,995	**17,611,503**	1913	746,332	2,270,741	1,110,974	**4,128,047**
1914	4,276,936	9,568,529	3,227,459	**17,072,924**	1914	573,799	3,168,518	1,147,596	**4,889,913**
1915	3,054,013	9,871,721	1,417,633	**14,343,367**	1915	724,162	3,808,019	990,903	**5,523,084**
1916	2,955,203	15,153,984	1,108,315	**19,217,505**	1916	7,789,358	6,762,837	1,626,263	**16,178,458**
1917	4,181,989	23,098,531	1,338,624	**28,619,135**	1917	32,743,351	15,190,789	5,070,083	**53,004,223**
1918	3,314,808	23,185,929	1,260,812	**27,761,549**	1918	27,992,887	17,749,423	3,879,611	**49,621,921**
1919	3,397,095	28,637,132	2,165,787	**34,200,014**	1919	20,761,501	30,673,722	5,971,126	**57,406,349**
1920	4,154,345	23,997,657	1,890,821	**30,042,823**	1920	3,804,732	13,803,067	5,185,886	**22,883,685**
1921	6,016,972	28,128,104	3,712,373	**37,857,449**	1921	3,399,815	12,236,087	4,730,377	**20,366,279**
1922	3,237,117	18,143,315	3,249,901	**24,630,333**	1922	1,062,757	5,937,136	2,596,277	**9,596,170**
1923	3,636,013	18,414,962	3,742,126	**25,793,101**	1923	1,984,441	7,951,543	4,110,956	**14,046,940**
1924	4,203,326	18,409,812	3,474,903	**26,088,041**	1924	3,188,187	7,598,432	4,773,337	**15,559,956**
1925	4,146,061	16,356,165	4,248,011	**24,760,237**	1925	3,805,628	7,826,076	4,578,116	**16,209,820**
1926	4,282,489	18,746,266	5,375,521	**28,404,276**	1926	3,318,614	9,107,929	4,981,585	**17,498,128**
1927	4,906,256	20,630,534	6,307,925	**31,844,715**	1927	3,567,256	8,092,373	4,915,126	**16,574,753**
1928	4,422,349	22,246,232	6,903,532	**33,572,113**	1928	4,238,426	8,678,200	4,976,278	**17,892,904**

Table 7.—Trend of Canada's External Trade in Chemicals and Allied Products, Fiscal Years ended March 31, 1918-1928

Fiscal year ended March 31	Source and value of imports (Values in millions of dollars)						Destination and value of exports (Values in millions of dollars)					
	United Kingdom		United States		Other Countries		United Kingdom		United States		Other Countries	
	$	%	$	%	$	%	$	%	$	%	$	%
1918	3.31	12	23.18	84	1.26	4	27.99	57	17.75	36	3.88	7
1919	3.40	10	28.64	84	2.16	6	20.76	36	30.67	54	5.97	10
1920	4.15	13	24.00	82	1.89	5	3.89	26	13.80	55	5.18	19
1921	6.05	17	28.13	75	3.71	8	3.40	19	12.24	56	4.73	25
1922	3.24	12	18.14	74	3.25	14	1.06	10	5.94	70	2.50	20
1923	3.64	15	18.41	71	3.74	14	1.98	13	7.95	58	4.11	29
1924	4.20	15	18.41	72	3.47	13	3.19	19	7.60	49	4.77	32
1925	4.15	17	16.37	66	4.25	17	3.80	23	7.83	48	4.58	29
1926	4.28	16	18.75	66	5.38	18	3.32	21	9.20	51	4.98	28
1927	4.91	16	20.63	64	6.31	20	3.57	20	8.09	50	4.91	30
1928	4.42	13	22.25	66	6.90	21	4.24	24	8.68	48	4.97	28

Table 8.—Capital Employed in the Manufacture of Chemicals and Allied Products in Canada, by Industries and by Provinces, 1926 and 1927

Industry and province	1926				1927			
	Capital employed as represented by				Capital employed as represented by			
	Lands, buildings, fixtures, machinery and tools	Materials on hand and stocks in process	Cash, trading and operating accounts and bills receivable	Total	Lands, buildings, fixtures, machinery and tools	Materials on hand and stocks in process	Cash, trading and operating accounts and bills receivable	Total
	$	$	$	$	$	$	$	$
(a) By Industries								
Coal tar and its products	2,118,861	715,707	1,312,595	**4,147,163**	2,152,318	774,726	1,371,347	**4,298,391**
Acids, alkalies, salts and compressed gases	26,563,986	4,994,781	6,830,896	**38,389,663**	25,530,937	3,923,479	5,857,835	**35,312,251**
Explosives, ammunition, fireworks and matches	10,597,969	3,598,911	2,660,240	**16,857,120**	12,124,183	3,853,042	2,351,644	**18,328,869**
Fertilizers	858,457	357,414	675,183	**1,891,054**	879,020	266,931	852,860	**1,998,811**
Medicinal and pharmaceutical preparations	6,030,474	4,193,292	6,970,753	**17,194,519**	6,464,184	4,467,946	6,609,981	**17,542,111**
Paints, pigments and varnishes	9,758,837	6,401,496	6,730,474	**22,890,807**	10,160,829	6,017,182	6,984,079	**23,162,090**
Soaps, washing compounds and toilet preparations	9,120,013	5,427,935	2,803,430	**17,351,378**	10,027,309	6,146,121	3,079,235	**19,252,665**
Inks, dyes and colours	1,509,626	540,447	679,093	**2,729,166**	1,658,793	540,957	715,932	**2,915,682**
Wood distillates and extracts	1,906,753	298,865	11,431	**2,217,049**	1,727,156	163,979	16,379	**1,907,514**
Miscellaneous chemical industries	5,008,674	2,384,779	2,346,519	**9,739,972**	5,038,920	2,497,713	2,363,822	**9,900,455**
Total	**73,473,650**	**28,913,627**	**31,020,614**	**133,407,891**	**75,763,649**	**28,652,076**	**30,203,114**	**134,618,839**
(b) By Provinces								
Nova Scotia	1,181,682	327,213	547,204	**2,056,099**	1,190,748	251,587	608,187	**2,050,522**
New Brunswick	264,960	384,192	153,697	**802,849**	302,014	301,756	190,424	**794,194**
Quebec	25,981,183	11,177,404	9,370,976	**46,529,563**	27,381,438	10,542,364	9,994,890	**47,918,692**
Ontario	39,615,218	14,161,235	19,004,666	**72,781,119**	40,345,416	14,793,808	17,603,689	**72,742,913**
Manitoba	2,421,471	1,559,025	1,015,601	**4,996,097**	2,432,731	1,364,675	838,711	**4,636,117**
Saskatchewan and Alberta	352,965	162,487	41,578	**557,030**	352,491	174,611	59,328	**586,430**
British Columbia	3,656,171	1,142,071	886,892	**5,685,134**	3,758,811	1,223,275	907,885	**5,889,971**
Canada	**73,473,650**	**28,913,627**	**31,020,614**	**133,407,891**	**75,763,649**	**28,652,076**	**30,203,114**	**134,618,839**

Table 9.—Wage-Earners in the Manufacture of Chemicals and Allied Products in Canada, by Months and by Industries, 1926 and 1927

Month	Coal tar products		Acids, alkalies, salts and compressed gases		Explosives, ammunition, fireworks and matches		Fertilizers	
	1926	1927	1926	1927	1926	1927	1926	1927
January	91	128	1,898	1,700	1,728	1,637	152	135
February	104	139	1,899	1,686	1,624	1,447	157	172
March	121	162	1,977	1,664	1,586	1,354	218	231
April	126	182	1,929	1,664	1,736	1,407	243	257
May	168	210	1,906	1,679	1,718	1,788	246	275
June	137	185	1,921	1,702	1,635	1,893	157	199
July	147	174	1,875	1,870	1,600	1,943	125	124
August	145	179	1,863	1,818	1,608	1,771	129	152
September	157	173	1,840	1,829	1,752	1,891	152	166
October	159	170	1,856	1,905	2,024	1,792	136	123
November	156	189	1,880	1,882	2,012	2,037	151	168
December	156	170	1,959	1,900	1,917	2,044	135	152
*Average	**141**	**177**	**1,907**	**1,779**	**1,764**	**1,776**	**175**	**191**

Month	Medicinal and pharmaceutical preparations		Paints, pigments and varnishes		Soaps, washing compounds and toilet preparations		Inks, dyes and colours	
	1926	1927	1926	1927	1926	1927	1926	1927
January	1,543	1,608	1,552	1,675	1,377	1,406	282	290
February	1,594	1,664	1,606	1,707	1,372	1,424	287	295
March	1,619	1,686	1,651	1,758	1,387	1,465	296	297
April	1,587	1,732	1,714	1,802	1,423	1,483	288	301
May	1,553	1,744	1,769	1,829	1,431	1,406	299	306
June	1,592	1,687	1,729	1,821	1,445	1,422	300	301
July	1,530	1,634	1,674	1,771	1,444	1,407	298	302
August	1,564	1,685	1,625	1,730	1,447	1,417	294	303
September	1,614	1,777	1,581	1,696	1,501	1,550	297	302
October	1,646	1,799	1,589	1,730	1,495	1,593	288	304
November	1,617	1,771	1,609	1,775	1,474	1,561	289	304
December	1,555	1,709	1,634	1,778	1,431	1,547	278	301
*Average	**1,604**	**1,712**	**1,657**	**1,760**	**1,472**	**1,485**	**297**	**303**

Month	Wood distillates and extracts		Miscellaneous chemical industries		**Total**	
	1926	1927	1926	1927	**1926**	**1927**
January	261	326	1,076	1,075	**9,960**	**9,980**
February	250	345	1,156	1,129	**10,049**	**10,008**
March	226	348	1,193	1,162	**10,274**	**10,127**
April	176	255	1,171	1,201	**10,393**	**10,781**
May	199	232	1,198	1,197	**10,487**	**10,666**
June	180	213	1,191	1,236	**10,287**	**10,659**
July	125	195	1,124	1,191	**9,942**	**10,611**
August	102	198	1,093	1,182	**9,870**	**10,435**
September	181	244	1,112	1,157	**10,187**	**10,785**
October	215	293	1,099	1,151	**10,507**	**10,860**
November	231	282	1,102	1,155	**10,521**	**11,121**
December	244	273	1,085	1,121	**10,394**	**10,995**
*Average	**237**	**273**	**1,192**	**1,231**	**10,446**	**10,717**

***Note on the Method of Computing the Average Number of Wage-Earners for each Industry**—If a company works only 3 months in the year, the average number of wage-earners for this company is obtained by adding the monthly figures and dividing by 3. If a second company operates every month in the year, the average number of wage-earners for this company is obtained by adding the monthly figures and dividing by 12. The average number of wage-earners for each other industry is computed in the same way. The average number of wage-earners in the industry during the year is the sum of these individual averages.

Table 10.—Wage-Earners in the Manufacture of Chemicals and Allied Products in Canada, by Months and by Provinces, 1926 and 1927

Month	Nova Scotia		New Brunswick		Quebec		Ontario	
	1926	1927	1926	1927	1926	1927	1926	1927
January	135	134	53	58	3,948	3,972	5,192	5,120
February	136	139	58	66	3,974	3,872	5,225	5,216
March	168	161	66	67	4,002	3,857	5,358	5,303
April	174	182	69	63	4,085	3,955	5,381	5,340
May	220	259	71	64	4,120	4,310	5,380	5,293
June	151	183	72	64	4,126	4,482	5,255	5,178
July	123	125	60	64	3,986	4,517	5,079	5,174
August	131	138	57	65	3,949	4,300	5,039	5,198
September	131	137	58	65	4,136	4,334	5,176	5,513
October	144	137	57	63	4,347	4,363	5,289	5,575
November	166	180	58	65	4,448	4,538	5,198	5,624
December	151	162	59	64	4,350	4,620	5,181	5,445
***Average**	**153**	**161**	**69**	**67**	**4,192**	**4,309**	**5,348**	**5,445**

Month	Manitoba		Saskatchewan and Alberta		British Columbia		Canada	
	1926	1927	1926	1927	1926	1927	1926	1927
January	263	298	44	41	325	357	**9,960**	**9,980**
February	264	305	44	41	348	369	**10,049**	**10,008**
March	271	312	46	42	363	385	**10,274**	**10,127**
April	276	315	46	40	362	389	**10,393**	**10,284**
May	296	318	49	42	351	380	**10,487**	**10,666**
June	288	323	50	45	345	384	**10,287**	**10,659**
July	299	316	49	40	346	375	**9,942**	**10,611**
August	301	317	50	42	343	375	**9,870**	**10,435**
September	300	325	48	40	338	371	**10,187**	**10,785**
October	284	310	46	42	340	370	**10,507**	**10,860**
November	276	302	45	41	330	374	**10,521**	**11,121**
December	276	304	45	41	332	359	**10,394**	**10,995**
***Average**	**288**	**317**	**49**	**44**	**347**	**374**	**10,446**	**10,717**

*See note on page 24.

Table 11.—Hours of Labour in Month of Greatest Employment in the Chemicals and Allied Products Industry in Canada, by Industries and by Provinces, 1927

Industry and Province	Number of wage-earners working			
	8 hours or less per day	9 hours	10 hours	Over 10 hours
(a) By Industries—				
Coal tar products	58	34	25	127
Acids, alkalies, salts and compressed gases	896	854	168	107
Explosives, ammunition, fireworks and matches	930	832	279	259
Fertilizers	57	64	167	–
Medicinal and pharmaceutical preparations	1,274	646	31	9
Paints, pigments and varnishes	629	802	406	77
Soaps, washing compounds and toilet preparations	779	600	278	36
Inks, dyes and colours	288	40	1	2
Wood distillates and extracts	2	35	338	5
Miscellaneous chemical industries	572	562	298	23
Total	**5,485**	**4,449**	**1,991**	**645**
(b) By Provinces—				
Nova Scotia	13	102	41	67
New Brunswick	15	53	–	1
Quebec	2,139	1,733	881	314
Ontario	2,699	2,437	1,012	238
Manitoba	245	35	48	11
Saskatchewan	3	–	–	–
Alberta	52	3	–	–
British Columbia	319	86	9	14
Total	**5,485**	**4,449**	**1,991**	**645**

Table 12.—Fuel and Electricity Used in the Manufacture of Chemicals and Allied for

Industry	Anthracite coal	Bituminous coal		Coke	Fuel oil
		Canadian	Imported		
	Tons	Tons	Tons	Tons	Gals.
Coal tar products—					
Quantity	2,164	5,051	5,992	768	7,529
Value $	11,080	28,743	36,695	2,385	745
Acids, alkalies, salts and compressed gases—					
Quantity	277	3,721	113,423	4,081	37,903
Value $	3,442	22,611	536,219	23,156	2,821
Explosives, ammunition, fireworks and matches—					
Quantity	6,497	3,389	13,519	452	410,520
Value $	39,738	23,806	85,895	5,341	21,462
Fertilizers—					
Quantity	130	1,015	17	20	-
Value $	1,253	5,696	115	100	-
Medicinal and pharmaceutical preparations—					
Quantity	582	1,412	5,862	33	92,098
Value $	8,103	11,146	39,744	470	8,259
Paints, pigments and varnishes—					
Quantity	1,856	9,788	12,173	1,830	309,966
Value $	10,764	67,653	77,925	22,072	22,746
Soaps, washing compounds and toilet preparations—					
Quantity	868	8,282	27,843	444	8,200
Value $	7,861	57,652	161,679	3,867	912
Inks, dyes and colours—					
Quantity	264	193	1,437	98	-
Value $	3,653	1,520	9,748	1,270	-
Wood distillates and extracts—					
Quantity	-	-	25,805	244	-
Value $	-	-	171,516	861	-
Miscellaneous chemical industries—					
Quantity	342	1,814	14,209	42	11,835
Value $	5,058	14,521	87,567	487	1,282
Total, 1927—					
Quantity	**12,980**	**34,665**	**220,280**	**8,012**	**878,051**
Value $	**90,952**	**233,348**	**1,207,103**	**60,009**	**58,227**
Total, 1926—					
Quantity	**15,831**	**245,979**		**15,155**	**1,074,066**
Value $	**111,880**	**1,394,917**		**102,278**	**82,771**

Table 13.—Fuel and Electricity Used in the Manufacture of Chemicals and Allied for

Province	Anthracite coal	Bituminous coal		Coke	Fuel oil
		Canadian	Imported		
	Tons	Tons	Tons	Tons	Gals.
Nova Scotia—					
Quantity	32	6,532	-	100	-
Value $	288	34,863	-	1,169	-
New Brunswick—					
Quantity	-	2,795	-	-	-
Value $	-	18,783	-	-	-
Quebec—					
Quantity	11,158	21,448	27,253	2,548	152,867
Value $	71,570	147,151	178,376	22,048	15,538
Ontario—					
Quantity	1,659	10	192,099	4,745	365,172
Value $	17,882	125	1,021,228	30,986	27,412
Manitoba—					
Quantity	31	3,054	928	475	-
Value $	412	26,514	7,499	4,590	-
Saskatchewan and Alberta—					
Quantity	-	65	-	-	-
Value $	-	395	-	-	-
British Columbia—					
Quantity	100	761	-	144	360,012
Value $	800	5,517	-	1,216	15,277
Canada—					
Quantity	**12,980**	**34,665**	**220,280**	**8,012**	**878,051**
Value $	**90,952**	**233,348**	**1,207,103**	**60,009**	**58,227**
Total for 1926—					
Quantity	**15,831**	**245,979**		**15,155**	**1,074,066**
Value $	**111,880**	**1,394,917**		**102,278**	**82,771**

*No separation was made as between electricity purchased and electricity generated for own use in 1926.

Products in Canada, by Kinds and by Industries, 1927, with Comparative Totals 1926

Gasoline	Kerosene	Gas		Wood	Other fuel	Electricity purchased	Total value	Electricity generated for own use
		Manufactured	Natural					
Gals.	Gals.	M cu. ft.	M cu. ft.	Cords	$	K.W.H.	$	K.W.H.
-	-	48	-	616	-	199,932	-	-
-	-	68	-	2,041	49,509	5,140	136,406	-
156	50	-	354	89	-	551,304,190	-	52,432,068
41	13	-	134	238	2,348	1,340,873	1,931,896	195,905
-	-	40,657	-	781	-	2,909,177	-	1,194,847
-	-	11,506	-	2,584	-	40,147	230,479	29,282
120	-	-	-	75	-	297,880	-	-
39	-	-	-	150	-	7,383	11,736	-
194	-	4,927	256	166	-	1,261,409	-	-
54	-	4,951	174	939	1,137	29,287	104,264	-
15,484	11,325	1,353	-	563	-	5,029,652	-	131,000
3,370	1,828	1,352	-	2,260	6,264	96,540	312,774	2,030
1,339	20	1,021	43	71	-	2,994,056	-	145,000
377	5	1,186	26	487	6,718	41,682	282,452	2,900
50	50	677	-	2	-	1,041,345	-	-
15	15	831	-	17	-	18,977	36,046	-
180	-	-	-	3,371	-	597,770	-	-
55	-	-	-	14,852	5,573	9,886	202,743	-
1,585	10	2,822	38	117	-	2,324,857	-	126,000
394	2	3,126	28	971	9,465	38,348	161,249	1,895
19,108	**11,455**	**51,505**	**691**	**5,851**	-	**567,960,268**	-	**54,028,915**
4,345	**1,863**	**23,020**	**362**	**24,539**	**81,014**	**1,628,263**	**3,413,045**	**232,012**
58,200	-	**58,701**		**4,093**	-	**704,677,321***	-	*
16,260	-	**25,899**		**17,416**	**58,697**	**1,935,935**	**3,746,053**	

Products in Canada, by Kinds and by Provinces, 1927, with Comparative Totals 1926

Gasoline	Kerosene	Gas		Wood	Other fuel	Electricity purchased	Total value	Electricity generated for own use
		Manufactured	Natural					
Gals.	Gals.	M cu. ft.	M cu. ft.	Cords	$	K.W.H.	$	K.W.H.
2,851	-	-	-	11	-	742,420	-	-
787	-	-	-	56	-	14,954	52,117	
120	-	375	-	-	-	39,725	-	-
39	-	375	-	-	-	1,102	20,209	-
2,715	11,380	44,925	50	268	-	232,370,099	-	30,191,234
728	1,844	16,286	30	1,543	36,665	596,785	1,088,564	51,087
13,352	75	5,514	287	3,442	-	330,604,058	-	23,827,681
2,771	19	5,394	198	15,234	32,210	965,016	2,118,475	180,725
55	-	139	-	3	-	1,297,262	-	-
16	-	183	-	28	3,951	16,544	59,737	-
11	-	-	354	-	-	393,370	-	-
3	-	-	134	-	3,660	4,917	9,109	-
4	-	552	-	2,127	-	2,513,334	-	10,000
1	-	782	-	7,678	4,528	28,945	64,744	200
19,108	**11,455**	**51,505**	**691**	**5,851**	-	**567,960,268**	-	**54,028,915**
4,345	**1,863**	**23,020**	**362**	**24,539**	**81,014**	**1,628,263**	**3,413,045**	**232,012**
58,200	-	**58,701**		**4,093**	-	**704,677,321**	-	*
16,260	-	**25,899**		**17,416**	**58,697**	**1,935,935**	**3,746,053**	

Table 14.—Power Employed in the Manufacture of Chemicals and Allied Products in Canada, by Industries, 1927, with Comparative Totals for 1926.

Industry		Steam engines and turbines	Gasoline, gas and oil	Hydraulic turbines or water wheels	*Total primary power*	Electric motors run by purchased power	**Total power employed**	Electric motors run by primary power in same plant	*Total electric motors*	Boilers
Coal tar and its products	No.	8	-	-	*8*	29	37	-	*29*	20
	H.P.	75	-	-	*75*	209	284	-	*209*	2,212
Acids, alkalies, salts and compressed gases	No.	37	1	4	*42*	871	913	122	*993*	33
	H.P.	9,373	225	8,000	*17,598*	23,714	41,312	1,580	*25,294*	8,607
Explosives, ammunition, fireworks and matches	No.	16	-	2	*18*	260	278	147	*407*	23
	H.P.	2,451	-	250	*2,701*	3,348	6,049	1,092	*4,440*	5,039
Fertilizers	No.	1	1	-	*2*	31	33	-	*31*	4
	H.P.	600	6	-	*606*	450	1,056	-	*450*	650
Medicinal and pharmaceutical preparations	No.	6	3	-	*9*	588	597	-	*588*	30
	H.P.	226	12	-	*238*	1,732	1,970	-	*1,732*	2,015
Paints, pigments and varnishes	No.	20	-	1	*21*	452	473	13	*465*	47
	H.P.	1,555	-	90	*1,645*	4,383	6,028	192	*4,575*	3,147
Soaps, washing compounds and toilet preparations	No.	14	1	-	*15*	573	588	10	*583*	50
	H.P.	719	6	-	*725*	3,500	4,225	106	*3,606*	6,444
Inks, dyes and colours	No.	1	1	-	*2*	125	127	-	*125*	5
	H.P.	40	4	-	*44*	1,116	1,160	-	*1,116*	198
Wood distillates and extracts	No.	5	2	-	*7*	17	24	2	*19*	23
	H.P.	188	15	-	*203*	340	543	30	*370*	3,000
Miscellaneous chemical industries	No.	12	3	1	*16*	376	392	20	*396*	42
	H.P.	496	52	130	*678*	2,593	3,271	132	*2,725*	3,252
Total for 1927	**No.**	**120**	**12**	**8**	*140*	**3,322**	**3,462**	**314**	*3,636*	**277**
	H.P.	**15,723**	**320**	**8,470**	*24,513*	**41,385**	**65,898**	**3,132**	*44,517*	**31,564**
Total for 1926	**No.**	**124**	**11**	**7**	*142*	**3,273**	**3,415**	**326**	*3,599*	**269**
	H.P.	**15,966**	**287**	**6,470**	*22,723*	**40,912**	**63,635**	**3,506**	*44,418*	**33,529**

Table 15.—Power Employed in the Manufacture of Chemicals and Allied Products in Canada, by Provinces, 1927, with Comparative Totals for 1926.

Province		Steam engines and turbines	Gasoline, gas and oil	Hydraulic turbines or water wheels	*Total primary power*	Electric motors run by purchased power	**Total power employed**	Electric motors run by primary power in same plant	*Total electric motors*	Boilers
Nova Scotia	No.	5	-	1	*6*	18	24	-	*18*	7
	H.P.	710	-	90	*800*	338	1,138	-	*338*	1,190
New Brunswick	No.	1	1	-	*2*	16	18	-	*16*	3
	H.P.	15	6	-	*21*	65	86	-	*65*	350
Quebec	No.	34	4	7	*45*	873	918	169	*1,042*	96
	H.P.	3,603	57	8,380	*12,040*	12,917	24,957	1,661	*14,578*	11,331
Ontario	No.	65	7	-	*72*	2,158	2,230	143	*2,301*	148
	H.P.	10,809	257	-	*11,066*	24,531	35,597	1,447	*25,978*	19,633
Manitoba	No.	5	-	-	*5*	86	91	-	*86*	13
	H.P.	117	-	-	*117*	1,077	1,194	-	*1,077*	1,050
Saskatchewan and Alberta	No.	-	-	-	-	17	17	-	*17*	2
	H.P.	-	-	-	-	285	285	-	*285*	200
British Columbia	No.	10	-	-	*10*	154	164	2	*156*	8
	H.P.	469	-	-	*469*	2,172	2,641	24	*2,196*	810
Total for 1927	**No.**	**120**	**12**	**8**	*140*	**3,322**	**3,462**	**314**	*3,636*	**277**
	H.P.	**15,723**	**320**	**8,470**	*24,513*	**41,385**	**65,898**	**3,132**	*44,517*	**31,564**
Total for 1926	**No.**	**124**	**11**	**7**	*142*	**3,273**	**3,415**	**326**	*3,599*	**269**
	H.P.	**15,966**	**287**	**6,470**	*22,723*	**40,912**	**63,635**	**3,506**	*44,418*	**33,529**

Table 16.—Alphabetical List of Materials Used in the Chemicals and Allied Products Industry in Canada, 1927

Material	Industry number See page 37	Unit of measure	Quantity	Value
				$
Acetone	4-5-11	lb.	272,890	54,394
Acid, acetic	11-20-27	lb.	816,488	57,379
Acid, acetylsalicylic	10	lb.	89,284	63,167
Acid, boric	10-28	lb.	159,548	14,650
Acid, carbolic	10-17	lb.	11,697	3,504
Acid, citric	10-23	lb.	105,248	39,719
Acid, cresylic	2	gal.	2,934	1,964
Acid, gallic	17	lb.	500	350
Acid, hydrochloric (muriatic)	3	lb.	1,500	194
Acid, nitric—38°—42° Bé	3-5-6-11-27	lb.	7,863,577	494,536
Acid, oxalic	10	lb.	3,509	8,736
Acid, phosphoric	28	lb.	130,067	9,572
Acid, sulphuric, 50° Bé	9	lb.	2,741,369	13,706
Acid, sulphuric, 60° Bé	3	lb.	2,428,060	19,719
Acid, sulphuric, 66° Bé	3-18	lb.	8,089,063	148,790
Acid, sulphuric 100 %	3	lb.	649,344	5,750
Acid, sulphuric, fuming (oleum)	5	lb.	12,190,996	108,305
Acid, sulphuric (grade not specified)	11-19-20-27-28	lb.	1,316,711	9,566
Acid, tannic	17	lb.	1,500	675
Acid, tartaric	10-23-26	lb.	244,872	62,644
Acids, fatty, stearic, etc	12-14	lb.	3,157,894	217,540
Acids, recovered	5	lb.	22,967,177	335,316
Acids (kind, not specified)	10-24	—	—	29,058
Albumen	22-23-26	lb.	10,336	2,660
Alcohol, denatured	3-11-15	gal.	9,165	8,671
Alcohol, ethyl	5-6-10-11-12-14-20-21-23-28	gal.	422,217	883,228
Aluminium, hydroxide	16	lb.	17,101	2,989
Aluminium, (metal) powder	7	lb.	1,090	740
Aluminium rod	6	lb.	5,500	1,339
Aluminium, sulphate	3-20	lb.	119,490	2,923
Ammonia, anhydrous	3	lb.	21,522	3,805
Ammonium chloride (sal ammoniac)	5	lb.	9,237	614
Ammonium, hydroxide	3-4-5-15-28	lb. NH_3	1,411,616	49,742
Ammonium, nitrate	5	lb.	5,062,073	231,843
Ammonium, perchlorate	5	lb.	20,911	2,104
Ammonium, phosphate	8-9	lb.	78,835	5,457
Ammonium, sulphate	9-26	lb.	5,550,447	135,587
Amyl, acetate	11-21	gal.	1,699	5,068
Amyl, alcohol (fusel oil)	11	gal.	2,817	5,596
Antimony, sulphide	6	lb.	1,832	370
Arrowroot	23	lb.	22,135	1,770
Arsenic	27	lb.	487,732	18,385
Asbestine	11	lb.	3,659,440	49,475
Asbestos, fibre	11	lb.	4,403	2,246
Asphalt	6-28	lb.	284,139	4,714
Asphaltum	11	lb.	766,632	23,921
Barium, chlorate	7	lb.	812	149
Barium, nitrate	6-7	lb.	45,484	2,642
Barium, peroxide	10	lb.	29,879	2,763
Barium, sulphate (barytes)	11	lb.	3,853,073	67,483
Bauxite	3	lb.	273,000	3,344
Benzine, gasoline, naphtha, etc	10-11-16-20-24	gal.	144,954	38,785
Bismuth, metal	10	lb.	10,992	27,580
Black, lamp and other carbon	11-16-24	lb.	609,280	83,623
Blanc, fixe	11-16	lb.	94,424	4,670
Blood, dried	9	lb.	82,000	2,625
Blue, prussian	11	lb.	34,070	12,581
Bone, ash	9	lb.	338,496	2,459
Bone, flour (steamed)	9	lb.	544,300	9,298
Bone, meal (crude)	9	lb.	80,000	1,600
Bones	20	ton	1,082	30,837
Brass, rods	6	lb.	20,211	3,779
Brass, springs	6	lb.	811,145	3,448
Butyl, acetate	11	gal.	197,376	264,749
Butyl, alcohol (butanol)	11-28	gal.	67,178	73,136
Caffeine	10	lb.	4,003	8,995
Calcium, acetate	3	lb.	545,297	15,260
Calcium, acetate, gray, 80%	18	lb.	1,150,782	23,016
Calcium, acid phosphate	23-26	lb.	2,086,202	206,636
Calcium, carbide	3-4	lb.	224,940,961	8,500,267
Calcium, carbonate (chalk)	5	lb.	505,364	2,681
Calcium, carbonate (limestone)	3-4	lb.	548,511,699	473,797
Calcium, chloride	3-13-25-28	lb.	988,858	22,728
Calcium, cyanamide, crude	3-9	lb.	40,495,200	719,895
Calcium, fluoride	3	lb.	4,952,220	41,167
Calcium, hydroxide (slaked lime)	3-18-27	lb.	4,183,872	26,535
Calcium oxide (quicklime)	3-4-13-20-27	lb.	155,586,084	666,289
Carbon tetrachloride	24-28	lb.	8,100	615

Table 16.—Alphabetical List of Materials Used in the Chemicals and Allied Products Industry in Canada, 1927—Continued

Material	Industry number See page 37	Unit of measure	Quantity	Value
				$
Cartridge cups of brass, copper and iron	6	-	-	119,707
Casein	27	lb.	2,010	360
Celluloid	21	lb.	119,478	102,151
Charcoal	5-6-7	lb.	256,417	4,869
Chemicals (kind not specified)	8-15-17-20 21-23-28	-	-	295,001
Chlorine, liquid	13-14	lb.	172,320	12,951
Clay, china, or kaolin	6-10-11-28	lb.	1,680,785	21,850
Coal, anthracite (not fuel)	3	ton	3,688	28,386
Cobalt salts	11	lb.	4,792	4,710
Coke (not fuel)	3-4	ton	86,320	776,835
Colours, dry	16	lb.	1,319,743	403,148
Colours in oil and japan	11	-	-	7,168
Copper, sheet	6-10	lb.	177,107	30,190
Copper sulphate (blue vitriol)	3-27	lb.	654,600	34,252
Cordite	6	lb.	34,263	51,065
Cork	20	lb.	16,989	685
Corn	26	lb.	2,860,004	49,704
Cotton	6-10-24	-	-	42,386
Creosote	11-27	gal.	71,480	23,086
Dextrine and glucose	10-17-20-27	lb.	1,279,605	60,052
Dinitrotoluene	5	lb.	504,693	54,125
Driers, linoleate	11	lb.	183,674	51,413
Driers, resinate	11	lb.	627,600	66,489
Driers (kind not specified)	11-16	-	-	8,142
Dyes and colours	8-15-17-20-21-24	-	-	43,343
Electrodes, carbon	3	lb.	4,279,000	253,230
Enamels	11	gal.	1,000	4,200
Essences, essential oils, etc	23	-	-	146,119
Ether, sulphuric	10	lb.	13,450	2,551
Ethyl, acetate	11-21	gal.	34,748	38,746
Ethylene glycol	5-28	lb.	1,100,735	254,083
Extracts	10	-	-	7,519
Extracts, tanners'	22	lb.	240,330	8,562
Feldspar	12	lb.	1,540,800	24,505
Felt	6	lb.	16,451	11,484
Felts, dry and sheathings	1	lb.	2,934,000	231,916
Fertilizer materials—mother liquor	9	lb.	2,726,720	11,734
Filler	9	lb.	501,600	226
Fish scrap, dried	9	lb.	400,000	10,000
Flour	5-11-20-23-26	lb.	777,845	30,910
Flowers, insect	27	ton	20	8,400
Flowers, japan	27	lb.	68,992	13,339
Foots (cottonseed, olive, etc.)	12-13	-	-	242,268
Formaldehyde	2-8-28	-	-	8,532
Gelatine	23	lb.	416,055	125,852
Glass, powdered	8	lb.	270,320	5,471
Glue, mucilage and paste	6-7-8-11-16-20-28	-	-	160,702
Glycerine, crude	12-14	lb.	1,975,216	308,505
Glycerine, refined	5-10-12-14-16-17-23-24-27-28		3,637,650	823,270
Graphite	3-5-11-20-24	lb.	865,367	42,147
Greases	28	lb.	544,113	50,527
Gunpowder	6-7	-	-	136,896
Gum, arabic	17	lb.	16,718	2,241
Gums (kind not specified)	8-10-11-28	-	-	536,759
Hardwoods	18	cord	56,292	482,277
Herbs, roots, etc	10	-	-	338,151
Hexite	5	lb.	1,041	497
Hops	26	lb.	26,160	9,120
Hydrogen peroxide	17	lb.	8,000	760
Hydrogen sulphide	7	lb.	52,954	5,057
Iodine, crude	10	lb.	15,675	58,854
Iron oxide	20	lb.	17,500	655
Iron sulphate (copperas)	27	lb.	24,000	240
Iron sulphide (pyrites)	3	ton	19,379	100,374
Kainit and other crude potash salts	9	lb.	529,252	6,362
Keiselguhr	5-8	lb.	26,452	1,190
Lacquers, japan	11-21-24	gal.	23,008	16,561
Lacquers, nitrocellulose (pyroxylin)	11	-	-	484,619
Lacquer pastes	11	lb.	8,019	2,429
Lakes coal tar (all colours)	11	lb.	20,655	19,597
Land plaster or lime	9	lb.	2,157,141	2,583

Table 16.—Alphabetical List of Materials Used in the Chemicals and Allied Products Industry in Canada, 1927—Continued

Material	Industry number See page 37	Unit of measure	Quantity	Value
				$
Lead	6	lb	349,199	34,285
Lead, basic carbonate, white, dry	11	lb	7,805,927	704,428
Lead, basic carbonate, white in oil	11	lb.	2,742,081	311,168
Lead, basic sulphate, white (sublimed lead)	11	lb.	136,627	15,129
Lead, hyposulphite of	8	lb	17,180	4,528
Lead oxide	27	lb.	102,340	8,473
Lead, pig	11	lb.	18,268,520	1,327,124
Lead, red	11	lb.	1,078,640	93,368
Litharge	11-21-27	lb.	766,558	68,566
Lithopone	11	lb.	7,905,256	408,219
Lumber	3-6-8	-	-	253,703
Magnesium carbonate	16	lb.	4,450	398
Magnesium oxide	5-26	lb.	15,492	1,949
Magnesium powder	6	lb.	708	813
Magnesium sulphate (epsom salts)	3-10	lb.	526,442	21,717
Malt	15	bush.	1,500	3,493
Manganese salts	3-11	lb.	65,330	5,011
Meal, corn	5	lb.	3,604	107
Meal, ivory nut	5	lb.	2,033,821	26,860
Mentnol	14	lb.	316	1,481
Mercury	5-22	lb.	78,080	93,697
Mercury bichloride	3	lb.	4,075	4,772
Mercury fulminate	6	lb.	31,458	60,281
Methyl hydrate (grade not specified))	2-6-10-11-15-16-21-24	gal.	118,668	107,139
Methyl hydrate, pure	18	lb	104,135	88,514
Methyl hydrate, crude, 95%	18	imp. gal.	314,788	204,612
Methyl salicylate	27	lb.	24,833	8,766
Milk	10	-	-	113,702
Millboard and topwadboard	6	lb.	45,858	2,567
Mop parts	24	-	-	15,120
Naphtha	2-20-28	gal.	44,222	9,709
Naphtha (coal tar) and benzol	11-20-21	gal.	602,972	210,859
Naphthalene	28	lb.	16,000	843
Nickel sulphate	3	lb.	41,350	3,205
Nitrobenzene	5	lb.	9,000	950
Nitrocellulose	11	lb.	764,265	153,869
Nitrocotton (pyrocotton)	5	lb.	85,540	34,583
Nitroglycerine	5	lb.	8,846,900	1,603,398
Nitrotoluene	5	lb.	9,700	1,215
Ochres, siennas, umbers	11	lb.	1,611,096	68,872
Oil, castor	10-21-22	lb.	181,866	24,201
Oil, china wood (tung oil)	11	gal.	562,850	531,414
Oil, cocoanut	12-13-14	lb.	14,326,855	1,390,145
Oil, cod liver	10	lb.	625,916	67,655
Oil, corn	12	lb.	206,641	11,777
Oil, cottonseed	12	lb.	175,268	13,522
Oil, linseed, boiled	11	gal.	468,502	426,990
Oil, linseed, raw	11-12-13-14	gal.	1,411,094	1,204,852
Oil, olive	10-12-14	lb.	27,733	7,412
Oil, palm	12-14	lb.	6,691,580	564,002
Oil, paint, and elixirs	11	gal.	15,043	12,786
Oil, peanut	12-14	lb.	448,866	45,177
Oil, peppermint	14	lb.	230	1,237
Oil, soya bean	11-12	gal.	232,559	179,635
Oils, essential	12-13-14	-	-	281,626
Oils, fish	11	gal.	50,368	27,469
Oils, petroleum	3-10	gal.	603,058	77,574
Oils, stand, blown and enamel	11	gal.	35,398	52,436
Oils (kind not specified)	2-3-10-11-24-25-27-28	-	-	245,888
Oils and varnishes	16	-	-	233,777
Ore, manganese	20	lb.	950,309	25,198
Ore, iron oxide	11	lb.	997,165	23,481
Orris	14	lb.	3,063	357
Oxygen	3	cu.ft.	74,230	1,593
Paints, mixed	11	gal.	18,057	21,254
Paints, paste	11	lb.	320,794	26,831
Paints, asphaltic and tar	11	gal.	400	800
Paper	5-6-7-27	-	-	144,303
Paper, transfer	16	-	-	2,025
Paradichlorobenzine	2	lb.	18,550	3,216
Perfumes	12-13-14-17	-	-	215,237
Petrolatum	5-6-10-12-13-14	lb.	365,815	41,627
Petroleum distillate	11	gal.	1,855,653	393,192
Petroleum products (kind not specified)	5-6	lb.	845,939	46,107
Phosphate rock	3-9	ton	14,880	168,483
Phosphorus, crude	3-27	lb.	17,050	1,795

Table 16.—Alphabetical List of Materials Used in the Chemicals and Allied Products Industry in Canada, 1927—Continued

Material	Industry number See page 37	Unit of measure	Quantity	Value
				$
Phosphorus, sesquisulphide of	8	lb.	80,377	34,406
Pigments, iron oxide	11	lb.	1,801,159	73,395
Pigments and dry colours	11-21	–	–	482,829
Pitch, coal tar	1-3-11-16	lb.	5,221,242	59,369
Potassium acid tartrate (cream of tartar)	23-26	lb.	21,478	4,417
Potassium bicarbonate	28	lb.	1,500	308
Potassium carbonate	4-9	lb.	97,070	3,974
Potassium chlorate	5-6-7-8	lb.	1,129,097	80,090
Potassium chloride	6-9	lb.	6,689,878	120,436
Potassium hodroxide	2-11-12-13-14-24-28	lb.	316,473	20,318
Potassium iodide	10	lb.	2,946	11,887
Potassium nitrate (saltpetre)	5-7	lb.	311,230	15,601
Potassium perchlorate	5-6-7	lb.	560,652	51,857
Potassium sodium tartrate (Rochelle salt)	10-22	lb.	92,998	17,946
Potassium sulphate	9	lb.	598,000	16,282
Pumice	14-24-27	ton	25	1,313
Pyralin tases, caps and clips	6	–	–	16,014
Pyroxylin jelly	21	lb.	284,266	36,366
Quartz, ground	8-28	lb.	605,696	7,818
Rennet	28	–	–	39,570
Resin (rosin)	2-5-6-8-11-12-13-20-24-27	lb.	16,922,748	890,068
Resin and gums	16-20	lb.	242,141	21,817
Rubber	10-20-21	lb.	882,488	107,535
Rye	26	lb.	328,325	6,419
Saccharine	10	lb.	278	611
Sand, silica, silex and infusorial earth	3-11-12-13-14-24-25-26-28	ton	8,619	120,275
Satin, white or gypsum	11	lb.	516,575	6,461
Sawdust	5-25	–	–	4,210
Seed, annatto	28	lb.	50,978	3,870
Shellac	6-11-15-20-24	gal.	86,475	46,252
Shot	6	lb	901,170	84,496
Silver, bollion	10	oz.	45,554	26,915
Skins, waste and hide trimmings	20	ton	8,181	207,862
Slag, basic	9	lb.	4,147,525	2,230
Soap	14-24-27-28	lb.	52,514	3,916
Sodium aluminium sulphate	26	lb	113,920	4,158
Sodium biborate (borax)	5-20-24-26-27	lb.	229,906	9,653
Sodium bicarbonate (baking soda)	5-10-23-26	lb.	2,309,443	53,137
Sodium bichromate	3-11	lb	123,467	8,172
Sodium bisulphate	3	lb.	178,640	313
Sodium carbonate (soda ash)	3-5-12-13-20-22-25-27-28	lb.	11,016,883	197,079
Sodium carbonate (washing soda)	26	lb.	70,000	1,855
Sodium chloride, dry (common salt)	3-5-12-13-14-21-22-26-28	lb.	9,294,270	131,715
Sodium chloride (brine) salt content	3	lb.	164,308,000	17,049
Sodium cyanide	3-27	lb.	6,894	1,215
Sodium fluoride	2	lb.	6,290	640
Sodium hydroxide (caustic soda) dry	2-3-12-13-14-19-22-26-28	lb.	10,910,351	385,874
Sodium hydroxide in solution	12-14	lb. soda	3,143,262	89,429
Sodium nitrate (Chile saltpetre)	3-5-9	lb.	32,149,062	800,842
Sodium phosphate (tri basic)	3-22-26	lb	647,208	26,065
Sodium salicylate	10	lb.	7,907	3,589
Sodium salts (kind not specified)	3	lb.	21,927	1,252
Sodium, sesquicarbonate	26	lb.	145,460	2,753
Sodium silicate (water g'ass)	3-12-13-14-22-28	lb.	19,346,841	148,420
Sodium sulphate (g'auber's salt)	3-23-28	lb.	46,579	1,336
Sodium sulphate (salt cake)	3	lb.	2,035,470	16,005
Sodium sulphide	3-21	lb.	20,050	1,040
Solvents	21	lb	142,960	12,074
Starch, corn	5-6-20-26	lb.	3,106,292	141,005
Steel	3-6-10-24	lb.	1,929,343	82,296
Strontium carbonate	7	lb.	908	108
Strontium nitrate	6-7	lb.	178,588	12,514
Strychnine	27-28	oz.	8,750	4,329
Sugar and its derivatives	5-10-14-23-28	lb.	5,826,242	374,955
Sulphur	3-5-6-7-8-27-28	lb.	42,475,571	434,503

Table 16.—Alphabetical List of Materials Used in the Chemicals and Allied Products Industry in Canada, 1927—Concluded

Material	Industry number See page 37	Unit of measure	Quantity	Value
				$
Sulphur dioxide	28	lb.	6,726	1,752
Superphosphate (acid phosphate)	9	lb.	30,787,748	197,992
Syrup, corn	28	brl.	497	19,996
Talc	12-13-14-28	lb.	1,147,783	19,765
Tallow, grease and other soapstock	12-13-14	lb.	42,897,976	3,386,148
Tankage	9	lb.	3,261,590	45,030
Tar	3-11	lb.	524,319	6,333
Tar, crude coal	1	gal.	23,845,851	1,813,053
Tar, crude oil	1	gal.	387,277	36,108
Tar, pine	27	-	-	239
Textiles	17-20-21-24	-	-	371,156
Thymol	14	lb.	194	658
Tin	6	lb	5,945	4,068
Turpentine, gum, spirits	10-11	gal.	409,114	384,505
Turpentine, wood	2-11	gal.	45,292	32,867
Turpentine and turpentine substitute	16-24	gal.	43,844	26,897
Ultramarine	11-24	lb.	277,500	41,496
Vanilla beans	10-23	lb.	15,590	40,622
Varnishes, all kinds	11-21-24	gal.	809,810	1,203,443
Wax	2-8-11-24	lb.	1,761,766	169,301
Whiting or chalk	11-20-21	lb.	11,176,210	116,647
Wine	10	-	-	23,981
Wire, copper	6	lb.	123,626	30,153
Wire, iron	6	lb.	28,779	2,336
Wire, platinum	6	oz.	370,906	4,529
Wood pulp	5	lb.	1,387,587	27,650
Yarn, jute and cotton	6	lb.	543,819	85,992
Zinc	6-11	lb.	704,188	52,291
Zinc chloride	2	lb.	2,200	150
Zinc ore	11	lb.	138,838	5,934
Zinc oxide	8-11-14	lb.	2,683,788	230,499
Zinc, oxide, leaded, and zinc leads	11	lb.	1,870,975	131,810
Zinc sheet	10	lb.	39,876	4,785
Zinc sulphate	3-20	lb.	105,063	3,836
Containers	All	-	-	7,418,910
All other materials	Industries	-	-	7,698,480
Total				**63,630,588**

Table 17.—Alphabetical List of Products Made in all the Industries Classified under Chemicals and Allied Products, in Canada, 1927

(Includes Intermediate Products made for use)

Product	Industry number See page 37	Unit of measure	Quantity	Value
				$
Acetaldehyde	3	-	-	*
Acetylene (compressed or dissolved)	3-4	cu. ft.	271,506,150	1,773,750
Acid, acetic, 28%	3-18	-	-	*
Acid, acetic, 80 %	18	-	-	*
Acid, acetic, glacial, 99½%	3	-	-	*
Acid, hydrochloric (muriatic), 20° Be	3	lb.	6,938,978	68,356
Acid, hydrofluosilicic	3	-	-	*
Acid, phosphoric	3	-	-	*
Acid, nitric (40-42° or 1·4 sp. gr.)	3-5	lb.	8,322,234	528,374
Acids, recovered, nitric and sulphuric	5	lb.	22,967,177	335,316
Acid, sulphuric, 66° Be	3	lb.	196,940,218	1,172,507
Alum, filter	3	-	-	*
Ammonia, anhydrous	4	-	-	*
Ammonia, aqua	4	-	-	*
Ammonia powder	12-13-14-27	-	-	151,[illegible]25
Ammunition, including safety cartridges, safety fuses, railway fog signals, percussion caps, shot shells, small arms and artillery ammunition, electric fuses and detonators	6	-	-	2,005,454
Amyl acetate	11	-	-	*
Anti-freeze	12-24-28	-	-	92,822
Bakelite products	21	-	-	*
Baking powder	23-26	lb.	6,521,032	1,661,073
Basic slag	9	-	-	*

Table 17.—Alphabetical List of Products Made in all the Industries Classified under Chemicals and Allied Products, in Canada, 1927—Continued

(Includes Intermediate Products made for use)

Product	Industry number See page 37	Unit of measure	Quantity	Value
				$
Battery preparations, dry	20	–	–	*
Beef scrap	9	lb.	240,000	6,000
Beverages	23	–	–	6,393
Black, acetylene	3	–	–	*
Blue, laundry	12-13	lb.	63,038	13,528
Boiler compounds	22	–	–	261,167
Bone flour (steamed)	9	lb.	100,000	1,800
Bone meal	9	lb.	164,558	4,168
Butyl acetate	3-11	–	–	*
Butyl alcohol	3	–	–	*
Calcium acetate, grey, 80%	18	lb.	9,912,568	186,080
Calcium carbide	3	–	–	*
Calcium cyanamide	3	–	–	*
Calcium hydroxide (slaked lime)	3-4	tons	287	5,238
Calcium hypochlorite (bleaching powder)	3	–	–	*
Calcium oxide (lime)	3	–	–	*
Candy	10	–	–	207,731
Caramel	15	–	–	*
Carbon dioxide	4	lb.	4,706,519	445,989
Carbon paper	17	–	–	20,147
Cartridge cases	6	–	–	*
Casein	10-26	–	–	*
Casein spreader	27	–	–	*
Celluloid products	21	–	–	655,893
Cement, boiler and radiator	24	–	–	*
Cement, caulking	1-11	lb.	105,742	16,214
Cement, rubber	20	–	–	*
Cement (kind not specified)	11-20	lb.	221,300	44,142
Charcoal	18	bush.	2,758,697	603,217
Chlorine, gas	3	–	–	*
Chlorine, liquid	3	–	–	*
Cleaning or scouring powders or preparations, not elsewhere specified	12-13-14-24-26	–	–	1,008,693
Cleaner, hand	12-24-27-28	–	–	209,434
Cleaner, metal	3	–	–	22,301
Collodion	10	–	–	*
Colour, butter	15	–	–	*
Colour, cheese	28	–	–	*
Colours, dry	11-16	–	–	481,338
Colours, food	23-28	–	–	*
Colours in oil and japan	11	–	–	603,574
Colour, show card	16	–	–	*
Columnian spirits	18	imp. gal.	6,052	7,502
Copper carbonate	3	–	–	*
Copper cyanide	3	–	–	*
Copper sulphate, dehydrated	27	lb.	8,632	921
Cotton, rubberized	20	–	–	*
Dental supplies	10	–	–	67,519
Deodorant	2-27	–	–	10,025
Dextri-maltose	28	–	–	*
Disinfectants	1-2-10	–	–	123,466
Driers, linoleate	11	gal.	17,810	48,564
Driers, resinate	11	gal.	145,294	137,641
Dyes (Diamond, Dyola, soap and straw hat)	15	–	–	306,913
Egg substitute	23	–	–	*
Electrodes	3	–	–	*
Embalming fluid	28	–	–	*
Enamels	11	gal.	442,160	1,482,899
Ether, nitrous, spirits of	10	–	–	*
Ethyl acetate	3	–	–	*
Explosives, including gun powder, nitrate mixtures, nitro-compounds, chlorate mixtures and mercury fulminate	5	–	–	6,279,436
Feeds, poultry and stock	9	lb.	2,442,000	75,430
Felts and sheathings, tarred	1	–	–	*
Fertilizers, complete	9	lb.	99,185,351	1,670,507
Fireworks, manufactured	7	–	–	143,652
Fish meal	20	tons	75	3,794
Fish scrap, acidulated	9	lb.	200,000	5,500
Flavouring extracts	10-23	–	–	677,211
Flour, malt	15	–	–	*
Formaldehyde	18	–	–	*
Fruits, crushed	23	gal.	2,650	9,275
Fusees, railway	6	–	–	*
Glue, mucilage and paste	11-15-16-17-20	–	–	1,156,641
Glycerine, crude	12	lb.	2,308,984	331,202
Glycerine, refined	12	lb.	4,598,093	1,091,299

Table 17.—Alphabetical List of Products Made in all the Industries Classified Under Chemicals and Allied Products, in Canada, 1927—Continued

(Includes Intermediate Products made for use)

Product	Industry number See page 37	Unit of measure	Quantity	Value
				$
Grease	20	lb.	1,056,133	63,368
Gums, dry, and paste powders	20	–	–	*
Hydrogen	4	cu. ft.	26,989,730	43,228
Hydrogen peroxide	10	–	–	46,881
Hydrogen sulphide	3	–	–	*
Ink powder and pellets	17	–	–	1,231
Inks, printing	11-16	lb.	6,544,532	1,813,977
Inks, writing	15-17	–	–	98,512
Inks, writing, and adhesives	17	–	–	150,038
Insecticides, including calcium arsenates, lead arsenate, sodium arsenate, Paris Green, lime-sulphur solution and other insecticides	2-11-27-28	–	–	645,018
Insulin	10	–	–	*
Iodine, resublimed	10	lb.	5,591	30,146
Iron oxide pigments	11	lb.	117,690	10,816
Iron, nitrated	27		–	*
Iron phosphide	3		–	*
Javelle water	12-13-25	–	–	293,160
Kalsomine	11	lb.	3,238,354	218,387
Lacquers, Japan	11	gal.	164,239	168,405
Lacquers, nitrocellulose	11	gal.	666,251	1,666,401
Lead, red	11			*
Lead, white, basic carbonate of, dry	11	lb.	7,871,941	766,242
Lead, white, basic carbonate of, in oil	11	lb.	14,441,899	1,833,356
Lead, white, and zinc white	11	lb.	119,491	21,269
Leather goods, artificial	21	–	–	*
Litharge	11	–	–	*
Lye	12-13-26	–	–	338,799
Matches	8	–	–	1,874,707
Medicines, patent, and proprietary preparations	10	–	–	6,990,127
Methyl hydrate, crude, 95%	18	imp. gal.	416,067	258,946
Methyl hydrate, pure	18	lb.	305,831	270,040
Milk, acidophilus	10	–	–	*
Milk sugar	10	–	–	*
Mops and parts	11-24	–	–	96,429
Mustard, prepared	23	gal.	789	1,148
Nickel salts	3	–	–	*
Nitrogen	3-4	–	–	*
Nitroglycerine	5	–	–	*
Oil, linseed, boiled	11	gal.	171,382	159,253
Oil, paint	11	gal.	15,043	12,786
Oil, sulphonated	11	–	–	*
Oils, creosote and other tar oils	1	imp. gal.	7,605,616	1,261,033
Oils, stand, blown or enamel	11	gal.	45,743	66,479
Oils, terpeneless	23	–	–	*
Oils, n.e.s.	2-24-27-28	–	–	294,818
Oxygen	4	cu. ft.	112,757,727	1,238,987
Paint, red oxide, dipping	11	gal.	5,281	6,574
Paint and varnish removers	11	gal.	48,827	85,410
Paints, asphaltic and tar	1-11	gal.	580,425	448,808
Paints, mixed, ready for use	11	gal.	3,229,755	8,759,987
Paints and enamels	16	–	–	91,727
Paints, cold water	11	lb.	1,009,472	125,386
Paints, paste	11	lb.	7,214,537	774,970
Paraldehyde	3	–	–	*
Pastes, lacquer	11	lb.	8,019	2,429
Perfumes	12-14	–	–	320,744
Pharmaceutical preparations	10	–	–	5,583,508
Phosphorus	3	–	–	*
Phosphorus, crude	3	–	–	*
Pitch	1	lb.	83,438,247	610,563
Poison, gopher	27-28	–	–	23,972
Poison, rat	24-27	–	–	14,701
Polish, car	24	–	–	31,057
Polish, furniture	23-24	–	–	255,612
Polish, harness	24	–	–	7,617
Polish, leather	13-24	–	–	9,127
Polish, metal	2-24	–	–	115,697
Polish, shoe	24	–	–	339,798
Polish, stove	24	–	–	200,042
Polish, n.e.s.	11-28	–	–	4,106
Potassium iodide	10	lb.	8,518	34,939
Powder, junket	28	–	–	*
Powder, custard	23	lb.	–	*

Table 17.—Alphabetical List of Products Made in all the Industries Classified under Chemicals and Allied Products, in Canada, 1927—Concluded

(Includes Intermediate Products made for use)

Product	Industry number See page 37	Unit of measure	Quantity	Value
				$
Powder, ice cream	23	–	–	*
Powder, jelly	23	–	–	761,940
Powder, orangeade and lemonade	23-28	–	–	1,601
Powder, whipping, and icing	23	–	–	*
Printers' rollers	10	–	–	245,283
Putty and other fillers	11	lb.	6,668,995	301,340
Pyroxlyin thinners	11	gal.	219,751	290,011
Rennett	28	–	–	*
Resin, prepared	11	lb.	88,258	7,168
Ribbons, inked	17	–	–	10,137
Roofing preparations	1	–	–	12,000
Rubber goods	21	–	–	*
Rubber solution	10	–	–	*
Satin white	3	lb.	–	*
Shellac	11	gal.	177,128	546,051
Silver nitrate	10	lb.	4,859	32,886
Size	11-20	–	–	302,353
Soap, all other hard	12-13-14-26-28	lb.	3,044,284	285,330
Soap, laundry and soap chips	12-13	lb.	56,262,911	4,362,605
Soap, harness	24	–	–	2,935
Soap, linseed oil	24	–	–	4,104
Soap, liquid	2-12-13-14	–	–	85,641
Soap, oil	11	lb.	88,000	5,280
Soap, polishing or scouring	12-13	lb.	397,115	26,068
Soap powder	12-13-14-20	lb.	5,255,277	307,509
Soap, soft	2-12-13	lb.	1,408,001	76,266
Soap, household	12	lb.	47,508,013	3,509,507
Soap, textile	12	lb.	1,656,699	126,055
Soap, toilet	12-14	lb.	19,371,556	3,277,101
Sodium bisulphate (nitre cake)	3	–	–	*
Sodium carbonate (sal soda)	20-27	–	–	*
Sodium carbonate (soda ash)	3	–	–	
Sodium cyanide	3	–	–	
Sodium hydroxide (caustic soda)	3	–	–	*
Sodium hypochlorite	3	–	–	*
Sodium bisulphite, liquid	28	–	–	*
Sodium sulphate (glauber's salt)	3	–	–	*
Sodium sulphate (salt cake)	3	–	–	*
Softeners, water	28	lb.	167,753	20,354
Stains	11-16	gal.	406,154	688,250
Starch, corn	26	–	–	*
Stearine	28	–	–	*
Superphosphate	9	–	–	*
Sweeping compounds	11-12-24-25-27-28	–	–	99,661
Syrups	23	gal.	4,900	7,350
Tallow, refined	12-14	–	–	*
Tankage	9-20	lb.	3,714,050	58,394
Tar, refined and road tar, tarvia, tarco, etc	1	imp. gal.	7,638,432	1,022,976
Toilet preparations, other, including hair tonics, facial creams, etc	10-12-13-14-23	–	–	4,380,165
Tooth paste	10-12-14	–	–	1,049,658
Turpentine	19	–	–	*
Vaccines, serums, etc	10	–	–	*
Varnishes, oil	11-16-24	gal.	2,572,954	4,334,196
Washing compounds	12-13-24-26-28	–	–	140,106
Wax, floor, and polishes	2-11-24	–	–	440,779
Wax, sealing	20	–	–	*
Welding compounds	28	–	–	*
Wines, medicated	10	–	–	62,959
Yeast	26	–	–	*
Yeast food	26	–	–	*
Zinc	11	–	–	*
Zinc carbonate	3	–	–	*
Zinc dust	11	–	–	*
Zinc oxide	11	–	–	*
Repairs and custom work	1-6-16-20-27	–	–	61,100
All other products	All industries	–	–	3,273,918
***Products reported by only 1 or 2 firms**	All industries	–	–	[redacted]
Total				127,484,672

32,463,153

KEY TO THE NUMBERED INDUSTRIES

Group.	Industry numbers.	Classification.
I		Coal Tar and its Products—
	1.	Coal Tar Distillation.
	2.	Disinfectants.
II		Acids, Alkalies, Salts and Compressed Gases—
	3.	Acids, Alkalies and Salts.
	4.	Compressed Gases.
III		Explosives, Ammunition, Fireworks and Matches—
	5.	Explosives.
	6.	Ammunition.
	7.	Fireworks.
	8.	Matches.
IV	9.	Fertilizers.
V	10.	Medicinal and Pharmaceutical Preparations.
VI	11.	Paints, Pigments and Varnishes.
VII		Soaps, Washing Compounds and Toilet Preparations—
	12.	Soaps.
	13.	Washing Compounds.
	14.	Toilet Preparations.
VIII		Inks, Dyes and Colours—
	15.	Dyes and Colours.
	16.	Printing Ink.
	17.	Writing Ink.
IX		Wood Distillates and Extracts—
	18.	Wood Distillates.
	19.	Wood Extracts.
X		Miscellaneous Chemical Products—
	20.	Adhesives.
	21.	Celluloid Products.
	22.	Boiler Compounds.
	23.	Flavouring Extracts.
	24.	Polishes and Dressings.
	25.	Sweeping Compounds.
	26.	Baking Powder.
	27.	Insecticides.
	28.	Chemical Products, not elsewhere specified.

Table 18.—Imports into Canada and Exports of Chemicals and Allied Products, Calendar Years, 1926 and 1927

—	Unit of measure	Imports				Exports			
		1926		1927		1926		1927	
		Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
(a) **By Commodities**			$		$		$		$
INORGANIC ACIDS									
Acid boracic, in packages not less than 25 pounds	lb.	680,008	59,221	606,741	49,874	-	-	-	-
Acid, hydrofluosilicic	lb.	3,971	565	10,859	811	-	-	-	-
Acid, muriatic	lb.	335,554	9,932	321,682	7,446	-	-	-	-
Acid, nitric	lb.	315,792	26,275	171,821	17,919	-	-	-	-
Acid, sulphuric	lb.	106,967	9,245	105,546	8,548	56,273,100	320,324	34,814,200	191,926
ORGANIC ACIDS									
Acid, acetic and pyroligneous	gal.	3,839	4,166	2,837	3,765	cwt. 221,770	2,089,339	277,531	2,860,393
Acid, citric	lb.	235,374	68,762	219,254	72,205	-	-	-	-
Acid, cresylic	lb.	53,416	4,011	184,797	12,860	-	-	-	-
Acid, oxalic	lb.	240,243	13,476	236,791	14,879	-	-	-	-
Acid, stearic, when imported by manufacturers of candles for use only in their own factories in the manufacture of candles	lb.	162,482	20,348	517,224	51,521	-	-	-	-
Acid, stearic, n.o.p.	lb.	869,736	113,088	1,064,354	99,233	-	-	-	-
Acid, tannic	lb.	44,753	21,204	57,746	27,344	-	-	-	-
Tartaric acid, crystals	lb.	536,496	124,244	523,799	136,830	-	-	-	-
Acids, others, n.o.p.	lb.	1,689,245	183,436	1,587,764	197,972	1,691,800	11,694	308,400	9,805
Total acids	.....	-	654,973	-	701,207	-	2,421,357	-	3,062,124
ALCOHOL INDUSTRIAL									
Amyl alcohol or fusel oil	gal.	686	1,913	1,808	4,090	-	-	-	-
Ethyl, alcohol	gal.	2,715	16,949	63	203	-	-	-	-
Methyl alcohol	gal.	56	189	58	231	37,196	33,835	47,026	49,083
Rum, when imported by the Department of National Revenue, or by a person licensed by the Minister of National Revenue to be denatured for use in the arts and industries	gal.	3,621	11,995	3,316	11,261	-	-	-	-
Other non-potable spirits, n.o.p.	gal.	-	-	-	-	44,613	176,468	16,548	15,321
Total alcohols, industrial	gal.	7,078	25,046	5,245	15,785	81,809	210,303	63,574	64,404
CELLULOSE PRODUCTS									
Celluloid, xylonite, xylolite or manufactures of	-	-	2,138,904	-	2,458,696	-	-	-	-
Collodin for use in films for photo-engravings and for engraving copper rollers, when imported by photo-engravers and manufacturers of copper rollers	gal.	1,691	4,175	1,817	4,636	-	-	-	-
Pyroxylin and wood naphtha preparations of, for coating imitation leather and for the manufacture of leather belting	-	-	80,041	-	39,436	-	-	-	-
Total cellulose products	-	-	2,223,120	-	2,502,768	-	-	-	-
DRUGS, MEDICINAL AND PHARMACEUTICAL PREPARATIONS									
Alkaloids and their salts—									
Caffeine and salts of	lb.	10,287	23,596	14,907	23,127	-	-	-	-
Cocaine	oz.	2,300	11,261	2,384	9,139	-	-	-	-
Codeine and salts of	oz.	10,968	37,814	9,330	28,003	-	-	-	-
Morphine	oz.	9,397	31,686	6,398	19,945	-	-	-	-
Nicotine sulphate	lb.	40,910	45,024	52,112	58,334	-	-	-	-
Opium, crude	lb.	810	6,517	1,105	8,660	-	-	-	-
Opium, powdered	lb.	268	1,807	271	2,089	-	-	-	-
Quinine, salts of	oz.	120,694	62,724	134,423	57,659	-	-	-	-
Strychnine and salts of	oz.	10,506	26,486	115,638	36,398	-	-	-	-
Other medicinal and pharmaceutical preparations	-	-	2,853,996	-	2,663,912	-	567,953	-	487,904
Total drugs, medicinal and pharmaceutical preparations	-	-	3,100,911	-	2,907,266	-	567,953	-	487,904

Table 18.—Imports into Canada and Exports of Chemicals and Allied Products, Calendar Years, 1926 and 1927—Continued

—	Unit of measure	Imports				Exports			
		1926		1927		1926		1927	
		Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
			$		$		$		$
(a) By Commodities— Continued									
DYEING AND TANNING MATERIALS									
Coal tar products—									
Aniline and coal-tar dyes soluble in water in bulk or packages of not less than 1 pound weight including alizarine and artificial alizarine.....	lb.	2,807,663	1,781,180	2,917,831	1,687,365	-	-	-	-
Aniline and coal-tar dyes n.o.p.....	lb.	21,788	11,091	14,358	5,793	-	-	-	-
Aniline oil, crude.....	lb.	213,338	33,687	127,952	18,487	-	-	-	-
Aniline salts.....	lb.	1,640	366	9,221	1,836	-	-	-	-
Coal tar base or salt for use in the manufacture of coal tar dyes.....	lb.	427,885	90,915	314,390	81,131	-	-	-	-
Other dyeing and tanning materials—									
Annatto, liquid or solid.	lb.	60,701	11,996	44,620	8,260	-	-	-	-
Camwood and sumac and extract thereof....	lb.	304,738	15,574	344,531	15,054	-	-	-	-
Extract of hemlock bark	-	-	-	-	-	-	1,342	-	1,721
Chemical compounds composed of two or more acids or salts soluble in water adapted for dyeing or tanning..	lb.	1,688,648	169,683	2,568,662	244,560	-	-	-	-
Indigo paste and extract of.....	lb.	119,524	12,701	98,454	10,592	-	-	-	-
Iron liquor, being solution of acetate or nitrate of iron adapted for dyeing and calico printing.....	lb.	68,911	3,303	75,679	1,676	-	-	-	-
Logwood and fustic ground and ground oak bark.....	lb.	31,357	3,097	62,965	6,315	-	-	-	-
Logwood and fustic, extract of.....	lb.	497,286	46,916	624,574	52,219	-	-	-	-
Oak bark and quebracho, and similar extracts, n.o.p.....	lb.	36,838,676	1,315,570	40,908,729	1,607,712	-	-	-	-
Red liquor being a crude acetate of aluminium prepared from pyroligneous acid and adapted for dyeing and calico printing.....	lb.	48,629	1,020	-	-	-	-	-	-
Terra japonica gambier or cutch.....	lb.	424,255	32,983	399,452	29,913	-	-	-	-
Turmeric.....	lb.	65,948	5,608	77,503	4,910	-	-	-	-
All other dying and tanning materials.....	lb.	3,291,761	118,468	3,187,470	110,340	-	-	-	-
Total dyeing and tanning materials.....	lb.	46,892,748	3,654,158	51,776,391	3,886,163	-	1,342	-	1,721
EXPLOSIVES									
Binitrotoluol, trinitrotoluol and perchlorate of ammonia when imported by manufacturers of explosives for use exclusively in the manufacture of such articles in their own factories	lb.	430,841	40,751	418,552	38,578	-	-	-	-
Nitrate compounds, n.o.p. adjusted for use in the manufacture of explosives.....	lb.	70,741	6,670	474,215	63,130	-	-	-	-
Blasting and mining powder.....	lb.	540	76	101,175	7,034	-	-	-	-
Dynamite.....	-	-	-	-	-	-	92,036	-	122,137
Dynamite and nitroglycerine.....	lb.	111,568	13,358	10,820	4,069	-	-	-	-

Table 18.—Imports into Canada and Exports of Chemicals and Allied Products, Calendar Years, 1926 and 1927—Continued

—	Unit of measure	Imports				Exports			
		1926		1927		1926		1927	
		Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
			$		$		$		$
(a) By Commodities—Continued									
EXPLOSIVES—*Con.*									
Explosive and fulminates, n.o.p.	–	–	–	–	–	–	21,379	–	57,601
Fireworks, firecrackers, and torpedoes, all kinds	–	–	56,277	–	71,508	–	–	–	–
Fuses, non-metallic	–	–	319	–	893	–	–	–	–
Gun, rifle, sporting, cannon, musket and canister powder	lb.	95,529	65,215	83,639	62,928	–	–	–	–
Giant powder, nitro and other explosives, n.o.p.	lb.	556,657	232,873	1,226,480	315,757	–	–	–	–
Total explosives	.....	–	415,539	–	563,897	–	113,415	–	179,738
FERTILIZERS									
Ammonia, sulphate of	cwt.	45,974	135,455	63,611	160,150	327,644	813,115	338,935	730,815
Basic slag, crushed or ground	cwt.	114,425	74,820	129,428	82,395	–	–	–	–
Cyanamide or lime nitrogen	cwt.	1,562	3,961	15	150	1,658,687	3,823,628	2,217,349	4,623,461
Kainite and other crude German potash salts	cwt.	122	83	8,631	11,283	–	–	–	–
Potash, muriate of, crude	cwt.	296,650	432,537	373,469	627,997	–	–	–	–
Potash, sulphate of, crude	cwt.	17,167	36,395	15,483	36,018	–	–	–	–
Soda, nitrate of, or cubic nitre	cwt.	577,353	1,417,710	533,668	1,252,730	–	–	–	–
Fertilizers, superphosphate or acid phosphate of lime	cwt.	1,538,373	925,515	1,731,777	979,261	–	–	–	–
Fertilizers, compounded or manufactured, n.o.p.	cwt.	560,633	666,204	839,255	988,069	21,812	27,573	21,484	25,306
Total fertilizers	cwt.	3,152,259	3,692,680	3,695,337	4,138,053	–	4,664,316	–	5,379,582
PAINTS, PIGMENTS AND VARNISHES									
Chemical pigments, lead—									
Litharge	cwt.	22,296	223,839	30,150	245,630	–	–	–	–
Lead, red dry, and orange mineral	lb.	1,158,873	112,915	1,844,288	125,358	–	–	–	–
Lead, white dry	lb.	60,606	5,539	338,399	24,879	343,200	36,063	92,900	8,650
Lead, white, ground in oil	lb.	73,468	7,539	360,301	28,252	–	–	–	–
Other chemical pigments—									
Black, carbon	lb.	5,825,935	431,864	9,599,189	637,954	–	–	–	–
Blacks, lamp, bone, ivory and carbon	lb.	1,388,712	127,751	1,841,591	135,352	–	–	–	–
Blanc fixe	lb.	854,248	22,645	1,022,084	28,053	–	–	–	–
Brocade and bronze powders	lb.	68,749	54,500	124,127	62,780	–	–	–	–
Colours metallic, viz.: oxide of cobalt tin and copper, n.o.p.	lb.	292,030	151,416	237,787	147,236	–	–	–	–
Lithopone	lb.	12,590,820	520,249	15,804,451	644,175	–	–	–	–
Oxide, fire proofs, rough stuffs, fillers and colours dry, n.o.p.	lb.	6,108,469	560,116	671,100	632,470	–	–	–	–
Paris green, dry	lb.	26,721	5,136	80,859	15,308	–	–	–	–
Satin white	lb.	2,110,692	29,714	2,088,760	29,528	–	–	–	–
Ultramarine blue, dry or in pulp	lb.	431,629	60,953	468,123	61,216	–	–	–	–
Zinc white	lb.	13,278,306	943,724	16,665,713	1,113,573	–	–	–	–
Mineral earth pigments—									
Mineral pigments, iron oxides, ochres, etc.	cwt.	–	–	–	–	16,156	34,259	17,031	34,800
Ochres, ochrey earths, siennas and umbers	lb.	5,897,042	97,405	5,308,859	90,614	–	–	–	–
Putty	lb.	947,644	24,604	1,526,218	36,437	118,100	4,459	65,400	2,443
Other paints and varnishes	–	–	998,089	–	905,653	18,633	427,402	15,690	382,655
Total paints, pigments and varnishes	–	–	4,377,998	–	4,964,468	–	502,183	–	428,548

Table 18.—Imports into Canada and Exports of Chemicals and Allied Products, Calendar Years, 1926 and 1927—Continued

—	Unit of measure	Imports				Exports			
		1926		1927		1926		1927	
		Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
			$		$		$		$
(a) **By Commodities**—Continued									
PERFUMERY, COSMETICS AND TOILET PREPARATIONS									
Alcoholic perfumes and perfumed spirits, bay rum, Cologne and lavender waters, hair, tooth and skin washes	–	–	185,055	–	217,684	–	–	–	–
Pomades, French or flower odours, etc., imported in tins of not less than 10 pounds each	lb.	180	339	162	396	–	–	–	–
Hair oil, tooth and other powders and washes, pomatums, pastes and all other perfumed preparations, n.o.p., used for the hair, mouth or skin	–	–	858,871	–	1,073,732	–	–	–	–
Total perfumery, cosmetics and toilet preparations	–	–	1,044,265	–	1,291,812	–	–	–	–
SOAPS									
Castile soap	lb.	1,343,834	109,270	1,176,528	96,772	–	–	–	–
Common laundry soap	lb.	9,611,191	679,703	9,875,487	718,906	–	–	–	–
Harness soap	lb.	5,084	1,129	3,486	729	–	–	–	–
Liquid soap	lb.	145,117	14,328	233,227	26,640	–	–	–	–
Soap, n.o.p.	lb.	–	–	–	–	452,474	41,747	493,077	40,258
Soap powders and powdered soap	lb.	532,017	38,952	342,448	27,540	–	–	–	–
Soap, toilet, n.o.p.	lb.	–	272,038	–	256,494	3,975,521	741,514	5,283,306	811,000
Soap, whale oil	lb.	8,144	548	21,138	1,213	–	–	–	–
Soap, n.o.p., including pumice, silver and mineral soaps, sapolio and like articles	–	–	83,925	–	60,746	–	–	–	–
Total soaps	–	–	1,199,893	–	1,189,040	–	783,261	–	851,258
INORGANIC CHEMICALS, N.O.P.									
Alum and compounds of aluminium and iron—									
Alum in bulk, ground or unground but not calcined	cwt.	67,395	84,072	23,892	36,650				
Chloralum and chloride of aluminium	cwt.	3,380	5,689	16,168	15,393	–	–	–	–
Sulphate of iron (copperas)	cwt.	12,397	11,842	9,530	12,597	–	–	–	–
Sulphate of alumina or alum cake	cwt.	418,878	482,811	416,490	473,366	–	–	–	–
Ammonia and its compounds—									
Ammonia, nitrate of	lb.	4,740,467	209,066	5,525,794	247,069	–	–	–	–
Sal ammoniac and sal ammoniac skimmings	lb.	2,417,963	125,264	3,584,274	150,878	–	–	–	–
Antimony, arsenic, copper, tin and zinc compounds—									
Antimony salts, viz.: tartar emetic, chloride and lactate (antimonine)	lb.	31,056	6,697	37,975	8,233	–	–	–	–
Arsenic, sulphide of	lb.	68,829	3,136	16,245	1,593	–	–	–	–
Arsenic	cwt.	–	–	–	–	33,430	108,120	38,566	124,823
Arsenious oxide	lb.	144,031	5,604	286,377	11,833	–	–	–	–
Copper, sub-acetate of, or verdigis dry	lb.	31,755	2,260	3,389	688	–	–	–	–
Copper sulphate of (blue vitriol)	lb.	3,385,239	158,992	4,110,695	198,553	–	–	–	–
Copper, sulphate of, dehydrated for agricultural or spraying purposes	lb.	224,708	11,778	586,426	29,696	–	–	–	–

Table 18.—Imports into Canada and Exports of Chemicals and Allied Products, Calendar Years, 1926 and 1927—Continued

—	Unit of measure	Imports				Exports			
		1926		1927		1926		1927	
		Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
			$		$		$		$
(a) **By Commodities**—Continued									
INORGANIC CHEMICALS, N.O.P.—*Con.*									
Antimony, etc.—*Con.*									
Tin, bichloride of, or tin crystals	lb.	223,913	76,081	415,705	147,323	-	-	-	-
Zinc, sulphate and chloride of	lb.	1,655,245	73,721	2,032,015	86,149	-	-	-	-
Bismuth and lead compounds—									
Bismuth salts	-	-	42,873	-	49,923	-	-	-	-
Lead, acetate of, not ground	lb.	77,133	7,963	116,324	10,316	-	-	-	-
Lead, nitrate of, not ground	lb.	62,913	5,529	220,720	17,902	-	-	-	-
Bromine, chlorine and iodine compounds—									
Bromine	lb.	8,340	2,501	397	328	-	-	-	-
Chlorine, liquid	lb.	11,889,520	372,623	9,047,961	290,919	-	-	-	-
Iodine, crude	lb.	13,613	50,281	12,721	47,903	-	-	-	-
Calcium compounds—									
Calcium acetate or acetate of lime	lb.	136	4	-	-	5,531,700	161,150	7,072,500	232,630
Calcium chloride	lb.	10,452,054	120,905	18,838,411	215,087	-	-	-	-
Calcium carbide	cwt.	-	-	-	-	445,861	1,717,780	268,376	913,498
Chloride of lime and hypochlorite of lime in packages	lb.	16,148,529	278,651	16,082,908	254,222	-	-	-	-
Potash and potassium compounds, n.o.p.—									
Cream of tartar in crystals or argols	lb.	927,350	140,957	831,547	144,765	-	-	-	-
Potash, and pearl ash in packages	lb.	220,961	12,587	102,783	6,490	-	-	-	-
Potash, bicarbonate of	lb.	10,628	981	2,100	307	-	-	-	-
Potash, bichromate of	lb.	145,379	10,764	191,798	15,127	-	-	-	-
Potash, caustic in packages	lb.	409,716	43,178	562,053	41,767	-	-	-	-
Potash, chlorate of not further prepared or ground	lb.	1,309,240	79,172	1,950,874	123,904	-	-	-	-
Potash, red and yellow prussiate of	lb.	27,677	5,433	19,758	3,500	-	-	-	-
Saltpetre or nitrate of potash	lb.	1,646,546	79,813	1,253,430	58,785	-	-	-	-
Potash compounds, n.o.p.	lb.	1,055,060	146,787	769,480	164,412	-	-	-	-
Potash, crude	cwt.	-	-	-	-	740	4,255	7,750	15,954
Soda and sodium compounds, n.o.p.	cwt.	-	-	-	-	572,934	3,420,841	732,026	3,889,640
Baking powder	lb.	30,051	7,746	65,020	20,530	413,800	105,460	344,300	85,250
Borax in bulk of not less than 25 pounds	lb.	2,990,081	139,959	2,556,494	99,547	-	-	-	-
Salts, glauber	lb.	1,465,442	10,069	575,899	5,276	-	-	-	-
Soda, arseniate, binarsemate and stannate of	lb.	15,357	3,151	25,148	4,024	-	-	-	-
Soda ash or barilla	lb.	1,670,947	27,764	1,971,436	30,905	-	-	-	-
Soda, bicarbonate of	lb.	10,253,745	180,903	10,592,048	177,913	-	-	-	-
Soda, bichromate of	lb.	1,785,479	109,514	2,060,560	121,209	-	-	-	-
Soda, bisulphate of, or nitre cake	lb.	31,896,632	53,536	26,286,952	50,698	-	-	-	-
Soda, bisulphate of	lb.	813,843	24,661	1,126,323	34,269	-	-	-	-
Soda, caustic in packages or in solution	lb.	10,107,398	325,511	10,676,283	321,640	-	-	-	-
Soda, chlorate of	lb.	233,112	16,806	544,150	41,838	-	-	-	-
Soda, hyposulphite	lb.	1,048,354	22,185	1,269,684	27,543	-	-	-	-
Soda, nitrite of	lb.	237,013	7,781	435,685	13,443	-	-	-	-
Soda, peroxide of	lb.	215,057	60,762	226,347	53,348	-	-	-	-
Soda, prussiate of	lb.	406,147	33,264	408,985	39,050	-	-	-	-
Soda, sulphite of	lb.	376,869	16,128	430,387	19,948	-	-	-	-
Soda, cyanide of	lb.	1,991,692	310,609	1,835,511	284,540	-	-	-	-
Soda, sal	lb.	10,602,053	130,144	10,196,212	120,761	-	-	-	-
Soda, silicate of, in crystals or in solution	lb.	43,761,697	297,363	51,704,105	340,768	-	-	-	-
Soda, sulphate of, crude known as salt cake	lb.	83,890,720	644,696	84,666,739	686,458	-	-	-	-
Soda, sulphide of	lb.	2,931,929	65,948	3,380,730	77,361	-	-	-	-
Sodium compounds, n.o.p.	lb.	14,033,117	617,412	13,803,267	621,856	-	-	-	-

Table 18.—Imports into Canada and Exports of Chemicals and Allied Products, Calendar Years, 1926 and 1927—Continued

—	Unit of measure	Imports				Exports			
		1926		1927		1926		1927	
		Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
			$		$		$		$
(a) **By Commodities—** Concluded									
INORGANIC CHEMICALS, N.O.P.—*Con.*									
Other inorganic chemicals—									
Acid phosphate not medicinal	lb.	3,998,031	255,020	3,113,540	228,433	–	–	–	–
Barium, peroxide of	lb.	22,930	2,311	70,217	3,195	–	–	–	–
Carbon dioxide or carbonic acid gas	–	–	3,411	–	3,715	–	–	–	–
Cobalt oxide and cobalt salts	lb.	–	–	–	–	293,369	494,678	379,136	668,788
Hydrogen peroxide, solutions of	–	–	83,235	–	52,434	–	–	–	–
Lye	–	–	–	–	–	–	9,021	–	8,096
Magnesia (magnesium oxide)	lb.	266,910	20,646	293,333	19,151	–	–	–	–
Magnesium sulphate or Epsom salts	lb.	4,262,490	39,016	4,807,279	39,199	–	–	–	–
Mercury salts	–	–	15,672	–	25,467	–	–	–	–
Phosphorus	lb.	87,027	38,135	88,373	34,618	–	–	–	–
Radium	–	–	38,800	–	20,078	–	–	–	–
Total inorganic chemicals, n.o.p.	–	–	6,260,173	–	6,484,880	–	6,021,305	–	5,938,679
OTHER DRUGS, DYES AND CHEMICALS, N.O.P.									
Acetone and amyl acetate	–	–	13,011	–	57,979	–	–	–	–
Blacking, shoe, and shoemakers' ink, shoe, harness and leather dressing, n.o.p.	–	–	301,046	–	344,699	–	–	–	–
Blueing, laundry	–	–	25,041	–	24,945	–	–	–	–
Camphor	lb.	86,893	60,283	85,652	54,877	–	–	–	–
Carbon bisulphide	lb.	821,561	43,339	997,580	52,199	–	–	–	–
Carbon tetrachloride	–	–	24,925	–	38,189	–	–	–	–
Chloroform	lb.	–	28,879	86,532	30,740	–	–	–	–
Creosote oil	gal.	–	–	–	–	1,773,268	302,976	3,472,566	588,663
Cyanide of potassium and cyanogen bromide	lb.	15,732	4,239	7,545	2,537	–	–	–	–
Ethylene glycol when for use in Canadian manufactures	lb.	–	–	1,161,442	248,017	–	–	–	–
Formaldehyde	–	–	416	–	220	–	–	–	–
Glycerine	lb.	4,351,879	887,893	2,129,761	448,437	622,900	104,758	936,200	136,237
Ink, printing	lb.	–	243,490	1,238,584	283,270	–	–	–	–
Ink, writing	–	–	41,527	–	41,621	–	–	–	–
Naphthalene, refined flakes and balls	lb.	445,101	12,119	496,473	16,126	–	–	–	–
Polish or composition, knife and other, n.o.p.	–	–	353,200	–	275,979	–	–	–	–
Sulphuric ether	lb.	202,533	61,070	213,908	56,665	–	–	–	–
Vanillin	lb.	–	–	18,133	54,351	–	–	–	–
All other drugs, dyes, chemicals, n.o.p. (including nitrous ether, sweet spirits of nitre and aromatic spirits of ammonia)	–	–	2,608,550	–	2,637,332	–	794,353	–	736,057
Total other drugs, dyes and chemicals, n.o.p.	–	–	4,709,628	–	4,668,155	–	1,202,087	–	1,460,957
Total chemicals and allied products	–	–	**31,358,384**	–	**33,313,500**	–	**16,487,532**	–	**17,854,915**

Table 18.—Imports into Canada and Exports of Chemicals and Allied Products, Calendar Years, 1926 and 1927—Continued

—	Imports		Exports	
	1926	1927	1926	1927
	$	$	$	$
(b) By Countries				
BRITISH EMPIRE				
United Kingdom	5,022,229	4,347,931	3,256,795	3,926,063
Northern Ireland	404	–	2,797	–
Irish Free State	729	365	11,815	23,577
Africa, British, East	–	–	741	398
Africa, British, South	–	–	40,549	19,813
Africa, British, West	–	–	3,008	6,536
Bermuda	–	–	18,001	20,841
British East Indies—				
British India	9,877	5,533	61,157	75,554
Ceylon	–	–	2,734	4,284
Straits Settlements	2,085	2,193	7,730	1,188
Other	1,232	2,097	–	–
British Guiana	17	–	115,046	44,369
British Honduras	–	–	6,017	7,794
British West Indies—				
Barbados	7	–	99,923	61,249
Jamaica	6,468	6,997	54,613	63,565
Trinidad and Tobago	–	–	61,410	69,447
Other	933	775	31,528	50,454
Gibraltar	–	–	–	–
Hong Kong	78,357	80,024	10,259	131,461
Iraq (Mesopotamia)	–	–	–	68
Malta	–	–	4	–
Newfoundland	173	2,837	439,062	477,751
Oceania—				
Australia	2,175	1,071	191,616	195,868
Fiji	–	–	149	207
New Zealand	195	80	163,706	121,400
Other Oceania	–	–	715	–
Total British Empire	5,124,881	4,449,903	4,579,375	5,301,887
FOREIGN COUNTRIES				
Argentina	395,133	436,628	4,288	16,063
Austria	2,647	14,111	–	–
Belgium	287,612	338,667	48,382	135,442
Bolivia	–	–	7,070	173
Brazil	500	–	5,477	1,101
Chile	725,097	473,154	88,091	41,115
China	26,409	19,176	217,245	89,155
Colombia	–	–	8,010	11,800
Costa Rica	–	–	11,782	7,892
Cuba	31	–	349,485	260,774
Czecho-Slovakia	3,424	5,550	–	–
Denmark	370	3,368	140	100
Ecuador	–	–	3,387	30
Egypt	–	–	462	50
Finland	12,880	13,335	–	–
France	1,016,606	1,162,758	55,963	11,185
French Africa	–	59	–	–
French West Indies	–	–	12,513	21,512
St. Pierre and Miquelon	–	7	4,072	8,854
Germany	2,432,737	3,063,050	5,982	19,421
Guatemala	–	–	4,227	1,477
Hayti	–	–	217	296
Honduras	–	–	34,953	43,863
Hungary	–	140	–	–
Italy	97,193	82,072	9	–
Japan	106,380	92,307	519,779	595,500
Korea	–	–	4,410	16,390
Jugo-Slavia	1,577	–	–	–
Mexico	–	–	1,502,164	1,676,417
Morocco	–	–	–	–
Netherlands	571,050	632,614	20,275	1,440
Dutch East Indies	1,190	730	41,573	33,727
Dutch Guiana	–	–	433	635
Dutch West Indies	–	–	600	1,532
Nicaragua	–	–	3,840	4,158
Norway	81,587	92,032	–	22
Panama	211	–	4,748	5,027
Paraguay	7,829	65,718	–	–
Peru	–	–	64,532	12,193
Portugal	–	–	–	144
Portuguese Africa	–	–	382,913	481,012
Roumania	–	–	40	–
Russia	–	–	–	–
Salvador	–	–	7,361	13,080
San Domingo	–	–	14,953	13,067

Table 18.—Imports into Canada and Exports of Chemicals and Allied Products, Calendar Years, 1926 and 1927—Concluded

—	Imports		Exports	
	1926	1927	1926	1927
	$	$	$	$
(b) By Countries—Concluded				
FOREIGN COUNTRIES—Concluded				
Siam	–	–	–	–
Spain	9,228	2,797	25,816	38,220
Canary Islands	–	–	17	–
Sweden	3,466	49,844	54	–
Switzerland	267,628	264,741	4	102
Syria	–	14	–	–
Turkey	17,476	26,273	–	–
United States	20,165,200	22,022,946	8,353,734	8,834,844
Alaska	17	108	87	553
American Virgin Islands	25	–	157	–
Hawaii	–	–	773	26
Philippine Islands	–	–	2,762	1,350
Porto Rico	–	–	51,534	72,904
Uruguay	–	–	4,978	9,364
Venezuela	–	1,096	38,795	72,901
Other foreign countries	–	302	–	127
Total	**31,358,384**	**33,313,500**	**16,487,522**	**17,854,915**

Table 19.—Index Numbers of Prices for Chemicals and Allied Products in Canada, 1923-1927

(Average prices in 1913 = 100)

Item	1923	1924	1925	1926	1927
CHEMICALS AND ALLIED PRODUCTS—					
Coal tar	220·3	225·3	229·2	237·5	237·5
Coal tar, crude	220·3	225·3	229·2	237·5	237·5
Sulphuric acid	180·8	180·0	173·1	173·1	147·5
Sulphuric acid, 66°	180·8	180·0	173·1	173·1	147·5
Paints, pigments and varnishes	191·2	194·3	196·6	175·9	166·8
White lead, ground, in barrels	175·2	179·2	191·0	169·9	161·8
Putty, pure linseed oil	191·4	189·5	185·5	163·1	142·1
Shellac, pure orange	321·2	321·2	250·8	234·6	227·3
Soap	157·9	152·7	140·3	140·3	140·3
Soap, common laundry	157·9	152·7	140·3	140·3	140·3
Miscellaneous inorganic chemicals	158·6	154·1	153·4	154·9	153·5
Alum, lump	199·4	176·1	167·7	163·5	163·5
Calcium carbide	132·6	130·8	130·8	133·6	133·8
Bleaching powder	180·1	182·4	195·1	195·1	195·1
Soda ash, 58% light	292·0	278·7	272·0	269·1	256·0
Caustic soda, 76-78% solid	191·7	180·6	180·6	180·6	177·9
Other chemicals	116·0	111·0	114·9	131·2	122·6
Glycerine, refined	99·8	101·5	107·9	135·4	120·8
Wood alcohol, 97%	139·9	125·2	125·2	125·2	125·2
Average	**164·8**	**161·8**	**157·1**	**157·8**	**153·8**

CHAPTER TWO

COAL TAR PRODUCTS

Output from the coal tar products industry in Canada during 1927 was valued at $3,796,715, the highest figure yet attained for the industry and 23 per cent over the output of $3,088,053 reported for 1926. The group included 17 establishments of which 9 were coal tar distillation plants, 7 manufactured disinfectants, as a major product and 1 made a roofing preparation from crude coal tar. Capital employed by these concerns was given at $4,298,391, an increase of 4 per cent over 1926; the number of employees rose to 222 from 183; materials used in manufacturing cost $2,358,228 at the plant as against $1,859,879 and the value added by manufacturing, or the net value of products, advanced to $1,438,487 from $1,228,174 in the previous year.

Coal Tar Distillation.—Nine coal tar distillation plants and 1 concern which made roofing preparation were included in this group in 1927; the latter plant did not report last year but, otherwise, the operating plants were the same as in 1926. The Dominion Tar and Chemical Company, Limited, operated distilleries at Sydney, N.S.; Ville la Salle, P.Q.; Toronto, Ont.; and Sault Ste. Marie, Ont.: the Barrett Company, Limited, had operating units at Montreal P.Q.; Toronto, Ont.; Winnipeg, Man.; and Vancouver, B.C.; and the Hamilton Tar Products Company, Limited, worked a plant at Hamilton, Ont. The Consolidated Products Limited, at Montreal, P.Q., used coal tar in manufacturing a roofing preparation on a small scale.

These concerns used material which cost $2,286,134 including 23,001,984 gallons of crude coal tar and 1,231,144 gallons of water gas and oil tars as well as quantities of dry felts and sheathings, pitch, etc., to make 7,695,616 gallons of creosote oils, 83,438,247 pounds of pitch, 7,638,432 gallons of refined tars and other products to bring the total value of the output for the year to $3,616,532 as compared with $2,967,281 in 1926. Capital employed, of which 50 per cent represented the value of lands, buildings and equipment, was also higher at $4,115,151 as against $4,004,311, and the number of employees was 179 as compared with 152 in the previous year.

Disinfectants.—In 1927, disinfectant preparations were the major product of 7 different plants of which 5 were located in Ontario and 2 were in Quebec. One new name was added to the list of manufacturers in this line of work in 1927. Representing a capital investment of $183,240, these concerns gave work to 24 salaried workers and 19 wage-earners throughout the year and used materials such as creosote oils, petroleum oils, vegetable oils, paradichlorobenzol, caustic soda, etc., worth $72,094 in the manufacture of disinfectants and similar products valued at $180,183.

There was also a production of disinfectants valued at $38,996 as a minor product of factories classified to other chemical industries; the total output is shown in Table 17.

Table 20.—Principal Statistics of the Coal Tar Products Industry in Canada, by Provinces, 1926 and 1927

Province	Number of plants	Capital employed	Number of employees	Salaries and wages	Cost of fuel and electricity	Cost of materials	Selling value of products	Value added by manufacturing
		$		$	$	$	$	$
1926								
Coal Tar Distillation—								
Ontario	4	1,562,214	46	69,971	61,938	635,612	1,062,780	427,168
Canada[1]	9	4,004,311	152	219,292	117,212	1,811,543	2,967,281	1,155,738
Disinfectants—								
Canada[2]	6	142,852	31	38,013	1,303	48,336	120,772	72,436
Total—								
Quebec	**4**	**1,663,612**	**66**	**86,100**	**27,883**	**742,751**	**1,144,011**	**401,260**
Ontario	**8**	**1,649,778**	**66**	**97,962**	**62,670**	**656,417**	**1,125,119**	**468,702**
Canada[3]	**15**	**4,147,163**	**183**	**257,305**	**118,515**	**1,859,879**	**3,088,053**	**1,228,174**
1927								
Coal Tar Distillation—								
Ontario	4	1,569,250	64	91,331	57,075	1,007,872	1,513,123	505,251
Canada[1]	10	4,115,151	179	258,178	134,963	2,286,134	3,616,532	1,330,398
Disinfectants—								
Canada[2]	7	183,240	43	56,101	1,443	72,094	180,183	108,089
Total—								
Quebec	**5**	**1,794,349**	**71**	**102,245**	**45,726**	**801,051**	**1,233,037**	**431,986**
Ontario	**9**	**1,689,144**	**94**	**128,716**	**57,923**	**1,042,213**	**1,623,891**	**581,678**
Canada[3]	**17**	**4,298,391**	**222**	**314,279**	**136,406**	**2,358,228**	**3,796,715**	**1,438,487**

[1]Includes also data for 2 plants in Quebec and 1 in each of Nova Scotia, Manitoba and British Columbia, and for 3 plants in Quebec and 1 in each of the provinces of Nova Scotia, Manitoba and British Columbia, in 1925.
[2]Includes data for 2 plants in Quebec and 4 in Ontario in 1926, and 1 additional plant in Ontario in 1927.
[3]Includes also data for 1 plant in each of Nova Scotia, Manitoba and British Columbia.

Table 21.—Capital Employed in the Coal Tar Products Industry in Canada, by Classes and by Provinces, 1926 and 1927

Province	1926				1927			
	Capital employed as represented by				Capital employed as represented by			
	Lands, buildings, fixtures, machinery and tools	Materials on hand, and stocks in process	Cash trading and operating accounts and bills receivable	**Total**	Lands, buildings, fixtures, machinery and tools	Materials on hand, and stocks in process	Cash, trading and operating accounts and bills receivable	**Total**
	$	$	$	$	$	$	$	$
Coal Tar Distillation—								
Ontario	969,257	289,251	303,706	**1,562,214**	964,656	316,341	288,253	**1,569,250**
Canada*	2,073,952	645,992	1,284,367	**4,004,311**	2,073,988	710,935	1,330,228	**4,115,151**
Disinfectants—								
Canada*	44,909	69,715	28,228	**142,852**	78,330	63,791	41,119	**183,240**
Total—								
Quebec	**647,695**	**207,396**	**808,521**	**1,663,612**	**664,709**	**226,249**	**903,391**	**1,794,349**
Ontario	**994,117**	**325,911**	**329,750**	**1,649,778**	**1,018,631**	**344,627**	**325,886**	**1,689,144**
Canada*	**2,118,861**	**715,707**	**1,312,595**	**4,147,163**	**2,152,318**	**774,726**	**1,371,347**	**4,298,391**

*See footnote to Table 20.

Table 22.—Employees, Salaries and Wages in the Coal Tar Products Industry in Canada, by Provinces, 1926 and 1927

Province	†Average number of employees					Salaries and wages		
	Salaried employees		Wage-earners		Total	Salaries	Wages	Total
	Male	Female	Male	Female				
					$	$		$
1926								
Coal Tar Distillation— Ontario	9	1	36	–	46	22,904	47,067	69,971
Canada*	20	4	128	–	152	53,219	166,073	219,292
Disinfectants— Canada*	15	3	12	1	31	27,095	10,918	38,013
Total—								
Quebec	12	2	52	–	66	23,644	62,456	86,100
Ontario	18	3	44	1	66	41,366	56,596	97,962
Canada*	35	7	140	1	183	80,311	176,991	257,305
1927								
Coal Tar Distillation— Ontario	8	1	56	–	65	21,883	69,448	91,331
Canada*	18	3	158	–	179	50,932	207,246	258,178
Disinfectants— Canada*	19	5	17	2	43	42,903	13,198	56,101
Total—								
Quebec	14	1	56	–	71	30,052	72,193	102,245
Ontario	18	5	69	2	94	47,459	81,257	128,716
Canada*	37	8	175	2	222	93,835	220,444	314,279

*See footnote to Table 20.
†See note, page 24.

Table 23.—Wage-Earners in the Coal Tar Products Industry in Canada, by Months, 1926 and 1927

Month	1926			1927		
	Coal tar distillation	Disinfectants	Total	Coal tar distillation	Disinfectants	Total
January	83	8	91	115	13	128
February	92	12	104	127	12	139
March	113	8	121	145	17	162
April	118	8	126	167	15	182
May	156	12	168	198	12	210
June	124	13	137	173	12	185
July	138	9	147	157	17	174
August	137	8	145	162	17	179
September	144	13	157	158	15	173
October	146	13	159	158	12	170
November	146	10	156	174	15	189
December	147	9	156	154	16	170
***Average**	128	13	141	158	19	177

*See note on page 24.

Table 24.—Hours of Labour in Month of Greatest Employment in the Coal Tar Products Industry in Canada, by Provinces, 1927

Group and Province	Number of wage-earners working			
	8 hours per day	9 hours per day	10 hours per day	Over 10 hours per day
Coal tar distillation	38	33	25	127
Disinfectants	20	1	-	-
Total—				
Quebec	7	17	6	38
Ontario	18	16	18	33
Canada*	58	34	25	127

*See footnote to Table 20.

Table 25.—Record of Operations in the Coal Tar Products Industry in Canada, by Provinces, 1927

Group and Province	On full time only			On less than full time				
	Average number of wage-earners	Number of plants	Total plant days	Average number of wage-earners	Number of plants	Total plant days		
						On full time	Part time	Idle
Coal tar distillation	95	6	1,824	63	4	731	304	182
Disinfectants	15	6	1,824	4	1	75	100	129
Total—								
Quebec	26	3	912	30	2	326	141	142
Ontario	57	8	2,432	14	1	168	123	13
Canada*	110	12	3,648	67	5	806	404	311

*See footnote to Table 20.

Table 26.—Fuel and Electricity Used in the Coal Tar Products Industry in Canada, 1926 and 1927

Kind	Unit of measure	1926		1927	
		Quantity	Value	Quantity	Value
		No.	$	No.	$
Anthracite coal	short ton	1,881	8,747	2,164	11,080
Bituminous coal—Canadian	short ton	9,621	56,126	5,051	28,743
Imported	short ton			5,992	36,695
Coke	short ton	2,204	6,764	768	2,385
Fuel oil and diesel oil	imp. gal.	43,605	8,721	7,529	745
Gas—manufactured	M cu.ft.	-	-	48	68
Wood	cord	494	1,649	616	2,041
Other fuel	-	-	31,445	-	49,509
Electricity purchased	k.w.h.	148,863	5,063	199,932	5,140
Total	-	-	118,515	-	136,406

Table 27.—Power Employed in the Coa Tar Products Industry in Canada, 1926 and 1927

Description	1926		1927	
	Number of units	Total h.p. according to manufacturers' rating	Number of units	Total h.p. according to manufacturers' rating
Steam engines and turbines	10	120	8	75
Total primary power	*10*	*120*	*8*	*75*
Electric motors run by purchased power	25	224	29	209
Total power employed	**35**	**344**	**37**	**284**
Electric motors run by primary power in same plant	1	1	–	–
Total electric motors	*26*	*225*	*29*	*209*
Boilers	17	1,887	20	2,212

Table 28.—Estimated Percentage of Normal Output Attained in the Coal Tar Products Industry in Canada, by Provinces and by Groups, 1927

Group and Province	Actual value of output	Computed value of normal output	Percent of normal output attained
	$	$	
Coal tar distillation	3,616,532	4,020,118	90
Disinfectants	180,183	248,483	73
Total:			
Quebec	**1,233,037**	**1,361,684**	**91**
Ontario	**1,623,891**	**1,751,615**	**93**
Canada*	**3,796,715**	**4,268,601**	**89**

*See footnote to Table 20.

Table 29.—Materials Used in the Coal Tar Products Industry in Canada, 1926 and 1927

Material	Unit of measure	1926		1927	
		Quantity	Cost at works	Quantity	Cost at works
			$		$
Coal Tar Distillation—					
Coal tar, crude	Imp. gal.	19,891,152	1,362,337	23,001,984	1,749,801
Water gas and oil tar	Imp. gal.	301,910	23,004	1,231,144	99,360
All other materials[1]		–	360,330	–	353,437
Containers, boxes, etc		–	65,872	–	83,536
Total		–	1,811,543	–	2,286,134
Disinfectants—					
Total[2]		–	48,336	–	72,094
Total		–	**1,859,879**	–	**2,358,228**

[1]Includes dry felts and sheathings, pitch and other materials

[2]Includes vegetable oils, petroleum oils, creosote oils, caustic soda, caustic potash, paradichlorobenzol and other materials.

Table 30.—Products of the Coal Tar Products Industry in Canada, 1926 and 1927

Product	Unit of measure	1926		1927	
		Quantity	Selling value	Quantity	Selling value
			$		$
Coal Tar Distillation.—					
Creosote and other oils	Imp. gal.	3,299,635	551,129	7,695,616	1,261,033
Pitch	lb.	85,467,318	505,277	83,438,247	610,563
Refined tar, road tar, tarvia, tarco, etc	Imp. gal.	7,477,345	1,081,117	7,638,432	1,022,976
Protective paints, varnishes, etc	Imp. gal.	159,362	118,544	211,674	150,541
Disinfectants		-	1,737	-	2,192
All other products[1]		-	709,477	-	569,227
Total		-	2,967,281	-	3,616,532
Disinfectants—					
Disinfectants		-	88,531	-	84,470
Insecticides		-	3,588	-	14,401
Liquid soap		-	19,968	-	45,165
All other products		-	8,685	-	36,147
Total[2]		-	120,772	-	180,183
Total		-	**3,088,053**	-	**3,796,715**

[1]Includes tarred felts and sheathings and other products.
[2]Includes floor oils and polishes, metal polish, deodorant, machine fluids and other products.

Table 31.—Imports into Canada and Exports of Coal Tar and Certain of Its Products, by Principal Countries, 1926 and 1927

Product and Source		1926		1927	
		Imports	Exports	Imports	Exports
Coal tar and pitch—					
United Kingdom	gal.	12,450	-	168,708	1,281,786
	$	2,034	-	10,891	134,872
United States	gal.	3,665,409	657,542	3,643,929	573,248
	$	253,047	59,134	275,416	40,475
Belgium	gal.	-	257,253	-	-
	$	-	34,924	-	-
France	gal.	-	3,032,550	-	-
	$	-	237,973	-	-
French Africa	gal.	-	612,400	-	948,100
	$	-	26,484	-	80,883
Newfoundland	gal.	-	82,460	-	103,452
	$	-	15,783	-	19,773
Other countries	gal.	3,465	248	-	8,056
	$	980	97	-	1,787
Total	**gal.**	**3,681,324**	**4,642,453**	**3,812,637**	**2,914,642**
	$	**256,061**	**374,395**	**286,307**	**277,793**
Carbolic or heavy oil—					
United Kingdom	gal.	2,354,371	-	633	-
	$	352,482	-	412	-
United States	gal.	1,312,566	-	638,671	-
	$	243,240	-	128,962	-
Japan	gal.	120,848	-	353,725	-
	$	18,022	-	74,699	-
Netherlands	gal.	332,927	-	165,709	-
	$	51,000	-	38,066	-
Other countries	gal.	-	-	177,574	-
	$	-	-	34,379	-
Total	**gal.**	**4,120,712**	-	**1,336,312**	-
	$	**664,744**	-	**276,518**	-
Creosote oil—					
United States	gal.	-	1,749,020	-	3,472,349
	$	-	297,441	-	588,562
Other countries	gal.	-	24,248	-	217
	$	-	5,535	-	101
Total	**gal.**	-	**1,773,268**	-	**3,472,566**
	$	-	**302,976**	-	**588,663**
Liquid preparations, non-alcoholic, for disinfecting, dipping or spraying, n.o.p.—					
United Kingdom	$	68,511	-	55,273	-
United States	$	91,560	-	96,521	-
Other countries	$	2,536	-	2,121	-
Total	**$**	**162,607**	-	**154,915**	-

CHAPTER THREE

ACIDS, ALKALIES, SALTS AND COMPRESSED GASES

An increase of a half-million dollars in the output value of the acids, alkalies, salts and compressed gases industry was recorded in 1927 when production reached a total value of $30,740,846 as compared with a corresponding figure of $30,232,322 in 1926. Capital employed, on the other hand, at $35,312,251 was lower by 3 million dollars; the average number of employees was down 5 per cent to 2,285; the cost of materials used in manufacturing was $15,661,786 or 2·3 millions more than in 1926, and the value added by manufacture was $15,079,060 as compared with $16,872,054 in the previous year. Forty-two plants were in operation of which 17 made heavy chemicals and 25 produced compressed gases.

Acids, Alkalies and Salts.—The 17 factories in this group in 1927 were distributed by provinces as follows: 9 in Ontario, 4 in Quebec, 3 in British Columbia and 1 in Nova Scotia One sulphuric acid factory and 1 fine chemical plant did not operate during the year. There was thus a net loss of 2 in the number of plants in this group. Capital was 3.5 million dollars lower at $31,134,457 and the number of employees was down to 1,881 from 2,040. Products made for sale declined in value to $17,086,788 from $18,526,247 but production for the further use of reporting firms was higher at $11,028,360 as compared with $9,283,589 in 1926, giving a total value of $28,115,148 in 1927 or only one per cent above the figure for 1926.

Sulphuric acid was made in 7 different plants in 1927. The Dominion Iron and Steel Company at Sydney, N.S., produced acid for use in making ammonium sulphate from the ammonia liquor recovered in the by-product coke plant; the Grasselli Chemical Company, Limited, with plant at Hamilton, Ont., the Nichols Chemical Company with plants at Sulphide, Ont., and Barnet, B.C., and the Mond Nickel Company, Limited, at Coniston, Ont., made sulphuric acid for sale; The Consolidated Mining and Smelting Company of Canada, Limited, at Trail, B.C., made acid for its own use in the hydrometallurgical treatment of zinc ores; and the Triangle Chemical Company, Limited, at New Westminster, B.C., maintained a sulphuric acid plant, the product from which was used in the manufacture of superphosphate fertilizer; the plant of the Algoma Steel Corporation at Sault Ste. Marie, Ontario, did not operate during 1927. The total production of sulphuric acid in 1927 was 98,470 tons, 66°Bé, worth $1,172,507 as compared with 108,230 tons valued at $1,306,254 in 1926.

Hydrochloric acid was manufactured by the Canadian Salt Company, Limited, at Sandwich, Ont., the Grasselli Chemical Company, Limited, at Hamilton, Ont., and the Nichols Chemical Company, Limited, at Sulphide, Ont.; the total output amounted to 6,938,978 pounds, 20°Bé, worth $68,356 against 7,409,881 pounds at $109,992 in 1926.

Nitric acid was made for sale by the Grasselli Chemical Company, Limited, at Hamilton, and the Nichols Chemical Company at Sulphide; and by the manufacturers of explosives for use in their own factories. Glacial acetic acid was made by the Canadian Electro Products Company, Limited, at Shawinigan Falls, P.Q., 28 per cent acetic acid was made by Grasselli Chemical Company, Limited, at Hamilton, Ont., and the 28 and 80 per cent grades were also produced in the Montreal refinery of the Standard Chemical Company, Limited, which plant is included in the wood distillation industry. Hydrofluosilicic acid was made at Trail, B.C., by the Consolidated Mining and Smelting Company of Canada, Limited, for own use in treatment of lead ores; and phosphoric acid was manufactured at Buckingham, P.Q., by the Electric Reduction Company, Limited.

Many of the heavy chemicals were made by only 1 or two manufacturers in Canada and production data cannot be shown separately according to the provisions of the Statistics Act under which the annual statistics are collected. The Canadian Salt Co., Ltd., at Sandwich, Ont., produced bleaching powder, caustic soda, liquid chlorine and sodium hypochlorite; the American Cyanamid Company at Niagara Falls manufactured calcium cyanamide and sodium cyanide; Brunner Mond, Canada, Limited., Amherstburg, Ont., made soda ash; Electric Reduction Company, Limited, at Buckingham, P.Q., made phosphorus; Canadian Electro Products Company, Limited, Shawinigan Falls, P.Q., made paraldehyde, butyl acetate, ethyl acetate and butyl alcohol; Canada Carbide Company, Shawinigan Falls, P.Q., made acetylene and calcium carbide while the latter commodity was also made for sale by the Union Carbide Company at Welland, Ont., and for intermediate use by the American Cyanamid Company, Ltd.

Compressed Gases.—Production of compressed gasses such as carbon dioxide, hydrogen, oxygen, etc., was valued at $2,625,698 in 1927, a gain of 8·4 per cent over the figure of $2,422,686 for 1926. The 25 plants were distributed by provinces as follows: Ontario, 11; Quebec, 6; Manitoba, 3; Nova Scotia, 2; British Columbia, 2; and Alberta 1. One new factory in Quebec reported for 1927 as well as all the plants which were in operation in the previous year. Capital employed in 1927 was $4,177,794, an increase of 10 per cent; the number of employees was 12 per cent higher at 404; materials cost $550,795 and the value added by manufacturing was $2,074,903 as against $1,986,757 in 1926.

Carbon dioxide was produced in 8 plants in this industry in 1927, oxygen in 12, acetylene in 11, hydrogen in 3, nitrogen in 1 and aqua and anhydrous ammonia in 1. Canadian Carbonate, Limited, operated 7 plants for the manufacture of carbon dioxide; L'Air Liquide Society had 7 factories for making acetylene and oxygen; the Dominion Oxygen Company, Limited, operated 3 units for the manufacture of oxygen, one of which also produced nitrogen; Prest-O-Lite Co. of Canada, Limited, had 3 establishments for making acetylene; the Harris Abattoir Company, Limited, Lever Bros. Limited, and the Proctor and Gamble Company of Canada, Limited, produced electrolytic hydrogen for use in hydrogenation of oils in their own plants and obtained oxygen as a by-product; Canadian Ammonia Co. Limited produced aqua and anhydrous ammonia; the People's Gas Supply Company, Limited, of Ottawa, made acetylene gas, and the Dry Ice Company, Limited, Montreal, made carbon dioxide.

In addition to the output in this industry acetylene gas was made by the Canada Carbide Company, Limited, at Shawinigan Falls, P.Q., for sale, and in several small western plants for town lighting purposes; compressed Pintsch gas for use in lighting railway coaches was made at several divisional points, and liquid chlorine was manufactured in large quantities by the Canadian Salt Company, Limited, at Sandwich, Ont, The output of pintsch gas and acetylene for town lighting has been included under the gas industry in the Bureau's annual report on the *Manufactures of the Non-Metallic Minerals in Canada.*

Table 32.—Principal Statistics of the Acids, Alkalies, Salts and Compressed Gases Industry in Canada, by Provinces, 1926 and 1927

Province	Number of plants	Capital employed	Number of employees	Salaries and wages	Cost of fuel and electricity	Cost of materials	Selling value of products	Value added by manufacturing
1926		$		$	$	$	$	$
Acids, Alkalies and Salts—								
Quebec	4	7,552,289	542	790,693	440,191	1,431,746	5,929,150	4,497,404
Ontario	11	26,522,423	1,454	2,194,722	1,693,806	11,346,046	21,442,406	10,096,360
Canada[1]	19	34,589,930	2,040	3,075,649	2,140,193	12,924,539	27,809,836	14,885,297
Compressed Gases—								
Quebec	5	790,893	65	102,579	26,465	101,159	670,804	569,645
Ontario	11	2,200,630	187	257,973	67,084	201,038	997,551	796,513
Manitoba	3	337,122	45	69,425	7,017	51,709	331,016	279,307
Canada[2]	24	3,799,733	360	521,824	118,744	435,729	2,422,486	1,986,757
Total—								
Quebec	**9**	**8,343,182**	**607**	**893,272**	**466,656**	**1,532,905**	**6,599,954**	**5,067,049**
Ontario	**22**	**28,723,053**	**1,641**	**2,452,695**	**1,760,890**	**11,547,084**	**22,439,957**	**10,892,873**
Manitoba	**3**	**337,122**	**45**	**69,425**	**7,017**	**51,709**	**331,016**	**279,307**
British Columbia	**5**	**560,244**	**61**	**107,445**	**8,976**	**115,410**	**498,206**	**382,796**
Canada[3]	**43**	**38,389,663**	**2,400**	**3,507,473**	**2,258,937**	**13,366,268**	**30,232,322**	**16,872,054**
1927								
Acids, Alkalies and Salts[1]								
Quebec	4	9,420,722	608	852,519	466,614	3,960,744	7,755,779	3,795,035
Ontario	9	21,166,564	1,236	1,941,078	1,323,826	10,957,953	20,009,983	9,052,030
Canada[1]	17	31,134,457	1,881	2,858,644	1,798,799	15,110,991	28,115,148	13,004,157
Compressed Gases—								
Quebec	6	984,372	102	172,872	37,862	157,381	793,158	635,777
Ontario	11	2,377,009	185	258,158	66,648	211,568	993,459	781,891
Manitoba	3	325,613	51	77,128	8,247	66,530	356,935	290,405
Canada[2]	25	4,177,794	404	604,417	133,097	550,795	2,625,698	2,074,903
Total—								
Quebec	**10**	**10,405,094**	**710**	**1,025,391**	**504,476**	**4,118,125**	**8,548,937**	**4,430,812**
Ontario	**20**	**23,543,573**	**1,421**	**2,199,236**	**1,390,474**	**11,169,521**	**21,003,442**	**9,833,921**
Manitoba	**3**	**325,613**	**51**	**77,128**	**8,247**	**66,530**	**356,935**	**290,405**
British Columbia	**5**	**575,450**	**55**	**82,827**	**11,195**	**176,969**	**418,990**	**272,021**
Canada[3]	**42**	**35,312,251**	**2,285**	**3,463,061**	**1,931,896**	**15,661,786**	**30,740,846**	**15,079,060**

[1]Includes also data for 1 plant in Nova Scotia and 3 in British Columbia.
[2]Includes also data for 2 plants in Nova Scotia, 2 in British Columbia and 1 in Alberta.
[3]Includes also data for 3 plants in Nova Scotia and 1 in Alberta.

Table 33.—Capital Employed in the Acids, Alkalies, Salts and Compressed Gases Industry in Canada, by Classes and Provinces, 1926 and 1927

Province	1926				1927			
	Capital employed as represented by				Capital employed as represented by			
	Lands, buildings, fixtures, machinery and tools	Materials on hand, and stocks in process	Cash trading and operating account and bills receivable	**Total**	Lands, buildings, fixtures, machinery and tools	Materials on hand, and stocks in process	Cash trading and operating account and bills receivable	**Total**
Acids, Alkalies and Salts—	$	$	$	$	$	$	$	$
Quebec	5,595,723	1,605,926	350,640	7,552,289	6,849,056	1,295,903	1,275,763	9,420,722
Ontario	17,888,105	2,784,397	5,849,921	26,522,423	15,326,361	1,998,674	3,841,529	21,166,564
Canada*	23,972,448	4,416,921	6,200,561	34,589,930	22,656,101	3,357,564	5,120,792	31,134,457
Compressed Gases—								
Quebec	641,808	66,325	82,670	790,893	802,508	62,061	118,903	984,372
Ontario	1,299,803	458,369	442,368	2,200,630	1,414,575	446,039	519,395	2,377,009
Manitoba	281,219	19,467	36,436	337,122	279,251	17,082	29,280	325,613
Canada*	2,591,538	577,863	630,335	3,799,733	2,874,836	565,915	737,043	4,177,794
Total—								
Quebec	**6,237,621**	**1,672,251**	**433,310**	**8,343,182**	**7,651,564**	**1,358,864**	**1,394,666**	**10,405,094**
Ontario	**19,187,998**	**3,242,766**	**6,292,289**	**28,723,053**	**16,737,936**	**2,444,713**	**4,360,924**	**23,543,573**
Manitoba	**281,219**	**19,467**	**36,436**	**337,122**	**279,251**	**17,082**	**29,280**	**325,613**
British Columbia	**494,950**	**38,764**	**26,530**	**560,244**	**494,337**	**55,825**	**25,288**	**575,450**
Canada*	**26,563,988**	**4,994,281**	**6,830,896**	**38,389,663**	**25,530,937**	**3,923,479**	**5,857,835**	**35,312,251**

*See footnote to Table 32.

Table 34.—Employees, Salaries and Wages in the Acids, Alkalies, Salts and Compressed Gases Industry in Canada, by Provinces, 1926 and 1927

Province	†Average number of employees					Salaries and wages		
	Salaried employees		Wage-earners		Total	Salaries	Wages	Total
	Male	Female	Male	Female				
						$	$	$
1926								
Acids, Alkalies and Salts—								
Quebec	56	9	472	5	542	196,941	592,752	790,693
Ontario	194	22	1,230	8	1,454	474,238	1,720,484	2,194,722
Canada*	254	32	1,741	13	2,040	683,103	2,392,546	3,075,649
Compressed Gases—								
Quebec	23	8	34	–	65	53,465	49,114	102,579
Ontario	77	36	73	1	187	154,620	103,353	257,973
Manitoba	20	7	18	–	45	43,221	26,204	69,425
Canada*	146	61	152	1	360	309,904	211,920	521,824
Total—								
Quebec	**79**	**17**	**506**	**5**	**607**	**250,406**	**642,866**	**893,272**
Ontario	**271**	**58**	**1,303**	**9**	**1,641**	**628,858**	**1,823,837**	**2,452,695**
Manitoba	**20**	**7**	**18**	–	**45**	**43,221**	**26,204**	**69,425**
British Columbia	**14**	**3**	**44**	–	**61**	**31,044**	**76,401**	**107,445**
Canada*	**400**	**93**	**1,893**	**14**	**2,400**	**993,007**	**2,604,466**	**3,597,473**
1927								
Acids, Alkalies and Salts—								
Quebec	64	12	532	–	608	232,278	620,241	852,519
Ontario	178	13	1,038	7	1,236	448,132	1,492,946	1,941,078
Canada*	246	26	1,602	7	1,881	691,817	2,166,827	2,858,644
Compressed Gases—								
Quebec	36	13	53	–	102	95,498	77,374	172,872
Ontario	75	41	67	2	185	153,649	104,509	258,158
Manitoba	22	8	21	–	51	51,480	25,648	77,128
Canada*	162	72	168	2	404	364,486	239,931	604,417
Total—								
Quebec	**100**	**25**	**585**	–	**710**	**327,776**	**697,615**	**1,025,391**
Ontario	**253**	**54**	**1,105**	**9**	**1,421**	**601,781**	**1,597,455**	**2,199,236**
Manitoba	**22**	**8**	**21**	–	**51**	**51,480**	**25,648**	**77,128**
British Columbia	**15**	**3**	**37**	–	**55**	**31,690**	**51,137**	**82,827**
Canada*	**408**	**98**	**1,770**	**9**	**2,285**	**1,056,303**	**2,406,758**	**3,463,061**

*See footnote to Table 32.
†See note page 24.

Table 35.—Wage-Earners in the Acids, Alkalies, Salts and Compressed Gases Industry in Canada, by Months, 1926 and 1927

Month	1926					1927				
	Acids, alkalies and salts		Compressed gases		Total	Acids, alkalies and salts		Compressed gases		Total
	Male	Female	Male	Female		Male	Female	Male	Female	
January	1,748	12	137	1	1,898	1,548	7	143	2	1,700
February	1,746	12	140	1	1,899	1,520	7	157	2	1,686
March	1,819	12	145	1	1,977	1,488	7	167	2	1,664
April	1,768	12	148	1	1,929	1,493	7	162	2	1,664
May	1,739	12	154	1	1,906	1,501	7	169	2	1,679
June	1,751	12	157	1	1,921	1,521	7	172	2	1,703
July	1,705	12	157	1	1,875	1,687	7	174	2	1,870
August	1,690	12	160	1	1,863	1,631	7	178	2	1,818
September	1,674	12	153	1	1,840	1,649	7	171	2	1,829
October	1,691	13	151	1	1,856	1,729	7	167	2	1,905
November	1,710	15	154	1	1,880	1,715	7	158	2	1,882
December	1,795	17	146	1	1,959	1,726	7	165	2	1,900
***Average**	**1,741**	**13**	**152**	**1**	**1,907**	**1,602**	**7**	**168**	**2**	**1,779**

*See note on page 24.

Table 36.—Hours of Labour in Month of Greatest Employment in the Acids, Alkalies, Salts and Compressed Gases Industry in Canada, by Groups and by Provinces, 1927

Group and Province	Number of wage-earners working			
	8 hours per day	9 hours per day	10 hours per day	Over 10 hours per day
Acids, alkalies and salts	820	798	158	60
Compressed gases	76	56	10	47
Total—				
Ontario	633	490	100	41
Quebec	197	360	68	11
Manitoba	12	1	–	6
British Columbia	40	–	–	–
Canada*	896	854	168	107

*See footnote to Table 32.

Table 37.—Record of Operations in the Acids, Alkalies, Salts and Compressed Gases Industry in Canada, by Groups and by Provinces, 1927

Group and Province	On full time only			On less than full time				
	Average number of wage-earners	Number of plants	Total plant days	Average number of wage-earners	Number of plants	Total plant days		
						On full time	On part time	Idle
Acids, alkalies and salts	1,575	13	4,501	34	4	1,032	29	277
Compressed gases	151	23	7,053	19	2	564	60	45
Total—								
Ontario	1,111	18	6,203	3	1	350	–	15
Quebec	567	8	2,615	18	2	329	62	217
Manitoba	21	3	912	–	–	–	–	–
British Columbia	12	3	912	25	2	672	27	31
Canada*	1,726	36	11,554	53	6	1,596	89	122

*See footnote to Table 32.

Table 38.—Fuel and Electricity Used in the Acids, Alkalies, Salts and Compressed Gases Industry in Canada, 1926 and 1927

Kind	Unit of measure	1926		1927	
		Quantity	Value	Quantity	Value
			$		$
Anthracite coal	short ton	1,494	12,304	277	3,442
Bituminous coal—Canadian	short ton	114,484	547,862	3,721	22,611
Bituminous coal—Imported	short ton			113,423	536,219
Lignite coal	short ton	–	–	383	2,348
Coke	short ton	7,268	46,623	4,081	23,156
Fuel oil	Imp. gal.	141,923	14,020	37,903	2,821
Gasoline	Imp. gal.	8,434	2,480	156	41
Kerosene	Imp. gal.	–	–	50	13
Gas—Natural	M cu. ft.	370	229	354	134
Wood	Cord	59	123	89	238
Electricity	k.w.h.	685,979,566	1,635,296	551,304,190	1,340,873
Total		–	**2,258,937**	–	**1,931,896**

Table 39.—Power Employed in the Acids, Alkalies, Salts and Compressed Gases Industry in Canada, 1926 and 1927

Description	1926		1927	
	Number of units	Total h.p. according to manufacturers' rating	Number of units	Total h.p. according to manufacturers' rating
Steam engines and turbines	37	9,023	37	9,373
Gasoline, gas and oil engines	1	225	1	225
Hydraulic turbines or water wheels	3	6,000	4	8,000
Total primary power	*41*	*15,848*	*42*	*17,598*
Electric motors run by purchased power	1,025	24,003	871	23,714
Total power employed	**1,066**	**39,851**	**913**	**41,312**
Electric motors run by primary power in same plant	136	2,026	122	1,580
Total electric motors	*1,161*	*26,029*	*993*	*25,294*
Boilers	33	8,607	33	8,607

Table 40.—Estimated Percentage of Normal Output Attained in the Acids, Alkalies, Salts and Compressed Gases Industry in Canada, by Groups and by Provinces, 1927

Group and Province	Actual value of output	Computed value of normal output	Per cent of normal output attained
	$	$	
Acids, alkalies and salts	28,115,148	28,165,316	99·8
Compressed gases	2,625,698	2,629,681	99·8
Total—			
Ontario	**21,003,442**	**21,004,558**	**99·9**
Quebec	**8,548,937**	**8,564,034**	**99·8**
Manitoba	**356,935**	**356,935**	**100·0**
British Columbia	**448,990**	**462,896**	**96·9**
Canada*	**30,740,846**	**30,794,997**	**99·8**

*See footnote to Table 32.

Table 41.—Materials Used in the Acids, Alkalies, Salts and Compressed Gases Industry in Canada, 1926 and 1927

Material	Unit of measure	1926 Quantity	1926 Cost at works	1927 Quantity	1927 Cost at works
ACIDS, ALKALIES AND SALTS			$		$
Purchased materials used—					
Acid, hydrocaloric, 20° Bé	lb.	835	107	1,500	194
Acid, sulphuric, 66° Bé	lb.	2,932,532	26,567	7,161,589	109,373
Ammonia, anhydrous, and ammonia liquor	lb. NH_3	174,633	22,132	161,683	15,684
Calcium carbonate (limestone)	ton	212,009	495,254	273,783	472,212
Calcium chloride	lb.	153,400	2,454	206,050	3,267
Calcium hydroxide (slaked lime)	lb.	4,748,040	24,684	1,437,107	7,540
Calcium oxide (quicklime)	lb.	32,720	279	28,730	247
Coke (not for fuel)	ton	93,278	794,031	84,624	751,066
Coal, anthracite (not for fuel)	ton	7,649	47,179	3,688	28,386
Carbon electrodes	lb.	5,869,870	322,277	3,503,997	218,252
Graphite	lb.	5,814	1,451	5,491	1,770
Copper sulphate (blue vitriol)	lb.	41,360	2,171	50,135	2,632
Iron sulphide (pyrites)	ton	15,986	82,708	19,379	100,374
Nickel sulphate	lb.	38,372	2,974	41,359	3,205
Silica	ton	29,233	88,975	4,504	16,015
Sodium carbonate (soda ash)	lb.	1,866,289	27,209	598,346	9,926
Sodium chloride (including brine)	ton	42,189	122,067	83,858	117,510
Sodium hydroxide	lb.	258,347	9,143	318,723	11,020
Sodium nitrate (Chile saltpetre)	ton	1,200	73,274	1,115	65,597
Sodium silicate (water glass)	lb.	44,188	1,944	28,597	1,953
Sodium sulphate (Glauber's salt)	lb.	15,030	225	16,446	247
Sodium salts, all other	.....	–	8,791	–	4,413
Sulphur (brimstone)	ton	22,893	419,056	19,847	388,008
Containers, boxes, etc.	.....	–	416,996	–	418,205
All other materials[1]	.....	–	651,409	–	1,343,413
Total purchased materials	.....	–	3,643,357	–	4,090,509
Intermediate products used as materials[2]	.....	–	9,281,182	–	11,020,482
Total materials used	.....	–	12,924,539	–	15,110,991
COMPRESSED GASES					
Acetone	lb.	91,281	18,520	125,532	25,244
Calcium carbide	lb.	6,361,871	207,125	7,385,241	234,192
Coke	ton	4,609	32,817	1,696	25,769
All other materials	.....	–	98,987	–	54,414
Cylinders purchased during year	No.	3,011	78,280	–	211,176
Total	.....	–	435,729	–	550,795
Total	.....	–	**13,360,268**	–	**15,661,786**

[1]Includes acetylene, calcium acetate, calcium fluoride, phosphate rock, sodium bichromate, pathway oil and other materials.

[2]Includes calcium carbide, acetaldehyde, acetylene, electrodes, crude phosphorus, crude cyanamide, lime, calcined salt cake, nitrogen and sulphuric acid, 66° Bé and 100%.

Table 42.—Products of the Acids, Alkalies, Salts and Compressed Gases Industry in Canada, 1926 and 1927

Product	Unit of measure	1926 Quantity	1926 Selling value at works	1927 Quantity	1927 Selling value at works
			$		$
ACIDS, ALKALIES AND SALTS					
Products made for sale—					
Sulphuric acid, 66° Bé	lb.	207,585,802	1,265,866	193,734,509	1,153,507
Hydrochloric acid, 20° Bé	lb.	7,409,881	109,992	6,938,978	68,356
All other products[1]	.....	–	17,150,389	–	15,864,925
Total products made for sale	.....	–	18,526,247	–	17,086,788
Intermediate products made for own use	.....	–	9,283,589	–	11,028,360
Total	.....	–	27,809,836	–	28,115,148
COMPRESSED GASES					
Acetylene	cu. ft.	27,814,736	700,977	31,195,053	798,480
Carbon dioxide	lb.	3,896,524	395,974	4,706,519	445,989
Hydrogen	cu. ft.	23,951,424	41,262	26,989,730	43,228
Oxygen	cu. ft.	86,989,015	1,102,523	112,757,727	1,238,987
All other products[2]	.....	–	181,750	–	99,014
Total	.....	–	2,422,486	–	2,625,698
Total	.....	–	**30,232,322**	–	**30,740,846**

[1]Includes products reported by only 1 or 2 firms such as acetylene, acetic acid 28%, glacial acetic acid, hydrofluosilicic acid, phosphoric acid, nitric acid, butyl acetate, ethyl acetate, butyl alcohol, calcium carbide, calcium cyanamide bleaching powder, liquid chlorine, iron phosphide, copper cyanide, copper carbonate, paraldehyde, phosphorus, soda ash, sodium cyanide, caustic soda, sodium hypochlorite, salt cake, glauber's salt, acetylene black and satin white.
[2]Includes aqua and anhydrous ammonia, nitrogen and other products.

Table 43.—Imports into Canada and Exports of Acids of All Kinds by Principal Countries, 1926 and 1927

Article	Country	Unit of measure	1926 Quantity	1926 Value	1927 Quantity	1927 Value
				$		$
IMPORTS						
Acid, boracic, in packages of not less than 25 pounds.	**Total**	**lb.**	**690,008**	**59,221**	**606,741**	**49,874**
	United Kingdom	lb.	4,451	466	107,611	8,851
	United States	lb.	675,557	58,755	499,130	41,023
Acid, hydrofluosilicic	**Total**	**lb.**	**3,971**	**565**	**10,859**	**811**
	United States	lb.	3,971	565	10,859	811
Acid, muriatic	**Total**	**lb.**	**335,554**	**9,932**	**321,682**	**7,446**
	United States	lb.	335,554	9,932	320,142	7,416
Acid, nitric	**Total**	**lb.**	**315,792**	**26,275**	**171,821**	**17,919**
	United States	lb.	315,792	26,275	165,951	17,587
Acid, sulphuric	**Total**	**lb.**	**106,967**	**9,245**	**105,546**	**8,548**
	United States	lb.	106,967	9,245	103,346	8,498
Acid, acetic and pyroligneous, crude, of any strength not exceeding 30 per cent.	**Total**	**gal.**	**3,076**	**2,421**	**1,883**	**1,797**
	United Kingdom	gal.	14	92	–	–
	United States	gal.	3,062	2,329	1,883	1,797
Acid, acetic and pyroligneous, n.o.p., not exceeding proof strength.	**Total**	**gal.**	**159**	**177**	**275**	**361**
	United Kingdom	gal.	–	–	23	92
	United States	gal.	159	177	252	269
Acid, acetic and pyroligneous in excess of strength of proof.	**Total**	**gal.**	**604**	**1,568**	**679**	**1,607**
	United Kingdom	gal.	181	823	161	725
	United States	gal.	423	745	518	882
Acid, citric	**Total**	**lb.**	**235,374**	**68,762**	**219,254**	**72,205**
	United Kingdom	lb.	127,835	36,942	144,196	49,149
	United States	lb.	14,579	4,403	4,128	1,895
	Italy	lb.	92,960	27,417	48,582	14,854

Table 43.—Imports into Canada and Exports of Acids of All Kinds by Principal Countries, 1926 and 1927—Concluded

Article	Country	Unit of measure	1926 Quantity	1926 Value	1927 Quantity	1927 Value
				$		$
IMPORTS—Continued						
Acid, cresylic, for use only in the manufacture of preparations for disinfecting dipping and spraying.	**Total**	**lb.**	**53,416**	**4,011**	**184,797**	**12,860**
	United Kingdom	lb.	23,208	1,175	137,132	9,043
	United States	lb.	23,761	2,276	47,665	3,817
Acid, oxalic	**Total**	**lb.**	**240,243**	**13,176**	**236,791**	**14,879**
	United Kingdom	lb.	14,260	784	29,588	1,929
	United States	lb.	19,131	1,693	2,276	352
Acid, stearic, when imported by manufacturers of candles for use only in their own factory in the manufacture of candles.	**Total**	**lb.**	**162,182**	**20,348**	**517,224**	**51,521**
	United Kingdom	lb.	51,859	6,511	51,888	5,807
	United States	lb.	66,575	8,129	462,868	45,488
Acid, stearic, n.o.p.	**Total**	**lb.**	**869,736**	**113,088**	**1,064,351**	**99,233**
	United Kingdom	lb.	16,586	2,224	6,756	867
	United States	lb.	749,557	95,398	988,515	90,601
Acid, tannic	**Total**	**lb.**	**44,753**	**21,204**	**57,746**	**27,344**
	United Kingdom	lb.	178	172	230	188
	United States	lb.	44,071	20,716	51,266	21,034
Tartaric acid crystals	**Total**	**lb.**	**536,496**	**121,244**	**523,799**	**136,830**
	United Kingdom	lb.	116,957	27,106	191,328	51,297
	United States	lb.	62,640	16,064	99,030	25,651
	France	lb.	109,128	23,891	22,055	5,584
	Germany	lb.	146,700	31,627	144,306	40,614
	Italy	lb.	89,871	20,334	67,080	13,684
Acids, other, n.o.p.	**Total**	**lb.**	**1,689,245**	**183,430**	**1,587,764**	**197,972**
	United Kingdom	lb.	463,679	39,049	321,439	46,255
	United States	lb.	947,024	108,747	775,083	106,420
	Germany	lb.	210,339	26,502	470,244	41,005
Total acids	**Total**	.....	–	**651,973**	–	**701,207**
EXPORTS				$		$
Acid, acetic	**Total**	**cwt.**	**221,770**	**2,089,335**	**277,531**	**2,860,393**
	United Kingdom	cwt.	141,343	1,543,324	171,244	2,042,317
	United States	cwt.	75,821	495,459	102,400	766,892
Acid, sulphuric	**Total**	**cwt.**	**562,731**	**320,324**	**348,142**	**191,926**
	United States	cwt.	562,661	320,131	348,114	191,806
Acids, other, n.o.p.	**Total**	**cwt.**	**16,918**	**11,694**	**3,084**	**9,805**
	United States	cwt.	16,903	11,575	2,968	9,073
Total acids	**Total**	.....	–	**2,421,357**	–	**3,062,124**

Sulphuric Acid.—Production of 66 degrees Bé sulphuric acid in Canada in 1927 totalled 98,470 tons valued at $1,172,507 at the works as compared with 108,230 tons worth $1,306,254 in 1926. Exports of sulphuric acid from Canada amounted to 17,407 tons worth $191,926 in 1927 as against 28,137 tons worth $320,324 in the previous year; practically all of the acid was shipped to the United States. Imports totalled only 53 tons worth $8,548 in 1927 and 54 tons at $9,245 in 1926.

Only 6 plants in Canada made sulphuric acid in 1927 as against 8 producers in 1926. These concerns used 19,377 tons of pyrites and 29,805 tons of brimstone, while one made sulphuric acid from waste smelter gases. The producing plants were located at the following points.

Dominion Iron and Steel Co., Ltd. ..... Sydney, N.S.
Grasselli Chemical Co., Ltd. ..... Hamilton, Ont.
Mond Nickel Co., Ltd. ..... Coniston, Ont.
Nichols Chemical Co. Ltd. ..... Sulphide, Ont.
Nichols Chemical Co. Ltd. ..... Barnet, B.C.
Triangle Chemical Co., Ltd. ..... New Westminster, B.C.

Table 44.—Production, Imports, Exports and Apparent Consumption of Sulphuric Acid in Canada, 1923-1927

Year	Production	Imports	Exports	Apparent consumption
	Pounds	Pounds	Pounds	Pounds
1923	174,300,512	582,400	24,406,400	150,476,512
1924	143,981,962	93,621	15,355,700	128,719,883
1925	166,791,926	103,340	38,358,600	128,536,666
1926	216,459,150	106,967	56,273,100	160,293,017
1927	196,946,218	105,546	34,814,200	162,231,564

Ammonium Sulphate.—Production of ammonium sulphate in Canada during 1927 amounted to 24,708 tons valued at $1,030,991 as compared with 23,655 tons worth $1,015,578 in 1926. All of the ammonium sulphate made in Canada is produced as a by-product of the coke and artificial gas industries.

The bulk of the Canadian production is exported to foreign countries for use as fertilizer. In 1927 exports totalled 16,947 tons worth $730,815 as compared with 16,382 tons valued at $813,115 in 1926. The principal countries of destination with the quantities and values of Canadian export to each were as follows: Japan, 7,498 tons worth $328,884; United States 3,061 tons at $126,482; Hong Kong, 2,990 tons at $127,865; China, 1,283 tons at $59,009; Barbados, 977 tons at $41,099; British Guiana, 235 tons at $10,146; French West Indies, 532 tons at $21,512; and other British West Indies, 339 tons at $14,471.

Considerable quantities of ammonium sulphate are also imported into Canada. During 1927 about 3,181 tons worth $160,150 were brought into Canada; the bulk of this came from the United States. In 1926 the imports were only 2,298 tons worth $135,455.

Six companies in Canada made ammonium sulphate during 1927; one concern ceased manufacturing this commodity late in 1926 but another firm commenced to produce in 1927. The producing plants were located as follows:

Algoma Steel Corporation, Sault Ste. Marie, Ont.
Steel Company of Canada, Limited, Hamilton, Ont.
Hamilton By-Product Coke Ovens, Limited, 15 Main St., Hamilton, Ont.
Dominion Iron and Steel Co., Limited, Sydney, N.S.
Montreal Light, Heat and Power Co., Limited, Montreal, P.Q.
Ottawa Gas Company, Ottawa, Ont.

Table 45.—Production in Canada, Imports and Exports of Ammonium Sulphate 1919-1927

Year	Production		Imports		Exports	
	Quantity	Value	Quantity	Value	Quantity	Value
	Pounds	$	Pounds	$	Pounds	$
1919	38,644,152	1,423,545	293,408	12,129	37,331,200	1,846,713
1920	39,912,723	1,475,542	624,650	31,495	36,658,500	1,896,660
1921	34,680,248	1,183,776	313,354	11,513	29,296,100	784,628
1922	27,201,332	667,934	825,326	24,659	26,570,000	532,983
1923	43,037,062	1,268,146	517,629	18,577	40,910,000	1,254,681
1924	34,685,134	865,538	1,376,643	27,111	26,714,100	681,809
1925	36,502,275	909,097	795,792	27,544	25,120,700	637,310
1926	47,310,666	1,015,578	4,596,953	135,455	32,764,400	813,115
1927	49,416,617	1,030,991	6,361,100	160,150	33,893,500	730,815

CHAPTER FOUR

EXPLOSIVES, AMMUNITION, FIREWORKS AND MATCHES

Production of explosives, ammunition, fireworks and matches in Canada during 1927 was valued at $12,921,079 or three-quarters of a million dollars above the figure of $12,155,220 for the combined output in 1926. The increase in the value of explosives production accounted for nearly the entire gain in this group; ammunition and fireworks showed only small gains while the value of matches dropped slightly. Capital employed in the group as a whole was increased by 9 per cent to $18,328,869; employees numbered 1,954 as against 2,109 in 1926; salaries and wages totalled $1,926,852 as against $2,243,455, and materials cost $6,871,855 as against $6,827,-317. The value added by manufacturing was $6,049,224 as compared with $5,327,903 in 1926.

Explosives.—Six factories in Canada produced high explosives during 1927; 4 were in Ontario, 1 in Quebec and 1 in British Columbia. Canadian Explosives, Limited, with plants at Beloeil, P.Q., and Nobel, Ont., and Canadian Giant at James Island, B.C., manufactured gun powder, nitrate mixtures, and nitro compounds; National Explosives Company, Limited, Deseronto, Ont., and Mexco, Limited, with a small temporary plant at Swastika, Ont., made chlorate mixtures, and the North Star Explosives Co., Ltd., Prescott, Ont., operated for part of the year on the manufacture of mercury fulminate. The plant of the National Explosives Co., Ltd., was operated only to the end of July when it was purchased by Canadian Explosives, Ltd., and closed down. The Dragon plant of the latter company was not in operation during 1927 but the Nobel factory was re-opened in January and worked continuously throughout the year.

Production of powder and blasting explosives in bulk during 1927 totalled 39,787,397 pounds as compared with 36,034,928 pounds in 1926. The total value of products made for sale was $6,279,436 and intermediates were valued at $2,385,309 making a total output value of $8,664,745 as against $7,979,765 in 1926. Capital employed was given at $9,043,308 of which $6,240,254 represented the value of lands, buildings and equipment; the average number of employees was 508 and salaries and wages totalled $644,211. Materials cost $5,019,696 at the works and the value added by manufacturing was $3,645,049.

Ammunition.—The same 3 plants were in operation in 1927 as in the preceding year; all were located in Quebec. The Government Arsenal, Quebec, P.Q., produced rifle and field gun ammunition; the Canadian Safety Fuse Co., Ltd., Brownsburg, P.Q., made safety fuse; and the Dominion Cartridge Co., Ltd., Brownsburg, P.Q., manufactured shot shells, detonators, fog signals, safety cartridges, percussion caps, and railway fusees.

Employing capital amounting to $4,310,481 in 1927 these concerns produced commodities with a selling value reported at $2,237,975 and gave work to a monthly average of 643 persons throughout the year. Conditions were slightly improved from 1926 when 603 people were employed and the output was valued at $2,104,204.

Fireworks.—Production of manufactured fireworks in 1927 was valued at $143,652 as compared with $127,456 in 1926. Four concerns in Canada were licensed to manufacture fireworks in 1927; 2 of these, the T. W. Hand Fireworks Co., Ltd., Hamilton, Ont., and the Toronto Fireworks Co., Ltd., Islington, Ont., operated all year and accounted for the bulk of the production, while Dominic Ruffo, Cornwall, Ont., and B. Marroni, St. Pierre, P.Q., worked intermittently on a small scale employing no help. A new plant owned by the Dominion Fireworks Company at Dixie, Ont., commenced operations just at the close of the year but data for this firm has not been included in this report.

Matches.—In 1927 there were 3 match factories in operation in Canada as follows: E. B. Eddy Co., Ltd., Hull, P.Q., World Match Corporation, Ltd., Berthierville, P.Q.; and the Canadian Match Co., Ltd., Pembroke, Ont. The outstanding development in this industry during the year was the amalgamation of these 3 concerns under the name of Eddy Match Co., Ltd. with head office at Hull, P.Q.; the 3 plants are being kept in operation.

Output of matches in 1927 was valued at $1,874,707 (exclusive of excise tax) or slightly less than the production value of $1,943,795 for 1926. Capital was reported at $4,846,034 including plants and equipment valued at $3,114,518, and the average number of employees each month was 762 of which 401 were males and 361 were females.

Table 46.—Principal Statistics of the Explosives, Ammunition, Fireworks and Matches Industry in Canada by Industries and by Provinces, 1926 and 1927

Industry and Province	Number of plants	Capital employed	Number of employees	Salaries and wages	Cost of fuel and electricity*	Cost of materials	Selling value of products	Value added by manufacturing
1926		$		$	$	$	$	$
Explosives	5	8,413,341	689	1,003,102	106,485	4,835,538	7,979,765	3,144,227
Ammunition	3	3,825,281	603	661,384	71,070	885,684	2,104,204	1,218,520
Fireworks	3	109,193	36	55,185	1,174	36,460	127,456	90,996
Matches	3	4,509,305	781	523,784	55,107	1,069,635	1,943,795	874,160
Total—Quebec	**7**	**12,595,809**	**1,770**	**1,890,585**	**203,321**	**4,883,726**	**9,028,358**	**4,144,633**
Ontario and British Columbia	**7**	**4,261,311**	**339**	**352,870**	**30,515**	**1,943,591**	**3,126,861**	**1,183,270**
Canada	**14**	**16,857,120**	**2,109**	**2,243,455**	**233,836**	**6,827,317**	**12,155,220**	**5,327,903**
1927								
Explosives	6	9,043,308	508	644,211	119,584	5,019,696	8,664,745	3,645,049
Ammunition	3	4,310,481	643	649,963	61,160	867,484	2,237,975	1,370,491
Fireworks	4	129,046	41	69,576	1,085	18,830	143,652	124,822
Matches	3	4,846,034	762	563,102	48,650	965,845	1,874,707	908,862
Total—Quebec	**7**	**11,933,512**	**1,479**	**1,392,852**	**161,360**	**3,859,320**	**7,732,605**	**3,873,285**
Ontario and British Columbia	**9**	**6,395,357**	**475**	**534,000**	**69,119**	**3,012,535**	**5,188,474**	**2,175,939**
Canada	**16**	**18,328,869**	**1,954**	**1,926,852**	**230,479**	**6,871,855**	**12,921,079**	**6,049,224**

Table 47.—Capital Employed in the Explosives, Ammunition, Fireworks and Matches Industry in Canada, by Industries and by Provinces, 1926 and 1927

Industry and province	1926				1927			
	Capital employed as represented by				Capital employed as represented by			
	Lands, buildings, fixtures, machinery and tools	Materials on hand, and stocks in process	Cash, trading and operating accounts and bills receivable	**Total**	Lands, buildings, fixtures, machinery and tools	Materials on hand, and stocks in process	Cash, trading and operating accounts and bills receivable	**Total**
	$	$	$	$	$	$	$	$
Explosives	5,454,449	1,282,873	1,676,019	8,413,341	6,240,254	1,643,962	1,159,092	**9,043,308**
Ammunition	2,070,126	1,511,940	243,215	3,825,281	2,727,793	1,355,139	227,549	**4,310,481**
Fireworks	41,594	26,046	41,553	109,193	41,618	23,457	63,971	**129,046**
Matches	3,031,800	778,052	699,453	1,509,305	3,114,518	830,484	901,032	**4,846,034**
Total—Quebec	**7,931,162**	**2,882,057**	**1,782,596**	**12,595,809**	**7,943,908**	**2,734,333**	**1,255,271**	**11,933,512**
Ontario and British Columbia	**2,666,807**	**716,854**	**877,650**	**4,261,311**	**4,180,275**	**1,118,709**	**1,096,373**	**6,395,357**
Canada	**10,597,969**	**3,598,911**	**2,660,240**	**16,857,120**	**12,124,183**	**3,853,042**	**2,351,644**	**18,328,869**

Table 48.—Employees, Salaries and Wages in the Explosives, Ammunition, Fireworks and Matches Industry in Canada, by Groups and by Provinces, 1926 and 1927

Industry and province	*Average number of employees					Salaries and wages		
	Salaried employees		Wage-earners		Total	Salaries	Wages	Total
	Male	Female	Male	Female				
						$	$	$
1926								
Explosives	162	37	486	4	689	547,234	455,868	1,003,102
Ammunition	72	4	356	171	603	173,733	487,651	661,384
Fireworks	6	2	14	14	36	31,890	23,295	55,185
Matches	46	16	412	307	781	100,875	422,909	523,784
Total—Quebec	**262**	**52**	**1,032**	**421**	**1,770**	**771,192**	**1,119,393**	**1,890,585**
Ontario and British Columbia	**24**	**7**	**236**	**72**	**339**	**82,540**	**270,330**	**352,870**
Canada	**286**	**59**	**1,268**	**496**	**2,109**	**853,732**	**1,389,723**	**2,243,455**
1927								
Explosives	50	3	443	12	508	114,396	529,815	644,211
Ammunition	56	1	392	194	643	114,042	535,921	649,963
Fireworks	6	2	16	17	41	38,142	31,434	69,576
Matches	43	17	358	344	762	109,250	453,852	563,102
Total—Quebec	**118**	**15**	**860**	**486**	**1,479**	**258,579**	**1,434,273**	**1,392,852**
Ontario and British Columbia	**37**	**8**	**349**	**81**	**475**	**117,251**	**416,749**	**534,000**
Canada	**155**	**23**	**1,209**	**567**	**1,954**	**375,830**	**1,551,022**	**1,926,852**

*See note on page 24.

Table 49.—Wage-Earners in the Explosives, Ammunition, Fireworks and Matches Industry in Canada, by Months, 1926

Month	Explosives		Ammunition		Fireworks		Matches		Total
	Male	Female	Male	Female	Male	Female	Male	Female	
January	375	2	338	163	14	15	469	352	1,728
February	365	2	341	166	14	15	410	311	1,624
March	369	2	341	165	14	14	388	293	1,586
April	432	2	339	165	13	14	465	306	1,736
May	450	2	344	171	16	14	418	303	1,718
June	373	3	348	170	15	14	415	297	1,635
July	386	4	348	171	15	11	386	279	1,600
August	373	4	374	170	15	12	386	274	1,608
September	387	4	363	181	15	11	451	340	1,752
October	728	5	378	177	13	12	415	296	2,024
November	699	7	380	178	12	15	387	334	2,012
December	664	7	378	178	12	16	362	300	1,917
***Average**	**486**	**4**	**356**	**171**	**14**	**14**	**412**	**307**	**1,764**

*See note on page 24.

Table 50.—Wage-Earners in the Explosives, Ammunition, Fireworks and Matches Industry in Canada, by Months, 1927

Month	Explosives		Ammunition		Fireworks		Matches		Total
	Male	Female	Male	Female	Male	Female	Male	Female	
January	399	16	378	181	11	15	359	278	1,637
February	388	10	377	188	11	15	272	186	1,447
March	384	10	346	179	11	16	237	171	1,354
April	404	10	371	179	14	18	222	189	1,407
May	467	10	383	191	16	17	375	329	1,788
June	394	11	391	194	23	19	418	443	1,893
July	405	12	399	200	20	16	415	476	1,943
August	422	10	414	186	15	19	371	334	1,771
September	503	10	414	198	16	19	382	349	1,891
October	444	11	405	210	13	16	352	341	1,792
November	431	12	411	216	13	16	459	479	2,037
December	392	11	410	216	14	20	431	550	2,044
***Average**	**443**	**12**	**392**	**194**	**16**	**17**	**358**	**344**	**1,776**

*See note on page 24.

Table 51.—Hours of Labour in Month of Greatest Employment in the Explosives, Ammunition, Fireworks and Matches Industry in Canada, by Provinces, 1927

Group and Province	Number of wage-earners working			
	8 hours per day	9 hours per day	10 hours per day	Over 10 hours per day
Explosives	45	231	103	168
Ammunition	256	366	–	9
Fireworks	11	32	–	–
Matches	618	203	176	82
Total—				
Quebec	**890**	**442**	**176**	**218**
Ontario and British Columbia	**40**	**390**	**103**	**41**
Canada	**930**	**832**	**279**	**259**

Table 52.—Record of Operations in the Explosives, Ammunition, Fireworks and Matches Industry, in Canada by Provinces, 1927

Group and Province	On full time only			On less than full time				
	Average number of wage-earners	Number of plants	Total plant days	Average number of wage-earners	Number of plants	Total plant days		
						On full time	On part time	Idle
Explosives	–	1	304	455	5	932	162	426
Ammunition	–	–	–	586	3	806	–	106
Fireworks	31	2	608	2	2	–	216	392
Matches	138	1	304	564	2	412	144	52
Total—								
Quebec	–	–	–	**1,346**	**7**	**1,476**	**301**	**351**
Ontario and British Columbia	**169**	**4**	**1,216**	**261**	**5**	**674**	**221**	**625**
Canada	**169**	**4**	**1,216**	**1,607**	**12**	**2,150**	**522**	**976**

Table 53.—Fuel and Electricity Used in the Explosives, Ammunition, Fireworks and Matches Industry in Canada, 1926 and 1927

Description	Unit of measure	1926		1927	
		Quantity	Value	Quantity	Value
			$		$
Anthracite coal	short ton	6,798	44,088	6,497	39,738
Bituminous coal—Canadian	short ton	15,010	94,622	3,389	23,806
Bituminous coal—Imported	short ton			13,519	85,895
Coke	short ton	658	7,862	452	5,341
Fuel oil and diesel oil	Imp. gal.	338,211	16,875	410,520	21,462
Gas, manufactured	M cu. ft.	36,495	13,312	40,657	11,506
Wood	cord	12	132	781	2,584
Other fuel	.....	–	5,784	–	–
Electricity purchased	k.w.h.	3,620,430	51,161	2,909,177	40,147
Total	.....	–	**233,836**	–	**230,479**
Electricity generated for own use	k.w.h.	–	–	1,194,847	29,282

Table 54.—Power Employed in the Explosives, Ammunition, Fireworks and Matches Industry in Canada, 1926 and 1927

Description	1926		1927	
	Number of units	Total h.p. according to manufacturers' rating	Number of units	Total h.p. according to manufacturers' rating
Steam engines and turbines	15	2,247	16	2,451
Hydraulic turbines and water wheels	2	250	2	250
Total primary power	*17*	*2,497*	*18*	*2,701*
Electric motors run by purchased power	285	3,330	260	3,348
Total power employed	**302**	**5,827**	**278**	**6,049**
Electric motors run by primary power in same plant	132	798	147	1,092
Total electric motors	*417*	*4,128*	*407*	*4,440*
Boilers	19	4,186	23	5,039

Table 55.—Estimated Percentage of Normal Output Attained in the Explosives, Ammunition, Fireworks and Matches Industry in Canada by Industries and by Provinces, 1927

Group and Province	Actual value of output	Computed value of normal output	Per cent of normal output attained
	$	$	
Explosives	7,664,745	9,703,336	79
Ammunition	2,237,975	2,508,827	89
Fireworks	143,652	149,685	96
Matches	1,874,707	2,191,096	86
Total—			
Quebec	**7,732,605**	**9,074,288**	**85**
Ontario and British Columbia	**5,188,474**	**6,478,656**	**80**
Canada	**12,921,079**	**15,552,944**	**83**

Table 56.—Materials Used in the Explosives, Ammunition, Fireworks, and Matches Industry in Canada, 1926 and 1927

Material	Unit of measure	1926		1927	
		Quantity	Cost of works	Quantity	Cost of works
			$		$
Explosives					
Purchased materials used—					
Ammonium hydroxide	lb. NH_3	158,179	14,735	227,899	16,041
Ammonium nitrate	lb.	4,398,454	253,884	5,062,073	231,843
Ammonium perchlorate	lb.	24,800	2,480	20,911	2,104
Calcium carbonate	lb.	422,879	2,462	505,364	2,681
Charcoal	lb.	326,767	4,995	245,628	4,626
Corn meal	lb.	395,349	10,038	3,604	107
Corn starch	lb.	310,221	14,071	94,013	4,296
Dinitrotoluene (DNT)	lb.	364,338	43,495	504,693	54,125
Ethylene glycol	lb.	–	–	920,735	204,583
Flour	lb.	326,032	7,477	18,532	421
Glycerine	lb.	4,013,096	741,598	2,502,140	548,371
Graphite	lb.	3,936	273	2,780	195
Ivory nut meal	lb.	661,158	11,023	2,033,821	26,860
Nitric acid	lb.	1,073,096	58,042	611,018	29,237
Nitrocotton (Pyrocotton)	lb.	130,356	68,561	85,540	34,583
Oleum	lb.	7,003,587	54,614	12,190,996	108,305
Paper	lb.	1,198,928	101,480	1,249,962	115,805
Petrolatum	lb.	7,301	384	11,865	580
Petroleum products (chiefly paraffine wax)	lb.	509,029	33,469	791,814	42,019
Potassium chlorate	lb.	15,600	1,092	86,000	8,750
Potassium nitrate	lb.	291,840	14,849	289,675	13,880
Potassium perchlorate	lb.	–	–	537,200	49,441
Sawdust	lb.	564,060	1,510	1,022,855	3,856
Sodium carbonate (soda ash)	lb.	272,376	7,677	209,603	4,007
Sodium chloride (salt)	lb.	505,135	3,554	385,988	2,821
Sodium biborate (borax)	lb.	33,087	1,691	19,581	832
Sodium nitrate (Chile saltpetre)	lb.	27,568,948	693,977	28,682,238	702,008
Sugar and its derivatives	lb.	19,900	1,205	216,800	13,971
Sulphur	lb.	1,201,910	14,139	1,683,119	22,092
Sulphuric acid (66° Bé)	lb.	6,088,415	54,583	–	–
Wood pulp	lb.	1,528,493	33,570	1,387,587	27,650
Containers, boxes, cartons, etc	–	–	129,676	–	99,234
All other materials[1]	–	–	174,785	–	259,063
Total		–	2,554,389	–	2,634,387
Intermediate products used as materials[2]		–	2,281,149	–	2,385,309
Total		–	*4,835,538*	–	*5,019,696*
Ammunition					
Total[3]		–	885,684	–	867,484
Fireworks					
Total		–	36,460	–	18,830
Matches					
Ammonium phosphate	lb.	42,082	4,936	33,835	3,911
Glue	lb.	369,975	76,888	356,284	76,333
Lumber blocks and logs	ft.	5,891,284	373,976	4,329,570	236,647
Phosphorus sesquisulphide	lb.	85,761	42,476	80,377	34,406
Potassium chlorate	lb.	1,011,875	68,521	1,017,949	69,260
Powdered glass	lb.	247,017	5,817	270,326	5,471
Resin	lb.	49,068	1,640	55,745	2,372
Sulphur	lb.	39,304	4,474	49,023	5,434
Zinc oxide	lb.	41,873	4,348	57,722	4,926
Wax	lb.	1,384,226	85,677	1,363,260	70,635
Containers, boxes, cartons, etc		–	197,687	–	165,077
All other materials		–	203,195	–	291,373
Total		–	1,069,635	–	965,845
Total		–	**6,827,317**	–	**6,871,855**

[1] Includes acetone, alcohol, mercury and various other materials.
[2] Includes nitric acid, recovered acids and nitroglycerine.
[3] Includes wax, potassium chlorate, mercury fulminate, cotton, yarn, powder, shot, copper, lead, paper, cordite, cartridge cups and various other materials.

Table 57.—Products of the Explosives, Ammunition, Fireworks and Matches Industry in Canada, 1926 and 1927

Product	Unit of measure	1926		1927	
		Quantity	Selling value	Quantity	Selling value
			$		$
EXPLOSIVES					
(a) Products made for sale.					
Class I—					
Gun powder	lb.	383,543	116,764	347,286	87,274
Class II—					
Nitrate mixtures	lb.	1,167,775	104,775	1,305,500	140,117
Class III—					
Nitro-compounds—Division 1	lb.	34,350,210	5,270,145	37,953,680	5,863,629
Class IV—					
Chlorate mixtures	lb.	133,400	20,200	189,931	29,867
Total powder and blasting explosives in bulk	lb.	36,034,928	5,511,884	39,787,397	6,120,887
Other products and by-products[1]	–	–	186,732	–	158,549
Total products made for sale	–	–	5,698,616	–	6,279,436
(b) Intermediate products made for use.					
Ammonium nitrate	lb.	693,543	46,144	–	–
Nitric acid	lb.	7,838,467	483,729	7,024,219	446,595
Nitroglycerine	lb.	8,977,790	1,585,193	8,846,900	1,603,398
Recovered acids	lb.	12,372,989	166,083	22,967,177	335,316
Total intermediate products	–	–	2,281,149	–	2,385,309
Total	–	–	*7,979,765*	–	*8,664,745*
AMMUNITION					
Total[2]	–	–	2,104,204	–	2,237,975
FIREWORKS					
Class VII—Fireworks—Division 2—					
Manufactured fireworks	–	–	127,456	–	143,652
Total	–	–	127,456	–	143,652
MATCHES					
Total	–	–	1,943,795	–	1,874,707
Total	–	–	**12,155,220**	–	**12,921,079**

[1]Includes recovered acids, nitre cake, mercury fulminate and other products.
[2]Includes safety cartridges, safety fuses for blasting, railway fog signals, percussion caps, loaded and empty shot shells, railway fusees, electric fuses, small arms and field gun ammunition, detonators, and other products.

Table 58.—Production of Certain Explosives in Canada, 1923-1927

(From the *Annual Reports of the Explosives Division of the Department of Mines*)

Class	1923	1924	1925	1926	1927
	Lb.	Lb.	Lb.	Lb.	Lb.
Class I—Gunpowder	339,300	453,418	175,758	383,543	347,286
Class II—Nitrate mixtures	1,239,175	1,421,450	1,371,825	1,167,775	1,305,500
Class III—Nitro-compounds	26,975,966	28,288,671	33,278,379	34,350,210	37,953,680
Class IV—Chlorate mixtures	81,660	80,585	126,227	133,400	189,931
Total powder and blasting explosives in bulk	**28,636,101**	**30,244,124**	**34,952,189**	**36,034,928**	**39,787,397**

Table 59.—Production Values of Manufactured Fireworks and Matches in Canada, 1918-1927

Year	Manufactured fireworks	Matches (selling value less excise)
	$	$
1918	37,327	1,515,680
1919	90,500	2,207,221
1920	100,515	2,698,125
1921	106,722	2,313,019
1922	177,162	2,923,998
1923	107,320	2,714,950
1924	123,201	1,674,001
1925	109,020	2,054,640
1926	127,456	1,943,795
1927	143,652	1,874,707

Table 60.—Imports Into Canada and Exports of Explosives, Ammunition, Fireworks and Matches, by Principal Countries, Calendar Years 1926 and 1927

Commodity	Country* of origin or destination	1926		1927	
		Quantity	Value	Quantity	Value
		Lb.	$	Lb.	$
IMPORTS					
Explosives—					
Binitrotoluol, trinitrotoluol and perchlorate of ammonia when imported by manufacturers of explosives, for use exclusively in the manufacture of such articles in their own factories.	**Total**	**430,841**	**40,751**	**418,552**	**38,578**
	United States	273,594	27,305	215,543	21,298
	Germany	157,247	13,446	203,009	17,280
Nitrate compounds, n.o.p., adapted for use in the manufacture of explosives.	**Total**	**70,741**	**6,670**	**474,215**	**63,130**
	United States	13,132	1,242	9,547	906
	Germany	57,609	5,428	464,668	62,224
Blasting and mining powder	**Total**	**540**	**76**	**101,175**	**7,034**
	United States	540	76	101,175	7,034
Dynamite and nitroglycerine	**Total**	**111,568**	**13,358**	**10,820**	**4,069**
	United States	111,468	13,341	10,820	4,069
Fuses, non-metallic	**Total**	–	**319**	–	**893**
	United States	–	319	–	893
Gun, rifle, sporting, cannon, musket and cannister powder.	**Total**	**95,529**	**65,215**	**83,639**	**62,928**
	United Kingdom	–	–	40,149	34,031
	United States	95,529	65,215	43,490	28,897
Giant powder, nitro and other explosives, n.o.p.	**Total**	**556,657**	**232,873**	**1,226,480**	**315,757**
	United Kingdom	53,037	62,251	125,412	51,300
	United States	503,620	170,622	1,101,068	264,457
Total explosives	**Total**	–	**415,539**	–	**563,897**
	United Kingdom	–	62,732	–	86,045
	United States	–	308,716	–	374,586
Ammunition—					
Cartridges, gun, rifle, and pistol and other ammunition, n.o.p.	**Total**	–	**396,937**	–	**385,454**
	United Kingdom	–	9,682	–	19,881
	United States	–	386,105	–	358,495
Cartridge cases, gunwads, percussion caps and primers.	**Total**	–	**6,952**	–	**9,868**
	United Kingdom	–	3,162	–	2,042
	United States	–	3,709	–	7,645
Total ammunition	**Total**	–	**403,889**	–	**395,322**
	United Kingdom	–	12,844	–	21,923
	United States	–	389,814	–	366,140
Fireworks—					
Fireworks, fire crackers, and torpedoes, all kinds	**Total**	–	**56,277**	–	**71,508**
	United Kingdom	–	481	–	714
	United States	–	30,596	–	47,032
	China	–	8,195	–	
	Hong Kong	–	14,019	–	–

Table 60.—Imports Into Canada and Exports of Explosives, Ammunition, Fireworks and Matches, by Principal Countries, Calendar Years 1926 and 1927—Concluded

Commodity	Country* of origin or destination	1926		1927	
		Quantity	Value	Quantity	Value
IMPORTS—Concluded		Lb.	$	Lb.	$
Matches—	**Total**	–	**37,861**	–	**86,463**
Matches of wood	United Kingdom	–	141	–	64
	United States	–	831	–	553
	Sweden	–	35,019	–	84,475
EXPORTS					
Explosives—	**Total**	–	**92,036**	–	**122,137**
Dynamite	United States	–	692	–	–
	Newfoundland	–	89,659	–	122,137
Explosives and fulminates, n.o.p.	**Total**	–	**21,379**	–	**57,601**
	United States	–	10	–	863
	Newfoundland	–	18,831	–	55,848
Matches—	**Total**	–	**20,254**	–	**8,410**
Matches of wood	United States	–	10,615	–	–
Match splints	**Total**	–	**471,866**	–	**387,835**
	United Kingdom	–	384,192	–	287,105
	United States	–	180	–	136
	Irish Free State	–	86,294	–	100,594

*Only the principal countries are shown in this table; more detailed information is available in the External Trade Branch, Dominion Bureau of Statistics.

Table 61.—Imports of Explosives into Canada, 1926 and 1927

(From the *Annual Report of the Explosives Division of the Department of Mines*).

Class	Division	Description	1926	1927
I	–	Gunpowder	2,850 lb.	3,500 lb.
II	–	Nitrate mixtures	2,500 lb.	152,450 lb.
III	1	Mixtures of liquid nitrocompounds	111,890 lb.	5,216 lb.
	2	Nitrocompounds—		
		(a) Propellants	116,415 lb.	67,855 lb.
		(b) For use in explosive factories	324,950 lb.	573,207 lb.
		(c) For other manufacturing purposes	388,530 lb.	704,855 lb.
V	1	Fulminates	32,200 lb.	27,000 lb.
VI	1	Percussion caps	35,500 lb.	13,500 lb.
		Safety fuse	6,100 ft.	100 ft.
	2	Miners' squibs	600	300
		Detonating fuse	275,688 ft.	296,460 ft.
	3	Detonators and electric detonators	29,750	22,600
VII	2	Manufactured fireworks	(Approx.) 332,000 lb.	(Approx.) 546,588 lb.

CHAPTER FIVE

FERTILIZERS

In 1927 there were only 12 establishments in Canada engaged primarily in the manufacture of mixed fertilizer or fertilizer materials; 6 were located in Ontario, 2 in Nova Scotia, 2 in British Columbia, 1 in Quebec, and 1 in New Brunswick. One of these factories was employed solely in grinding basic slag and the remainder were occupied chiefly in preparing mixed fertilizer for market; only 1 concern actually manufactured superphosphate although a number of other manufacturers sold superphosphate after treatment or dilution with a filler to meet the requirements of the trade. In addition to the fertilizers made in these plants there was a considerable production of fertilizer materials such as cyanamide, ammonium sulphate, animal tankage, etc., as a minor product or as a by-product from factories classified in the other industrial groups; a table showing this production has been added to the present chapter.

Production from the fertilizers industry in 1927 reached a value of $1,844,032, an increase of 27 per cent over the output value of $1,449,589 reported for the same 12 factories in 1926. These concerns reported the capital employed at $1,998,811, including $879,020 as the value of lands, plants and machinery, and an average payroll of 233 people for each month of the year. Payments for salaries and wages amounted to $224,564; expenditure for fuel and electricity totalled $14,736; and materials used in manufacture cost $1,200,030. Mixed fertilizer was the main product and in 1927 the output was 49,593 tons valued at $1,670,507 or 91 per cent of the total output for the industry.

Of the plants in this group, only 3 showed output values above $300,000; 3 more reported products valued in excess of $100,000; 2 more above $50,000; and 2 more above $25,000; while the remaining 2 establishments each had an output valued at less than $10,000. Only 1 plant had a payroll numbering more than 50 hands; 3 more each employed more than 25 people; 5 more averaged more than 10 employees; while 3 establishments had less than 10 workers in each.

Production of fertilizers in other industries amounted in value to $6,338,046 in 1927 as compared with $6,749,974 in the previous year. Included in this total were 22,519 tons of complete fertilizers, 17,012 tons of animal tankage and 5,047 tons of raw or ground bone from the slaughtering and meat packing industry, 49,416 tons of ammonium sulphate from the coke and gas industries, as well as cyanamide, fish and whale fertilizers and similar materials.

Imports of fertilizers and fertilizer materials during 1927 were valued at $4,138,053, as against $3,692,680 in 1926. Mixed fertilizers, superphosphate, muriate and sulphate of potash, sodium nitrate, basic slag, kainit and ammonium sulphate were included in this total. Of course, some portions of these materials may have been used for other than fertilizer purposes. For example, a considerable quantity of sodium nitrate was used in the manufacture of explosives and there was no separation of the imports to show a division according to the purpose for which it was intended to be used; it is known that the greater portion was used for fertilizer purposes being either applied directly to the soil or used as an ingredient in the mixed fertilizers.

Exports were appraised at $5,379,582 as against $4,664,316 in 1926. Cyanamide was shipped mostly to United States; ammonium sulphate was sent to Japan, Hong Kong, United States, China, Barbados, and other countries, and manufactured fertilizers were exported chiefly to United States.

In order to secure more complete information on the fertilizer trade in Canada, the Bureau made a special survey of the sales of imported and domestic fertilizers for the year July 1, 1926 to June 30, 1927. The results of this study are printed as a supplement to this chapter, beginning on page 76.

Table 62.—Principal Statistics of the Fertilizers Industry in Canada, by Provinces, 1926 and 1927

Province	Number of plants	Capital employed	Number of employees	Salaries and wages	Cost of fuel and electricity	Cost of materials	Selling value of products	Value added by manufacturing
		$		$	$	$	$	$
1926								
Ontario	6	842,673	116	110,421	3,707	819,234	1,056,459	237,225
Canada*	**12**	**1,891,054**	**221**	**210,427**	**18,501**	**1,047,641**	**1,449,589**	**401,948**
1927								
Ontario	6	958,335	123	124,114	4,210	877,995	1,320,062	442,067
Canada*	**12**	**1,998,811**	**233**	**224,564**	**14,736**	**1,200,030**	**1,844,032**	**644,002**

* Includes also data for 2 plants in Nova Scotia, 2 in British Columbia, 1 in New Brunswick and 1 in Quebec.

Table 63.—Capital Employed in the Fertilizers Industry in Canada, by Classes and by Provinces, 1926 and 1927

Province	1926				1927			
	Capital employed as represented by				Capital employed as represented by			
	Lands, buildings, fixtures, machinery and tools	Materials on hand, and stocks in process	Cash, trading and operating account and bills receivable	**Total**	Lands, buildings, fixtures, machinery and tools	Materials on hand, and stocks in process	Cash, trading and operating account and bills receivable	**Total**
	$	$	$	$	$	$	$	$
Ontario	356,203	202,419	284,051	842,673	397,512	163,230	398,593	959,335
Canada*	**858,457**	**357,414**	**675,183**	**1,891,054**	**879,020**	**266,931**	**852,860**	**1,998,811**

* See footnote to Table 62.

Table 64.—Employees, Salaries and Wages in the Fertilizers Industry in Canada, by Provinces, 1926 and 1927

Province	Average number of employees					Salaries and wages		
	Salaried employees		Wage-earners		**Total**	Salaries	Wages	**Total**
	Male	Female	Male	Female				
						$	$	$
1926								
Ontario	14	7	95	–	**116**	37,353	73,068	**110,421**
Canada*	**34**	**12**	**175**	**–**	**221**	**74,380**	**136,047**	**210,427**
1927								
Ontario	13	9	100	1	**123**	42,422	81,692	**124,114**
Canada*	**29**	**13**	**190**	**1**	**233**	**80,912**	**143,652**	**224,564**

* See footnote to Table 62.

Table 65.—Wage-Earners in the Fertilizers Industry in Canada, by Months, 1926 and 1927

Month	1926	1927	Month	1926	1927
January	152	135	July	125	124
February	157	172	August	129	152
March	218	231	September	152	166
April	243	257	October	136	123
May	246	275	November	151	168
June	157	199	December	135	152
			Average*	**175**	**191**

* See note on page 24.

Table 66.—Hours of Labour in Month of Greatest Employment in the Fertilizers Industry in Canada by Provinces, 1927

Province	Number of wage-earners working			
	8 hours per day	9 hours per day	10 hours per day	Over 10 hours per day
Ontario	20	12	130	-
Canada*	**57**	**64**	**167**	-

* See footnote to Table 62.

Table 67.—Record of Operations in the Fertilizers Industry in Canada, by Provinces, 1927

Province	On full time only			On less than full time				
	Average number of wage-earners	Number of plants	Total plant days	Average number of wage-earners	Number of plants	Total plant days		
						On full time	On part time	Idle
Ontario	74	3	912	27	3	628	51	233
Canada*	**147**	**6**	**1,824**	**44**	**6**	**712**	**56**	**1,056**

* See footnote to Table 62.

Table 68.—Fuel and Electricity Used in the Fertilizers Industry in Canada, 1926 and 1927

Kind	Unit of measure	1926		1927	
		Quantity	Value	Quantity	Value
			$		$
Anthracite coal	short ton	106	1,097	130	1,253
Bituminous coal—Canadian	short ton	1,531	9,646	1,015	5,696
Bituminous coal—Imported	short ton			17	115
Coke	short ton	10	108	20	100
Gasoline	gallon	3,960	1,198	120	39
Wood	cord	99	328	75	150
Electricity purchased	k.w.h.	212,096	6,124	297,880	7,383
Total		-	**18,501**	-	**14,736**

Table 69.—Power Employed in the Fertilizers Industry in Canada, 1926 and 1927

Description	1926		1927	
	Number of units	Total h.p. according to manufacturers' rating	Number of units	Total h.p. according to manufacturers' rating
Steam engines and turbines	2	625	1	600
Gasoline, gas and oil engines	2	8	1	6
Total primary power	*4*	*633*	*2*	*606*
Electric motors run by purchased power	17	190	31	450
Total power employed	**21**	**823**	**33**	**1,056**
Electric motors run by primary power in some plant	5	110	-	-
Total electric motors	*22*	*300*	*31*	*450*
Boilers	4	655	4	650

Table 70.—Estimated Percentage of Normal Output Attained in the Fertilizers Industry in Canada by Provinces, 1927

Province	Actual value of output	Computed value of normal output	Per cent of normal output attained
	$	$	
Ontario	1,320,062	1,615,361	82
Canada*	**1,844,032**	**2,243,443**	**82**

* See footnote to Table 62.

Table 71.—Materials Used in the Fertilizers Industry in Canada, 1926 and 1927

Material	Unit of measure	1926		1927	
		Quantity	Cost at works	Quantity	Cost at works
			$		$
Acid phosphate (superphosphate)	lb.	25,405,778	178,687	30,787,748	197,992
Ammonium phosphate	lb.	165,950	5,614	45,000	1,546
Ammonium sulphate	lb.	2,740,193	71,148	5,541,509	134,752
Basic slag	lb.	7,380,000	5,259	4,147,525	2,230
Bone ash (char)	lb.	159,416	1,050	338,496	2,459
Bone flour, and bone dissolved	lb.	219,333	3,866	544,300	9,298
Bone meal (crude)	lb.	1,154,280	15,305	80,000	1,600
Calcium cyanamide	lb.	546,862	14,933	709,200	15,189
Dried blood	lb.	610,300	18,399	82,000	2,625
Fish scrap, dried and acidulated	lb.	60,000	1,500	400,000	10,000
Kainit and other crude potash salts	lb.	391,060	4,472	529,252	6,362
Lime or land plaster	lb.	2,938,938	5,953	2,157,141	2,583
Potassium carbonate or wood ashes	lb.	211,180	4,112	40,570	895
Potassium chloride (muriate)	lb.	5,192,414	86,979	6,689,766	120,397
Potassium sulphate	lb.	663,065	15,639	598,000	16,282
Phosphate rock (crude)	lb.	4,745,834	27,054	5,489,141	32,866
Sodium nitrate	lb.	2,337,969	65,484	1,236,166	33,237
Sulphuric acid, 50° Bé	lb.	2,445,611	11,007	2,741,369	13,706
Tankage	lb.	5,872,270	82,533	3,261,590	45,030
All other materials	–	–	366,417	–	454,491
Containers, etc	–	–	62,315	–	96,580
Total	–	–	**1,047,641**	–	**1,200,030**

Table 72.—Products of the Fertilizers Industry in Canada, 1926 and 1927

Product	Unit of measure	1926		1927	
		Quantity	Selling value	Quantity	Selling value
			$		$
Bone flour and meal	lb.	407,960	8,075	264,588	5,968
Complete fertilizer	lb.	74,066,935	1,235,415	99,185,351	1,670,507
All other products[1]	–	–	206,099	–	167,557
Total	–	–	**1,449,589**	–	**1,844,032**

[1]Includes fish scrap, basic slag, tankage, superphosphate and various other products.

Table 73.—Production of Fertilizers and Fertilizer Materials, in Other Industries 1926 and 1927

Industry	Product	Unit of measure	1926		1927	
			Quantity	Selling value	Quantity	Selling value
				$		$
Acids, alkalies, salts and compressed gases	Calcium cyanamide	ton	96,364	3,962,509	98,763	3,231,326
Slaughtering and meat packing	Animal tankage	ton	13,845	575,201	17,012	833,334
	Bone, raw, ground	ton	4,901	175,872	5,047	202,005
	Complete fertilizer	ton	19,855	807,678	22,519	881,914
Fisheries	Fish and whale fertilizers	–	–	213,136	13,630	158,476
Coke and gas	Ammonium sulphate	ton	23,655	1,015,578	24,708	1,030,991
Total		–	–	**6,749,974**	**181,679**	**6,338,046**

Table 74.—Imports into Canada and Exports of Fertilizers, by Principal Countries, 1926 and 1927

Item	Country	Unit of measure	1926 Quantity	1926 Value	1927 Quantity	1927 Value
				$		$
IMPORTS						
Ammonium sulphate	**Total**	**lb.**	**4,597,400**	**135,455**	**6,361,100**	**160,150**
	United Kingdom	lb.	106,500	4,562	100	9
	United States	lb.	4,311,200	125,131	6,346,700	159,727
Basic slag, crushed or ground	**Total**	**lb.**	**11,442,500**	**74,820**	**12,942,800**	**82,395**
	United Kingdom	lb.	541,900	2,632	1,920,000	9,532
	United States	lb.	90,000	106	–	–
	Belgium	lb.	7,178,100	54,199	11,022,800	72,863
Cyanamide	**Total**	**lb.**	**156,200**	**3,961**	**1,500**	**150**
	United States	lb.	156,200	3,961	1,500	150
Kainit and other crude German potash salts for fertilizers.	**Total**	**lb.**	**12,200**	**83**	**863,100**	**11,283**
	United Kingdom	lb.	12,200	83	11,200	79
	United States	lb.	–	–	421,900	3,691
Potash, muriate of, crude	**Total**	**lb.**	**29,665,000**	**432,537**	**37,346,900**	**627,997**
	United States	lb.	6,402,700	110,100	15,060,200	242,395
	Germany	lb.	22,580,100	308,983	20,728,000	342,262
Potash, sulphate of, crude	**Total**	**lb.**	**1,716,700**	**36,395**	**1,548,300**	**36,018**
	United Kingdom	lb.	20,000	360	100	11
	United States	lb.	596,900	13,248	460,800	10,600
	Germany	lb.	1,026,400	21,109	1,067,400	24,932
Soda, nitrate of, or cubic nitre	**Total**	**lb.**	**57,735,300**	**1,417,710**	**53,366,800**	**1,252,730**
	United Kingdom	lb.	1,788,100	37,040	17,200	727
	United States	lb.	20,174,600	544,345	30,631,500	759,795
	Chile	lb.	31,601,600	725,097	22,027,400	473,154
	Germany	lb.	3,224,700	84,755	587,100	16,376
Fertilizers, superphosphate or acid phosphate of lime.	**Total**	**lb.**	**153,837,300**	**925,515**	**173,177,700**	**979,261**
	United Kingdom	lb.	116,200	1,503	2,156,000	9,712
	United States	lb.	149,097,100	896,842	163,533,000	929,837
Fertilizers, compounded or manufactured n.o.p.	**Total**	**lb.**	**56,063,300**	**666,204**	**83,925,500**	**988,069**
	United Kingdom	lb.	164,700	6,172	88,300	4,810
	United States	lb.	50,787,200	618,062	81,507,300	954,121
Total fertilizers	**Total**	**lb.**	**315,225,900**	**3,692,680**	**369,533,700**	**4,138,053**
	United Kingdom	**lb.**	**2,749,600**	**52,358**	**4,192,900**	**24,880**
	United States	**lb.**	**231,615,900**	**2,311,795**	**297,963,000**	**3,060,316**
EXPORTS						
Ammonium sulphate	**Total**	**lb.**	**32,761,000**	**813,115**	**33,893,500**	**730,815**
	United States	lb.	1,023,000	24,960	6,121,100	126,482
	British Guiana	lb.	3,677,200	83,958	470,400	10,146
	Barbados	lb.	3,240,900	85,904	1,953,300	41,099
	Other Br. W. Indies	lb.	9,000	260	678,700	14,471
	China	lb.	6,370,600	151,520	2,566,000	59,009
	Cuba	lb.	1,059,000	26,645	–	–
	French West Indies	lb.	582,400	12,513	1,064,000	21,512
	Hong Kong	lb.	318,000	8,596	5,979,200	127,865
	Japan	lb.	16,403,100	417,110	14,996,300	328,884
Cyanamide	**Total**	**lb.**	**165,868,700**	**3,823,628**	**221,734,900**	**4,623,461**
	United States	lb.	163,571,700	3,763,608	211,551,500	4,396,497
	Belgium	lb.	–	–	6,270,500	134,720
	Porto Rico	lb.	2,003,900	50,639	2,970,700	72,904
Fertilizers, manufactured	**Total**	**lb.**	**2,181,200**	**27,573**	**2,148,400**	**25,306**
	United States	lb.	1,855,700	22,367	1,891,900	20,988
	Newfoundland	lb.	315,500	4,901	253,500	4,289
Total fertilizers	**Total**	–	–	**4,661,316**	–	**5,379,582**
	United States	–	–	**3,810,935**	–	**4,543,967**

THE FERTILIZER TRADE IN CANADA

July 1, 1926-June 30, 1927

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Purpose and Scope of Present Report.—In previous years, fertilizer statistics for Canada have been confined to data on imports, home production, and exports. But many materials used as fertilizers are also used for other purposes and because of this fact it is difficult to allocate the imported materials according to the several purposes; for example, nitrate of soda is used as a fertilizer but it also finds extensive use as a material in the heavy chemical and explosives industries. To obtain some definite information, therefore, in respect to the quantities and values of fertilizers and fertilizer materials marketed in Canada, the *Bureau of Statistics* in co-operation with the *Markets and Fertilizer Division* of the *Seed Branch Department of Agriculture*, made a survey of the *fertilizer trade* in Canada, selecting as the period for study, the twelve months beginning July 1, 1926, and ending June 30, 1927. This period coincides with the licence period recognized by the *Department of Agriculture* as the "fertilizer year." Lists of concerns to whom licences had been granted were furnished by the *Seed Branch*, and the work of collection and compilation was done by the Bureau.

An excellent response on the part of the traders in fertilizers enabled the Bureau to obtain practically complete returns in a reasonable time. Of 95 reporting firms, 8 replied that they had not been selling during the period; one sold to other manufacturers only; 5 sold only to other dealers for resale; and 13 were reported not operating; this left 68 plants engaged in marketing fertilizers or fertilizer materials directly to consumers, and in this report the tabular matter and reading references relate only to the data supplied by these 68 plants.

Products Marketed.—Fertilizers and fertilizer materials marketed by these 68 plants during the period July 1, 1926-June 30, 1927, reached a total of 254,639 tons, including 169,564 tons sold in the domestic market, and 85,075 tons sold for export from Canada. Mixed fertilizers for domestic trade at 64,423 tons constituted the bulk of the sales in this field; acid phosphate was next in quantity at 56,715 tons; basic slag sales totalled 12,919 tons; while muriate of potash followed closely at 12,523 tons. Other fertilizer materials sold in considerable amounts for consumption in Canada were nitrate of soda at 9,066 tons; sulphate of ammonia, 6,909 tons; bone meal, 2,158 tons; tankage, 2,116 tons; and fish meal, 1,021 tons. Still other fertilizer materials sold in smaller quantities were cyanamide, sulphate of potash, dried blood, nitrate of lime, bone flour, whale meat and blood, natural rock phosphate, sheep manure, and urea.

Sales for export from Canada totalled 85,075 short tons and included cyanamide, sulphate of ammonia, acid phosphate, mixed fertilizer, tankage, muriate of potash, nitrate of soda, whale meat and blood, and bone meal.

It may be noted at this point that the area sown to field crops in Canada each year total about 56 million acres. But as great tracts of land thus cropped are wonderfully fertile, and as the distribution of fertilizers, either by crops or by provincial areas, is not known, it is impossible to correlate the tonnage of fertilizers sold for use in Canada (169,564 tons) and the area of cultural land under cultivation.

Distribution of Trade.—An analysis of the trade by the 68 concerns shows that 43 were engaged in manufacturing; of these 34 had their factories in Canada, 7 sold from plants located in the United States, 1 factory was located in England and 1 in Scotland.

Fifty-three concerns sold Canadian-made fertilizers or fertilizer materials for use in Canada, and 50 sold imported materials for the same purpose. In the export field, 14 sold Canadian-made products and 3 sold imported fertilizers.

Canada's fertilizer trade may be divided into two classes: *(a)* fertilizer materials; *(b)* mixed fertilizers.

Fertilizer Materials.—Regarding the sale of fertilizer materials, there remains little to be said. Such materials are either used singly by the farmer or are mixed by him according to a formula which he has decided will best serve his particular needs. At the experimental farms maintained by the provincial and federal governments, a great deal of investigational work is constantly being carried on and the results are published so that the individual users of fertilizers or of fertilizer materials may gain first-hand knowledge regarding the relative values of the several fertilizer materials on the market and may thus determine for himself the quantities and kinds of materials that are likely to give the best results in his particular crops.

Mixed Fertilizers.—It has been noted that mixed fertilizers are sold in greater tonnage for use in Canada than any single fertilizer material. Mixed fertilizers are those contianing at least two, and usually three, of the primary fertilizer materials, namely, nitrogen, phosphoric acid and potash. Common practice permits the addition of inert material or filler in a mixed fertilizer so that the percentages of plant food may be controlled, and to improve the physical condition of the finished product so that it may be applied to the soil evenly.

Government Control.—Every manufacturer of mixed fertilizers in Canada is required by law to furnish the Dominion Government with the analysis of each brand he proposes to put on the market before he is given a licence to sell his product. Every bag of mixed fertilizer is required to carry a label showing the name of the manufacturer or importer and the guaranteed analysis of the product. Rigid enforcement of these regulations provides an excellent safeguard for the consumer against the possibility of fraudulent practice on the part of manufacturers. Samples taken by government inspectors from the material offered for sale, are analyzed regularly and if any samples are found to be below the strength guaranteed on the tag, corrective action is immediately taken by the Department of Agriculture.

Classes of Mixed Fertilizer Sold.—Reports received by the Bureau in the course of the present survey, showed that 128 different "mixed fertilizers" were sold in the period under review.

These mixed fertilizers were of four classes according to their plant food content. The number in each class was as follows:—

Nitrogen-Phosphoric Acid mixtures	12
Phosphoric Acid-Potash mixtures	17
Nitrogen-Potash mixtures	1
Nitrogen-Phosphoric Acid-Potash mixtures	98
Total	128

Consideration of the analyses and tonnages of the entire lot of 128 mixed fertilizers revealed the fact that the total content of actual plant food in the 66,378 tons of fertilizers sold (including 1,955 tons for export) was 23,405,714 pounds (11,702 tons) or 17.63 p.c. For the total tonnage, the percentages of plant food were: nitrogen, 2·74 p.c.; phosphoric acid, 9·17 p.c.; and potash, 5·72 p.c.

Nitrogen contents ranged from zero to 15 p.c.; phosphoric acid from zero to 25 p.c.; potash, from zero to 16 p.c.

Again, the total quantity of nitrogen in the mixed fertilizers sold (including those for export) was 3,633,574 pounds. Phosphoric acid present amounted to 12,182,080 pounds, and potash, 7,590,060 pounds.

Of the 128 kinds under review, 111 contained nitrogen in some form; 127 contained phosphoric acid; and 116 contained potash.

Nitrogen.—Eighty-five products in this group, representing 95 p.c. of the total tonnage of nitrogen-bearing fertilizers had a nitrogen content of from 2 to 4 p.c. Twelve products showed 5 p.c. nitrogen and there were samples of nitrogen content of 6, 7, 9, 10, 11 and 15 p.c.

Phosphoric Acid was present in 127 out of the 128 mixed fertilizers reported, in amounts varying from 5 p.c. through 6, 8, 9, 10, 11, 12, 14, 16, 20 and 22 to 25. p.c. The average content of phosphoric acid in the 128 samples was 9·17 p.c. Phosphoric acid contents ranging from 8 to 12 p.c. were characteristic of 104 products or 85 p.c. of the total number of phosphoric-acid-bearing fertilizers, representing 96 p.c. of the tonnage sold in this class. A further analysis showed that more than 6 p.c. of these mixed fertilizers representing 81 p.c. of the total tonnage of this class contained from 8 to 10 p.c. phosphoric acid.

Potash was reported in 116 products in amounts ranging from 2 p.c. through 3, 4, 5, 6, 7, 8, 9, 10, 12, 13 and 15 p.c. to one sample showing about 16 p.c. About one-half of the samples showed a potash content of 4 to 6 p.c. Over 60 p.c. of these products representing about 70 p.c. of the tonnage of potash-bearing fertilizers sold, contained potash in amounts not exceeding 6 p.c. About 93 p.c. of the total number, or 108 products, representing 90 p.c. of the total tonnage, showed potash contents in varying proportions up to and including 10. p.c.

There are appended several tables showing in detail the analyses made of the data obtained in the present survey. A list of the reporting firms, showing the address of each company and the nature of the trade carried on during the period under review, has also been included.

Table 75.—Nature of Companies' Trade in Fertilizers during the period July 1, 1926 to June 30, 1927

Number of firms	Manufacturing fertilizers or fertilizer materials	Selling Canadian made fertilizers or fertilizer materials		Selling imported fertilizers or fertilizer materials	
		Domestic trade	Export trade	Domestic trade	Export trade
2	Yes	Yes	Yes	Yes	Yes
1	"	"	"	"	No
10	"	"	"	No	"
6	"	"	No	"	"
15	"	"	"	Yes	"
9*	"	No	"	"	"
16	No	Yes	"	"	"
2	"	"	"	No	"
6	"	No	"	Yes	"
1	"	Yes	Yes	"	Yes

*Factories not located in Canada.

SUMMARY

1. 68 firms reported.
2. Classification of the 68 firms according to the nature of their trade showed:—
   (a) Number of firms manufacturing fertilizers or fertilizer materials, 43.
   (b) Of those engaged in Domestic Trade—
      (1) 53 sold products made in Canada.
      (2) 50 sold imported products.
   (c) Of those engaged in Export Trade—
      (1) 14 sold products made in Canada.
      (2) 3 sold imported products.

Table 76.—Kinds and Amounts of Fertilizers Sold in Canada, except for Manufacturing Purposes, during the period July 1, 1926 to June 30, 1927

	Short tons
AMOUNTS SOLD IN THE DOMESTIC MARKET—	
Fertilizer Materials—	
Sulphate of ammonia	6,908·91
Nitrate of soda	9,065·75
Cyanamide	605·50
Acid phosphate	56,715·50
Natural rock phosphate	90·50
Basic slag	12,918·90
Muriate of potash	12,523·17
Sulphate of potash	305·14
Tankage	2,115·88
Dried blood	219·28
Bone meal	2,158·47
Bone flour	139·54
Whale meat and blood	111·50
Fish meal	1,021·25
Calcium nitrate	175·20
Sheep manure	42·00
Whale meat and bone	24·00
Urea	1·00
Total fertilizer materials	105,141·49
Mixed Fertilizer	64,422·83
Total	**169,564·32**
AMOUNTS SOLD FOR EXPORT FROM CANADA—	
Fertilizer Materials—	
(Mostly cyanamide, ammonium sulphate, acid phosphate and tankage)	83,119·88
Mixed Fertilizer	1,955·00
Total	**85,074·88**
TOTAL TRADE—	
Fertilizer Materials	188,261·37
Mixed Fertilizer	66,377·83
Total	**254,639·20**

Table 77.—Analysis of Mixed Fertilizers Containing only Nitrogen and Phosphoric Acid

(a) Arranged in order of Nitrogen Content

Number of Brands	Total tons sold	Fertilizer Ingredients					
		Nitrogen		Phosphoric acid		Total	
		lb.	p.c.*	lb.	p.c.	lb.	p.c.
1	60·00	2,400	2	30,000	25·00	32,400	27·00
2	111·70	6,702	3	44,008	19·70	50,710	22·70
2	80·00	6,400	4	22,800	14·25	29,200	18·25
2	189·04	18,824	5	44,173	11·68	62,997	16·66
3	5·81	695	6	1,029	8·86	1,724	14·84
1	173·00	24,220	7	27,680	8·00	51,900	15·00
1	103·16	18,404	9	10,316	5·00	28,720	13·92
12 **Total**	**722·71**	**77,645**	**5·37**	**180,006**	**12·45**	**257,651**	**17·82**

*Nearest whole number.

(b) Arranged in order of Phosphoric Acid Content

Number of Brands	Total tons sold	Fertilizer Ingredients					
		Nitrogen		Phosphoric acid		Total	
		lb.	p.c.	lb.	p.c.	lb.	p.c.
1	103·16	18,404	8·92	10,316	5	28,720	13·92
4	192·32	26,316	6·79	30,854	8	56,990	14·81
1	2·49	299	6·00	498	10	797	16·00
2	198·74	18,846	4·74	47,698	12	66,544	16·74
1	70·00	5,600	4·00	19,600	14	25,200	18·00
1	10·00	800	4·00	3,200	16	4,000	20·00
1	86·00	5,160	3·00	37,840	22	43,000	25·00
1	60·00	2,400	2·00	30,000	25	32,400	27·00
12 **Total**	**722·71**	**77,645**	**5·37**	**180,006**	**12·45**	**257,651**	**17·82**

*Nearest whole number.

Table 78.—Analysis of Mixed Fertilizers Containing only Phosphoric Acid and Potash

(a) Arranged in order of Phosphoric Acid Content

Number of Brands	Total tons sold	Fertilizer Ingredients					
		Phosphoric acid		Potash		Total	
		lb.	p.c.*	lb.	p.c.*	lb.	p.c.
1	225·00	22,500	5	31,500	7·00	54,000	12·00
1	35·00	4,200	6	7,000	10·00	11,200	16·00
2	134·00	21,440	8	12,400	4·63	33,840	12·63
1	50·00	9,000	9	8,000	8·00	17,000	17·00
5	1,101·64	220,328	10	131,056	5·95	351,384	10·95
6	5,224·78	1,253,948	12	710,892	6·80	1,964,840	18·80
1	0·5	140	14	40	4·00	180	18·00
17 **Total**	**6,770·92**	**1,531,556**	**11·31**	**900,888**	**6·65**	**2,432,444**	**17·96**

*Nearest whole number.

(b) Arranged in order of Potash Content

Number of Brands	Total tons sold	Fertilizer Ingredients					
		Phosphoric acid		Potash		Total	
		lb.	p.c.	lb.	p.c.*	lb.	p.c.
1	10·95	2,190	10·00	438	2	2,628	12·00
4	1,648·15	362,670	11·00	131,852	4	494,522	15·00
2	3,237·39	770,254	11·90	323,739	5	1,093,993	16·90
2	53·80	12,872	11·96	6,456	6	19,328	17·96
1	225·00	22,500	5·00	31,500	7	54,000	12·00
2	68·04	12,608	9·27	10,886	8	23,494	17·27
3	616·00	129,680	10·53	123,200	10	252,880	20·53
1	11·00	2,640	12·00	2,640	12	5,280	24·00
1	900·59	216,142	12·00	270,177	15	486,319	27·00
17 **Total**	**6,770·92**	**1,531,556**	**11·31**	**900,888**	**6·65**	**2,432,444**	**17·96**

*Nearest whole number.

Table 79.—Analysis of Mixed Fertilizers Containing only Nitrogen and Potash

Number of Brands	Total tons sold	Fertilizer ingredients					
		Nitrogen		Potash		Total	
		lb.	p.c.	lb.	p.c.	lb.	p.c.
1	0·40	36	4·5	64	8	100	12·5

Table 80.—Analysis of Mixed Fertilizers Containing Nitrogen, Phosphoric Acid and Potash

(a) Arranged in order of Nitrogen Content

Number of Brands	Total tons sold	Fertilizer Ingredients							
		Nitrogen		Phosphoric acid		Potash		Total	
		lb.	p.c.*	lb.	p.c.	lb.	p.c.	lb.	p.c.
17	6,770·92	-	-	1,531,556	11·31	900,888	6·65	2,432,444	17·96
28	22,429·10	916,981	2	4,303,186	9·59	1,830,546	4·08	7,050,713	15·71
32	19,675·73	1,209,938	3	3,405,768	8·65	2,176,341	5·53	6,792,047	17·25
25	14,375·23	1,179,677	4	2,381,393	8·28	2,286,091	7·95	5,847,161	20·33
12	2,551·58	247,202	5	464,715	9·11	347,122	6·80	1,059,039	20·75
9	284·01	34,029	6	56,659	9·97	48,220	8·49	138,908	24·45
1	173·00	24,220	7	27,680	8·00	-	-	51,900	15·00
1	103·16	18,404	9	10,316	5·00	-	-	28,720	13·92
1	13·47	2,694	10	539	2·00	539	2·00	3,772	14·00
1	0·75	165	11	180	12·00	225	15·00	570	38·00
1	0·88	264	15	88	5·00	88	5·00	440	25·00
128 Total	66,377·83	3,633,574	2·74	12,182,080	9·17	7,590,060	5·72	23,405,714	17·63

* Nearest whole number.

(b) Arranged in order of Phosphoric Acid Content

Number of Brands	Total tons sold	Fertilizer Ingredients							
		Nitrogen		Phosphoric Acid		Potash		Total	
		lb.	p.c.	lb.	p.c.*	lb.	p.c.	lb.	p.c.
1	0·40	36	4·50	-	-	64	8·00	100	12·50
1	13·47	2,694	10·00	539	2	539	2·00	3,772	14·00
4	410·04	21,908	2·67	41,004	5	41,308	5·04	104,220	12·71
10	1,807·45	116,116	3·21	216,894	6	346,952	9·60	679,962	18·81
44	29,460·40	1,955,675	3·32	4,713,747	8	3,721,711	6·32	10,391,133	17·64
9	8,344·05	547,050	3·28	1,492,017	9	926,668	5·55	2,965,735	17·77
25	16,076·85	744,610	2·32	3,215,370	10	1,554,264	4·83	5,514,244	17·15
2	5·68	632	5·56	1,200	11	509	4·48	2,341	20·60
24	10,012·80	229,482	1·14	2,403,073	12	996,967	4·98	3,629,522	18·12
2	70·50	5,600	3·97	19,740	14	40	0·03	25,380	18·00
3	17·75	1,340	3·77	5,680	16	540	1·52	7,560	21·29
1	12·44	871	3·50	4,976	20	498	2·00	6,345	25·50
1	86·00	5,160	3·00	37,840	22	-	-	43,000	25·00
1	60·00	2,400	2·00	30,000	25	-	-	32,400	27·00
128 Total	66,377·83	3,633,574	2·74	12,182,080	9·17	7,590,060	5·72	23,405,714	17·63

* Nearest whole number.

(c) Arranged in order of Potash Content

Number of Brands	Total tons sold	Fertilizer Ingredients							
		Nitrogen		Phosphoric acid		Potash		Total	
		lb.	p.c.	lb.	p.c.	lb.	p.c.*	lb.	p.c.
12	722·71	77,645	5·37	180,006	12·45	-	-	257,651	17·82
14	5,745·60	234,409	2·04	1,206,864	10·50	229,825	2	1,671,098	14·54
5	296·26	14,689	2·48	47,412	8·00	17,776	3	79,877	13·48
25	23,630·69	1,150,607	2·43	4,286,876	9·07	1,890,455	4	7,327,938	15·50
15	12,036·38	537,714	2·23	2,359,830	9·80	1,198,138	5	4,095,682	17·01
13	4,695·25	319,930	3·41	811,212	8·64	563,430	6	1,694,572	18·05
7	7,129·89	501,617	3·52	1,257,842	8·82	998,185	7	2,757,644	19·34
12	2,099·32	175,172	4·17	371,601	8·85	335,891	8	882,667	21·02
1	25·00	2,500	5·00	3,000	6·00	4,500	9	10,000	20·00
16	4,567·29	257,819	2·82	714,896	7·83	913,188	10	1,885,903	20·64
3	576·72	22,629	1·96	93,955	8·14	138,413	12	254,997	22·10
1	3,909·58	337,006	4·31	625,533	8·00	1,016,491	13	1,979,030	25·31
3	901·84	185	0·01	216,442	12·00	270,552	15	487,179	27·01
1	41·30	1,652	2·00	6,608	8·00	13,216	16	21,476	26·00
128 Total	66,377·83	3,633,574	2·74	12,182,080	9·17	7,590,060	5·72	23,405,714	17·63

* Nearest whole number.

Table 81.—Summary of Analysis of Mixed Fertilizers

Number of brands—128

—	Pounds	Per cent of total fertilizer sold
Nitrogen	3,633,574	2·74
Phosphoric acid	12,182,080	9·17
Potash	7,590,060	5·72
Total fertilizing ingredients	**23,405,714**	**17·63**
Total mixed fertilizer sold	**132,755,660**	**100·00**

Reporting Companies

Nature of trade*	Name	Address
a, b, c	Algoma Steel Corporation, Ltd	Sault Ste. Marie, Ont.
a, b, c	American Cyanamid Co	Niagara Falls, Ont.
b, d	Andrewes, Mountain Seed Co., Ltd	133 King St. E., Toronto, Ont.
b	Anthony & Eckbrecht	Little River P.O., Saint John, N.B.
a, d	Armour Fertilizer Works	Sandusky, Ohio, U.S.A.
a, b, d	Beaty, W. R., and Co., Ltd	325 Howe St., Vancouver, B.C.
b, d	Bernier, J. E., Ltd	Kamouraska, P.Q.
b, d	Black, C. H	208 Victoria St., Amherst, N.S.
a, d	Bon Arbor Chemical Co	390–2 Straight St., Paterson, N.J., U.S.A.
b, d	Brand, Jas. and Co	723 Robson St., Vancouver, B.C.
a, b	British Canadian Packing Co., Ltd	Saint John, N.B.
a, d	Burlington Rendering Co	North Ave., Burlington, Vt., U.S.A.
a, b, c	Burns, P. and Co	Calgary, Alta.
a, b, d	Burns, P. and Co	Vancouver, B.C.
a, b, c, d, e	Canadian Fertilizer Co., Ltd	Chatham, Ont.
a, b	Canadian Packing Co., Ltd	Toronto, Ont.
a, b, c, d	City Renderers, Ltd	Mill and Oak Sts., Montreal, P.Q.
a, b, d	Colonial Fertilizer Co	Windsor, N.S.
a, b, c	Consolidated Whaling Corporation, Ltd	Victoria, B.C.
b, d	Co-Operative Federation of Quebec	Ste. Rosalie Jct., P.Q.
a, b	Cross Fertilizers, Ltd	Prince St., Sydney, N.S.
a, b, c	Dominion Iron & Steel Co., Ltd	Sydney, N.S.
b, d	Dupuy & Ferguson Reg'd	483 Jacques Cartier Sq., Montreal, P.Q.
a, d	Earp-Thomas Cultures Corp	Nelson Ave. and Hill St., Long Island City, N.Y. U.S.A.
a, b	Fearman, F. W. Co., Ltd	Hamilton, Ont.
b, d	Fertilizers and Feeds, Ltd	2980 Dundas St. W., Toronto 9, Ont.
b, d	Fowler Bros. Grain Co., Ltd	2307 Royal Oak Ave., Burnaby, B.C.
a, o	Fraser River Oilery	Box 10, Ladner, B.C.
a, b, d	Globe Fertilizer Co	Campbell Road, South Vancouver, B.C.
b, d	Gregory, F.R	Leamington, Ont.
a, b, d	Gunns, Ltd	West Toronto, 9 Ont.
a, b, c	Hamilton By-Product Coke Ovens, Ltd	15 Main St., Hamilton, Ont.
b, d	Hantsport Fruit Co., Ltd	Hantsport, N.S.
a, b, c	Harris, W., and Co., Ltd	200 Keating St., Toronto, Ont.
b, d	Home Mixed Fertilizers, Ltd	Hartland, N.B.
a, b	Hurober Fishing and Fish Manure Co., Ltd	Winchester Chambers, Stoneferry, Hull, England.
a, d	International Agricultural Corporation	Buffalo, N.Y., U.S.A.
b, d	Jack Fertilizer Co	Royal Bank Bldg., Halifax, N.S.
d	Kuttroff, Pickhardt & Co., Inc	128 Duane St., New York City, U.S.A.
a, b, d	Lavigueur, Arthur	1772 Amherst St., Montreal, P.Q.
b, d	Legare, P. T., Co., Ltd	273 St. Paul St., Quebec, P.Q.
d	Lyon, Walter H	9 Richmond St. E., Toronto, Ont.
a, d	Miller Fertilizer Co	Garrett Bldg., Baltimore, Md., U.S.A.
a, b, c	Montreal Light, Heat and Power Consolidated	Montreal, P.Q.
a, b, d	National Fertilizers, Ltd	2896 Dundas St. W., Toronto 9, Ont.
d	Niagara Brand Spray Co., Ltd	Burlington, Ont.
a, b, d	Nova Scotia Fertilizer Co., Ltd	Dennis Bldg., Halifax, N.S.
b, d	Oliver Chemical Co., Ltd	Penticton, B.C.
a, b, d	Ontario Fertilizers, Ltd	West Toronto, Ont.
d	P.E.I. Potato Growers Ass'n	Charlottetown, P.E.I.
d	Prudhomme Od. Engr. (in liquidation)	37 de la Couronne, Quebec, P.Q.
b	Rideau Specialty Co	19 Main St. E., Smiths Falls, Ont.
b, d	Ritchie Bros. & Co	841 Granville St., Vancouver, B.C.
a, b, d	Saint John Fertilizer Co	Chesley St., Saint John, N.B.
a, b, d	Sayer & Co	624 Main St., Vancouver, B.C.
a, b, d	Scottish Fertilizers, Ltd	Welland, Ont.
a, b, c	Steel Company of Canada, Ltd	Hamilton, Ont.
a, d	Swift & Co	Hammond, Indiana, U.S.A.
a, b	Tanguay, Ltd	54 St. Andre St., Quebec, P.Q.
a, d	Thomson, Wm. and Sons, Ltd	Tweed Vineyards, Clovenfords, Scotland.
a, b, c, d, e	Triangle Chemical Co., Ltd	Box 1011, New Westminster, B.C.
d	United Farmers Co-Operative Co., Ltd	28 Duke St., Toronto, Ont.
b, d	United Fruit Companies of N.S., Ltd	Kentville, N.S.
a, b, d	Vancouver Milling and Grain Co., Ltd	Vancouver, B.C.
a, b, d	Webb, Edward & Sons (Stourbridge), Ltd	Stourbridge, England.
a, b, c	Wight, W. & Co., Ltd	60 Paton Rd., Toronto, Ont.
b, c, d, e	Wilson, Paterson, Gifford, Ltd	89 Water St., Saint John, N.B.
a, b, d	Witts Fertilizer Works	Norwich, Ont.

*a—Manufacturing fertilizers or fertilizer materials.
b—Selling Canadian-made fertilizers or fertilizer materials for domestic trade.
c—Selling Canadian-made fertilizers or fertilizer materials for export trade.
d—Selling imported fertilizers or fertilizer for domestic trade.
e—Selling imported fertilizers or fertilizer materials for export trade.

CHAPTER SIX

MEDICINAL AND PHARMACEUTICAL PREPARATIONS

Further improvement characterized the medicinal and pharmaceutical preparations industry in Canada during 1927 when the concerns engaged primarily in the manufacture of patent and proprietary medicines, pharmaceutical preparations and similar commodities reported a total production valued at $16,249,191, a new record for the industry and an increase of nearly a million dollars over 1926. The value added by manufacturing processes in 1927 was $10,487,172 a sum considerably in excess of any other year, and capital employed at $17,542,111 was 2 per cent above the former high figure in 1926. The average number of employees was 2,578 and their total earnings reached the sum of $3,160,802 as against 2,365 workers and salaries and wages which amounted to $2,875,677 in 1926.

In 1927, reports were received from 136 establishments as compared with 130 in 1926 and 120 in 1925. There was a gain of 4 plants in Quebec, 1 in Ontario and 1 in Alberta in 1927. The industry was still centred in Ontario and Quebec, there being 81 active plants in the former and 41 in the latter province while there were also 6 plants in Manitoba, 3 in British Columbia, 2 in each of the provinces of Nova Scotia and New Brunswick, and 1 in Alberta. Ontario's plants produced 66 per cent of the total for Canada. Individual pharmacists throughout the country who compound medicines but chiefly conduct a retail business are not included in this review.

This industry is of such a nature as to lend itself to operations on a small scale with limited capital and plant equipment. Firms reporting in this group therefore ranged from small one-man concerns compounding certain patent medicines in private homes to firms with an output valued in excess of a million dollars. A general idea of the industry may be obtained from the following analysis; of the 136 plants which reported to the Bureau in 1927 only 3 had outputs valued at more than a million dollars each; 5 others each exceeced half a million dollars; 10 more were each above a quarter million; 20 others above $100,000; 25 more above $50,000; 21 more over $25,000; 15 others over $10,000; and 37 other establishments each produced less than $10,000 worth of goods during the year. An examination of employment returns shows that only 1 firm employed more than 200 persons; 4 other plants gave work to more than 100 people; 6 plants employed between 50 and 100 workers; 11 between 25 and 50 employees; 39 between 10 and 25 persons; and 75 concerns employed fewer than 10 hands the year round.

Imports of medicinal and pharmaceutical preparations and other drugs were valued at $2,907,266 in 1927. Of this sum $1,396,515 was spent for products made in the United States and $857,585 for similar purchases in the United Kingdom. Exports of this class reached a value of $487,904 as against $567,953 in 1926; about one-half of the export business was in trade with the United Kingdom.

Products of this industry are of a great variety and are largely marketed under individual trade names. No attempt has been made to list the various commodities, as the information was collected under several general items. Patent medicines and proprietary preparations were valued at $6,990,127, a slight decrease from 1926; medicinal and pharmaceutical preparations of all kinds came next at $5,583,508; toilet preparations worth $1,389,578; and other products brought the total output value to $16,249,191, an increase of 6 per cent over the figure for 1926. Ontario's production was given at $10,749,925; Quebec, $4,057,655; Manitoba, $1,166,603; British Columbia, $81,191; and other provinces, $193,817.

Some of the products of this industry, particularly toilet preparations, are also made in other industries; for the complete production of any commodity the reader should refer to the alphabetical list for all industries given in Table 17 of this report.

Table 82.—Principal Statistics of the Medicinal and Pharmaceutical Preparations Industry in Canada, by Provinces, 1926 and 1927

Year	Number of plants	Capital employed	Number of employees	Salaries and wages	Cost of fuel and electricity	Cost of materials	Selling value of products	Value added by manufacturing
		$		$	$	$	$	$
1926								
Quebec	37	3,842,400	605	734,541	28,239	1,225,687	3,570,616	2,344,929
Ontario	80	11,156,994	1,614	1,965,331	71,403	3,541,148	10,263,520	6,722,372
Manitoba	6	1,915,788	87	115,405	7,225	711,748	1,306,984	595,236
British Columbia	3	19,207	18	17,371	269	29,426	54,775	25,349
Canada*	**130**	**17,194,519**	**2,365**	**2,875,677**	**108,087**	**5,552,699**	**15,382,475**	**9,829,776**
1927								
Quebec	41	4,601,814	766	911,513	32,471	1,393,424	4,057,655	2,664,231
Ontario	81	11,039,477	1,622	2,039,620	65,216	3,652,192	10,749,925	7,097,733
Manitoba	6	1,661,982	114	133,178	4,850	644,615	1,166,603	521,988
British Columbia	3	19,207	33	36,114	788	22,092	81,189	59,097
Canada*	**136**	**17,542,111**	**2,578**	**3,160,802**	**104,264**	**5,762,019**	**16,249,191**	**10,487,172**

*Includes also data for 2 plants in Nova Scotia and 2 in New Brunswick in 1926 and 1927 and also for 1 plant in Alberta in 1927.

Table 83.—Capital Employed in the Medicinal and Pharmaceutical Preparations Industry in Canada, by Classes and by Provinces, 1926 and 1927

Province	1926				1927			
	Capital employed as represented by				Capital employed as represented by			
	Lands, buildings, fixtures, machinery and tools	Materials on hand, and stocks in process	Cash, trading, and operating accounts and bills receivable	**Total**	Lands, buildings, fixtures, machinery and tools	Materials on hand, and stocks in process	Cash, trading and operating accounts and bills receivable	**Total**
	$	$	$	$	$	$	$	$
Quebec	1,473,822	1,035,674	1,332,904	**3,842,400**	1,802,040	1,372,375	1,427,399	**4,601,814**
Ontario	3,881,297	2,393,897	4,881,800	**11,156,994**	3,951,843	2,438,550	4,649,084	**11,039,477**
Manitoba	626,058	636,846	652,884	**1,915,788**	658,405	563,230	440,347	**1,661,982**
British Columbia	11,200	4,110	3,897	**19,207**	11,200	4,110	3,897	**19,207**
Canada*	**6,030,474**	**4,193,292**	**6,970,753**	**17,194,519**	**6,464,184**	**4,467,946**	**6,609,981**	**17,542,111**

*See footnote to Table 82.

Table 84.—Employees, Salaries and Wages in the Medicinal and Pharmaceutical Preparations Industry in Canada, by Provinces, 1926 and 1927

Province	Average number of employees					Salaries and wages		
	Salaried employees		Wage-earners		**Total**	Salaries	Wages	**Total**
	Male	Female	Male	Female				
						$	$	$
1926								
Quebec	139	45	206	215	**605**	408,660	325,881	**734,541**
Ontario	328	213	476	597	**1,614**	1,031,143	934,188	**1,965,331**
Manitoba	12	6	32	37	**87**	45,923	69,482	**115,405**
British Columbia	1	1	4	12	**18**	2,700	14,671	**17,371**
Canada*	**493**	**268**	**726**	**878**	**2,365**	**1,513,130**	**1,362,547**	**2,875,677**
1927								
Quebec	163	60	272	271	**766**	464,617	446,896	**911,513**
Ontario	332	226	475	589	**1,622**	1,053,511	986,109	**2,039,620**
Manitoba	20	15	38	41	**114**	52,069	81,109	**133,178**
British Columbia	1	1	11	20	**33**	2,700	33,414	**36,114**
Canada*	**531**	**305**	**804**	**938**	**2,578**	**1,601,084**	**1,559,718**	**3,160,802**

*See footnote to Table 82.

Table 85.—Wage-Earners in the Medicinal and Pharmaceutical Preparations Industry in Canada, by Months, 1926 and 1927

Month	1926			1927		
	Male	Female	Total	Male	Female	Total
January	710	833	1,543	759	849	1,608
February	723	871	1,594	771	893	1,664
March	728	891	1,619	771	915	1,686
April	719	868	1,587	783	949	1,732
May	715	838	1,553	802	942	1,744
June	717	875	1,592	791	896	1,687
July	714	816	1,530	788	846	1,634
August	723	841	1,564	793	892	1,685
September	718	896	1,614	818	959	1,777
October	727	919	1,646	819	980	1,799
November	713	904	1,617	810	961	1,771
December	706	849	1,555	790	919	1,709
***Average**	**726**	**878**	**1,604**	**804**	**938**	**1,742**

*See note on page 24.

Table 86.—Hours of Labour in Month of Greatest Employment in the Medicinal and Pharmaceutical Preparations Industry in Canada, by Provinces, 1927

Province	Number of wage-earners working			
	8 hours per day	9 hours per day	10 hours per day	Over 10 hours per day
Quebec	463	115	16	4
Ontario	706	496	15	2
Manitoba	69	9	–	3
British Columbia	25	11	–	–
Canada*	**1,274**	**646**	**31**	**9**

*See footnote to Table 82.

Table 87.—Record of Operations in the Medicinal and Pharmaceutical Preparations Industry in Canada, by Provinces, 1927

Province	On full time only			On less than full time				
	Average number of wage-earners	Number of plants	Total plant days	Average number of wage-earners	Number of plants	Total plant days		
						On full time	On part time	Idle
Quebec	413	30	9,129	130	11	1,988	60	1,296
Ontario	775	64	19,456	289	17	3,444	415	1,309
Manitoba	79	6	1,824	–	–	–	–	–
British Columbia	31	3	912	–	–	–	–	–
Canada*	**1,316**	**107**	**32,537**	**426**	**29**	**5,702**	**475**	**2,638**

*See footnote to Table 82.

Table 88.—Fuel and Electricity Used in the Medicinal and Pharmaceutical Preparations Industry in Canada, 1926 and 1927

Kind	Unit of measure	1926		1927	
		Quantity	Value	Quantity	Value
			$		$
Anthracite coal	short ton	561	8,799	582	8,103
Bituminous coal—Canadian	short ton	}		1,412	11,146
Bituminous coal—Imported	short ton	7,127	52,233	5,862	39,744
Lignite coal	short ton	281	1,534	224	1,137
Coke	short ton	26	397	33	479
Fuel oil and diesel oil	gallon	103,237	9,500	92,098	8,259
Gasoline	gallon	6,480	1,933	194	54
Gas—Manufactured	M cu. ft.	13,195	5,013	4,927	4,951
Gas—Natural	M cu. ft.	–	–	256	174
Wood	cord	146	941	166	939
Other fuel	.....	–	109	–	–
Electricity	k.w.h.	1,156,801	27,628	1,261,409	29,287
Total	.....	–	**108,087**	–	**104,264**

Table 89.—Power Employed in the Medicinal and Pharmaceutical Preparations Industry in Canada, 1926 and 1927

Description	1926		1927	
	Number of units	Total h.p. according to manufacturers' rating	Number of units	Total h.p. according to manufacturers' rating
Steam engines and turbines	3	190	6	226
Gasoline, gas and oil engines	3	8	3	12
Total primary power	*6*	*198*	*9*	*238*
Electric motors run by purchased power	511	1,608	588	1,732
Total power employed	**517**	**1,806**	**597**	**1,970**
Total electric motors	*511*	*1,608*	*588*	*1,732*
Boilers	20	1,745	30	2,015

Table 90.—Materials Used in the Medicinal and Pharmaceutical Preparations Industry in Canada, 1926 and 1927

Material	Unit of measure	1926		1927	
		Quantity	Cost at works	Quantity	Cost at works
			$		$
Acetylsalicylic acid	lb.	–	–	89,284	63,167
Boric acid	lb.	–	–	155,720	14,276
Carbolic acid	lb.	–	–	11,497	3,454
Citric acid	lb.	–	–	104,912	39,570
Oxalic acid	lb.	–	–	3,509	8,736
Tartaric acid (crystals)	lb.	–	–	179,440	44,366
All other acids		–	–	–	28,782
Barium peroxide	lb.	33,837	3,867	29,879	2,763
Bismuth and bismuth salts	lb.	2,990	9,576	10,992	27,580
Caffeine	lb.	3,381	9,007	4,003	8,995
Cod liver oil	lb.	–	–	625,916	67,655
Ethyl alcohol (65 o.p.)	proof gal.	178,419	547,372	213,148	643,293
Glycerine, refined	lb.	–	–	651,248	161,717
Gums, including camphor		–	–	–	80,122
Iodine, crude	lb.	13,704	60,239	15,075	58,854
Herbs, roots and other drugs		–	–	–	338,151
Magnesium sulphate	lb.	–	–	522,392	21,636
Potassium iodide	lb.	–	–	2,946	11,887
Potassium sodium tartrate (Rochelle salt)	lb.	–	–	92,448	17,796
Silver bullion	oz.	25,386	24,116	45,554	26,915
Sodium bicarbonate	lb.	–	–	438,297	12,518
Sodium salicylate	lb.	–	–	7,997	3,589
Sugar	lb.	–	–	2,123,820	141,787
Other materials		–	3,292,259	–	2,164,138
Shipping containers (boxes, cartons, labels, corks, caps, etc.		–	1,606,263	–	1,770,272
Total		–	**5,552,699**	–	**5,762,019**

Table 91.—Products of the Medicinal and Pharmaceutical Preparations Industry in Canada, 1926 and 1927

Product	Unit of measure	1926		1927	
		Quantity	Selling value	Quantity	Selling Value
			$		$
Patent medicines and proprietary preparations		–	7,101,499	–	6,990,127
Medicated wines		–	71,580	–	62,959
Pharmaceutical preparations		–	5,250,169	–	5,583,508
Toilet preparations (including perfumes, hair tonics, etc)		–	1,211,412	–	1,389,588
Disinfectants		–	50,526	–	36,804
Hydrogen peroxide		–	35,080	–	46,881
Iodine resublimed	lb.	4,772	23,713	5,591	30,146
Potassium iodide	lb.	8,786	33,511	8,518	34,939
Silver nitrate	oz.	27,515	11,906	4,859	32,886
All other products[1]		–	1,593,079	–	2,041,353
Total		–	**15,382,475**	–	**16,249,191**

[1]Includes casein, collodion, nitrous ether, insulin, sugar of milk, vaccines, serums, acidophilus milk and various other products not specified on the regular schedule.

CHAPTER SEVEN

PAINTS, PIGMENTS AND VARNISHES

With a production value of $25,229,454, the paints, pigments and varnishes industry ranked second in importance among the 10 main groups of the chemical manufactures in Canada. Output in 1927 was nearly 2 per cent higher than in 1926 and was exceeded in value only in 1917; but as prices are now about 18 per cent lower than in 1917, it follows that quantity production in 1927 was the greatest on record for the industry.

Factories in operation in 1927 numbered 62 of which 30 were in Ontario, 17 in Quebec, 8 in British Columbia, 5 in Manitoba, 1 in Alberta and 1 in Nova Scotia. One small concern in Quebec and another in British Columbia went out of business during the year giving a net decline of 2 in the number of operating plants as compared with 1926. Capital employed, however, increased by about a quarter of a million dollars to $23,162,090, of which $10,160,829 represented the value of lands, buildings and equipment, and the number of employees at 2,563 was 3 per cent higher than in the previous year. Materials used in manufacturing during 1927 cost $12,934,639 and the value added by the manufacturing operations was $12,294,815. Expenditures for salaries and wages amounted to $3,552,586 and fuel and electricity cost $312,774.

The paint industry is centred in Ontario and Quebec. In 1927, Ontario had 30 plants which employed 1,078 people and had a total output worth $10,769,678 while Quebec had 17 factories, a payroll of 1,095 persons and a production valued at $$10,419,371.

Of the 62 factories in operation, 7 had productions valued at more than $1,000,000 each: 4 others were each above $750,000; 9 more above $500,000; 8 more above $250,000: 7 more above $100,000; 8 more above $50,000; 7 more above $25,000; 6 more above $10,000, while only 6 reported output values below the latter figure. Six factories employed only 1 or two workers in each; 18 concerns employed from 3 to 10 workers; 9 from 11 to 25 people; 10 from 26 to 50 people; 13 from 51 to 100 people; and 5 from 100 to 200 people while only 1 concern reported a payroll of over 200 names.

Only a few paint manufacturers in Canada produce their own pigments as, for the most part, they purchase all ingredients ready made and devote their attention to grinding, blending and mixing and to the treatment of the different vehicles used. In 1927, only 3 factories, all in Quebec, corroded pig lead to produce basic carbonate of white lead; these concerns corroded 18,207,200 pounds of pig lead during the year. Most of the dry carbonate was ground in oil by the producers; only one of these concerns made litharge and red lead.

Manufacturers reported good demand during the year for their products at stationary or slightly lower prices and good outlook for the future.

Imports of paints, pigments and varnishes into Canada during 1927 were valued at $4,964,468 as against $4,377,998 in the previous year. Zinc white, lithopone, carbon black, litharge and red lead were the more important of the imports of this class. Exports were appraised at $428,548. Details of foreign trade in these commodities are given on page 40.

Table 92.—Principal Statistics of the Paints, Pigments and Varnishes Industry in Canada, by Provinces, 1926 and 1927

Province	Number of plants	Capital employed	Number of employees	Salaries and wages	Cost of fuel and electricity	Cost of materials	Selling value of products	Value added by manufacturing
		$		$	$	$	$	$
1926								
Quebec	18	12,536,130	1,057	1,364,081	182,934	5,469,589	10,173,789	4,704,200
Ontario	30	7,723,799	1,034	1,560,718	97,252	5,676,702	10,800,077	5,123,375
Manitoba	5	939,315	173	218,101	18,727	1,059,428	1,922,663	863,235
British Columbia	9	1,232,522	150	158,947	5,719	712,178	1,274,450	562,272
Canada*	**64**	**22,890,807**	**2,484**	**3,375,961**	**310,913**	**13,105,367**	**24,803,237**	**11,697,870**
1927								
Quebec	17	11,972,810	1,095	1,458,140	188,767	4,853,089	10,419,371	5,566,282
Ontario	30	8,507,753	1,078	1,664,569	90,105	6,111,095	10,769,678	4,658,583
Manitoba	5	891,973	173	209,166	21,334	1,154,026	1,984,083	830,057
British Columbia	8	1,344,042	147	155,837	6,178	626,909	1,298,708	671,799
Canada	**62**	**23,162,090**	**2,563**	**3,552,586**	**312,774**	**12,934,639**	**25,229,454**	**12,294,815**

*Includes also data for 1 plant in Nova Scotia and 1 in Alberta.

Table 93.—Capital Employed in the Paints, Pigments, and Varnishes Industry in Canada, by Classes and by Provinces, 1926 and 1927

Province	1926				1927			
	Capital employed as represented by				Capital employed as represented by			
	Lands, buildings, fixtures, machinery and tools	Materials on hand, and stocks in process	Cash trading and operating accounts and bills receivable	**Total**	Lands, buildings, fixtures, machinery and tools	Materials on hand, and stocks in process	Cash trading and operating accounts and bills receivable	**Total**
	$	$	$	$	$	$	$	$
Quebec	5,192,138	3,499,331	3,844,661	**12,536,130**	5,162,040	3,029,196	3,781,574	**11,972,810**
Ontario	3,170,054	2,069,443	2,484,302	**7,723,799**	3,604,434	2,213,139	2,690,180	**8,507,753**
Manitoba	552,100	319,265	67,950	**939,315**	547,560	235,089	109,324	**891,973**
British Columbia	609,368	369,314	253,840	**1,232,522**	611,223	430,717	302,102	**1,344,042**
Canada*	**9,758,837**	**6,401,496**	**6,730,474**	**22,890,807**	**10,160,829**	**6,017,182**	**6,984,079**	**23,162,090**

* See footnote to Table 92.

Table 94.—Employees, Salaries and Wages in the Paints, Pigments and Varnishes Industry in Canada, by Provinces, 1926 and 1927

Province	Average number of employees					Salaries and wages		
	Salaried employees		Wage-earners		**Total**	Salaries	Wages	**Total**
	Male	Female	Male	Female				
						$	$	$
1926								
Quebec	203	56	685	113	**1,057**	636,458	727,623	**1,364,081**
Ontario	331	104	527	72	**1,034**	906,794	653,924	**1,560,718**
Manitoba	58	12	89	14	**173**	115,445	102,656	**218,101**
British Columbia	35	14	89	12	**150**	76,209	82,738	**158,947**
Canada*	**637**	**190**	**1,441**	**216**	**2,484**	**1,737,097**	**1,618,864**	**3,375,961**
1927								
Quebec	218	52	720	105	**1,095**	666,443	791,697	**1,458,140**
Ontario	312	108	576	82	**1,078**	968,526	696,043	**1,664,569**
Manitoba	38	11	105	19	**173**	67,746	141,420	**209,166**
British Columbia	31	13	91	12	**147**	71,667	84,170	**155,837**
Canada*	**614**	**189**	**1,538**	**222**	**2,563**	**1,795,696**	**1,756,890**	**3,552,586**

* See footnote to Table 92.

Table 95.—Wage-Earners in the Paints, Pigments and Varnishes Industry in Canada, by Months, 1926 and 19 7

Month	1926			1927		
	Male	Female	Total	Male	Female	Total
January	1,340	212	1,552	1,458	217	1,675
February	1,389	217	1,606	1,483	224	1,707
March	1,428	223	1,651	1,519	239	1,758
April	1,469	245	1,714	1,552	250	1,802
May	1,531	238	1,769	1,588	241	1,829
June	1,508	221	1,729	1,593	228	1,821
July	1,463	211	1,674	1,557	214	1,771
August	1,424	201	1,625	1,517	213	1,730
September	1,384	197	1,581	1,488	208	1,696
October	1,397	192	1,589	1,518	212	1,730
November	1,403	206	1,609	1,554	221	1,775
December	1,425	209	1,634	1,553	225	1,778
*Average	1,441	216	1,657	1,538	222	1,760

* See note on page 24.

Table 96.—Hours of Labour in Month of Greatest Employment in the Paints, Pigments and Varnishes Industry in Canada, by Provinces, 1927

—	Number of wage-earners working			
	8 hours per day	9 hours per day	10 hours per day	Over 10 hours per day
Quebec	232	360	304	6
Ontario	200	394	51	70
Manitoba	82	1	47	1
British Columbia	113	1	–	–
Canada*	**631**	**802**	**406**	**77**

*See footnote to Table 92.

Table 97.—Record of Operations in the Paints, Pigments, and Varnishes Industry in Canada, by Provinces, 1927

Province	On full time only			On less than full time				
	Number of plants	Average number of wage-earners	Days in operation (in plant days)	Number of plants	Average number of wage-earners	Record of operation (in plant days)		
						On full time	On part time	Idle
Quebec	14	771	4,256	3	54	612	30	279
Ontario	28	632	8,500	2	26	427	52	129
Manitoba	4	102	1,216	1	22	245	52	7
British Columbia	7	103	2,128	1	–	–	304	–
Canada*	**55**	**1,658**	**16,708**	**7**	**102**	**1,284**	**438**	**415**

*See footnote to Table 92.

Table 98.—Fuel and Electricity Used in the Paints, Pigments and Varnishes Industry in Canada, 1926 and 1927

Kind	Unit of measure	1926		1927	
		Quantity	Value	Quantity	Value
			$		$
Anthracite coal	short ton	3,940	23,636	1,856	10,764
Bituminous coal—Canadian	short ton	17,074	117,312	9,788	67,653
Bituminous coal—Imported	short ton			12,173	77,925
Coke	short ton	2,454	29,135	1,830	22,072
Fuel oil	Imp. gal.	408,286	29,418	309,966	22,746
Gasoline	Imp. gal.	26,247	6,553	15,484	3,370
Gas—Manufactured	M cu. ft.	1,120	1,163	1,353	1,352
Kerosene	Imp. gal.	–	–	11,325	1,828
Wood	cord	500	2,067	563	2,260
Other fuel	–	–	6,626	–	6,264
Electricity purchased	k.w.h.	4,727,290	95,003	5,029,652	96,540
Total	–	–	**310,913**	–	**312,774**
Electricity generated for own use	k.w.h.	–	–	**131,000**	**2,030**

Table 99.—Power Employed in the Paints, Pigments, and Varnishes Industry in Canada, 1926 and 1927

Description	1926		1927	
	Number of units	Total h.p. according to manufacturers' rating	Number of units	Total h.p. according to manufacturers' rating
Steam engines and turbines	20	1,555	20	1,555
Hydraulic turbines or water wheels	1	90	1	90
Total primary power	*21*	*1,645*	*21*	*1,645*
Electric motors run by purchased power	395	3,966	452	4,383
Total power employed	**416**	**5,611**	**473**	**6,028**
Electric motors run by primary power in same plant	13	192	13	192
Total electric motors	*408*	*4,158*	*465*	*4,575*
Boilers installed	42	2,987	47	3,147

Table 100.—Estimated Percentage of Normal Output Attained in the Paints, Pigments and Varnishes Industry in Canada, by Provinces, 1927

Province	Actual sales value of output	Computed value of normal output	Per cent of normal output attained
	$	$	
Quebec	10,419,371	10,795,743	97
Ontario	10,769,678	10,817,981	99
Manitoba	1,984,083	2,040,644	97
British Columbia	1,298,708	1,317,686	98
Canada*	**25,229,454**	**25,729,668**	**98**

*See footnote to Table 92.

Table 101.—Materials Used in the Paints, Pigments and Varnishes Industry in Canada, 1926 and 1927

Material	Unit of measure	1926		1927	
		Quantity	Cost at works	Quantity	Cost at works
			$		$
Purchased Materials					
Pigments, Colours and Fillers—					
Asbestine	lb.	3,274,528	43,040	3,659,440	49,475
Barytes	lb.	3,983,600	68,447	3,853,073	67,483
Basic carbonate white lead, dry	lb.	3,531,650	380,887	3,835,067	389,287
Basic carbonate white lead, in oil	lb.	1,630,824	185,202	2,406,457	270,075
Basic sulphate white lead (sublimed lead)	lb.	168,759	19,701	136,627	15,129
Blanc fixe	lb.	21,220	901	84,764	4,260
Coal tar lakes (all colours)	lb.	37,184	28,887	20,655	19,597
Graphite	lb.	364,369	12,553	378,708	13,632
Kaolin or china clay	lb.	1,238,780	14,808	1,161,857	15,144
Iron oxide ore	lb.	57,000	1,788	997,165	23,481
Iron oxide pigments	lb.	2,390,085	87,959	1,801,159	73,395
Lampblack, and other carbon blacks	lb.	395,920	60,723	308,519	59,679
Leaded zinc oxide and zinc leads	lb.	1,643,975	121,681	1,870,975	131,810
Litharge	lb.	1,109,727	111,813	561,764	49,517
Lithopone	lb.	7,444,769	475,149	7,905,256	408,219
Ochres, siennas and umbers	lb.	1,679,871	59,065	1,611,096	68,872
Pig lead	lb.	19,443,556	1,654,287	18,268,520	1,327,124
Prussian blue	lb.	25,903	10,114	33,510	12,312
Red lead	lb.	957,044	101,035	1,078,640	93,368
Satin white or gypsum	lb.	506,949	6,835	516,575	6,461
Silica, silex or infusorial earth	lb.	1,039,471	20,639	1,154,707	21,719
Ultramarine	lb.	121,151	21,854	129,997	24,048
Whiting or chalk	lb.	11,068,094	114,585	10,810,656	111,351
Zinc	lb.	590,622	46,894	617,497	47,956
Zinc oxide, pure	lb.	2,455,495	220,244	2,619,406	224,973
Zinc ore	lb.	346,975	17,051	138,838	5,934
Nitrocellulose	lb.	380,028	146,048	764,265	153,869
All other pigments, fillers and dry colours	.....	-	384,977	-	337,849
Driers—					
Cobalt salts	lb.	6,189	5,199	4,792	4,710
Gums	lb.	2,064,750	437,386	2,188,133	440,344
Linoleate driers	lb.	19,733	5,075	21,494	6,420
Manganese salts	lb.	50,162	4,372	52,816	4,012
Resins	lb.	5,054,719	338,210	5,554,835	313,722
Resinate driers	lb.	123,145	9,236	287,799	21,774
Waxes	lb.	135,487	28,201	154,650	30,222
Glue	lb.	158,644	26,389	210,017	33,811
Other driers	.....	-	3,208	-	5,845
Oils and Solvents—					
Alcohol, ethyl	gal.	65,839	65,938	64,384	49,679
Acetic acid	gal.	310,565	39,846	395,057	36,995
Acetone	lb.	-	25,246	-	27,653
Amyl alcohol	gal.	5,556	8,752	2,817	5,596
Amyl acetate	gal.	845	2,973	1,023	3,625
Asphaltum	lb.	750,493	25,567	766,632	23,921
Butyl alcohol	gal.	54,164	77,361	66,250	70,908
Butyl acetate	gal.	72,631	131,023	174,276	227,789
China wood oil (tung oil)	gal.	499,081	474,677	562,856	531,414
Coal tar naphtha and benzol	gal.	499,192	149,179	591,759	206,825
Coal tar pitch	lb.	127,099	2,624	68,991	7,037
Creosote	gal.	58,254	19,178	65,936	21,255
Ethyl acetate	gal.	27,067	28,860	34,504	38,458
Fish oils	gal.	49,998	37,711	50,368	27,469
Linseed oil, raw	gal.	1,266,112	1,176,096	1,379,024	1,173,956
Linseed oil, boiled	gal.	371,850	373,076	453,553	410,823
Methyl hydrate	gal.	102,035	93,793	100,935	90,442
Petroleum distillate	gal.	1,773,345	411,597	1,855,653	393,192
Soya bean oil	gal.	20,453	20,451	17,640	12,346
Turpentine (gum spirits)	gal.	332,749	377,292	399,952	377,152
Wood turpentine	gal.	47,501	38,002	44,043	32,223
Other oils and solvents	.....	-	13,045	-	12,459
Cans, cases, barrels, etc	.....	-	1,184,632	-	1,157,430
All other materials	.....	-	616,311	-	649,382
Total	.....	-	10,667,673	-	10,474,908
Intermediates Used as Materials					
Basic carbonate white lead, dry	lb.	5,148,589	465,934	3,970,860	315,141
Basic carbonate white lead, in oil	lb.	305,755	32,171	341,624	41,093
All other pigments and dry colours	lb.	771,404	149,347	811,306	147,872
Japans and lacquers	gal.	12,623	9,188	20,863	14,900
Enamels	gal.	889	3,716	1,000	4,200
Linoleate driers	lb.	145,217	43,171	162,180	44,993
Linseed oil, boiled	gal.	58,524	19,063	14,949	16,167
Mixed paints	gal.	1,267	2,256	18,057	21,254
Paste paints	lb.	819,878	99,874	320,794	26,831

Table 101.—Materials Used in the Paints, Pigments and Varnishes Industry in Canada, 1926 and 1927—Concluded

Material	Unit of measure	1926 Quantity	1926 Cost at works	1927 Quantity	1927 Cost at works
			$		$
INTERMEDIATES USED AS MATERIALS—Concluded					
Resins, prepared	lb.	68,557	6,863	88,258	7,168
Resinate driers	lb.	33,938	39,856	339,801	44,715
Varnishes	gal.	525,170	904,751	786,030	1,167,314
Stand, blown and enamel oils	gal.	34,085	51,374	35,398	52,436
Colours in oil	gal.	1,583	3,784	–	7,168
Other intermediates	.....	–	600,346	–	548,479
Total	.....	–	2,437,694	–	2,459,731
Total	.....	–	**13,105,367**	–	**12,934,639**

Table 102.—Products of the Paints, Pigments and Varnishes Industry in Canada, 1926 and 1927

Product	Unit of measure	1926 Quantity	1926 Selling value	1927 Quantity	1927 Selling value
			$		$
PRODUCTS MADE FOR SALE—					
Asphaltic and tar paints	gal.	125,004	121,601	370,351	309,467
Basic carbonate white lead, dry	lb.	3,681,836	362,892	4,020,572	396,531
Basic carbonate white lead, in oil	lb.	13,187,243	1,411,229	13,372,946	1,705,675
Cold water paints	lb.	811,835	80,705	1,009,472	125,386
Colours in oil and japan	–	–	466,781	–	596,406
Dry colours	lb.	1,559,197	260,358	1,882,724	286,170
Enamels	gal.	391,538	1,402,108	441,042	1,478,528
Floor waxes and polishes	lb.	606,669	264,077	663,086	294,672
Iron oxide pigments	lb.	115,805	9,474	117,690	10,816
Japans and lacquers	gal.	151,456	158,226	143,376	153,505
Kalsomine	lb.	3,885,788	260,596	3,238,354	218,387
Linoleate driers	gal.	47,560	33,035	1,600	3,600
Linseed oil, boiled	gal.	99,085	101,176	156,433	143,086
Mixed paints, ready for use	gal.	3,037,308	8,198,056	3,211,698	8,738,733
Nitrocellulose lacquers	gal.	304,170	1,310,568	438,982	1,181,782
Resinate driers	gal.	49,838	67,265	103,208	91,664
Paste	lb.	–	–	297,124	13,359
Paste paints	lb.	6,364,362	682,969	6,893,743	748,139
Paint and varnish removers	gal.	52,243	109,259	48,827	85,410
Putty and other fillers	lb.	6,239,681	309,452	6,668,865	301,334
Pyroxylin thinners	gal.	223,407	566,354	219,214	289,445
Stand, blown or enamel oils	gal.	13,055	16,807	10,345	14,043
Shellac	gal.	170,394	535,459	173,650	537,124
Size	lb.	316,010	11,683	467,171	19,116
Stains	gal.	390,443	679,117	395,643	665,317
Varnishes	gal.	1,757,999	3,295,968	1,695,874	3,053,973
All other products[1]	–	–	1,564,173	–	1,144,395
Total	–	–	22,279,382	–	22,606,063
INTERMEDIATE PRODUCTS MADE FOR USE—					
Basic carbonate white lead, dry	lb.	5,148,589	526,537	3,970,860	390,980
Basic carbonate white lead, in oil	lb.	305,723	32,171	1,068,953	127,081
Colours, dry	lb.	771,434	149,347	811,306	147,872
Colours, in oil and japan	lb.	1,583	3,784	–	7,168
Enamels	gal.	889	3,716	1,118	4,371
Japans and lacquers	gal.	17,292	12,672	20,863	14,900
Linoleate driers	gal.	15,473	43,171	16,210	44,964
Linseed oil, boiled	gal.	58,524	19,063	14,949	16,167
Nitrocellulose lacquers	gal.	1,366,138	529,151	2,272,690	484,619
Paints, mixed, ready for use	gal.	1,267	2,256	18,057	21,254
Paste paints	lb.	819,878	99,874	320,794	20,831
Resinate driers	gal.	33,900	39,911	42,086	45,977
Shellac	gal.	1,414	7,070	3,478	8,927
Stand, blown or enamel oils	gal.	34,085	51,374	35,398	52,436
Varnishes, all kinds	gal.	546,462	926,770	786,030	1,167,314
All other intermediates[2]	–	–	76,988	–	61,930
Total	–	–	2,523,855	–	2,623,391
Total	.....	–	**24,803,237**	–	**25,229,454**

[1] Includes litharge, red lead, slab zinc, zinc oxide, zinc dust, insecticides, mops and brushes, caulking cement, sulphonated oil, and other products.

[2] Includes pyroxylin thinners, amyl acetate, butyl acetate, prepared resins and other products.

CHAPTER EIGHT

SOAPS, WASHING COMPOUNDS AND TOILET PREPARATIONS

Production from the soaps, washing compounds and toilet preparations industry in Canada during 1927 was valued at $19,993,453, a gain of almost a million dollars over the figure for 1926 and the highest output value recorded since 1918. Quantity output was probably the greatest on record for the industry as prices are now on a lower level than when the high value was established in 1918; for example, the index number of prices for soap stood at 140·3 in 1927 as against 173·4 in 1918.

Capital employed at $19,252,665 was almost 2 million dollars above the former high figure attained in 1926, and the number of employees at 2,106 in 1927 was greater than the average payroll for any other year, even exceeding the total of 2,068 reported in 1926. The cost of materials entering into manufacture at $11,387,719 was the highest on record as was also the value added by manufacturing at $8,605,734.

In 1927, the total number of establishments included in this group, was 110 and of theses 40 manufactured soaps of various kinds as the chief product, 22 produced washing compounds and 48 were engaged in the preparation of perfumes, cosmetics and toilet essentials as their main business.

Soaps.—The 40 plants in Canada engaged primarily in the manufacture of soaps were distributed by provinces as follows: Ontario, 22; Quebec, 9; British Columbia, 3; Manitoba, 2; Alberta, 2; New Brunswick, 1, and Saskatchewan, 1. These concerns reported fixed and working capital amounting to $15,626,944 and employed an average of 1,423 workers to manufacture commodities valued at $14,947,503 from materials which cost $9,677,467 delivered at the works. Two concerns in Ontario went out of business during the year, but 2 others resumed operations while 1 new concern in the same province was added to the active list. There was thus 1 more factory in operation in 1927 than in the previous year.

Ontario was the centre of the soap manufacturing industry with 55 per cent of the operating plants which accounted for 66 per cent of the total labour employed and 74 per cent of the products made; 22 factories employing 944 people produced goods worth $11,004,163 in 1927.

Grouped according to the value of output, the 40 operating plants were distributed as follows: under $10,000, 9 plants; $10,000 but under $25,000, 6 plants; $25,000 but under $100,000, 5 plants; $100,000 but under $200,000, 7 plants; $200,000 but under $500,000, 5 plants; $500,000 but under $1,000,000, 4 plants; over $1,000,000, only 4 plants.

According to the number of employees the grouping was as follows: only 1 or 2 employees 9 concerns; 3 to 10 employees, 10 concerns; 11 to 25 workers, 6 plants; 26 to 50 workers, 5 plants; 51 to 100 workers, 6 plants; and over 100 workers, 4 concerns.

Main products in 1927 included 47·6 million pounds of house-hold soaps; 56 million pounds of laundry soap and soap chips; 18·5 million pounds of toilet soaps; 1·6 million pounds of textile soaps; 5·2 million pounds of soap powder; 1·4 million pounds soft soap; 3·3 million pounds of other soap; cleaning preparations worth $1,145,504; toilet preparations valued at $525,969; refined glycerine at $1,091,299; and various other products. There was also a small output of soap in other industries which amounted in value to $93,765 in 1927; the total production is shown in Table 17.

Imports of soap into Canada were valued at $1,189,040 in 1927; common laundry soap and toilet soap comprised the bulk of the imports. Exports, mostly toilet soap to the United Kingdom, were worth $841,258.

Washing Compounds.—In 1927, some 22 concerns were classified to this industry which includes all concerns engaged chiefly in making washing compounds, javelle water, ammonia powder and similar commodities. By provinces, the factories were distributed as follows: Quebec, 9; Ontario, 9; Manitoba, 3; and British Columbia, 1. Most of the plants were comparatively small as 10 reported individual productions valued at less than $10,000 while 10 more had

outputs worth less than $50,000 and only 2 were above the latter figure. Eight establishments, employed only 1 or 2 people in each; 12 others each employed from 3 to 10 hands on the average; and only 2 had more than 10 workers in each.

Production from these plants in 1927 was given at $580,597 or about 12 per cent above the value of $519,325 for 1926. Capital was up to $501,512 from $428,288 and the number of employees to 126 from 117 in the previous year. Quebec with 9 factories and 70 employees accounted for an output valued at $286,161 or 49 per cent of the total while Ontario with the same number of plants and 44 workers produced 42 per cent of the total output. Javelle water, ammonia powder and washing compounds were the main products. There was also a production of washing compounds worth $89,792 in other industries.

Toilet Preparations.—The manufacture of toilet preparations was the main business of 48 plants in Canada during 1927 and the division by provinces was as follows: Ontario, 25; Quebec, 17; Manitoba, 4; Alberta, 1; and British Columbia, 1. In addition there was a considerable number of concerns in other industries which made toilet essentials as a minor part of their operations; production in 1927 from such concerns was valued at $1,936,749.

Output from the toilet preparations industry was valued at $4,465,353 in 1927 as against $4,225,510 in 1926. Capital, as represented by lands, plants, machinery, inventories and open accounts stood at $3,124,209 and the number of employees averaged 557. Ontario with 25 factories produced 51 per cent of the total output and Quebec with 17 factories accounted for 48 per cent.

Only 6 plants had outputs valued at more than $200,000 each; 5 others each made goods worth more than $100,000; 9 other factories reported outputs which exceed $50,000 in value; 7 more were each above $25,000; and 6 more were over $10,000; while 15 were below the latter figure.

Classed according to the number of employees in each, the factories were grouped as follows: 1 or 2 employees, 15 plants; 3 to 10 employees, 19 plants; 11 to 25 employees, 9 plants; 26 to 100 employees, 3 plants; over 100 employees, only 2 plants.

Table 103—Principal Statistics of the Soaps, Washing Compounds and Toilet Preparations Industry in Canada, by Provinces, 1926 and 1927

Year	Number of plants	Capital employed	Number of employees	Salaries and wages	Cost of fuel and electricity	Cost of materials	Selling value of products	Value added by manufacturing
		$		$	$	$	$	$
1926								
Soaps—								
Quebec	9	1,573,132	231	282,821	35,809	1,020,493	1,799,479	778,986
Ontario	21	10,024,896	908	1,202,687	217,428	6,689,630	9,959,004	3,269,374
British Columbia	3	402,223	61	76,845	3,578	306,180	499,927	193,747
Canada[1]	39	14,181,242	1,382	1,817,787	296,187	9,368,082	14,327,693	4,959,611
Washing Compounds—								
Quebec	10	206,632	62	122,194	2,614	61,594	246,051	184,457
Ontario	10	166,828	45	43,360	3,067	100,600	233,430	132,830
Canada[2]	23	428,288	117	176,084	6,314	188,514	519,325	330,811
Toilet Preparations—								
Quebec	17	1,188,141	267	267,332	11,439	626,483	2,018,069	1,391,586
Ontario	24	1,302,230	283	309,027	4,938	754,896	2,157,819	1,402,923
Manitoba	3	246,807	16	16,890	164	21,585	46,025	24,440
Canada[3]	46	2,741,848	569	595,589	16,571	1,403,399	4,225,510	2,822,111
Total—								
Quebec	**36**	**2,967,905**	**560**	**672,347**	**49,862**	**1,708,570**	**4,063,599**	**2,355,029**
Ontario	**55**	**11,493,954**	**1,236**	**1,555,074**	**225,433**	**7,545,126**	**12,350,253**	**4,805,127**
Manitoba	**7**	**1,500,411**	**107**	**146,920**	**19,559**	**569,548**	**902,529**	**332,981**
Alberta	**3**	**407,418**	**46**	**58,019**	**4,533**	**232,898**	**357,990**	**125,092**
British Columbia	**5**	**411,893**	**64**	**79,685**	**3,735**	**307,113**	**504,781**	**197,641**
Canada	**108**	**17,351,378**	**2,068**	**2,589,460**	**319,072**	**10,959,995**	**19,022,528**	**8,112,533**

Table 103—Principal Statistics of the Soaps, Washing Compounds and Toilet Preparations Industry in Canada, by Provinces, 1926 and 1927—Concluded

Year	Number of plants	Capital employed	Number of employees	Salaries and wages	Cost of fuel and electricity	Cost of materials	Selling value of products	Value added by manufacturing
		$		$	$	$	$	$
1927								
Soaps—								
Quebec	9	1,859,798	231	296,678	32,039	867,196	1,608,108	740,912
Ontario	22	11,238,399	944	1,208,340	184,599	7,335,064	11,004,163	3,669,099
British Columbia	3	435,164	68	84,184	3,509	269,208	458,751	189,543
Canada[1]	40	15,626,944	1,423	1,844,213	260,753	9,677,467	14,947,503	5,270,036
Washing Compounds—								
Quebec	9	253,291	70	133,813	3,726	69,150	286,161	217,011
Ontario	9	185,615	44	47,151	2,924	115,435	242,417	126,982
Canada[2]	22	501,512	126	192,570	7,484	212,553	580,597	368,044
Toilet Preparations—								
Quebec	17	1,339,007	277	285,161	8,894	607,291	2,155,596	1,548,305
Ontario	25	1,535,728	256	316,602	5,094	872,129	2,258,104	1,385,975
Manitoba	4	244,098	21	21,019	227	17,599	47,309	29,710
Canada[3]	48	3,124,209	557	624,922	14,215	1,497,699	4,465,353	2,967,654
Total—								
Quebec	**35**	**3,452,096**	**578**	**715,652**	**44,659**	**1,543,637**	**4,049,865**	**2,506,228**
Ontario	**56**	**12,959,742**	**1,244**	**1,572,093**	**192,617**	**8,322,628**	**13,504,684**	**5,182,056**
Manitoba	**9**	**1,444,532**	**112**	**117,537**	**19,591**	**485,429**	**829,955**	**344,539**
Alberta	**3**	**397,814**	**46**	**57,085**	**4,495**	**206,391**	**321,033**	**114,642**
British Columbia	**5**	**439,120**	**71**	**86,124**	**3,591**	**270,029**	**463,435**	**193,406**
Canada	**110**	**19,252,665**	**2,106**	**2,661,705**	**282,452**	**11,387,719**	**19,993,453**	**8,605,734**

[1]Includes also data for 2 plants in Manitoba, 2 in Alberta, 1 in New Brunswick and 1 in Saskatchewan.
[2]Includes also data for 3 plants in Manitoba in 1927 and 2 in 1926 and 1 in British Columbia in each year.
[3]Includes also data for 1 plant in Alberta and 1 in British Columbia.

Table 104—Capital Employed in the Soaps, Washing Compounds and Toilet Preparations Industry in Canada, by Classes and by Provinces, 1926 and 1927

—	1926				1927			
	Capital employed as represented by				Capital employed as represented by			
	Lands, buildings, fixtures, machinery and tools	Materials on hand, and stocks in process	Cash trading and operating accounts and bills receivable	**Total**	Lands, buildings, fixtures, machinery and tools	Materials on hand, and stocks in process	Cash trading and operating accounts and bills receivable	**Total**
	$	$	$	$	$	$	$	$
Soaps—								
Quebec	851,347	410,183	311,602	1,573,132	1,172,599	364,462	322,737	1,859,798
Ontario	5,776,006	2,928,611	1,320,279	10,024,896	6,286,933	3,769,370	1,182,096	11,238,399
British Columbia	207,486	151,923	42,814	402,223	249,964	113,896	71,304	435,164
Canada*	8,092,462	4,195,390	1,893,390	14,181,242	8,973,651	4,804,502	1,848,788	15,626,944
Washing Compounds—								
Quebec	151,702	24,439	30,491	206,632	176,479	26,205	50,607	253,291
Ontario	99,671	46,671	20,486	166,828	112,299	49,168	24,148	185,615
Canada*	274,745	99,041	54,502	428,288	316,150	104,919	80,443	501,512
Toilet Preparations—								
Quebec	421,581	469,170	297,390	1,188,141	404,251	514,947	419,809	1,339,007
Ontario	292,629	490,570	519,031	1,302,230	294,533	552,909	688,286	1,535,728
Manitoba	38,146	170,702	37,959	246,807	38,271	164,976	40,851	244,098
Canada*	752,806	1,133,504	855,538	2,741,848	737,505	1,236,700	1,150,064	3,121,209
Total—								
Quebec	**1,424,630**	**903,792**	**639,483**	**2,967,905**	**1,753,329**	**905,614**	**793,153**	**3,452,096**
Ontario	**6,168,306**	**3,465,852**	**1,859,796**	**11,493,954**	**6,693,765**	**4,371,447**	**1,894,530**	**12,959,742**
Manitoba	**834,336**	**501,057**	**165,018**	**1,500,411**	**843,498**	**431,788**	**169,246**	**1,444,532**
Alberta	**256,207**	**130,986**	**20,225**	**407,418**	**256,211**	**111,420**	**30,213**	**397,814**
British Columbia	**207,936**	**159,985**	**43,972**	**411,893**	**250,414**	**116,611**	**72,362**	**439,420**
Canada*	**9,120,013**	**5,427,935**	**2,803,430**	**17,351,378**	**10,027,309**	**6,146,121**	**3,079,235**	**19,252,665**

*See footnote to Table 103.

Table 105.—Employees, Salaries and Wages in the Soaps, Washing Compounds and Toilet Preparations Industry in Canada, by Provinces, 1926 and 1927

Province	Average number of employees					Salaries and wages		
	Salaried employees		Wage-earners		Total	Salaries	Wages	Total
	Male	Female	Male	Female				
						$	$	$
1926								
Soaps—								
Quebec	49	12	133	37	231	139,990	142,831	282,821
Ontario	190	62	511	145	908	469,988	732,699	1,202,687
British Columbia	13	2	34	12	62	31,008	45,837	76,845
Canada*	294	88	785	215	1,382	758,817	1,058,970	1,817,787
Washing Compounds—								
Quebec	16	1	45	–	62	72,262	49,932	122,194
Ontario	6	3	19	17	45	18,706	24,654	43,360
Canada*	26	5	68	18	117	97,672	78,412	176,084
Toilet Preparations—								
Quebec	45	18	73	131	267	119,492	147,840	267,332
Ontario	38	70	37	138	283	182,859	126,168	309,027
Manitoba	8	3	4	1	16	12,910	3,980	16,890
Canada*	91	92	115	271	569	316,301	279,288	595,589
Total—								
Quebec	**110**	**31**	**251**	**168**	**560**	**331,744**	**340,603**	**672,347**
Ontario	**234**	**135**	**567**	**300**	**1,236**	**671,553**	**883,521**	**1,555,074**
Manitoba	**26**	**12**	**60**	**9**	**107**	**69,174**	**77,746**	**146,920**
Alberta	**10**	**2**	**24**	**10**	**46**	**25,863**	**32,156**	**58,019**
British Columbia	**14**	**3**	**34**	**13**	**64**	**33,048**	**46,637**	**79,685**
Canada*	**411**	**185**	**968**	**504**	**2,068**	**1,172,790**	**1,416,670**	**2,589,460**
1927								
Soaps—								
Quebec	58	13	126	34	231	159,429	137,249	296,678
Ontario	207	57	526	154	944	436,480	771,860	1,208,340
British Columbia	13	2	40	13	68	30,893	53,291	84,184
Canada*	320	85	799	219	1,423	747,766	1,095,453	1,844,213
Washing Compounds—								
Quebec	18	1	49	2	70	73,409	60,404	133,813
Ontario	6	3	26	9	44	19,596	27,555	47,151
Canada*	27	5	81	13	126	99,403	93,167	192,570
Toilet Preparations—								
Quebec	44	17	75	141	277	117,531	167,630	285,161
Ontario	39	71	38	108	256	176,219	140,383	316,602
Manitoba	9	3	7	2	21	14,986	6,033	21,019
Canada*	92	92	121	252	557	309,776	315,146	624,922
Total—								
Quebec	**120**	**31**	**250**	**177**	**578**	**350,369**	**365,283**	**715,652**
Ontario	**252**	**131**	**590**	**271**	**1,244**	**632,295**	**939,798**	**1,572,093**
Manitoba	**27**	**13**	**63**	**9**	**112**	**72,062**	**75,475**	**147,537**
Alberta	**10**	**2**	**25**	**9**	**46**	**25,302**	**31,783**	**57,085**
British Columbia	**13**	**3**	**41**	**14**	**71**	**31,933**	**54,191**	**86,124**
Canada*	**439**	**182**	**1,001**	**481**	**2,106**	**1,156,939**	**1,504,766**	**2,661,705**

*See footnote to Table 103.

Table 106.—Wage-Earners in the Soaps, Washing Compounds and Toilet Preparations Industry in Canada, by Months, 1926 and 1927

Month	1926				1927			
	Soaps	Washing compounds	Toilet preparations	Total	Soaps	Washing compounds	Toilet preparations	Total
January	950	77	350	1,377	985	85	336	1,406
February	954	80	338	1,372	1,003	88	333	1,424
March	955	85	347	1,387	1,024	86	355	1,465
April	970	90	363	1,423	1,026	92	365	1,483
May	965	92	374	1,431	946	89	371	1,406
June	979	82	384	1,445	962	93	367	1,422
July	969	85	390	1,444	941	92	374	1,407
August	969	85	393	1,447	949	95	373	1,417
September	1,016	85	400	1,501	1,066	96	388	1,550
October	1,003	83	409	1,495	1,098	95	400	1,593
November	1,002	75	397	1,474	1,074	95	392	1,561
December	987	73	371	1,431	1,087	92	368	1,547
***Average—Male**	**785**	**68**	**115**	**968**	**799**	**81**	**121**	**1,001**
Female	**215**	**18**	**271**	**504**	**219**	**13**	**252**	**484**
Total	**1,000**	**86**	**386**	**1,472**	**1,018**	**94**	**373**	**1,485**

* See note on page 24.

Table 107.—Hours of Labour in Month of Highest Employment in the Soaps, Washing Compounds and Toilet Preparations Industry in Canada, by Industries and by Provinces, 1927

Group and Province	Number of wage-earners working			
	8 hours per day	9 hours per day	10 hours per day	Over 10 hours per day
Soaps	442	449	236	35
Washing compounds	36	33	36	–
Toilet preparations	301	118	6	1
Total—				
Quebec	**228**	**158**	**98**	**4**
Ontario	**384**	**390**	**180**	**32**
Manitoba	**62**	**12**	–	–
Alberta	**43**	**3**	–	–
British Columbia	**62**	–	–	–
Canada*	**779**	**600**	**278**	**36**

*Includes also data for 1 plant in New Brunswick and 1 in Saskatchewan.

Table 108.—Record of Operations in the Soaps, Washing Compounds and Toilet Preparations Industry in Canada, by Industries and by Provinces, 1927

Group and Province	On full time only			On less than full time				
	Average number of wage-earners	Number of plant	Total plant days	Average number of wage-earners	Number of plants	Total plant days		
						On full time	On part time	Idle
Soaps	964	32	9,715	54	8	1,509	201	735
Washing compounds	80	16	4,856	14	6	720	206	906
Toilet preparations	319	38	11,549	54	10	1,212	524	1,307
Total—								
Quebec	**370**	**29**	**8,813**	**57**	**6**	**1,252**	**192**	**383**
Ontario	**800**	**42**	**12,747**	**61**	**14**	**1,954**	**658**	**1,665**
Manitoba	**70**	**7**	**2,128**	**2**	**2**	**169**	**60**	**388**
Alberta	**23**	**2**	**608**	**1**	**1**	**75**	–	**229**
British Columbia	**54**	**4**	**1,216**	**1**	**1**	–	**21**	**283**
Canada*	**1,363**	**86**	**26,120**	**122**	**24**	**3,441**	**931**	**2,948**

*Includes also data for 1 plant in New Brunswick and 1 in Saskatchewan.

Table 109.—Fuel and Electricity Used in the Soaps, Washing Compounds and Toilet Preparations Industry in Canada, 1926 and 1927

Kind	Unit of measure	1926		1927	
		Quantity	Value	Quantity	Value
			$		$
Anthracite coal	short ton	541	5,744	868	7,861
Bituminous coal—Canadian	short ton	40,593	244,997	8,282	57,652
Bituminous coal—Imported	short ton			27,843	161,679
Lignite coal	short ton	13	117	16	144
Coke	short ton	90	1,140	444	3,867
Fuel oil	gal.	8,018	990	8,200	912
Gasoline	gal.	10,444	3,236	1,339	377
Gas—manufactured	M cu. ft.	1,217	887	1,021	1,186
Gas—natural	M cu. ft.			43	26
Wood	cord	80	554	71	487
Other fuel		–	7,089	–	6,579
Electricity purchased	k.w.h.	5,202,777	54,327	2,994,056	41,682
Total		–	**319,072**	–	**282,452**
Electricity generated for own use	k.w.h.	–	–	145,000	2,900

Table 110.—Power Employed in the Soaps, Washing Compounds and Toilet Preparations Industry in Canada, 1926 and 1927

Description	1926		1927	
	Number of units	Total h.p. according to manufacturers' rating	Number of units	Total h.p. according to manufacturers' rating
Steam engines and turbines	17	792	14	719
Gasoline, gas and oil engines	1	6	1	6
Total primary power	*18*	*798*	*15*	*725*
Electric motors run by purchased power	590	3,956	573	3,500
Total power employed	**608**	**4,754**	**588**	**4,225**
Electric motors run by primary power in same plant	25	210	10	106
Total electric motors	*615*	*4,166*	*583*	*3,606*
Boilers	52	5,936	50	6,444

Table 111—Materials Used in the Soaps, Washing Compounds and Toilet Preparations Industry in Canada, 1926 and 1927

Material	Unit of measure	1926		1927	
		Quantity	Cost at works	Quantity	Cost at works
			$		$
SOAPS—					
Cocoanut oil	lb.	11,575,158	1,224,433	14,260,463	1,383,093
Corn oil	lb.	143,645	11,907	206,641	11,777
Cottonseed oil	lb.	329,241	24,757	175,268	13,522
Essential oils	.....	–	83,897	–	74,733
Fatty acids—stearic, etc	lb.	2,237,743	111,668	3,028,301	198,548
Foots (cottonseed, olive, etc.)	.....	–	180,965	–	242,161
Glycerine, crude, purchased	lb.	1,501,007	248,836	1,973,750	308,055
Glycerine, refined, purchased	lb.	172,597	42,352	111,370	27,513
Linseed oil	gal.	28,364	28,029	31,308	30,178
Olive oil	lb.	177,939	18,257	15,083	2,985
Palm oil	lb.	5,994,931	537,215	6,687,379	563,635
Peanut oil	lb.	455,524	41,218	446,807	44,794
Perfumes	.....	–	175,608	–	199,920
Petrolatum	lb.	77,225	2,546	69,610	1,960
Potash, caustic	lb.	140,275	11,305	247,075	14,788
Resin	lb.	7,365,920	446,432	6,860,264	373,148
Silica sand	ton	2,682	71,749	2,973	76,991
Soda ash	lb.	6,847,107	120,718	6,765,025	119,351
Soda, caustic dry	lb.	5,456,445	200,545	8,271,336	301,599
Soda, caustic, in solution	lb. soda	7,212,739	191,148	3,143,137	89,421
Sodium chloride (common salt)	lb.	2,230,460	13,155	5,279,459	26,618
Sodium silicate (waterglass)	lb.	16,251,732	132,872	16,025,205	126,032
Soya bean oil	lb.	3,069,862	267,542	2,149,192	167,289
Talc	lb.	399,248	5,112	421,606	4,916
Tallow, grease, and other soap stock	lb.	41,436,725	3,425,743	42,388,197	3,342,805
All other materials	.....	–	471,179	–	362,855
Shipping containers (boxes, cartons, etc.)	.....	–	1,278,894	–	1,568,789
Total	.....	–	9,368,082	–	9,677,467
WASHING COMPOUNDS—					
Calcium chloride	lb.	575,900	15,324	599,283	16,533
Lime	lb.	65,609	2,017	56,372	1,755
Liquid chlorine	lb.	–	–	172,250	12,652
Petrolatum	lb.	35,600	890	27,000	810
Resin	lb.	6,655	331	4,425	380
Silica sand	ton	115	1,565	204	2,694
Soda ash	lb.	1,381,966	26,995	1,625,521	32,060
Soda, caustic, dry	lb.	316,656	11,823	335,458	13,302
Sodium silicate (water glass)	lb.	105,902	2,086	125,091	2,505
Tallow, grease, and other soap stock	lb.	92,408	7,465	232,888	19,788
All other materials	.....	–	82,640	–	66,786
Shipping containers (boxes, cartons, etc.)	.....	–	37,378	–	43,287
Total	.....	–	188,514	–	212,553
TOILET PREPARATIONS—					
Cocoanut oil	lb.	55,705	6,715	63,527	6,603
Ethyl alcohol	gal.	55,844	19,316	37,559	61,011
Essential oils	.....	–	159,537	–	206,864
Fatty acids—stearic, etc	lb.	134,998	13,910	129,593	18,992
Glycerine, refined	lb.	173,175	42,354	206,923	52,484
Glycerine, crude, purchased	lb.	68,453	18,652	1,460	450
Perfumes	.....	–	6,531	–	15,052
Petrolatum	lb.	261,629	37,569	55,811	8,920
Potash, caustic	lb.	38,919	2,873	35,463	2,750
Soda, caustic	lb.	33,345	1,331	39,450	1,493
Talc	lb.	770,403	18,823	591,437	14,153
Tallow, grease, and other soap stock	lb.	231,064	20,234	276,891	23,555
All other materials	.....	–	487,063	–	596,787
Shipping containers (boxes, cartons, etc.)	.....	–	568,491	–	488,585
Total	.....	–	1,403,399	–	1,497,699
Total	.....	–	**10,959,995**	–	**11,387,719**

Table 112—Products of the Soaps, Washing Compounds and Toilet Preparations Industry in Canada, 1926 and 1927

Product	Unit of measure	1926		1927	
		Quantity	Selling value	Quantity	Selling value
SOAPS—			$		$
Hard soaps					
Household soaps	lb.	50,610,468	3,631,745	47,568,013	3,509,507
Laundry soaps and soap chips	lb.	42,396,197	4,127,784	56,076,973	4,348,435
Textile soaps	lb.	-	-	1,656,699	126,055
Toilet soaps	lb.	16,850,170	2,489,727	18,514,258	2,847,251
Polishing and scouring soaps	lb.	852,231	57,051	391,015	25,642
Soap powder	lb.	11,379,020	418,846	5,224,179	304,264
Foots soap	lb.	16,021	1,602	-	-
All other hard soaps	lb.	2,753,742	235,397	2,580,554	235,998
Liquid soaps	lb.	244,825	29,290	335,059	34,686
Soft soaps	lb.	1,356,502	84,283	1,388,754	74,661
Cleaning preparations—					
Ammonia powder	lb.	1,484,384	101,001	1,604,065	94,225
Lye	lb.	542,787	68,862	607,607	81,703
Washing compounds	lb.	1,302,083	35,595	922,954	30,633
Other cleaning preparations		-	966,748	-	938,943
Glycerine, crude, sold as such	lb.	2,569,938	403,768	2,308,984	331,202
Glycerine, refined	lb.	3,304,882	851,731	4,598,093	1,091,299
Toilet preparations		-	537,206	-	525,969
Perfumes		-	104,476	-	74,215
All other products*		-	182,581	-	272,815
Total		-	14,327,693	-	14,947,503
WASHING COMPOUNDS—					
Ammonia powder		-	53,568	-	54,119
Javelle water		-	237,733	-	289,889
Washing compounds		-	54,944	-	50,314
Soap, all kinds	lb.	204,873	16,393	230,290	18,240
Other cleaning or scouring preparations		-	42,509	-	57,530
All other products		-	114,178	-	110,505
Total		-	519,325	-	580,597
TOILET PREPARATIONS—					
Toilet preparations, including hair tonics, facial cream, etc.		-	2,682,288	-	2,749,180
Tooth paste		-	631,317	-	818,109
Toilet soap	lb	-	-	857,298	429,850
Liquid soap		-	4,693	-	5,268
Perfumes		-	379,044	-	246,529
All other products		-	528,168	-	216,417
Total		-	4,225,510	-	4,465,353
Total		-	**19,072,528**	-	**19,993,453**

*Includes laundry blue, hand cleaner, refined tallow, and various other products.

Table 113—Production* of Soaps in Canada, by Principal Kinds, 1918-1927

Year		Household soaps	Laundry soaps and soap chips	Toilet soaps	Polishing and scouring soaps	Soap powder	Soft soaps	All other soaps
1918	lb.	83,302,070	Included with household soaps	8,805,766	6,809,563	7,711,635	928,924	5,931,363
	$	9,170,894		2,136,838	690,155	423,589	102,768	928,464
1919	lb.	31,192,654	34,073,766	10,819,505	6,490,442	6,451,025	1,133,776	4,223,076
	$	3,952,158	3,591,813	3,408,248	593,372	403,549	138,558	500,833
1920	lb.	53,435,214	20,156,338	7,512,417	8,597,176	7,484,270	1,152,493	1,405,679
	$	6,840,021	3,012,690	2,206,734	765,641	593,811	155,708	157,193
1921	lb	37,530,586	23,393,172	8,503,563	13,996,194	8,032,299	1,630,518	2,676,866
	$	3,134,790	2,695,536	2,401,955	1,408,354	359,762	87,532	262,522
1922	lb	42,740,992	39,851,368	13,044,353	-	7,349,603	919,475	3,607,354
	$	2,901,515	3,925,410	3,114,039	753,290	477,125	68,541	273,714
1923	lb	46,884,007	38,121,723	15,297,966	-	12,961,679	1,121,657	3,839,880
	$	3,513,458	4,144,913	3,878,845	289,943	1,125,283	71,981	293,664
1924	lb	41,075,620	43,026,334	15,905,020	* 2,189,883	12,442,762	909,961	3,998,706
	$	3,107,893	4,150,022	2,642,719	166,717	984,976	60,501	337,508
1925	lb	46,920,389	39,386,350	16,040,634	847,347	11,607,570	1,351,148	-
	$	3,538,591	3,924,003	2,692,699	57,514	920,766	77,517	401,887
1926	lb.	50,610,468	42,541,576	18,188,505	857,231	11,404,348	1,380,502	-
	$	3,631,745	4,143,767	2,926,446	57,401	420,823	85,737	364,617
1927	lb.	47,568,013	56,262,911	19,371,556	397,115	5,255,277	1,408,001	-
	$	3,509,507	4,362,605	3,277,101	26,068	307,509	76,266	526,368

*Includes also a small production in other industries; see Table 17.

Table 114—Imports into Canada of Soaps, Washing Compounds and Toilet Preparations, by Principal Countries of Origin, Calendar Years, 1926 and 1927

Article	Country	Unit of measure	1926 Quantity	1926 Value	1927 Quantity	1927 Value
				$		$
SOAPS—						
Castile soap	**Total**	**lb.**	**1,343,834**	**109,270**	**1,176,528**	**96,772**
	United Kingdom	lb.	9,584	1,069	4,591	836
	United States	lb.	54,318	7,123	81,546	11,456
	France	lb.	1,279,932	101,138	1,090,169	84,384
Common laundry soap	**Total**	**lb.**	**9,611,191**	**679,705**	**9,875,487**	**718,906**
	United Kingdom	lb.	111,151	9,854	84,813	7,499
	United States	lb.	9,431,930	663,915	9,721,343	705,941
Harness soap	**Total**	**lb.**	**5,084**	**1,129**	**3,486**	**729**
	United Kingdom	lb.	2,532	628	2,364	478
	United States	lb.	2,552	501	1,122	251
Liquid soap	**Total**	**lb.**	**145,117**	**14,328**	**233,227**	**26,640**
	United Kingdom	lb.	29,165	2,813	34,132	5,491
	United States	lb.	115,710	11,498	198,495	21,081
Soap powders and powdered soaps	**Total**	**lb.**	**532,017**	**38,322**	**342,448**	**27,540**
	United Kingdom	lb.	63,848	4,213	83,537	5,278
	United States	lb.	467,870	34,705	256,695	22,220
Toilet soap, n.o.p.	**Total**	.....	–	**272,038**	–	**256,434**
	United Kingdom	.....	–	103,058	–	117,064
	United States	.....	–	133,489	–	95,674
	France	.....	–	27,647	–	35,892
Whale-oil soap	**Total**	**lb.**	**8,144**	**548**	**21,138**	**1,213**
	United Kingdom	lb.	–	–	–	–
	United States	lb.	8,144	548	21,138	1,213
Soap, n.o.p., including pumice, silver and mineral soaps, sapolio and like articles.	**Total**	.....	–	**83,925**	–	**60,746**
	United Kingdom	.....	–	20,091	–	12,842
	United States	.....	–	60,632	–	42,223
Total soap	**Total**	.....	–	**1,199,893**	–	**1,189,040**
	United Kingdom	.....	–	141,666	–	150,088
	United States	.....	–	912,391	–	901,059
TOILET PREPARATIONS—						
Alcoholic perfumes and perfumed spirits, bay rum, Cologne and lavender waters, hair, tooth and skin washes, and other toilet preparations in bottles or flasks containing not more than 4 ounces each.	**Total**	.....	–	**83,322**	–	**119,982**
	United Kingdom	.....	–	9,305	–	11,913
	United States	.....	–	10,971	–	14,354
	France	.....	–	52,867	–	84,164
Alcoholic perfumes and perfumed spirits, bay rum, Cologne and lavender waters, hair, tooth and skin washes, and other toilet preparations in bottles, flasks or other packages, containing more than 4 ounces each.	**Total**	**gal.**	**4,682**	**101,733**	**2,718**	**97,702**
	United Kingdom	gal.	324	21,050	362	24,398
	United States	gal.	378	8,391	389	9,726
	France	gal.	3,663	67,271	1,690	57,783
Pomades, French or flower odours, etc., imported in tins of not less than 10 pounds each.	**Total**	**lb.**	**180**	**339**	**162**	**396**
	United Kingdom	lb.	–	–	–	–
	United States	lb.	10	22	42	137
Hair oil, tooth and other powders, and washes, pomatums, pastes and all other perfumed preparations, n.o.p., used for the hair, mouth or skin.	**Total**	.....	–	**858,871**	–	**1,073,732**
	United Kingdom	.....	–	215,675	–	259,093
	United States	.....	–	486,697	–	561,274
	France	.....	–	144,121	–	232,209
Total Perfumery, Cosmetics and Toilet Preparations.	**Total**	.....	–	**1,044,265**	–	**1,291,812**
	United Kingdom	.....	–	246,030	–	295,404
	United States	.....	–	506,081	–	585,491
WASHING COMPOUNDS—			Not separately itemized.			

Table 115—Exports of Soaps from Canada, by Principal Countries of Destination, Calendar Years, 1926 and 1927

Article	Country	Unit of measure	1926		1927	
			Quantity	Value	Quantity	Value
				$		$
SOAPS—						
Toilet soap	**Total**	**lb.**	**3,975,521**	**741,514**	**5,283,306**	**811,090**
	United Kingdom	lb.	3,384,662	618,590	4,967,126	749,042
	United States	lb.	4,798	1,082	158	31
	Belgium	lb.	200,826	47,897	–	–
	Jamaica	lb.	36,304	11,105	43,487	12,808
	Irish Free State	lb.	94,689	11,614	184,615	23,483
	Netherlands	lb.	159,980	20,233	–	–
	Newfoundland	lb.	44,920	13,975	52,177	14,061
Soap, n.o.p.	**Total**	**lb.**	**452,474**	**41,747**	**493,077**	**40,258**
	United Kingdom	lb.	–	–	108	21
	United States	lb.	60,108	9,369	1,026	121
	Trinidad & Tobago	lb.	276,250	21,807	357,450	28,096
	Other Br. W. Indies	lb.	38,210	3,139	65,375	5,388
	Newfoundland	lb.	52,459	4,578	34,365	3,035
TOILET PREPARATIONS			Not separately itemized			
WASHING COMPOUNDS			Not separately itemized			

CHAPTER NINE

INKS, DYES AND COLOURS

This industrial classification covers the manufacture of *(a)* soap, dyes, butter and food colours, etc. *(b)* printers' inks and rollers, *(c)* writing inks. Production during 1927 reached a value of $3,221,677 or 14 per cent above the figure of $2,819,945 reported for 1926 and only slightly below the record, in point of value, established at $3,288,664 in 1920. Capital employed which was given at $2,915,682 was higher than in any previous year and the average number of workers at 455 was the greatest ever employed in this industry. Of the 30 plants which reported in 1927, 16 made printers' inks and printers' rollers as their main products, 8 made writing inks and 6 produced dyes and colours. In the present review statistics are given for each of these groups as well as for the industry as a whole.

Dyes and Colours.—The main products of this group were soap dyes, butter and food colours, malt flour and caramel. Only 6 plants were in this line of business; 3 were in Quebec and 3 in Ontario. Production was valued at $391,452 or 2 per cent higher than in 1926 but capital employed was lower at $600,199 and the number of employees was only 54 as against 83 in the previous year. One of the largest dye factories was moved from Montreal, P.Q., to Windsor, Ont., while another plant in Quebec which formerly made laundry blue as the main product did not operate during the year.

Two of the smaller plants were idle for about 2 months and worked on part time for about the same length of time, while the remaining concerns worked on full time throughout the year.

Printing Inks.—Manufacturers of printers' inks and rollers again reported increased business in 1927 when the output value advanced to $2,529,437 or 18 per cent above the value of $2,148,624 in 1926. Capital increased to $2,124,758 from $1,884,183; the number of employees was 340 against 296, and the value added by manufacturing was $1,586,578 as compared with $1,327,986 for 1926.

Sixteen factories were in operation in 1927 of which 11 were in Ontario, 2 in Quebec, and 1 in each of New Brunswick, Manitoba, and British Columbia. Two new factories in Ontario operated throughout the year. Eight concerns made printers' and lithographers' inks only; 3 made printers' rollers only; while 5 made both printers' inks and rollers.

Ontario with 11 of the larger plants accounted for an output worth $2,404,836 or 95 per cent of Canadian total for this group.

All but 2 of the establishments operated on full time throughout the year; part time operations lasted for about a month in 1 plant and for about 2 months in the other.

Imports of printing inks into Canada amounted to 1,238,584 pounds worth $283,270 in 1927 as against a value of $243,490 in the previous year.

Writing Inks.—Eight concerns were included in this group in 1927 against 6 in 1926; one small concern in Ontario and another in British Columbia were included in 1927 in addition to those which were in operation in the previous year. Production was slightly higher at $300,788; capital investment was reported at $190,725, and the number of employees was 61. Four of the factories employed only 1 or 2 people; two of these plants were very small and were operated only intermittently.

Musilage and other adhesives were also important products of this industry and it has not been possible to make a separation of production as between writing inks and adhesives.

Production of writing inks as a minor product of firms classified to other industrial groups amounted to $170,725 in 1927 as against $159,616 in 1926.

Imports of writing inks were valued at $41,621 in 1927 as compared with $41,527 in 1926.

Table 116.—Principal Statistics of the Inks, Dyes and Colours Industry in Canada, by Provinces, 1926 and 1927

Province	Number of plants	Capital employed	Number of employees	Salaries and wages	Cost of fuel and electricity	Cost of materials	Selling value of products	Value added by manufacturing
		$		$	$	$	$	$
1926								
Dyes and Colours:—								
Canada[1]	7	663,185	83	99,855	10,509	125,396	383,888	258,492
Printing Inks:—								
Ontario	9	1,804,978	278	539,654	22,765	787,845	2,032,835	1,244,990
Canada[2]	14	1,884,183	296	566,624	24,639	820,638	2,148,624	1,327,986
Writing Inks:—								
Ontario	3	65,097	16	12,260	242	19,460	42,330	22,870
Canada[3]	6	181,798	62	61,794	3,101	123,923	287,433	163,510
Total—								
Quebec	**8**	**518,136**	**86**	**92,033**	**6,074**	**156,848**	**460,689**	**303,841**
Ontario	**14**	**2,136,308**	**338**	**614,397**	**31,379**	**864,608**	**2,251,587**	**1,386,979**
Canada	**27**	**2,729,166**	**441**	**728,273**	**38,249**	**1,069,957**	**2,819,945**	**1,749,988**
1927								
Dyes and Colours:—								
Quebec	3	64,311	15	16,206	1,366	26,259	72,420	40,161
Ontario	3	535,888	39	57,063	2,158	75,679	319,032	243,353
Canada	6	600,199	54	73,269	3,524	101,938	391,452	289,514
Printing Inks:—								
Ontario	11	2,018,789	319	589,121	27,121	913,856	2,404,836	1,490,980
Canada[2]	16	2,124,758	340	617,911	29,345	942,859	2,529,437	1,586,578
Writing Inks:—								
Ontario	4	73,037	15	13,196	258	23,230	51,632	28,402
Canada[3]	8	190,725	61	64,866	3,177	140,124	300,788	160,664
Total—								
Quebec	**6**	**207,097**	**61**	**72,027**	**5,459**	**119,213**	**329,369**	**210,156**
Ontario	**18**	**2,627,714**	**373**	**659,380**	**29,537**	**1,012,765**	**2,775,500**	**1,762,735**
Canada	**30**	**2,915,682**	**455**	**756,046**	**36,046**	**1,181,921**	**3,221,677**	**2,036,756**

[1] Includes also data for 5 plants in Quebec and 2 in Ontario.
[2] Includes also data for 2 plants in Quebec and 1 in each of New Brunswick, Manitoba and British Columbia.
[3] Includes also data for 1 plant in Quebec and 1 in Manitoba in 1926 and 1927, and for 1 plant in British Columbia in 1992 and 2 in 1927.

Table 117.—Capital Employed in the Inks, Dyes and Colours Industry in Canada, by Classes and by Provinces, 1926 and 1927

Province	1926				1927			
	Capital employed as represented by				Capital employed as represented by			
	Lands, buildings, fixtures, machinery and tools	Materials on hand and stocks in process	Cash, trading and operating accounts and bills receivable	**Total**	Lands, buildings, fixtures, machinery and tools	Materials on hand and stocks in process	Cash, trading and operating accounts and bills receivable	**Total**
	$	$	$	$	$	$	$	$
Dyes and Colours:—								
Quebec	–	–	–	–	29,981	16,113	18,217	**64,311**
Ontario	–	–	–	–	382,666	30,226	122,996	**535,888**
Canada*	417,261	61,155	184,769	**663,185**	412,647	46,339	141,213	**600,199**
Printing Inks:—								
Ontario	984,448	386,236	434,294	**1,804,978**	1,115,908	394,338	508,543	**2,018,789**
Canada*	1,019,614	403,247	461,322	**1,884,183**	1,166,530	412,597	545,631	**2,124,758**
Writing Inks:—								
Ontario	38,146	22,988	3,963	**65,097**	46,430	23,461	3,146	**73,037**
Canada*	72,751	76,045	33,002	**181,798**	79,616	82,021	29,088	**190,725**
Total—								
Quebec	**264,400**	**97,919**	**155,817**	**518,136**	**79,296**	**59,161**	**68,340**	**207,097**
Ontario	**1,210,189**	**415,685**	**510,434**	**2,136,308**	**1,545,004**	**448,025**	**634,685**	**2,627,714**
Canada*	**1,509,626**	**540,447**	**679,093**	**2,729,166**	**1,658,793**	**540,957**	**715,932**	**2,915,682**

*See foot-note to Table 116.

Table 118.—Employees, Salaries and Wages in the Inks, Dyes and Colours Industry in Canada, by Provinces, 1926 and 1927

Province	Average number of employees					Salaries and wages		
	Salaried employees		Wage-earners		Total	Salaries	Wages	Total
	Male	Female	Male	Female				
1926						$	$	$
Dyes and Colours:—								
Canada*	22	7	32	22	83	52,836	47,019	99,855
Printing Inks:—								
Ontario	70	23	185	–	278	294,195	245,459	539,654
Canada*	74	23	199	–	296	302,500	264,124	566,624
Writing Inks:—								
Ontario	3	2	5	6	16	6,281	5,979	12,260
Canada*	12	6	21	23	62	35,935	25,859	61,794
Total—								
Quebec	17	7	28	34	86	42,458	49,575	92,033
Ontario	86	28	213	11	338	335,279	279,118	614,397
Canada*	108	36	252	45	441	391,271	337,002	728,273
1927								
Dyes and Colours:—								
Quebec	2	2	6	5	15	6,540	9,666	16,206
Ontario	12	5	12	10	39	37,146	19,917	57,063
Canada*	14	7	18	15	54	43,686	29,583	73,269
Printing Inks:—								
Ontario	78	22	215	4	319	320,515	268,606	589,121
Canada*	89	22	224	5	340	338,969	278,942	617,911
Writing Inks:—								
Ontario	4	1	5	5	15	6,743	6,453	13,196
Canada*	14	6	21	20	61	36,522	28,344	64,866
Total—								
Quebec	16	5	19	21	61	39,737	32,296	72,027
Ontario	94	28	232	19	373	364,404	294,976	659,380
Canada*	117	35	263	40	455	419,177	336,869	756,046

*See footnote to Table 116.

Table 119.—Wage-Earners in the Inks, Dyes and Colours Industry in Canada, by Months, 1926 and 1927

Month	1926				1927			
	Dyes and colours	Printing inks	Writing inks	Total	Dyes and colours	Printing inks	Writing inks	Total
January	50	197	35	282	30	221	39	290
February	55	196	36	287	32	223	40	295
March	56	200	40	296	34	222	41	297
April	56	192	40	288	35	226	40	301
May	59	195	45	299	34	229	43	306
June	56	201	43	300	32	227	42	301
July	50	200	48	298	31	229	42	302
August	44	200	50	294	30	231	42	303
September	48	201	48	297	32	227	43	302
October	44	202	42	288	33	229	42	304
November	42	203	44	289	33	231	40	304
December	35	203	40	278	32	230	39	301
***Average—Male**	32	199	21	252	18	224	21	263
Female	22	–	23	45	15	5	20	40
Total	54	199	44	297	33	229	41	303

*See note on page 24.

Table 120.—Hours of Labour in Month of Greatest Employment in the Inks, Dyes and Colours Industry in Canada, by Industries and by Provinces, 1927

Group and Province	Number of wage-earners working			
	8 hours per day	9 hours per day	10 hours per day	Over 10 hours per day
Dyes and colours	34	–	1	2
Printing inks	239	7	–	–
Writing inks	15	33	–	–
Total—				
Quebec	**17**	**24**	**1**	–
Ontario	**264**	**7**	–	**2**
Canada*	**288**	**40**	**1**	**2**

*See footnote to Table 116.

Table 121.—Record of Operations in the Inks, Dyes and Colours Industry in Canada, by Industries and by Provinces, 1927

Group and Province	On full time only			On less than full time				
	Average number of wage-earners	Number of plants	Total plant days	Average number of wage-earners	Number of plants	On full time	On part time	Idle
Dyes and colours	23	4	1,225	10	2	444	42	122
Printing inks	206	14	4,256	23	2	534	65	9
Writing inks	41	6	1,824	–	2	20	–	589
Total—								
Quebec	**38**	**5**	**1,528**	**2**	**1**	**200**	**42**	**62**
Ontario	**232**	**13**	**3,952**	**31**	**5**	**788**	**65**	**658**
Canada*	**270**	**24**	**7,305**	**33**	**6**	**998**	**107**	**720**

*See footnote to Table 116.

Table 122.—Fuel and Electricity Used in the Inks, Dyes and Colours Industry in Canada, 1926 and 1927

Kind	Unit of measure	1926		1927	
		Quantity	Value	Quantity	Value
			$		$
Anthracite coal	short ton	154	2,136	264	3,653
Bituminous coal—Canadian	short ton	2,201	16,740	193	1,520
Bituminous coal—Imported	short ton			1,437	9,748
Coke	short ton	100	1,452	98	1,270
Fuel oil	Imp. gal.	9,100	1,092	–	–
Gas—manufactured	M. cu. ft.	462	500	677	831
Wood	cord	6	43	2	17
Other fuel	.....	–	–	–	30
Electric power	k.w.h.	766,974	16,286	1,041,345	18,977
Total		–	**38,249**	–	**36,04**

Table 123.—Power Employed in the Inks, Dyes and Colours Industry in Canada, 1926 and 1927

Description	1926		1927	
	Number of units	Total h.p. according to manufacturers' rating	Number of units	Total h.p. according to manufacturers' rating
Steam engines and turbines	1	40	1	40
Gasoline, gas and oil engines	1	4	1	4
Total primary power	*2*	*44*	*2*	*44*
Electric motors run by purchased power	102	1,014	125	1,116
Total power employed	**104**	**1,058**	**127**	**1,160**
Total electric motors	*102*	*1,014*	*125*	*1,116*
Boilers	6	225	5	198

Table 124.—Estimated Percentage of Normal Output Attained in the Inks, Dyes and Colours Industry in Canada, by Industries and by Provinces, 1927

Group and Province	Actual value of output	Computed value of normal output	Per cent of normal output attained
	$	$	$
Dyes and colours	391,452	392,917	99·6
Printing inks	2,529,437	2,551,112	99·1
Writing inks	300,788	309,637	97·1
Total—			
Quebec	**329,369**	**330,834**	**99·6**
Ontario	**2,775,500**	**2,818,741**	**98·4**
Canada*	**3,221,677**	**3,255,666**	**98·9**

*See footnote to Table 116.

Table 125—Materials Used in the Inks, Dyes and Colours Industry in Canada, 1926 and 1927

Material	Unit of measure	1926		1927	
		Quantity	Cost at works	Quantity	Cost at works
			$		$
DYES AND COLOURS—					
Purchased materials[1]	.....	–	104,433	–	90,573
Containers (boxes, bags, packages, etc.)	.....	–	20,963	–	11,365
Total	.....	–	125,396	–	101,938
PRINTING INKS—					
Carbon black	lb.	123,750	12,028	175,512	14,576
Dry colours	lb.	1,092,290	332,990	1,319,743	403,148
Oils and varnishes	.....	–	243,761	–	233,777
Glue	lb.	58,497	14,097	54,523	14,440
Glycerine	lb.	128,724	33,583	132,332	24,422
Methylated spirits, benzine, naphtha, coal oil and turpentine	.....	–	10,805	–	15,977
Resin and gums	lb.	148,072	10,600	184,186	18,865
Shellac	lb.	7,500	3,400	–	–
Pitch	lb.	17,853	610	18,964	616
Aluminium hydrate	lb.	21,325	3,898	17,101	2,989
Blanc fixe	lb.	8,000	340	9,660	410
Containers (boxes, etc)	.....	–	50,319	–	52,989
All other materials[2]	.....	–	104,207	–	160,650
Total	.....	–	820,638	–	942,859
WRITING INKS—					
Purchased materials[3]	.....	–	49,057	–	48,680
Containers (boxes, etc.)	.....	–	74,856	–	91,444
Total	.....	–	123,923	–	140,124
Total	.....	–	**1,069,957**	–	**1,184,921**

[1]Includes grape sugar, ammonia, malt, aniline dye and dye mixtures, alcohol, shellac and various other materials.
[2]Includes driers, transfer paper, and various other materials.
[3]Includes tannic acid, gallic acid, oils, dextrine dyes and colours and various other materials.

Table 126—Products of the Inks, Dyes and Colours Industry in Canada, 1926 and 1927

Product	Unit of measure	1926		1927	
		Quantity	Selling value	Quantity	Selling value
			$		$
DYES AND COLOURS—					
Dyes		–	274,359	–	303,723
All other products[1]		–	109,529	–	87,729
Total		–	383,888	–	391,452
PRINTING INKS—					
Printing and lithographic inks	lb.	5,682,616	1,554,415	6,525,032	1,812,277
Printers' rollers and composition		–	228,976	–	245,283
Paints, varnishes, stains and enamels	lb.	–	157,488	–	227,410
All other products[2]		–	207,745	–	244,467
Total		–	2,148,624	–	2,529,437
WRITING INKS—					
Inks and adhesives		–	253,450	–	264,040
All other products[3]		–	33,983	–	36,748
Total		–	287,433	–	300,788
Total		–	**2,819,945**	–	**3,221,677**

[1]Includes malt flour, food colours, butter colours, caramel, carbolic acid, sylkraft, and various other products.
[2]Includes dry colours, show card colours and other products.
[3]Includes carbon paper, inked ribbon and various other products.

Table 127.—Imports of Inks and Adhesives into Canada, by Principal Countries, Calendar Years, 1926 and 1927

Item and Country	Unit of measure	1926		1927	
		Quantity	Value	Quantity	Value
			$		$
Ink, printing—United Kingdom		–	19,583	–	31,349
United States		–	220,498	–	248,844
Other countries		–	3,409	–	3,077
Total		–	**243,490**	–	**283,270**
Ink, writing—United Kingdom		–	16,906	–	14,321
United States		–	21,383	–	25,376
Other countries		–	3,238	–	1,924
Total		–	**41,527**	–	**41,621**
Mucilage and adhesive paste including vegetable glue—					
United Kingdom		–	6,623	–	8,966
United States		–	99,143	–	123,099
Other countries		–	43	–	167
Total		–	**105,809**	–	**132,232**
Glue, animal, powdered or sheet—					
United Kingdom	lb.	1,316,509	129,074	1,846,955	182,315
United States	lb.	513,126	68,217	556,577	75,854
Belgium	lb.	23,669	4,523	222,096	30,007
France	lb.	124,695	19,252	118,047	14,593
Other countries	lb.	48,224	2,870	78,103	9,426
Total		**2,026,223**	**223,936**	**2,821,778**	**312,195**
Glue, liquid—					
United Kingdom		–	9,387	–	4,878
United States		–	66,657	–	61,693
Other countries		–	365	–	222
Total		–	**76,409**	–	**66,793**

CHAPTER TEN

WOOD DISTILLATES AND WOOD EXTRACTS

In 1927, statistics for this group covered the operations of 11 different plants in Canada. Of these, 6 were engaged in the distillation of hardwoods to produce charcoal, methyl hydrate and acetate of lime; 1 was operated as a refinery to make pure methyl hydrate, formaldehyde and acetic acid; 1 extracted turpentine from resinous woods; and 3 small concerns produced charcoal only from hardwood. One distillation plant in Ontario and 1 in Quebec were closed down during 1927 but another in Ontario was re-opened after a period of idleness; 2 small charcoal plants, 1 in Ontario and 1 in Quebec, were added to the list in 1927 and another small plant in Quebec which produced charcoal for use in making explosives was operated for part of the year after being closed during 1926.

The value of wood distillates and wood extracts at $1,587,704 in 1927 showed a decline of 8·5 per cent as compared with 1926; capital employed was 14 per cent lower at $1,907,514; the number of employees increased to 291 from 255; salaries and wages were higher at $275,301 as compared with $214,694; materials cost more at $865,081 as against $827,575; and the value added by manufacturing was $722,623 as against $907,418 in 1926. Wood used in 1927 totalled 56,292 cords of which 52,361 cords were charged to distillation ovens and 3,931 cords were used by charcoal burners. Output of charcoal totalled 2,758,697 bushels and included 2,570,628 bushels from distillation plants and 188,069 bushels from the charcoal plants. Production of acetate of lime was 5 per cent higher at 9,912,568 bushels, of which 1,014,680 bushels, or 10 per cent, were shipped to the refinery for further treatment. Production of crude methyl hydrate was only slightly higher at 416,667 gallons, and of this, 357,331 gallons or 86 per cent were shipped for refining. The average yield per cord of wood charged to the ovens in 1927 was 49·1 bushels of charcoal, 189·3 pounds of lime acetate and 8·0 gallons of crude methyl hydrate. Refinery output in 1927 was slightly lower than in 1926.

Table 128.—Principal Statistics of the Wood Distillates and Wood Extracts Industry in Canada, by Provinces, 1926 and 1927

Province	Number of plants	Capital employed	Number of employees	Salaries and wages	Cost of fuel and electricity	Cost of materials	Selling value of products	Value added by manufacturing
		$		$	$	$	$	$
1926								
Quebec	4	1,250,622	84	76,292	47,338	408,749	773,054	364,305
Ontario	5	966,427	171	138,402	136,076	418,826	961,939	543,113
Canada	**9**	**2,217,049**	**255**	**214,694**	**183,414**	**827,575**	**1,734,993**	**907,418**
1927								
Quebec	5	957,751	92	98,605	67,179	487,203	792,591	305,388
Ontario	6	949,763	199	176,696	135,564	377,878	795,113	417,235
Canada	**11**	**1,907,514**	**291**	**275,301**	**202,743**	**865,081**	**1,587,704**	**722,623**

Table 129.—Capital Employed in the Wood Distillates and Wood Extracts Industry in Canada, by Provinces and by Classes, 1926 and 1927

Province	1926				1927			
	Capital employed as represented by				Capital employed as represented by			
	Lands, buildings, fixtures, machinery and tools	Materials on hand and stocks in process	Cash, trading, and operating accounts and bills receivable	Total	Lands, buildings, fixtures, machinery and tools	Materials on hand and stocks in process	Cash, trading, and operating accounts and bills receivable	Total
	$	$	$	$	$	$	$	$
Quebec	1,110,845	139,131	646	1,250,622	883,486	72,841	1,424	957,751
Ontario	795,908	159,734	10,785	966,427	843,670	91,138	14,955	949,763
Canada	**1,906,753**	**298,865**	**11,431**	**2,217,019**	**1,727,156**	**163,979**	**16,379**	**1,907,514**

Table 130.—Employees, Salaries and Wages, in the Wood Distillates and Wood Extracts Industry in Canada, by Provinces, 1926 and 1927

Province	Average number of employees			Salaries and wages		
	Salaried employees Male	Wage-earners Male	Total	Salaries	Wages	Total
				$	$	$
1926						
Quebec	8	76	84	13,440	62,852	76,292
Ontario	10	161	171	18,365	120,037	138,402
Canada	**18**	**237**	**255**	**31,805**	**182,889**	**214,694**
1927						
Quebec	8	84	92	15,208	83,397	98,605
Ontario	10	189	199	19,876	156,820	176,696
Canada	**18**	**273**	**291**	**35,084**	**240,217**	**275,301**

Table 131.—Wage-Earners in the Wood Distillates and Wood Extracts Industry in Canada, by Months, 1926 and 1927

Month	1926	1927	Month	1926	1927
	Male	Male		Male	Male
January	261	326	July	125	195
February	250	345	August	102	198
March	226	348	September	181	244
April	176	255	October	215	293
May	199	232	November	231	282
June	180	213	December	244	273
			Average	**237**	**273**

Table 132.—Hours of Labour in Month of Greatest Employment in the Wood Distillates and Wood Extracts Industry in Canada, by Provinces, 1927

Province	Number of wage-earners working			
	8 hours per day	9 hours per day	10 hours per day	Over 10 hours per day
Quebec	2	1	94	–
Ontario	–	14	244	5
Canada	2	15	338	5

Table 133.—Record of Operations in the Wood Distillates and Wood Extracts Industry in Canada, by Provinces, 1927

Province	On full time only			On less than full time				
	Average number of wage-earners	Number of plants	Total plant days	Average number of wage-earners	Number of plants	Total plant days		
						On full time	On part time	Idle
Quebec	80	2	617	4	3	310	280	322
Ontario	–	–	–	189	6	1,306	60	488
Canada	**80**	**2**	**617**	**193**	**9**	**1,616**	**340**	**810**

Table 134.—Fuel and Electricity Used in the Wood Distillates and Wood Extracts Industry in Canada, 1926 and 1927

Kind	Unit of measure	1926		1927	
		Quantity	Value	Quantity	Value
			$		$
Bituminous coal—Imported	short ton	21,723	152,378	25,805	171,516
Coke	short ton	2,252	7,727	244	861
Gasoline	Imp. gal.	–	–	180	55
Gas	M cu. ft.	300	300	–	–
Wood	Cord	2,391	9,963	3,371	14,852
Other fuel	.....	–	4,630	–	5,573
Electricity purchased	k.w.h.	546,490	8,416	597,770	9,886
Total	.....	–	**183,414**	–	**202,743**

Table 135.—Power Employed in the Wood Distillates and Wood Extracts Industry in Canada, 1926 and 1927

Description	1926		1927	
	Number of units	Total h.p. according to manufacturers' rating	Number of units	Total h.p. according to manufacturers' rating
Steam engines and steam turbines	7	278	5	188
Gasoline, gas and oil engines	1	6	2	15
Total primary power	*8*	*284*	*7*	*203*
Electric motors run by purchased power	16	405	17	340
Total power employed	**24**	**689**	**24**	**543**
Electric motors run by primary power in same plant	2	40	2	30
Total electric motors	*18*	*445*	*19*	*370*
Boilers	29	3,765	23	3,000

Table 136.—Estimated Percentage of Normal Output Attained in the Wood Distillates and Wood Extracts Industry in Canada, by Provinces, 1927

Province	Actual value of output	Computed value of normal output	Per cent of normal output attained
	$	$	
Quebec	792,591	820,290	96·6
Ontario	795,113	1,013,690	78·4
Canada	**1,587,704**	**1,833,980**	**86·5**

Table 137.—Materials Used in the Wood Distillates and Wood Extracts Industry in Canada, 1926 and 1927

Material	Unit of measure	1926		1927	
		Quantity	Cost at works	Quantity	Cost at works
			$		$
Primary materials:—					
Hardwoods	cord	48,254	462,818	56,292	482,277
Lime	bush.	41,587	16,752	37,999	18,131
Sulphuric acid 66° Bé	lb.	757,460	4,545	764,780	45,886
All other materials	.....	–	1,628	–	2,645
Total primary materials	.....	–	485,743	–	548,939
Intermediate materials:—					
Gray acetate of lime	lb.	1,153,899	26,539	1,150,782	23,016
Methyl hydrate crude, 95%	Imp. gal.	334,776	227,641	314,788	204,612
Methyl hydrate, pure	lb.	103,170	87,652	104,135	88,514
Total intermediate materials	.....	–	341,832	–	316,142
Total materials	.....	–	**827,575**	–	**865,081**

Table 138.—Products of the Wood Distillates and Wood Extracts Industry in Canada, 1926 and 1927

Product	Unit of measure	1926		1927	
		Quantity	Selling value	Quantity	Selling value
			$		$
Products made for sale:—					
Charcoal	bush.	2,370,494	565,215	2,758,697	603,217
Gray acetate of lime, 80%	lb.	8,566,722	254,833	8,897,888	167,424
Methyl hydrate, crude, 95%	Imp. gal.	69,321	37,788	59,336	26,702
Methyl hydrate, pure	lb.	196,391	191,088	201,696	181,526
Columnian spirits	Imp. gal.	3,775	4,926	6,052	7,502
Acetone	lb.	26,723	5,238	–	–
Acetone oils	lb.	3,503	560	–	–
Wood creosote	Imp. gal.	2,348	638	–	–
*Other products	.....	–	348,310	–	261,919
Total products made for sale	.....	–	1,408,596	–	1,248,290
Intermediate products made for use:—					
Gray acetate of lime, 80%	lb.	857,951	17,157	1,014,680	18,656
Methyl hydrate crude, 95%	Imp. gal.	337,337	221,588	357,331	232,244
Methyl hydrate, pure	Imp. gal.	103,170	87,652	104,135	88,514
Total intermediate products	.....	–	326,397	–	339,414
Total products	.....	–	**1,734,993**	–	**1,587,704**

*Includes 28% and 80% acetic acid, formaldehyde, turpentine and other products.

Table 139.—Hardwood and Lime Used and Primary Products Made in the Wood Distillates Plants in Canada, 1919-1927

Year	Primary materials		Primary products					
			Charcoal		Gray acetate of lime		Methyl hydrate 95%	
	Hardwood	Lime	Total output	Yield per cord of wood carbonized	Total output	Yield per cord of wood carbonized	Total output	Yield per cord of wood carbonized
	Cords	Bushels	Bushels	Bushels	Pounds	Pounds	Gallons	Gallons
1919	69,958	67,100	3,589,275	51·3	13,886,165	198·5	571,703	8·2
1920	100,347	98,647	5,116,171	51·0	18,230,899	181·7	835,626	8·3
1921	58,662	53,231	2,960,280	50·5	–	–	587,087	10·0
1922	59,169	38,990	3,019,167	51·0	–	–	497,930	8·4
1923	56,310	52,903	2,780,707	49·4	11,246,337	199·7	504,945	8·9
1924	57,131	55,190	2,892,404	50·6	10,889,845	190·6	461,919	8·1
1925	49,514	44,391	2,422,490	48·9	8,851,270	118·2	373,974	7·6
1926	48,254	41,587	2,370,494	49·1	9,424,673	195·3	406,658	8·4
1927	52,361	37,939	2,570,628	49·1	9,912,568	189·3	416,667	8·0

Table 140.—Methanol and Lime Acetate Statistics for Canada, by Months, 1926 and 1927

(From the Oil, Paint and Drug Reporter)

Month	1926			1927		
	Acetate of lime production	Crude methanol production	Wood consumed	Acetate of lime production	Crude methanol production	Wood consumed
	Pounds	Imp. Gal.	Cords	Pounds	Imp. Gal.	Cords
January	1,163,593	45,917	6,220	1,200,147	49,885	6,096
February	1,010,391	42,705	5,326	1,046,408	46,141	5,306
March	838,315	36,038	4,522	1,007,423	42,823	5,300
April	647,717	30,017	3,650	931,916	39,016	4,790
May	683,197	30,424	3,878	755,705	30,088	3,298
June	580,126	24,115	3,046	424,050	14,388	1,945
July	245,327	7,239	1,062	352,676	17,283	2,038
August	–	–	–	172,490	12,058	1,154
September	610,090	25,974	3,132	427,464	17,777	2,401
October	897,207	37,196	4,513	1,090,876	48,179	5,121
November	920,603	38,520	4,732	1,105,600	47,750	5,937
December	1,083,989	45,946	9,334	1,185,554	49,107	5,700
Total	**8,680,855**	**364,091**	**49,415**	**9,700,309**	**414,495**	**49,086**

Table 141.—Imports Into Canada and Exports of Wood Distillation Products by Principal Countries, Calendar Years, 1926 and 1927

Commodity and Country		1926		1927	
		Imports	Exports	Imports	Exports
Wood Alcohol –					
United Kingdom	gal.	3	3,460	1	5,062
	$	10	2,941	41	3,295
Australia	gal	–	27,769	–	25,132
	$	–	25,709	–	29,627
New Zealand	gal.	–	5,952	–	7,259
	$	–	5,161	–	7,245
United States	gal	53	–	57	96
	$	179	–	190	91
Other countries	gal	–	15	–	9,477
	$	–	24	–	8,825
Total	**gal.**	**56**	**37,196**	**58**	**47,026**
	$	**189**	**33,835**	**231**	**49,083**
Acetone and Amyl Acetate—					
United Kingdom	$	–	–	–	–
United States	$	13,590	–	57,902	–
Other countries	$	21	–	77	–
Total	**$**	**13,611**	–	**57,979**	–
Acetic and Pyroligneous Acid—					
United Kingdom	gal	195	–	184	–
	$	915	–	817	–
United States	gal	3,644	–	2,653	–
	$	3,251	–	2,948	–
Total	**gal.**	**3,839**	–	**2,837**	–
	$	**4,166**	–	**3,765**	–
Acetic Acid—					
United Kingdom	cwt.	–	141,343	–	171,244
	$	–	1,543,324	–	2,042,317
United States	cwt.	–	75,821	–	102,100
	$	–	495,459	–	766,892
Other countries	cwt.	–	4,606	–	4,187
	$	–	50,556	–	51,184
Total	**cwt.**	–	**221,770**	–	**277,531**
	$	–	**2,089,339**	–	**2,860,393**
Formaldehyde—					
United States	$	416	–	220	–
Total	**$**	**416**	–	**220**	–

Table 141.—Imports Into Canada and Exports of Wood Distillation Products by Principal Countries, Calendar Years, 1926 and 1927—Concluded

Commodity and Country		1926		1927	
		Imports	Exports	Imports	Exports
Charcoal—					
United Kingdom	$	114	-	114	-
United States	$	190,179	3,173	202,193	43
Other countries	$	423	490	207	114
Total	$	**190,716**	**3,663**	**202,514**	**157**
Acetate of Lime—					
United Kingdom	cwt.	-	1,032	-	2,462
	$	-	2,309	-	6,607
United States	cwt.	-	54,285	-	68,263
	$	2	158,841	-	226,023
Other countries	cwt.	1	-	-	-
	$	2	-	-	-
Total	**cwt.**	-	**55,317**	-	**70,725**
	$	**4**	**161,150**	-	**232,630**
Turpentine, Raw or Crude—					
United Kingdom	lb.	-	-	430	-
	$	-	-	100	-
United States	lb.	11,179	-	138,731	-
	$	1,435	-	15,472	-
Other countries	lb.	-	-	1,480	-
	$	-	-	342	-
Total	**lb.**	**11,179**	-	**140,641**	-
	$	**1,435**	-	**15,914**	-
Turpentine, Spirits of—					
United Kingdom	gal.	592	-	268	-
	$	742	-	208	-
United States	gal.	951,646	4,015	1,026,072	1,833
	$	864,108	2,850	667,734	1,198
Other countries	gal.	857	1,548	5,985	3,239
	$	681	2,017	4,803	3,241
Total	**gal.**	**953,095**	**5,563**	**1,032,325**	**5,072**
	$	**865,531**	**4,867**	**672,745**	**4,439**

Table 142.—Exports of Wood Alcohol from Canada, Fiscal Years Ended March 31, 1917-1928

Fiscal year ended March 31	Quantity	Value	Fiscal year ended March 31	Quantity	Value
	Gal.	$		Gal.	$
1917	500,067	411,288	1923	99,312	78,219
1918	450,696	490,837	1924	125,395	118,661
1919	327,313	606,550	1925	171,585	150,456
1920	168,849	302,636	1926	101,213	91,499
1921	411,296	784,228	1927	34,197	32,488
1922	213,653	210,734	1928	49,390	48,882

CHAPTER ELEVEN

MISCELLANEOUS CHEMICAL INDUSTRIES

A number of firms operating in Canada produce chemicals or allied products which do not naturally fall in any of the groups previously considered, so a miscellaneous group has been made and the industries therein divided into nine classes, namely: *(a)* adhesives; *(b)* baking powder; *(c)* boiler compounds; *(d)* celluloid products; *(e)* flavouring extracts; *(f)* insecticides; *(g)* polishes and dressings; *(h)* sweeping compounds, and *(i)* chemical products, not elsewhere specified. In 1927, there were 125 establishments classified in these groups; of these, 65 were located in Ontario; 43 in Quebec; 3 in New Brunswick; 1 in Nova Scotia; 5 in Manitoba; 3 in Alberta; 1 in Saskatchewan; and 4 in British Columbia. The total cost of materials used by these concerns was $5,404,310, and the total selling value of the various products was $11,900,521, giving thus, a difference of $6,496,211 as the value added by the process of manufacturing. In 1926, there were 134 plants in this group, materials used cost $5,513,884, the products sold for $11,851,164 and the value added by manufacturing was $6,337,280.

Each industry is briefly reviewed in this chapter, and separate statistics are shown for each in the accompanying tables. Group totals are also given.

(a) Adhesives.—In 1927, there were 14 plants in Canada primarily engaged in the manufacture of glue, paste, rubber cement, sealing wax and other adhesives; 7 were located in Quebec, 6 in Ontario and 1 in New Brunswick. One very small mucilage factory in Quebec did not produce during 1927 but otherwise the same concerns were in operation as in 1926.

Products and by-products of the adhesive industry in 1927 were valued at $1,934,240, an increase of 13 per cent over 1926. Capital employed was also higher at $1,593,196 and the number of employees was 261 as against 240 in 1926. Glues, mucilage, paste and paste powder, cements, size, sealing wax, casine, dry battery mixtures and tankage were the main products from these factories.

Of the 14 plants included in this industry only 3 each produced over a quarter of a million dollars' worth of commodities for sale; the outputs from 4 other plants were each valued at more than $100,000, and 4 of the remainder each manufactured goods worth more than $25,000. Two different concerns each employed more than 50 persons on the average; 3 other firms each reported 10 or more names on the payrolls; while fewer than 10 persons were employed in each of the remaining 9 establishments.

Adhesives were also produced in smaller quantities in other industrial groups. In addition to the $1,124,601 worth of glue, mucilage and paste made in the adhesives industry there was an output of liquid glue valued at $11,078 as a by-product from the fish-curing establishments, and an output of more than $38,996 worth of such adhesives in other chemical establishments.

(b) Baking Powders.—Six plants in Canada, of which 4 were located in Quebec and 2 in Ontario, were engaged primarily in the manufacture of baking powders in 1927; the same factories were in operation in 1926. Three concerns made baking powder only, another made baking powder and starch; another made some yeast with baking powder as the major product; and another made considerable quantities of lye, yeast and washing powder as well as baking powder. Products made by these firms had an aggregate selling value of $2,613,737; the average number of employees was 421 whose yearly earnings totalled $503,698, and the capital employed was reported at $1,223,261 of which by far the greater portion was invested in establishments in Ontario.

Production of baking powders in this industry amounted to 6,416,254 pounds worth $1,646,967 as compared with 6,789,144 pounds worth $1,748,418 in 1926. In addition there was an output of 2,884,012 pounds worth $483,171 from plants classified in other industrial groups. Yeast, lye and starch were the other products of importance.

(c) Boiler Compounds.—Only 3 concerns in Canada made boiler compounds as the major product in 1927; all were located in Ontario. In the previous year there were 4 firms in this group but 1 in Ontario was not in business during 1927.

Production of boiler compounds in 1927 was valued at $261,167 as compared with $266,655 in 1926. Capital employed was given at $223,085, employees numbered 30 and payments in salaries and wages totalled $55,184. In 1926, 33 people were employed and salaries and wages amounted to $58,215.

Soda ash, caustic soda, sodium silicate, mercury and trisodium phosphate were the more important of the materials used in the manufacture of boiler compounds.

(d) Celluloid Products.—This industry includes those establishments which manufactured celluloid combs, hair ornaments, etc.; French ivory toilet articles; artificial leather goods; bakelite products; and similar commodities.

Ten establishments were included in this group of which 4 were in Quebec and 6 in Ontario. Production reached a value of $2,063,307 and the average number of employees was 381. Materials used in manufacture included textiles, celluloid, pyralin, rubber, varnishes, paints, pigments lacquers, dyes and other chemicals. Production of celluloid products was valued at $655,893; fabrikoid articles, rubber goods, bakelite and other products made up the rest of the output. In addition to the celluloid articles made in this industry there was an output of celluloid buttons worth $78,903 in the button industry.

Plants in Ontario employed 272 persons and made commodities worth $1,742,748 while concerns in Quebec employed 109 people and produced commodities worth $320,559.

(e) Flavouring Extracts.—The bases of all flavouring extracts and essences are organic products either naturally or synthetically produced. So far as is known these products are not made in Canada, but are purchased by some firms and used as raw materials in the preparation of the various extracts and essences. Alcohol, gelatine, starch, sugar, vanilla bean, and various other materials were also used in the Canadian industry. Jelly powders and flavouring extracts were the main products, but ice cream powders, custard powders and various similar commodities were made in considerable quantities.

In 1927, there were 20 plants in Canada engaged in this industry distributed as follows: 7 in Quebec, 9 in Ontario, 2 in British Columbia and 1 in each of the provinces of New Brunswick and Nova Scotia. These concerns employed 272 workers and produced commodities having a total selling value of $1,821,374 from materials worth $1,107,093. In 1926, the output of 22 operating plants was valued at $1,722,496 and 263 persons were employed the year round.

(f) Insecticides.—Insecticides manufactured in Canada include Paris green, lime sulphur solution, lead arsenate, lime arsenate and various other compounds and liquids for fumigation and disinfectant purposes. In 1927, there were 17 plants which made these commodities as major products; 4 were located in Quebec, 7 in Ontario, 3 in Alberta, 2 in Manitoba and 1 in British Columbia. These plants represented a capital investment of $851,343, employed an average of 140 workers and produced commodities worth $711,850. In 1926, there were 18 plants in operation and the aggregate output value was $711,435; one very small plant in Quebec was out of business during 1927.

Production from plants in Quebec was valued at $337,594, and in Ontario at $316,118; Alberta, Manitoba and British Columbia accounted for the remainder.

Many of the plants were small as 7 were only 1 or 2 man concerns and only 5 carried 10 or more names on their payrolls. Only 3 concerns reported production values in excess of $100,000; 4 others were each above $25,000; 2 others above $10,000; and the remainder were below the latter figure.

Small quantities of insecticides were also made in other groups; the total output is shown in Table 17.

(g) Polishes and Dressings.—The 37 plants engaged in the manufacture of polishes and dressing during 1927 were distributed as follows: 20 in Ontario, 15 in Quebec and 1 in each of the provinces of Manitoba and British Columbia. Production from these concerns reached a total value of $1,422,111. Capital employed stood at $1,401,061, employees numbered 248 and materials used in manufacturing costs $671,423. Shoe polishes and dressings worth $339,798, floor wax valued at $138,075, furniture polish at $254,902, stove polish at $200,042, and metal polish at $115,213 were the main products of the industry.

Only 8 of the operating concerns employed more than 10 persons in each of their manufacturing plants, and 20 concerns each required only 3 or fewer workers in their establishments. Only 5 concerns each produced goods worth more than $100,000; output values for 3 others were each above $50,000; 9 more were each above $10,000; while 20 were below the latter figure.

(h) Sweeping Compounds.—Only 6 establishments in Canada produced sweeping compounds as their principal product; 2 were in Ontario, 2 in Quebec, 1 in Manitoba and 1 in New Brunswick. These plants employed 17 people and paid out $16,845 in salaries and wages. Products sold for $80,437 and materials used in manufacture cost $51,480. In 1926, the 5 plants in operation produced commodities worth $68,311. Sweeping compounds were also made as a minor product of plants classified in other industries; for the total production in Canada reference should be made to Table 17.

(i) Chemical Products, not elsewhere specified.—In 1927 this group included 10 plants in Ontario, 1 in Manitoba and 1 in Saskatchewan which manufactured chemical products which do not naturally fall within the other classifications listed in this report. The aggregate value of production from all these plants was $992,298; the average number of employees was 102 and their earnings totalled $168,233 for the year. Dextri-maltose, cheese rennet, sulphonated oils, embalming fluid, welding fluxes and antifreeze solution were the main products.

Table 143.—Principal Statistics of the Miscellaneous Chemical Industries in Canada, by Provinces, 1926 and 1927

Year	Number of plants	Capital employed	Number of employees	Salaries and wages	Cost of materials	Selling value of products	Value added by manufacturing
1926		$		$	$	$	$
Adhesives—							
Quebec	8	554,419	120	165,379	321,439	696,651	375,212
Ontario	6	1,006,223	114	156,725	517,747	978,471	460,724
Canada*	15	1,569,001	240	328,597	866,464	1,710,095	843,631
Baking Powder—							
Canada*	6	1,424,749	428	497,442	932,042	2,820,797	1,888,755
Boiler Compounds—							
Ontario	4	227,197	33	58,215	80,896	266,655	185,759
Canada	4	227,197	33	58,215	80,896	266,655	185,759
Celluloid Products—							
Quebec	4	647,673	136	133,568	105,871	339,931	234,060
Ontario	6	1,668,509	235	281,721	1,222,395	1,974,322	851,927
Canada	10	2,316,182	371	415,289	1,228,266	2,314,253	1,085,987
Flavouring Extracts—							
Quebec	8	629,740	118	122,341	314,225	546,219	231,994
Ontario	10	708,781	136	165,501	647,065	1,140,891	493,826
Canada*	22	1,353,869	263	295,595	978,156	1,722,496	744,340
Insecticides—							
Quebec	5	414,117	57	87,008	114,741	310,155	195,414
Ontario	7	397,374	58	49,872	150,185	339,892	189,707
Canada*	18	871,436	129	153,180	296,863	711,435	414,572
Polishes and Dressings—							
Quebec	13	455,717	79	97,479	221,088	383,080	161,992
Ontario	23	873,355	154	209,279	438,639	1,018,300	579,661
Canada*	39	1,335,822	236	308,358	662,155	1,406,581	744,426
Sweeping Compounds—							
Canada*	5	79,608	17	13,991	26,859	68,311	41,452
Miscellaneous Chemical Products, n.e.s.—							
Ontario	11	507,675	88	119,935	426,762	783,428	356,666
Canada*	15	562,108	102	145,985	442,183	830,541	388,358
Total—							
Quebec	**44**	**2,803,767**	**564**	**643,645**	**1,222,384**	**2,527,440**	**1,305,056**
Ontario	**71**	**6,753,376**	**1,206**	**1,512,380**	**4,190,293**	**9,123,005**	**4,932,712**
Manitoba	**6**	**73,481**	**14**	**14,919**	**17,005**	**39,867**	**22,862**
Alberta	**5**	**9,055**	**6**	**8,000**	**13,163**	**32,960**	**19,797**
British Columbia	**5**	**43,178**	**11**	**8,833**	**29,509**	**47,341**	**17,832**
Canada*	**134**	**9,739,972**	**1,819**	**2,216,652**	**5,513,884**	**11,851,164**	**6,337,280**
1927							
Adhesives—							
Quebec	7	587,073	135	172,188	315,864	739,467	423,603
Ontario	6	996,936	126	177,884	583,550	1,161,864	578,314
Canada*	14	1,593,196	261	357,034	921,132	1,934,240	1,013,108
Baking Powder—							
Canada*	6	1,223,261	421	503,698	885,496	2,613,737	1,728,241
Boiler Compounds—							
Ontario	3	223,085	30	55,184	87,855	261,167	173,312
Canada	3	223,085	30	55,184	87,855	261,167	173,312
Celluloid Products—							
Quebec	4	355,550	109	118,401	111,897	320,559	208,662
Ontario	6	1,875,639	272	329,394	798,134	1,742,748	944,614
Canada	10	2,231,189	381	447,795	910,031	2,063,307	1,153,276
Flavouring Extracts—							
Quebec	7	759,715	131	146,053	344,774	599,005	254,231
Ontario	9	745,381	130	163,924	734,483	1,179,096	444,613
Canada*	20	1,658,170	272	318,811	1,107,093	1,821,374	714,281
Insecticides—							
Quebec	4	359,800	54	88,374	147,720	337,594	189,874
Ontario	7	414,149	73	52,848	117,311	316,118	198,807
Canada*	17	851,343	140	154,260	290,583	711,850	421,267
Polishes and Dressings—							
Quebec	15	432,767	92	100,654	251,848	409,775	157,927
Ontario	20	962,186	154	197,441	418,552	1,008,967	590,415
Canada*	37	1,401,061	248	299,795	671,423	1,422,111	750,688

Table 143.—Principal Statistics of the Miscellaneous Chemical Industries in Canada, by Provinces, 1926 and 1927—Concluded

Year	Number of plants	Capital employed	Number of employees	Salaries and wages	Cost of materials	Selling value of products	Value added by manufacturing
1927		$		$	$	$	$
SWEEPING COMPOUNDS—							
Canada*	6	96,334	17	16,845	51,480	80,437	28,957
MISCELLANEOUS CHEMICAL PRODUCTS, N.E.S.—							
Ontario	10	643,250	87	139,333	410,045	864,612	454,567
Canada*	12	722,816	102	168,233	479,217	992,298	513,081
Total—							
New Brunswick	3	58,668	13	13,420	38,288	56,709	18,421
Quebec	43	2,586,169	570	669,146	1,321,128	2,672,620	1,351,492
Ontario	65	7,061,761	1,251	1,589,878	3,926,867	8,945,428	5,018,561
Manitoba	5	60,793	13	15,619	21,582	42,217	20,635
Alberta	3	11,174	5	2,170	7,854	13,982	6,128
British Columbia	4	42,127	8	7,422	21,930	43,026	21,096
Canada*	125	9,900,455	1,872	2,321,655	5,404,310	11,900,521	6,496,211

*Where fewer than three firms in one province were engaged in the same industry, the data for these companies are not shown by provinces but they are included in the Canada totals for each industry.

Table 144.—Capital Employed in the Miscellaneous Chemical Industries in Canada, by Classes and by Provinces, 1926 and 1927

Industry—Province	1926				1927			
	Capital employed as represented by				Capital employed as represented by			
	Lands, buildings, fixtures, machinery and tools	Materials on hand, and stocks in process	Cash, trading and operating accounts and bills receivable	**Total**	Lands, buildings, fixtures, machinery and tools	Materials on hand, and stocks in process	Cash, trading and operating accounts and bills receivable	**Total**
	$	$	$	$	$	$	$	$
ADHESIVES—								
Quebec	456,967	48,232	49,220	**554,419**	483,271	51,966	51,836	**587,073**
Ontario	470,310	236,741	299,172	**1,006,223**	491,710	233,771	271,455	**996,936**
Canada*	932,939	287,170	348,892	**1,569,001**	980,644	288,761	323,791	**1,593,196**
BAKING POWDER—								
Canada*	581,470	498,315	344,964	**1,424,749**	552,603	430,025	240,633	**1,223,261**
BOILER COMPOUNDS—								
Ontario	78,613	32,630	115,954	**227,197**	64,503	37,392	121,190	**223,085**
Canada	78,613	32,630	115,954	**227,197**	64,503	37,392	121,190	**223,085**
CELLULOID PRODUCTS—								
Quebec	474,555	109,673	63,445	**647,673**	170,279	129,498	55,773	**355,550**
Ontario	1,008,334	279,368	380,807	**1,668,509**	1,147,978	382,700	344,961	**1,875,639**
Canada	1,482,889	389,041	444,252	**2,316,182**	1,318,257	512,198	400,734	**2,231,189**
FLAVOURING EXTRACTS—								
Quebec	162,621	305,349	161,720	**629,740**	206,634	391,712	161,369	**759,715**
Ontario	279,475	225,869	203,437	**708,781**	381,668	167,352	196,361	**745,381**
Canada*	447,418	539,585	366,866	**1,353,869**	622,498	575,821	359,851	**1,558,170**
INSECTICIDES—								
Quebec	314,025	81,492	18,600	**414,117**	276,000	65,600	18,200	**359,800**
Ontario	220,277	66,262	110,835	**397,374**	324,889	66,946	125,311	**517,149**
Canada*	557,516	165,547	148,373	**871,436**	529,947	157,023	164,373	**851,343**
POLISHES AND DRESSINGS—								
Quebec	238,603	142,554	74,560	**455,717**	252,820	104,455	75,492	**432,767**
Ontario	363,206	179,199	330,950	**873,355**	375,933	159,446	426,807	**962,186**
Canada*	602,363	323,719	409,740	**1,335,822**	631,595	264,757	504,709	**1,401,061**
SWEEPING COMPOUNDS—								
Canada*	42,025	10,076	27,507	**79,608**	39,559	17,674	39,101	**96,334**
MISCELLANEOUS CHEMICAL PRODUCTS, N.E.S.—								
Ontario	252,641	127,196	127,838	**507,675**	273,914	168,662	200,674	**643,250**
Canada*	283,441	138,696	139,971	**562,108**	299,314	214,062	209,440	**722,816**
Total—								
New Brunswick	5,662	2,197	500	**8,359**	41,222	15,892	1,551	**58,668**
Quebec	1,690,870	739,853	373,044	**2,803,767**	1,133,066	783,431	369,672	**2,586,169**
Ontario	3,227,252	1,601,400	1,924,724	**6,753,376**	3,500,767	1,621,933	1,939,066	**7,061,761**
Manitoba	35,323	10,480	27,678	**73,481**	12,006	11,005	31,582	**60,793**
Alberta	3,926	4,160	969	**9,055**	2,982	2,201	5,988	**11,174**
British Columbia	19,941	13,943	9,294	**43,178**	23,182	13,852	5,093	**42,127**
Canada	5,008,674	2,384,779	2,346,519	**9,739,972**	5,038,920	2,497,713	2,363,822	**9,900,455**

*Where fewer than three firms in one province were engaged in the same industry, the data for these companies are not shown by provinces but they are included in the Canada totals for each industry.

Table 145.—Employees, Salaries and Wages in the Miscellaneous Chemical Industries by Industries and by Provinces in Canada, 1927 with Comparative totals for 1926

Industry—Province	Average number of employees					Salaries and wages		
	Salaried employees		Wage-earners		Total	Salaries	Wages	Total
	Male	Female	Male	Female				
						$	$	$
ADHESIVES—								
Quebec	17	4	107	7	135	53,510	118,678	172,188
Ontario	26	9	78	7	120	81,500	96,384	177,884
Canada*	45	13	189	14	261	138,182	218,852	357,034
BAKING POWDER								
Canada*	98	78	147	98	421	286,888	216,810	503,698
BOILER COMPOUNDS—								
Ontario	13	5	12	–	30	42,766	12,418	55,184
Canada	13	5	12	–	30	42,766	12,418	55,184
CELLULOID PRODUCTS—								
Quebec	15	3	51	40	109	58,942	59,459	118,401
Ontario	42	22	186	22	272	97,349	232,045	329,394
Canada	57	25	237	62	381	156,291	291,504	447,795
FLAVOURING EXTRACTS—								
Quebec	54	27	25	25	131	105,194	40,859	146,053
Ontario	34	6	24	66	130	80,073	83,851	163,924
Canada*	89	33	54	96	272	186,267	132,544	318,811
INSECTICIDES—								
Quebec	12	1	38	3	54	44,400	43,974	88,374
Ontario	9	6	40	18	73	25,117	27,731	52,848
Canada*	28	7	84	21	140	77,149	77,111	154,260
POLISHES AND DRESSINGS—								
Quebec	25	7	35	25	92	52,411	48,243	100,654
Ontario	41	17	64	32	154	110,492	86,948	197,441
Canada*	68	24	99	57	248	164,608	135,191	299,795
SWEEPING COMPOUNDS—								
Canada*	4	1	12	–	17	6,193	10,652	16,845
MISCELLANEOUS CHEMICAL PRODUCTS, N.E.S.—								
Ontario	26	13	38	10	87	91,394	47,939	139,333
Canada*	38	15	36	10	103	118,794	49,439	168,233
Total—								
New Brunswick	2	–	8	3	13	3,172	9,948	13,120
Quebec	132	42	283	113	570	342,156	326,990	669,146
Ontario	284	157	570	240	1,251	794,074	795,804	1,589,878
Manitoba	7	1	5	–	13	10,023	5,596	15,619
Alberta	3	–	2	–	5	1,510	660	2,170
British Columbia	3	–	3	2	8	1,200	3,222	7,122
Canada, 1927	440	201	875	358	1,872	1,177,134	1,144,521	2,321,655
Canada, 1926	427	200	829	363	1,819	1,148,099	1,068,553	2,216,652

*Where fewer than three firms in one province were engaged in the same industry, the data for these companies are not shown by provinces but they are included in the Canada totals for each industry.

Table 146.—Hours of Labour in Month of Greatest Employment in the Miscellaneous Chemical Industries in Canada, by Groups and by Provinces, 1927

Group and Province	Number of wage-earners working			
	8 hours per day	9 hours per day	10 hours per day	Over 10 hours per day
Adhesives	25	120	80	14
Baking powder	140	128	3	4
Boiler compounds	–	19	–	–
Celluloid products	81	110	162	3
Flavouring extracts	143	47	–	–
Insecticides	28	55	48	1
Polishes and dressings	115	56	5	–
Sweeping compounds	12	–	–	–
Miscellaneous chemical products	28	27	–	–
Total—				
New Brunswick	6	4	–	1
Quebec	96	256	118	–
Ontario	450	301	180	22
Manitoba	8	–	–	–
Alberta	2	–	–	–
British Columbia	7	–	–	–
Canada	572	562	298	23

Table 147.—Record of Operations in the Miscellaneous Chemical Industries in Canada, by Groups and by Provinces, 1927

Group and Province	On full time only			On less than full time				
	Average number of wage-earners	Number of plants	Total plant days	Average number of wage-earners	Number of plants	Total plant days		
						On full time	On part time	Idle
Adhesives	147	12	3,648	56	2	565	–	43
Baking powder	30	3	912	215	3	319	72	521
Boiler compounds	12	3	912	–	–	–	–	–
Celluloid products	108	3	912	191	7	1,719	207	202
Flavouring extracts	150	20	6,080	–	–	–	–	–
Insecticides	62	13	3,961	43	4	354	–	862
Polishes and dressings	129	27	8,208	27	10	1,630	150	1,260
Sweeping compounds	11	5	1,520	1	1	–	180	124
Miscellaneous chemical products	43	11	3,344	6	1	24	–	280
Total—								
New Brunswick	**10**	**2**	**608**	**1**	**1**	–	**180**	**124**
Quebec	**285**	**34**	**10,336**	**111**	**9**	**1,387**	**249**	**1,100**
Ontario	**385**	**49**	**14,905**	**425**	**16**	**3,097**	**180**	**1,587**
Manitoba	**5**	**5**	**1,520**	–	–	–	–	–
Alberta	–	**1**	**304**	**2**	**2**	**127**	–	**481**
British Columbia	**5**	**4**	**1,216**	–	–	–	–	–
Canada	**692**	**97**	**29,497**	**539**	**28**	**4,611**	**609**	**3,292**

Table 148.—Fuel and Electricity Used in the Miscellaneous Chemical Industries in Canada, 1926 and 1927

Kind	Unit of measure	1926		1927	
		Quantity	Value	Quantity	Value
			$		$
Anthracite coal—Canadian	short ton	356	5,329	342	5,058
Bituminous coal—Canadian	short ton	16,705	103,001	1,814	14,521
Bituminous coal—Imported	short ton			14,209	87,567
Coke	short ton	93	1,070	42	487
Fuel oil	gal.	21,686	2,155	11,835	1,282
Gasoline	gal.	2,635	860	1,585	394
Gas	M cu. ft.	5,542	4,495	2,860	3,154
Wood	cord	306	1,616	117	971
Other fuel	.....	–	1,372	–	9,467
Electricity purchased	k.w.h.	2,316,034	36,631	2,324,857	38,348
Total	.....	–	**156,529**	–	**161,249**
Electricity generated for own use	k.w.h.	–	–	126,000	1,895

Table 149.—Power Employed in the Miscellaneous Chemical Industries in Canada, 1926 and 1927

Description	1926		1927	
	Number of units	Total h.p. according to manufacturers' rating	Number of units	Total h.p. according to manufacturers' rating
Steam engines and turbines	12	496	12	496
Gasoline, gas and oil engines	2	30	3	52
Hydraulic turbines or water wheels	1	130	1	130
Total primary power	*15*	*656*	*16*	*678*
Electric motors run by purchased power	307	2,216	376	2,593
Total power employed	**322**	**2,872**	**392**	**3,271**
Electric motors run by primary power in same plant	12	130	20	132
Total electric motors	*319*	*2,346*	*396*	*2,725*
Boilers	41	3,536	42	3,252

Table 150.—Materials Used in the Miscellaneous Chemical Industries in Canada, 1926 and 1927

Material	Unit of measure	1926		1927	
		Quantity	Cost at works	Quantity	Cost at works
			$		$
Adhesives—					
Acetic acid	lb.	6,053	368	5,672	331
Bones	ton	1,104	30,912	1,082	30,837
Borax	lb.	116,710	5,450	138,545	5,292
Cotton textiles	-	-	27,682	-	36,928
Dextrine and glucose	lb.	879,663	44,616	1,141,405	54,521
Skins and waste and hide trimming	ton	6,151	131,377	8,181	207,862
Flour	-	-	8,643	-	9,424
Gasoline	gal.	41,437	10,801	33,563	6,711
Glue and paste	-	-	36,809	-	41,606
Graphite	lb.	198,448	11,982	240,789	13,935
Lime	ton	367	2,663	420	3,003
Naphtha and benzol	gal.	46,985	12,989	49,427	12,177
Rubber and rubber substitute	lb.	48,570	30,645	39,833	14,763
Resin, pitch, wax, gums, etc	-	-	242,932	-	195,128
Shellac	lb.	-	5,900	9,000	5,310
Soda ash	lb.	511,877	8,483	558,378	9,215
Starch	lb.	336,000	13,830	276,755	11,070
Sulphuric acid	lb.	72,000	3,890	840,000	4,536
Containers	-	-	37,603	-	37,190
All other materials	-	-	198,886	-	221,293
Total	-	-	866,464	-	921,132
Baking Powder—					
Bicarbonate of soda	lb.	1,779,844	41,354	1,878,839	41,417
Calcium acid phosphate	lb.	2,145,060	190,952	2,069,848	205,192
Corn starch	lb.	2,787,957	128,872	2,730,587	125,365
Cream of tartar	lb.	85,514	14,246	36,445	10,127
Trisodium phosphate	lb.	493,550	21,507	340,350	14,056
Containers, boxes, packages, etc	-	-	317,024	-	327,060
All other materials	-	-	218,087	-	162,279
Total	-	-	932,042	-	885,496
Boiler Compounds—					
Castor oil	lb.	10,025	1,366	13,765	1,789
Mercury	lb.	13,088	9,475	11,099	14,804
Sodium carbonate (soda ash)	lb.	649,057	11,591	612,512	10,512
Sodium hydroxide (caustic soda)	lb.	105,499	5,056	168,857	5,193
Sodium silicate	lb.	785,126	7,536	724,973	6,803
Trisodium phosphate	lb.	278,856	11,154	266,014	10,375
Containers, boxes, packages, etc)	-	-	7,825	-	8,497
All other materials	-	-	26,893	-	29,882
Total	-	-	80,896	-	87,855
Celluloid Products—					
Celluloid, and pyroxylin jelly	lb.	-	209,429	403,744	138,517
Rubber	lb.	-	96,940	842,455	92,572
Textiles	yd.	-	592,637	1,745,528	330,325
All other materials	-	-	311,553	-	313,588
Containers, boxes, etc	-	-	17,707	-	35,029
Total	-	-	1,228,266	-	910,031
Flavouring Extracts—					
Alcohol	gal.	20,269	78,688	22,338	85,759
Corn starch	-	-	-	-	-
Essences, essential oil, etc	-	-	136,248	-	146,119
Flour and starch	lb.	252,129	13,083	289,083	13,090
Gelatine	lb.	388,103	114,528	416,055	125,852
Sugar	lb.	2,972,187	189,544	3,312,222	211,785
Tartaric acid	lb.	43,609	9,988	50,465	12,568
Vanilla beans	lb.	12,758	36,564	15,107	39,214
Containers, boxes, etc	-	-	226,029	-	234,966
All other materials	-	-	179,484	-	237,740
Total	-	-	978,156	-	1,107,093

Table 150.—Materials Used in the Miscellaneous Chemical Industries in Canada, 1926 and 1927—Concluded

Material	Unit of measure	1926		1927	
		Quantity	Cost at works	Quantity	Cost at works
			$		$
INSECTICIDES—					
Acetic acid	lb.	457,961	22,074	415,659	20,053
Copper sulphate	lb.	240,703	11,794	604,471	31,620
Insect flowers and japanese flowers	lb.	109,200	20,928	108,992	21,739
Lime	lb.	1,090,516	16,984	1,132,131	8,264
Litharge	lb.	84,465	7,601	242,340	21,209
Soda ash	lb.	347,600	7,449	551,160	10,067
Sulphur	lb.	1,204,300	18,545	932,000	16,305
White arsenic	lb.	467,153	17,532	487,732	18,385
Containers, (boxes, etc.)	–	–	89,903	–	68,619
All other materials	–	–	84,053	–	74,262
Total	–	–	296,863	–	290,583
POLISHES AND DRESSINGS—					
Carbon black	lb.	48,280	5,439	65,249	9,368
Graphite	lb.	197,025	11,048	237,599	12,615
Oils	–	–	21,793	–	29,698
Dyes and colours, n.e.s.	lb.	29,685	23,005	29,664	19,675
Methylated spirits	gal.	1,215	1,154	10,085	9,019
Naphtha, benzine, gasoline	gal.	35,783	15,735	80,775	19,839
Shellac	lb.	34,519	19,718	35,688	20,472
Turpentine	gal.	16,786	17,785	21,844	20,897
Ultramarine blue	lb.	134,000	15,690	147,503	17,448
Wax	lb.	205,446	60,159	239,391	67,477
Containers	–	–	287,192	–	322,489
All other materials	–	–	183,437	–	122,426
Total	–	–	662,155	–	671,423
SWEEPING COMPOUNDS—					
Total	–	–	26,859	–	51,480
MISCELLANEOUS CHEMICAL INDUSTRIES, N.E.S.—					
Total	–	–	442,183	–	479,217
Total	–	–	**5,513,884**	–	**5,404,310**

Table 151.—Products of the Miscellaneous Chemical Industries in Canada, 1926 and 1927

Product	Unit of measure	1926		1927	
		Quantity	Selling value	Quantity	Selling value
			$		$
ADHESIVES—					
Glue, mucilage, paste and liquid fish glue	–	–	957,117	–	1,124,601
Gums and paste powders	–	–	36,864	–	50,743
Size, including paper sizing	–	–	318,889	–	283,237
Rubber and other cements	–	–	113,930	–	116,549
All other products and by-products[1]	–	–	283,295	–	359,110
Total	–	–	1,710,095	–	1,934,240
BAKING POWDER—					
Baking powder	lb.	6,789,144	1,748,418	6,416,254	1,646,967
All other products[2]	–	–	1,072,379	–	966,770
Total	–	–	2,820,797	–	2,613,737
BOILER COMPOUNDS—					
Boiler compounds	–	–	266,655	–	261,167
Total	–	–	266,655	–	261,167
CELLULOID PRODUCTS—					
Celluloid products	–	–	687,833	–	655,893
All other products[3]	–	–	1,626,420	–	1,407,414
Total	–	–	2,314,253	–	2,063,307

Table 151.—Products of the Miscellaneous Chemical Industries in Canada, 1926 and 1927—Concluded

Product	Unit of measure	1926		1927	
		Quantity	Selling value	Quantity	Selling value
			$		$
FLAVOURING EXTRACTS—					
Baking powder	lb.	73,107	8,759	104,778	14,106
Egg substitute and egg powder	lb.	–	5,620	–	3,672
Flavouring extracts and essences	gal.	–	626,039	–	671,255
Ice cream powders	–	–	12,732	–	10,935
Jelly powders	–	–	710,199	–	761,940
Prepared pudding and custard powders	–	–	35,761	–	64,947
All other products[4]	–	–	323,326	–	294,519
Total	–	–	1,722,406	–	1,821,374
INSECTICIDES—					
Insecticides, fly spray, rat exterminator, Paris green, lead arsenate and calcium arsenate	–	–	586,385	–	579,688
Lime sulphur solution	gal.	–	56,594	249,520	61,015
All other products[5]	–	–	68,456	–	71,147
Total	–	–	711,435	–	711,850
POLISHES AND DRESSINGS—					
Car polishes and dressings	–	–	–	–	31,057
Furniture polish	–	–	238,385	–	254,902
Floor wax	–	–	123,337	–	138,075
Harness polish	–	–	8,560	–	7,617
Metal polish	–	–	81,565	–	115,213
Polishes, n.e.s.	–	–	111,346	–	–
Shoe polishes, pastes and dressings	–	–	240,459	–	339,7[illegible]8
Stove polish, and pipe varnish	–	–	216,150	–	200,042
All other products[6]	–	–	386,779	–	335,407
Total	–	–	1,406,581	–	1,422,111
SWEEPING COMPOUNDS—					
Sweeping compounds	–	–	65,611	–	77,422
All other products	–	–	2,700	–	3,015
Total	–	–	68,311	–	80,437
MISCELLANEOUS CHEMICAL PRODUCTS, N.E.S.—					
Total[7]	–	–	830,541	–	992,298
Total	–	–	**11,851,164**	–	**11,900,521**

[1] Includes sealing wax, casein, dry battery mixtures, cork filler, fish scrap, silver polish, rubberized cotton, grease, tankage, shoe cloth, top facings and innersoling.
[2] Includes yeast, lye, washing powder, starch, and other products.
[3] Includes fabrikoid, rubber goods, bakelite and other products.
[4] Includes toilet preparations, pie filling fangs, terpeneless oils, beverages and other products.
[5] Includes hand cleaner, salsoda and sweeping compounds.
[6] Includes mops and parts, sweeping compounds, washing compounds, hand cleaner, radiator cement, antifreeze, and other products.
[7] Includes dextri-maltose, soaps, cheese rennet and colour, sulphonated oils, welding compounds, washing compounds, embalming fluids, antifreeze, furnace cements and other products.

DIRECTORY OF FIRMS ENGAGED IN THE MANUFACTURE OF CHEMICALS AND ALLIED PRODUCTS IN CANADA, 1927

Coal Tar and its Products

Name	Head Office Address	Location of Plant
COAL TAR DISTILLATION—		
Nova Scotia—		
Dominion Tar and Chemical Co., Ltd.	Canada Cement Bldg., Phillips Square, Montreal	Sydney.
Quebec—		
The Barrett Co., Ltd.	5551 St. Hubert St., Montreal	Montreal.
Consolidated Products, Ltd.	184 St. Margaret St., Montreal	Montreal.
Dominion Tar and Chemical Co., Ltd.	Canada Cement Bldg., Phillips Square, Montreal	Allard St., Ville la Salle.
Ontario—		
The Barrett Co., Ltd.	5551 St. Hubert St., Montreal, P.Q.	Toronto.
Dominion Tar and Chemical Co., Ltd.	Canada Cement Bldg., Phillips Square, Montreal, P.Q.	Sault Ste. Marie.
Dominion Tar and Chemical Co., Ltd.	Canada Cement Bldg., Phillips Square, Montreal, P.Q.	Toronto.
Hamilton Tar Products Co., Ltd.	Sheaffe St., Hamilton	Hamilton.
Manitoba—		
The Barrett Co., Ltd.	5551 St. Hubert St., Montreal, P.Q.	Winnipeg.
British Columbia—		
The Barrett Co., Ltd.	5551 St. Hubert St., Montreal, P.Q.	Vancouver.
DISINFECTANTS—		
Quebec—		
Rowe, Robert W., Ltd.	249 Grand Trunk St., Montreal	Montreal.
West Disinfecting Co.	16 Barn St., Long Island City, New York, U.S.A.	301-303 Casgrain St., Montreal.
Ontario—		
Associated Chemical Co. of Canada, Ltd.	1264 Queen St. W., Toronto	Toronto.
Canadian Germicide Co., Ltd.	1 Howard Park Ave., Toronto	Toronto.
Hayner, Norman C., Co.	Rochester, N.Y., U.S.A.	Warehouse 183 Huron St., Toronto.
O-De Chemical Co., Ltd.	200 Clyde Blg., Hamilton	Hamilton.
Polusterine Products Co. of Canada, Ltd.	168-170 Ontario St., Toronto	Toronto.
Wedehouse Zenoleum Co., Ltd.	New Hamburg	New Hamburg.

Acids, Alkalies, Salts and Compressed Gases

Name	Head Office Address	Location of Plant
ACIDS, ALKALIES AND SALTS—		
Nova Scotia—		
Dominion Iron and Steel Co., Ltd.	Sydney	Sydney.
Quebec—		
Electric Reduction Co., Ltd.	Oldbury, England	Buckingham.
Montreal Water and Power Co.	11 Place d'Armes Square, Montreal	20 Charlevoix St., Montreal.
Shawinigan Chemicals Ltd. (Canada Carbide Co., Ltd.)	611 Power Bldg., Craig St., Montreal	Transmission Ave., Shawinigan Falls.
Shawinigan Chemicals Ltd. (Canadian Electro Products Co., Ltd.)	611 Power Bldg., Craig St., Montreal	Transmission Ave., Shawinigan Falls.
Ontario—		
American Cyanamid Co.	535 Fifth Ave., New York, N.Y.	Niagara Falls.
Brunner, Mond Canada, Ltd.	Canadian Bank of Commerce Bldg., Toronto	Amherstburg.
Canadian Hanson and Van Winkle Co., Ltd.	2 Silver Avenue, Toronto	15-25 Morrow Ave., Toronto.
Canadian Salt Co., Ltd.	719 Sandwich St., W., Windsor	Riverfront St., Sandwich.
Crystal H.S. & T. Co., Ltd.	169 Yonge St., Toronto	Toronto.
Grasselli Chemical Co., Ltd.	Burlington St., Hamilton	Hamilton.
Mond Nickel Co., Ltd.	Coniston	Coniston.
Nichols Chemical Co., Ltd.	1111 Beaver Hall Hill, Montreal, P.Q.	Sulphide.
Union Carbide Co. of Canada, Ltd.	46 King St., W. Toronto	Welland.
British Columbia—		
Consolidated Mining and Smelting Co. of Canada, Ltd.	Drummond Bldg., Montreal, P.Q.	Tadanac St., Trail.
Nichols Chemical Co., Ltd.	1111 Beaver Hall Hill, Montreal, P.Q.	Barnet.
The Triangle Chemical Co., Ltd.	Box 699, New Westminster	New Westminster.
COMPRESSED GASES—		
Nova Scotia—		
Canadian Carbonate Ltd.	1 Hadley St., Cote St. Paul, Montreal, P.Q.	Stairs St., Dartmouth.
L'Air Liquide Society	1111 Beaver Hall Hill, Montreal, P.Q.	Cor. Kane & Agricola Sts., Halifax.

Acids, Alkalies, Salts and Compressed Gases—Concluded

Name	Head Office Address	Location of Plant
COMPRESSED GASES—Concluded		
Quebec—		
Canadian Carbonate Ltd.	1 Hadley St., Cote St. Paul, Montreal	78 St. Maurice St., Montreal.
Canadian Carbonate Ltd.	1 Hadley St., Cote St. Paul, Montreal	1 Hadley St., Montreal.
Dominion Oxygen Co., Ltd.	46 King St. West, Toronto, Ont.	225 Bourgeois St., Montreal.
Dry Ice Co., Ltd.	5584 Christophe Colomb St., Montreal	Montreal
L'Air Liquide Society	1111 Beaver Hall Hill, Montreal	Viau and Rouen Sts., Montreal.
Prest-O-Lite Co. of Canada, Ltd.	46 King St. W., Toronto, Ont.	Transmission Ave., Shawinigan Falls.
Ontario—		
Canadian Ammonia Co., Ltd.	65-87 Heward Ave., Toronto	Toronto.
Canadian Carbonate Ltd.	1 Hadley St., Cote St. Paul, Montreal, P.Q.	Simcoe St., Hamilton.
Canadian Carbonate Ltd.	1 Hadley St., Cote St. Paul, Montreal, P.Q.	6 Wabash Ave., Toronto.
Dominion Oxygen Co., Ltd.	46 King St. West, Toronto	Hillcrest Park, Toronto.
Harris Abattoir Co. Ltd., The	Toronto 9	Toronto
Harris Abattoir Co. Ltd., The	St. Clair Ave. West, Toronto 9	Toronto
L'Air Liquide Society	1111 Beaver Hall Hill, Montreal, P.Q.	York St., London.
L'Air Liquide Society	1111 Beaver Hall Hill, Montreal, P.Q.	16 Boler St., West Toronto.
Lever Bros. Ltd.	Eastern Ave., cor. Don River, Toronto	Toronto.
Peoples' Gas Supply Co., Ltd.	2 Mill St., Ottawa	Ottawa.
Prest-O-Lite Co. of Canada, Ltd.	46 King St. West Toronto	Merritton.
Proctor Gamble Mfg. Co.	6th and Main Sts., Cincinnati, Ohio, U.S.A.	Burlington St. E., Hamilton.
Manitoba—		
Canadian Carbonate, Ltd.	1 Hadley St., Cote St. Paul, Montreal, P.Q.	Winnipeg.
L'Air Liquide Society	1111 Beaver Hall Hill, Montreal, P.Q.	1211 Valor Road, Winnipeg.
Prest-O-Lite Co. of Canada, Ltd.	46 King St. West, Toronto, Ont.	Tache Ave., St. Boniface.
Alberta—		
L'Air Liquide Society	1111 Beaver Hall Hill, Montreal, P.Q.	201 First Ave. E., Calgary.
British Columbia—		
Canadian Carbonate Ltd.	1 Hadley St., Cote St. Paul, Montreal, P.Q.	Cor. 11th Ave. and Yew St., Vancouver.
L'Air Liquide Society	1111 Beaver Hall Hill, Montreal, P.Q.	Cor. Fifth Ave. and Yukon St., Vancouver

Explosives, Ammunition, Fireworks and Matches

EXPLOSIVES—		
Quebec—		
Canadian Explosives, Ltd.	Canada Cement Bldg., Phillips Sq., Montreal	Beloeil.
Canadian Explosives Ltd.	Canada Cement Bldg., Phillips Sq., Montreal	Dragon.
Ontario—		
Canadian Explosives Ltd.	Canada Cement Bldg., Phillips Square, Montreal, P.Q.	Nobel.
Mexco Co.	c/o. St. Clair Parsons, 504 Murray Chambers Bay St., Toronto.	Swastika.
National Explosives Co., Ltd.	714 Sparks St., Ottawa	Deseronto.
North Star Explosives Co., Ltd., c/o. J. J. Heney.	40 Elgin St., Ottawa	Prescott.
British Columbia—		
Canadian Giant Ltd.	Canada Cement Bldg., Phillips Sq., Montreal, P.Q.	James Island.
AMMUNITION—		
Quebec—		
Canadian Safety Fuse Co., Ltd.	Canada Cement Bldg., Phillips Square, Montreal	Brownsburg.
Dominion Cartridge Co., Ltd.	Canada Cement Bldg., Phillips Square, Montreal	Brownsburg.
Dominion Arsenal	8 Carleton St., Quebec	Quebec.
FIREWORKS—		
Quebec—		
Marroni, B.	St. Pierre	St. Pierre.
Ontario—		
The Hand T. W. Firework Co., Ltd.	611 King St. W., Hamilton	Hamilton.
Dominic Ruffo	8th St. West, Cornwall	Cornwall.
Toronto Fireworks Co., Ltd.	28 James St., South, Hamilton	Islington.
MATCHES—		
Quebec—		
Eddy, E. B. Co., Ltd.	Hull	Hull.
World Match Corp., Ltd.	137 McGill St., Montreal	Berthierville.
Ontario—		
Canadian Match Co., Ltd.	Water St., Pembroke	Pembroke.
Dominion Match Co., Ltd.	Main St., Deseronto	Deseronto.

Fertilizers

Name	Head Office Address	Location of Plant
Nova Scotia—		
Colonial Fertilizer Co.	40 North Market St., Boston, Mass., U.S.A.	Nesbitt St., Windsor.
Cross Fertilizers, Ltd.	Prince St., Sydney	Sydney.
New Brunswick—		
St. John Fertilizer Co.	500 Chesley St., St. John	St. John.
Quebec—		
Tanguay Limitée	54 St. André St., Quebec	Quebec.
Ontario—		
Canadian Fertilizer Co., Ltd.	Market Bldg., Chatham	End of King St. E., Chatham.
Farmers' Fertilizer Co., Ltd.	Josephine St., Wingham	Wingham.
Ontario Fertilizers, Ltd.	Harris Road, West Toronto	West Toronto.
Scottish Fertilizers, Ltd.	Welland	Welland.
Stone, William, Sons, Ltd.	Ingersoll	Ingersoll.
Witts Fertilizer Works	R.R. No. 1, Norwich	Norwich.
British Columbia—		
Globe Fertilizer Co.	Campbell Road, South Vancouver	South Vancouver.
Triangle Chemical Co., Ltd.	P.O. Box 699, New Westminster	Foot 16th St., New Westminster.

Medicinal and Pharmaceutical Preparations

Nova Scotia—		
Gates, C. Son & Co., Ltd.	Middleton	Middleton.
Minard's Liniment Co., Ltd.	7 Jenkins St., Yarmouth	Yarmouth.
New Brunswick—		
Baird Co., Ltd.	66 King St., Woodstock	Woodstock.
Brayley Drug Co., Ltd.	13-15 Mill St., St. John	St. John.
Quebec—		
Agence Franco-Britannique	4247 St. André St., Montreal	Montreal.
Arex Company, The	Bienville	Bienville.
Audet, E. Co.	549 Iberville St., Montreal	Montreal.
Ayerst, McKenna & Harrison, Ltd.	22 Craig St. W., Montreal	Montreal.
Bliss, Alonzo O., Medical Co.	422-4 St. Paul St. E., Montreal	Montreal.
Centaur Co.	80 Varick St., New York City, N.Y., U.S.A.	442 St. James St., Montreal.
Central Pharmacy of Canada, Ltd.	427 rue St. Francois Xavier, Montreal	Montreal.
Chesebrough Mfg. Co. Consolidated	17 State St., New York, N.Y., U.S.A.	5520 Chabot Ave., Montreal.
Chretien, Alphonse	Ste. Eulalie	Ste. Eulalie.
Cie Pharmaceutique Remeau, Ltée	310 St. Catherine E., Montreal	Montreal.
Daniels, Dr. A. C. Co. of Canada, Ltd.	172 Milk St., Boston, Mass., U.S.A.	Knowlton.
Davis and Lawrence Co.	356 St. Antoine St., Montreal	Montreal.
Denver Chemical Mfg. Co.	163-167 Varick St., New York, N.Y., U.S.A.	107 Lagauchetière St. W., Montreal.
Devins, R. J., Ltd.	511 Convent St., Montreal	Montreal.
Frasier, Thornton & Co., Ltd.	Cookshire	Cookshire.
Frosst, Charles E. & Co.	851 St. Antoine West, Montreal	Montreal.
Gauvin, J. A. E.	851A St. Catherine St. E., Montreal	1427 Maisonneuve St., Montreal.
Hanford, G. C. Mfg. Co., Ltd.	133 Youville Square, Montreal	Montreal.
Hervay Chemical Co. of Canada, Ltd.	St. Basile	St. Basile.
Horner, Frank W., Ltd.	9 0 St. Urbain St., Montreal	Montreal
Laboratoire Louvain	1 rue Gauvreau, Levis	Levis.
Laboratoire Nadeau, Ltée	110 St. Paul St. W., Montreal	Montreal.
Laboratoire Poulenc Frères du Canada, Ltd.	6613 rue St. André, Montreal	Montreal.
Lambert, Dr. J. O., Ltée	396 St. Antoine St., Montreal	Montreal.
Laurentian Laboratories	5 0 De Courcelles St., Montreal	Montreal.
La Compagnie de Médecine St. Bernard	304 St. Catherine St., Grand Mère	Grand Mère.
Les Produits Chimiques Laurentic Ltée	49 St. Gabriel St., Quebec	Quebec.
Mathieu, J. L. Compagnie	14 Albert St., Sherbrooke	Sherbrooke.
Menley and James Ltd. of Canada	270 Lagauchetière St., Montreal	Montreal.
Morin, Dr. Ed. and Cie, Ltée	113 Cote de la Montagne, Quebec	Quebec.
Mowatt & Moore, Ltd.	100-102 Burnside Place, Montreal	Montreal.
Paula Co. Ltd., The	4674 Christophe Colomb, Montreal	Montreal.
Polson, N. C. & Co., Ltd.	311 Notre Dame St. W., Montreal	Montreal.
Racicot, Ant. & Cie	4656 Papineau St., Montreal	Montreal.
Rawleigh, W. T. & Co.	135 Richelieu St., Montreal	Montreal.
Rodrique, Louis	St. Prosper Co., Dorchester	St. Prosper.
Rougier Freres	Cor. Favard & Fortune Sts., Montreal	Montreal.
Watson, D. and Co.	427 St. François Xavier St., Montreal	Montreal.
White, A. J. and Co., Ltd.	270 Lagauchetiere St., Montreal	Montreal.
Wingate Chemical Co., Ltd.	468 St. Paul W., Montreal	Montreal.
Wyeth, John and Bro., Inc.	1118 Washington Ave., Philadelphia, Pa., U.S.A.	64 Prince St., Montreal.

Medicinal and Pharmaceutical Preparations—Continued

Name	Head Office Address	Location of Plant
Ontario—		
Acidophilus Biological Laboratories	14 Howard Park Ave., Toronto	Toronto.
Allen and Hanburys Co., Ltd.	64–66 Gerrard St. E., Toronto	65 King St. E., Lindsay.
Arner Co., Ltd.	303 Michigan Ave., Buffalo, N.Y., U.S.A.	Fort Erie.
Bayer Co., Ltd.	907 Elliott St., Windsor	Windsor.
Bell, Dr., Wonder Medicine Co.	110–112 Clarence St., Kingston	Kingston.
Bennett and Messecar Co., Ltd.	Mille Roches	Mille Roches.
Briggs, G. C. and Sons	162 Sanford Ave. N., Hamilton	Hamilton.
Buckley, W. K., Ltd.	142 Mutual St., Toronto	Toronto.
Canada Pharmacal Co., Ltd.	447 Talbot St., London	London.
Canadian Gunagathon Ltd.	7503 Yonge St., Toronto	Toronto.
Carter Drug Co.	1560 Dundas St. W., Toronto	Toronto.
Caulk L. D. Co. of Canada Ltd.	172 John St., Toronto	Toronto.
Chamberlain Medicine Co., Ltd.	Sixth Ave., Des Moines, Iowa, U.S.A.	41 Dovercourt Road, Toronto.
Cummings, J. H. (Carter Cummings and Co.)	107 Duke St., Toronto	Toronto.
Coleman and Co., Canada, Ltd.	67 Portland St., Toronto	Toronto.
Connaught Laboratories	University of Toronto, Toronto	Toronto.
Crossman, L.	439 Booth St., Ottawa	Ottawa.
D.D.D. Co. of Canada, Ltd.	27 Lyall Ave., Toronto	67 Portland St., Toronto
Diffin, C. W.	Bridgeburg	Bridgeburg.
Djerol Co., (Canada) Ltd.	King St., Gananoque	Gananoque.
Douglas and Co.	Napanee	Napanee.
Deshell Laboratories of Canada, Ltd.	245 Carlaw Ave., Toronto	Toronto.
Druggists Corporation of Canada	35 Britain St., Toronto	Toronto.
Eaton, The T., Drug Co., Ltd.	190 Yonge St., Toronto	Toronto.
Edmanson, Bates and Co., Ltd.	244 Adelaide St. W., Toronto	Toronto.
Emerson Drug Co., Ltd.	1266 Queen St. W., Toronto	Toronto.
Fleming Bros., Ltd.	422 Wellington St. W., Toronto	Toronto.
Foster Duck Co., Ltd.	577 King St. W., Toronto	Toronto.
Fulford, C. E. Ltd.	310 Dupont St., Toronto	Toronto.
Gallagher Remedy Co., Ltd.	332 Water St., Peterborough	Peterborough.
Gamble, D. J. C. and Son	63 Sheridan Ave., Toronto	Toronto.
Gaskin, H. M. Co., Ltd.	420 Yonge St., Toronto	Toronto.
Hartz, J. F. and Co., Ltd.	24–26 Hayter St., Toronto	Toronto.
Howard Bros. Chemical Co.	243 Jarvis St., Bridgeburg	Bridgeburg.
Hygiene Kola, Ltd.	28 Dundas St. W., Toronto	Toronto.
International Druggists' and Chemists' Laboratories, Inc.	280 Pearl St., New York, N.Y., U.S.A.	147 Carling St., London.
Jefferis, E. G.	442 Quebec Ave., Toronto	Toronto.
Karn, F. E. Co., Ltd.	415 Spadina Road, Forest Hill, Toronto	Toronto.
Lambert Pharmacal Co.	2101 Locust St., St. Louis, Mo., U.S.A.	263 Adelaide St. W., Toronto.
Latimer, H. B. Co., Ltd.	7 Widmer St., Toronto	Toronto.
Lavoris Chemical Co., Ltd.	92 Jarvis St., Toronto 2	Toronto.
Lewis, A. H. Medicine Co.	219 S. Fourth St., St. Louis, Mo., U.S.A.	67 Crawford Ave., Windsor.
Lyman Bros. and Co., Ltd.	71 Front St. E., Toronto	183 Front St. E., Toronto.
Mahans, Dr., Compass Oil Co.	18 Garfield Ave., London	London.
Marlatt, J. W. and Co., Ltd.	211 Gerrard St. E., Toronto	Toronto.
Mentholatum Co.	Wichita, Kansas, U.S.A.	Lewis St., Bridgeburg.
Merrill Co., Ltd.	934 Church St., Toronto	Toronto.
Milburn, The T. Co., Ltd.	643 King St. W., Toronto	Toronto.
Miles, Dr., Medical Co.	422 Wellington St. W., Toronto 2	Toronto.
Mulveney, R. D.	211 Ossington Ave., Toronto	Toronto.
Northrop and Lyman Co., Ltd.	462–6 Wellington St. W., Toronto	Toronto.
Pabst Chemical Co.	1115 Franklin St., Chicago, Ill.	179 Parliament St., Toronto.
Parke Davis and Co.	Joseph Campeau Ave., Detroit, Mich., U.S.A.	Walker & Sandwich Sts., Walkerville.
Parke & Parke, Ltd.	18 Market Square, Hamilton	Hamilton.
Paris Medicine Co.	St. Louis, Mo., U.S.A.	195–195 Spadina Ave., Toronto.
Penslar Co., Ltd.	Walker Power Bldg., Walkerville	Walkerville.
Pinex Co., The	424 Wellington St. W., Toronto	Toronto.
Pinkham, Lydia E. Medicine Co.	271 Western Ave., Lynn, Mass., U.S.A.	University Ave., Cobourg.
Powell, H., Chemical Co.	40 Dundas St. E., Toronto	Toronto.
Radam Microbe Killer Co.	120 Byron St., Ottawa	Ottawa.
Rundle, Geo. H. and Son Co., Ltd.	Cor. Pitt and Dougal Ave., Windsor	Windsor.
Saunders, W. E. and Co., Ltd.	184–188 King St., London	London.
Scott and Bowne, Inc.	60 Orange St., Bloomfield, N.J., U.S.A.	64–66 Princess St., Toronto.
Shuttleworth, E.B. Chemical Co., Ltd.	898 St. Clair Ave., W., Toronto	Toronto.
Stearns, Frederick and Co. of Canada, Ltd.	345 Sandwich St. W., Windsor	Windsor.
Sterling Products, Ltd.	907 Elliott St., Windsor	Windsor.
Stott & Jury	Bowmanville	Bowmanville.
Sutcliffe and Bingham of Canada, Ltd.	81 Peter St., Toronto 2	Toronto.
Swaisland, C. E.	11 Queen St., S. Kitchener	Kitchener.
Synthetic Drug Co., Ltd.	243 College St., Toronto	Toronto.
Templetons, Ltd.	129 King St. W., Toronto	Toronto.
Toronto Pharmacal Co., Ltd.	20 Brockton Ave., Toronto	Toronto.
United Drug Co., Ltd.	68 Broadview Ave., Toronto	Toronto.
Vanderhoof and Co., Ltd.	Louis & Wyandotte St., Windsor	Windsor.
Van Camp, T. & Son	715 Danforth Ave., Toronto	Toronto.
Vescol Co., The	Alliston	Alliston.

Medicinal and Pharmaceutical Preparations—Concluded

Name	Head Office Address	Location of Plant
Ontario—Concluded		
Viavi Co.	326 Pine St., San Francisco, Cal. U.S.A.	Windsor.
Wampole, Henry K. and Co., Ltd.	Perth	Perth.
Warner, William R. and Co., Ltd.	113 West 18th St., New York City, N.Y.	727 King St. W., Toronto
Will, Chas. R. & Co., Ltd.	17 King St., London	London.
Waterbury Chemical Co. of Canada, Ltd.	58 Spadina Ave., Toronto	Toronto.
West, Ernest P	41 Duchess St., Toronto	Toronto.
Whoop-A-Tone Co.	Wilson St., Perth	Perth.
World's Dispensary Medical Association	665 Main St., Buffalo, N.Y., U.S.A.	Courtwright St., Bridgeburg.
Manitoba—		
Drugs, Ltd.	Lydia & McDermott Ave., Winnipeg	Winnipeg.
Eaton, The T. Co., Ltd.	190 Yonge St., Toronto, Ont	Winnipeg.
Fahrney, Dr. Peter and Sons Co.	2501 Washington Blvd., Chicago, Ill., U.S.A.	256 Stanley St., Winnipeg.
Macdonald Medicine Co. of Canada, Ltd.	310 Notre Dame Ave., Winnipeg	Winnipeg.
Rawleigh, W. T. Co., Ltd.	135 Richelieu St., Montreal	587–589 Henry Ave., Winnipeg.
Watkins, The J. R. Co.	158–170 Liberty St., Winona, Minnesota, U.S.A.	E. Higgins and Annabella Sts., Winnipeg.
Alberta—		
Conway Co., The	49 Union Bank Bldg., Calgary	Calgary.
British Columbia—		
British Columbia Pharmacal Co., Ltd.	329 Railway St., Vancouver	Vancouver.
Tepoorten, J. A., Ltd.	308 Water St., Vancouver	Vancouver.
Western Wholesale Drug Ltd.	456 Broadway W., Vancouver	Vancouver.

Paints, Pigments and Varnishes

Nova Scotia—		
Brandram-Henderson Ltd.	6684 St. Urbain St., Montreal, P.Q.	230–240 Kempt Road, Halifax.
Quebec—		
Army and Navy Mfg. Products	26 Jurors St., Montreal	Montreal.
Brandram-Henderson, Ltd.	6684 St. Urbain St., Montreal	Montreal.
Canada Paint Co. Ltd.	572 William St., Montreal	Montreal.
Carter White Lead Co. of Canada, Ltd.	1295 Delorimier Ave., Montreal	Montreal.
Dominion Putty Reg'd.	177 de la Reine, Quebec	Quebec.
Excelsior Varnish and Colour Works, Ltd.	84 Wellington St., Montreal	Montreal.
Holland Varnish Co., Ltd.	6700 Park Ave., Montreal	Montreal.
Jamieson, Jas. W. Co., Ltd.	Charlemagne and Boyce Sts., Montreal	Montreal.
Jamieson, R. C. Co., Ltd.	264 St. Patrick St., Montreal	Montreal.
Martin-Senour Co., Ltd.	2951 De L'epée Ave., Montreal	Montreal.
McArthur, Irwin, Ltd.	20 St. Paul St. W., Montreal	Montreal.
Mount Royal Colour and Varnish Co., Ltd.	195 Dorchester St. E., Montreal	5625 Casgrain St., Montreal.
Murphy Varnish Co. of Canada, Ltd.	305 Manufacturers St., Montreal	Montreal.
National Varnish Co. of Canada, Ltd.	189 Basin St., Montreal	Montreal.
Ramsay, A. and Son, Company	370 Inspector St., Montreal	Montreal.
Sherwin-Williams Co. of Canada, Ltd.	897 Centre St., Montreal	Montreal.
The Steel Co. of Canada, Ltd.	Hamilton, Ont	1272 Notre Dame St., Montreal.
Thorp-Hambrock Co., Ltd.	Park and Hopper Avenues, Montreal	Montreal.
Ontario—		
Arco Co., Ltd.	16 Liberty St., Toronto	Toronto.
Berry Brothers, Incorporated	Walker Rd., Walkerville	Walkerville.
Boulton Paint Co., Ltd., The	167 King St. E., Toronto	Toronto.
Brandram-Henderson, Ltd.	6684 St. Urbain St., Montreal, P.Q.	377 Carlaw Ave., Toronto 6. Biggar Ave., Hamilton.
Cosmos Chemical Company	Cavan St., Port Hope	Port Hope.
Dominion Paint Works, Ltd.	103 Ottawa St., Walkerville	Walkerville.
Flat Varnish and Colour Works of Canada, Ltd.	Canada Cement Building, Montreal, P.Q.	Cor. Perth and Kingsley Ave., Toronto.
Glidden Varnish Co., Ltd.	370–382 Wallace Ave., Toronto	Toronto.
Hamilton Paint and Varnish Works	Biggar Ave. and Lottridge St., Hamilton	Hamilton.
Hannan Varnish Co.	Glenmorris	Glenmorris.
Imperial Varnish and Colour Co., Ltd.	8–20 Morse St., Toronto	Toronto.
International Varnish Co., Ltd.	Gerrard St. & Carlaw Ave., Toronto	Toronto.
Johnston S.C. & Son, Ltd.	Frank & Webster Sts., Brantford	Brantford.
Lakeside Varnish & Turpentine Co.	261 MacDonell Ave., Toronto	Toronto.
Langmuir, James and Co., Ltd.	Oakville	Oakville.
Lowe Brothers, Ltd.	263 Sorauren Ave., Toronto	Toronto.
Moore, Benjamin and Co., Ltd.	Mulock and Lloyd Sts. Toronto 9	Toronto.
Morin, J. H.	54 Colborne St., Toronto	Toronto.
Muirhead, A. Co., Ltd.	217 King St. E., Toronto	Toronto

Paints, Pigments and Varnishes—Concluded

Name	Head Office Address	Location of Plant
Ontario—Concluded		
Northern Varnish Co., Ltd.	1st Ave. W., Owen Sound	Owen Sound.
Ottawa Paint Works, Ltd.	687 Wellington St., Ottawa	Ottawa.
Penfound Varnish Co.	25 Cariboo Ave., Toronto	Toronto.
Pratt and Lambert, Inc.	79 Tonawanda St., Buffalo, N.Y.	Bridgeburg.
Sanderson Pearcy and Co., Ltd.	272 Van Horne St., Toronto	Toronto.
Scarfe and Co., Ltd.	35 Greenwich St., Brantford	Brantford.
Standard Paint and Varnish Co., Ltd.	Cor. Wyandotte St. and C.P. Railway, Windsor.	Windsor.
Sturgeon's Ltd.	330 Carlaw Ave., Toronto	Toronto.
Toronto Putty Co.	2 North View Terrace, Toronto 5	Toronto.
Trelco Ltd.	518 Young St., Toronto	Toronto.
Watts Chemical Co.	355 Weston Road South, Toronto	Toronto.
Weir, James Co., Ltd.	New Toronto, P.O. Drawer 74	New Toronto.
Manitoba—		
International Laboratories, Ltd.	490 rue des Meurons, St. Boniface	St. Boniface.
Northern Paint Co., Ltd.	394 Gertrude Ave., Winnipeg	Winnipeg.
Sherwin-Williams Co. of Canada, Ltd.	897 Centre St., Montreal, P.Q.	112 Sutherland Ave., Winnipeg.
Stephens, G. F. and Co., Ltd.	172 Market St. East, Winnipeg	Winnipeg.
Wyers, C. J.	763-13th St., Brandon	Brandon.
Alberta—		
Herbert Paint and Varnish Co., Ltd.	9th Ave. and 3rd St. W., Calgary	Calgary.
British Columbia—		
Ayres Varnish and Paint Co., Ltd.	950 Raymur Ave., Vancouver	Vancouver.
British America Paint Co., Ltd.	Box 70, Laurel Pt., Victoria	Victoria.
Crown Paint Co., Ltd.	24 Cordova St. E., Vancouver	Vancouver.
Darling, Henry and Son, Ltd.	28 Powell St., Vancouver	Vancouver.
Martin Senour Co., Ltd.	1505 Powell St., Vancouver	Vancouver.
Pacific White Lead Co., Ltd.	Granville Island, Vancouver	Vancouver.
Stanchand Co., Ltd.	840 Fort St., Victoria	Bay and Shakespeare Sts., Victoria.
Williams and Harte, Ltd.	1302 Wharf St., Victoria	Victoria.

Soaps, Washing Compounds and Toilet Preparations

SOAPS—		
New Brunswick—		
St. Croix Soap Mfg. Co.	Water St., St. Stephen	St. Stephen.
Quebec—		
Albert Soaps, Ltd.	336 McCord St., Montreal	Montreal.
Barsalou, J. Cie, Ltée.	1600 Delorimier Ave., Montreal	Montreal.
Daigneault, H.	1647 Notre-Dame St. East., Montreal	Montreal.
Darling and Brady, Ltd.	159 Richardson St., Montreal	Montreal.
Gold Dust Corporation, Ltd.	75 Hughson St. N., Hamilton, Ont.	St. Patrick St., Ville La Salle.
La Savonnerie du Lion	8117 St. Hubert St., Montreal	Montreal.
Robertson, J. T. Co. of Canada, Ltd.	7575 Notre Dame St. E., Montreal	Montreal.
Roy, Alphonse D.	1853 rue Moreau, Montreal	Montreal.
Sewards Ltd.	Lachine	Lachine
Snap Company Ltd.	91 Reading St., Montreal	Montreal.
Ontario—		
Bates Products Co.	1601 Bloor St. W., Toronto 9	Toronto.
Clayden, John & Son	164 Strachan St. E., Hamilton	Hamilton.
Cudahy Packing Co.	Chicago, Ill., U.S.A.	64 Macaulay Ave., West Toronto.
Darcy Mfg. Co.	179 Bolton Ave., Toronto	Toronto.
Diamond Cleanser Ltd.	376 Dufferin St., Toronto	Toronto.
Elliot, J. & R.	Water St. S., Galt	Galt.
Gardner, Howard	Baden	Baden.
Guelph Soap Co., Ltd.	12-20 Waterloo St., Guelph	Guelph.
Jergens, Andrew Co., Ltd.	Herriott St., Perth	Perth.
Judd Soap Company, The	101 Bay St. N., Hamilton	Hamilton.
Lavoline Cleanser Co., Ltd.	77 York St., Toronto	Toronto.
Lever Bros., Ltd.	Eastern Ave., Toronto	Toronto.
Liquid Soap and Sanitary Products, Ltd.	320 Bay Street, Toronto	18 Beverley St., Toronto.
London Soap Co., Ltd.	197-204 Ottawa Ave., London	London.
Morton D. and Sons, Ltd.	77 Emerald St. S., Hamilton	Hamilton.
Ontario Soap and Oil Co.	45 Dickens Ave., Toronto	Toronto.
Palmolive Company of Canada, Ltd.	64 Natalie St., Toronto	Toronto.
Proctor and Gamble Co. of Canada, Ltd.	6th and Main Sts., Cincinnati, Ohio, U.S.A.	Burlington St. E., Hamilton.
Pugsley, Dingman and Co., Ltd.	Cor. Eastern and Davies Aves., Toronto	Cawthra Ave., Toronto.
Soaps-Perfumes Ltd.	84 Front St. E., Toronto	Toronto.
Standard Soap Co., Ltd.	219-21 Front St. E., Toronto	Toronto.
Zryd Mfg. Co.	58-62 George St., Toronto	Toronto.

Soaps, Washing Compounds and Toilet Preparations—Continued

Name	Head Office Address	Location of Plant
SOAPS—Concluded		
Manitoba—		
Beaver Soap Co., Ltd	1379 Winnipeg Ave., Winnipeg	Winnipeg.
Royal Crown Soaps, Ltd	King and Henry Sts., Winnipeg	Winnipeg.
Saskatchewan—		
Chemical Novelty Products Co	529–20th Street W., Saskatoon	Saskatoon.
Alberta—		
Hubley E. (Acme Soap Works)	9272–110th Ave., North Edmonton	North Edmonton.
Royal Crown Soaps Ltd	Winnipeg, Man	Calgary.
British Columbia—		
Chasit Soap Mfg Co	1475–14th Ave. W., Vancouver	Vancouver.
Fendray, W. J. and Sons, Ltd	Belleville and Montreal Sts., Victoria	Victoria.
Royal Crown Soaps, Ltd	Winnipeg, Man	308 Georgia St. E., Vancouver.
WASHING COMPOUNDS—		
Quebec—		
Allard, Blaise	Iberville	Iberville.
Ajax Products Co., Ltd	708 Fulford St., Montreal	Montreal.
Dalglish & Co	6631 St. Urbain St., Montreal	Montreal.
Demontigny & Ponlot Enr	39–7th St., Quebec	Quebec.
Fyon and Fyon, Ltd	Cor. Papineau and Masson Sts., Montreal	Montreal.
Imperial Chemical Works	89a Marie Anne St. E., Montreal	Montreal.
La Compagnie des eaux de javelle "La Victoria".	5958 rue Papineau, Montreal	Montreal.
Levesque, Lionel J	164 Roche St., Three Rivers	Three Rivers.
Osias Violy	Ste. Angèle, Nicolet	Nicolet Co.
Robillard, J. J. et Cie	4522 Fabre St., Montreal	Montreal.
Ontario—		
Alpha Chemical Co., Ltd	Kitchener	Kitchener.
Atlas Chemical Co	49 Niagara St., Toronto	Toronto.
Chamberlain Desolvo Co., Ltd	522 Hamilton Road, London	London.
Eze Mfg. Co., Ltd	253 Huron St., Toronto	Toronto.
Gold Rock Chemical Co	8 Bellwoods Place, Toronto	Toronto.
Macks Laundry Specialty Co	Reserve St., Almonte	Almonte.
Magic White Laboratories, Ltd	120 Duke St., Toronto	Toronto.
Utility Products Co., Ltd	7 Awde St., Toronto 4	Toronto.
Windsor Sapoline Co	99 Sandwich St., Walkerville	Walkerville.
Manitoba—		
Dainty White Mfg Co	335 Ross Ave., Winnipeg	Winnipeg.
Ideal Products, Ltd	78–80 Higgins Ave., Winnipeg	Winnipeg.
Old Sol Manufacturing Co., Ltd	805 Erin St., Winnipeg	Winnipeg.
British Columbia—		
Wash Out Co. (Wildren, A. G.)	1067 Haro St., Vancouver	Vancouver.
The White Wizard Co	1238 Fender St. E., Vancouver	Vancouver.
TOILET PREPARATIONS—		
Quebec—		
Bellefontaine, Albert	1670 St. Denis St., Montreal	Montreal.
Cheramy, Ltd	46 St. Alexandre St., Montreal	Montreal.
California Perfume Co. of Canada, Ltd	114 Fifth Ave., New York, N.Y., U.S.A	35 St. Alexandre St., Montreal.
Colgate and Co., Ltd	72 St. Ambrose St., Montreal	Montreal.
Elcaya Co. of Canada, Ltd	1101 St. Alexandre St., Montreal	Montreal.
Forhans Limited	200 Sixth Ave., New York, N.Y., U.S.A	489 St. Paul St. W., Montreal.
Houbigant Ltée	46 St. Alexandre St., Montreal	Montreal.
La Parfumierie Orientale	1281 rue Amherst, Montreal	Montreal.
Lewis, G. A. Co., Ltd	105 Prince St., Montreal	Montreal.
Marceau, J. A., Ltée	2 Rodney St., Montreal	Montreal.
Noreau, Hector	73 Des Fossés St., Quebec	Quebec.
Palmers Limited	100 Latour St., Montreal	Montreal.
Parfumerie J. A. Bellefontaine Ltée	5270 Ave. Papineau, Montreal	Montreal.
Parfumerie L. T. Piver	Room 502, 1030 St. Alexander, Montreal	Montreal.
Renovator Chemical Co	7614 Boyer St., Montreal	Montreal.
Warren Northam Corporation	114 W. 17th St., New York, N.Y	1101 St. Alexandre St., Montreal.
Williams Co., J. B. (Canada) Ltd	1114 St. Patrick St., Montreal	Montreal.
Ontario—		
Armand, Ltd	269 Talbot St., St. Thomas	St. Thomas.
Calsodent Co., Ltd	33 Front St. E., Toronto	Toronto.
Canadian Booster Co., Ltd	435 Sandwich St., Windsor	Windsor.
Colgate & Co	595 Fifth Ave., New York, N.Y	414 Windsor Ave., Windsor.
Corson Ralph, Ltd	146 Brock Ave., Toronto	Toronto.
Dearborn Supply Co	2350 Clybourn Ave., Chicago, Ill., U.S.A	15 Sandwich St., Windsor

Soaps, Washing Compounds and Toilet Preparations—Concluded

Name	Head Office Address	Location of Plant
TOILET PREPARATIONS—Concluded		
Ontario—Concluded		
Dixie Products Co., The	1034 Ottawa St., Windsor	Windsor.
Gallois Laboratories	1078 Danforth Ave., Toronto	Toronto.
Harper, Martha Matilda	1233 E. Main St., Rochester, N.Y., U.S.A.	1587 Ellen Ave., Niagara Falls.
Herpicide Company	63 W. Milwaukee Ave., Detroit, Mich., U.S.A.	30 Goyeau St., Windsor.
Hudnut, Richard	727 King St. W., Toronto	Toronto.
Inecto Rapid (Canada) Ltd	272 Yonge St., Toronto	Toronto.
Ingram, Frederick F. Co	1565 W. Lafayette Blvd., Detroit, Mich., U.S.A.	801-3 Sandwich St. W., Windsor.
Klotz, H. and G	204 King St. E., Toronto	Toronto.
Lehn & Fink (Canada) Ltd	9 Davies Ave., Toronto 8	Toronto.
Maison Blanche Toilet Co	70 West Chippewa St., Buffalo, N.Y., U.S.A.	Bridgeburg.
Marion Perfume Co	424 Wellington St. W., Toronto	Toronto.
Melba Mfg. Co., Ltd	624 King St. W., Toronto	Toronto.
Mennen Co. Ltd., The	165 Dufferin St., Toronto	Toronto.
McLarty, R. W. Ltd	432 Wellington St. W., Toronto	Toronto.
Misner Mfg. Co.	Waterloo St., Goderich	Goderich.
Notox Ltd	10 McCaul St., Toronto	Toronto.
Parfumerie Rigaud, Inc	79 Bedford St., New York, N.Y., U.S.A.	107 Duke St., Toronto.
Pepsodent Co	1104 S. Wabash Ave., Chicago, Ill., U.S.A.	191 George St., Toronto.
Robertsons	137 Avenue Rd., Toronto 5	Toronto.
Seely Mfg. Co., Ltd	15 Church St., Windsor	Windsor.
Solar Products	525 King St. W., Toronto 2	Toronto.
Whitlow & Co	165 Dufferin St., Toronto	Toronto.
Manitoba—		
Jones Bros of Canada, Ltd	201 Princess St., Winnipeg	Winnipeg.
Klenc-O Chemical Co., Ltd	175 King St., Winnipeg	Winnipeg.
Pulford Drug Co., Ltd	52 Albert St., Winnipeg	Winnipeg.
Seeco Mfg. Co	590 Ellice Ave., Winnipeg	Winnipeg.
Alberta—		
Roberta Chemical Co	10434 Jasper Ave., Edmonton	Edmonton.
British Columbia—		
Henrietta Toilet Preparations	732 Richards St., Vancouver	Vancouver.

Inks, Dyes and Colours

DYES AND COLOURS—		
Quebec—		
Dominion Caramel Co	21 Walnut Ave., St. Henri, Montreal	Montreal.
Johnson-Richardson Ltd	74 St. Antoine St., Montreal	Montreal.
La Cie Techno Chimique Massé	201 rue St. Joseph, Lachine	Lachine.
Tellier, Bydwell and Co	421 St. Dizier St., Montreal	Montreal.
Ontario—		
Dye and Chemical Co. of Canada, Ltd	Kingston	Kingston.
North American Dye Corp., Ltd	519 S-5th Ave., Mt. Vernon, New York, N.Y., U.S.A.	340 Richmond St. W., Toronto.
Wells & Richardson Co., Ltd., The	907 Elliott St., Windsor	Windsor.
PRINTING INKS—		
New Brunswick—		
Johnson, Ensley B	45 Kennedy St., St. John	St. John.
Quebec—		
Frontenac Ink Works	243 William St., Montreal	Montreal.
Robertson, J. S	119 Lagauchetiere St. W., Montreal	Montreal.
Sleight Metallic Ink Co. of Canada, Ltd	366 Adelaide St. W., Toronto, Ont	43 St. Maurice St., Montreal.
Ontario—		
Ault and Wiborg Co. of Canada, Ltd	19-23 Charlotte St., Toronto	Toronto.
Bush, Charles, Limited	105 Davenport Rd., Toronto	Toronto.
Canada Printing Ink Co., Ltd	15 Duncan St., Toronto	Toronto.
Canadian Fine Colour Co., Ltd	240 Logan Ave., Toronto	Toronto.
Dominion Printing Ink and Colour Co., Ltd	128-130 Pears Ave., Toronto	Toronto.
Federal Inks Ltd	40 St. Patrick St., Toronto 4	Toronto.
Hoops Printing Ink Co., Ltd	9-St. Clair Ave. E., Toronto	Toronto.
Manton Bros	105 Elizabeth St., Toronto	Toronto.
Peerless Printing Inks Ltd	127 Peter St., Toronto	Toronto.
Sinclair & Valentine Co. of Can., Ltd	233 Richmond St. W., Toronto	Toronto.
Sleight Metallic Ink Co. of Can. Ltd	366 Adelaide St. W., Toronto	Toronto.
Manitoba—		
Printers' Roller Co	175 McDermot Ave., Winnipeg	Winnipeg.
British Columbia—		
Columbia Printing Ink and Roller Co., Ltd.	1260 Hamilton St., Vancouver	Vancouver.

Inks, Dyes and Colours—Concluded

Name	Head Office Address	Location of Plant
WRITING INKS—		
Quebec—		
Carter's Ink Co.	239 First St. East, Cambridge, Mass., U.S.A.	4501 Drolet St., Montreal
Ontario—		
Acidproof Ink Co., Ltd.	147 Close Ave., Toronto	Toronto.
Blue Bird Ink Co.	124 Richmond St. W., Toronto	Toronto.
Cutler Ink Co.	105 Rose Ave., Toronto	Toronto.
Poole, J. E. and Co.	18 Holly St., Toronto	Toronto.
Manitoba—		
Reliance Ink Co., Ltd.	520 McGee St., Winnipeg	Winnipeg.
British Columbia—		
Peerless Products Ltd.	1642 Pandora St., Vancouver	Vancouver.
Walmsley, Frank	2741-11 Ave. W., Vancouver	Vancouver.

Wood Distillates and Wood Extracts

WOOD DISTILLATES—		
Quebec—		
Canadian Explosives Ltd.	Canada Cement Bldg., Phillips Sq., Montreal	Windsor Mills.
Guay, M.	La Macaza	La Macaza.
Standard Chemical Co., Ltd.	Brock Chambers, 200 Bay St., Toronto, Ont.	Fassett.
Standard Chemical Co., Ltd.	Brock Chambers, 200 Bay St., Toronto, Ont.	524 St. Ambroise St., Montreal.
Standard Chemical Co, Ltd.	Brock Chambers, 200 Bay St., Toronto, Ont.	Lac Mercier.
Ontario—		
Dominion Wood and Lumber Co., Ltd.	410 King St. W., Kitchener	Trout Creek.
Lindsay Distilleries Ltd.	19 River St., Toronto	Lindsay.
Standard Chemical Co., Ltd.	Brock Chambers, 200 Bay St., Toronto	Longford Mills.
Standard Chemical Co., Ltd.	Brock Chambers, 200 Bay St., Toronto	Parry Sound.
Standard Chemical Co., Ltd.	Brock Chambers, 200 Bay St., Toronto	South River.
Standard Chemical Co., Ltd.	Brock Chambers, 200 Bay St., Toronto	Donald.
WOOD EXTRACTS—		
Quebec—		
Brown Corporation	71 St. Peter St., Quebec	La Tuque.

Miscellaneous Chemical Industries

(a) Adhesives

New Brunswick—		
Russia Cement Co.	Gloucester, Mass., U.S.A.	Gilbert Lane, St. John.
Quebec—		
Boston Blacking Co.	3rd and Potter Sts., East Cambridge, Mass., U.S.A.	Cabot St., Cote St. Paul, Montreal.
Bulldog Grip Cement Co. Inc.	1305 Visitation St., Montreal	Montreal.
Dominion Flour Paste Co.	2135 Maisonneuve St., Montreal	2122½ rue Champlain, Montreal.
Fox, T. M. and Sons, Limited	Cote St. Paul, Montreal	Montreal.
Marquis, F. Canac	Guyart St., Quebec	Quebec.
Russia Cement Co.	Gloucester, Mass, U.S.A.	2115 Piux IX Ave., Montreal.
Woodward, F. E. and Sons	17th Avenue, Lachine	Lachine.
Ontario—		
Burgess, C. F., Laboratories	Niagara Falls	Niagara Falls.
Canada Glue Company, Ltd.	Box 630, Brantford	Brantford.
Cannon Canadian Co., Ltd.	361 Sorauren Ave., Toronto	Toronto.
Machon Sealing Wax Co.	47 St. James Ave., Toronto	Toronto.
Meredith Simmons Co., Ltd.	71 Brown's Ave., Toronto	Toronto.
Vera Chemical Co. of Canada, Ltd.	P.O. Box 6, North Milwaukee, Wis.	Burlington.

(b) Baking Powder

Quebec—		
McLaren, W. D. Ltd.	641 St. Paul St. W., Montreal	Montreal.
Moulin Ocean Ltée.	257 de Lanaudiere, Montreal	Montreal.
Royal Baking Powder Co.	100 E. 42 St., New York, N.Y., U.S.A.	4 St. Lawrence Blvd., Montreal.
La Société des Produits Belge de Montmagny.	15 St. Thomas St., Montmagny	Montmagny.
Ontario—		
Egg-O Baking Powder Co., Ltd.	198 Gage Avenue South, Hamilton	Hamilton.
Gillett, E. W., Co., Ltd.	Fraser Ave. & Liberty Sts., Toronto	Toronto.

Miscellaneous Chemical Industries—Continued

(c) Boiler Compounds

Name	Head Office Address	Location of Plant
Ontario—		
Bird-Archer Co	1 East 42nd St., New York, N.Y., U.S.A	2nd St., Cobourg.
Dearborn Chemical Co., Ltd	2454-64 Dundas St., West, Toronto	Toronto.
Perolin Co. of Canada, Ltd	858 Dupont St., Toronto 4	Toronto.
Shell-Bar Boico Supply Ltd	1-15 Saunders Ave., Toronto	Toronto.

(d) Celluloid Products

Quebec—		
Arlington Co. of Canada, Ltd	Canada Cement Bldg., Philips Square, Montreal	Brownsburg.
Dominion Comb and Novelty Co	Warwick	Warwick.
Granby Mfg. Co	39-41 Court St., Granby	Granby.
McComiskey, R. B. and Co	47 Alexander St., Granby	Granby.
Ontario—		
Austin, Carl W. & Co., Ltd	266 King St. W., Toronto	Weston.
Bakelite Corporation of Canada, Ltd	163 Dufferin St., Toronto	Toronto.
Broad Novelty Co	869 Richmond St., W., Toronto	254 Niagara St., Toronto.
Canadian Fabrikoid Ltd	Canada Cement Bldg., Phillips Sq., Montreal, P.Q.	New Toronto.
French Ivory Products Ltd	1475 Queen St. W., Toronto	Toronto.
Rideau Specialty Co	19 Main St., Smith's Falls	Smith's Falls.

(e) Flavouring Extracts

Nova Scotia—		
Crouse, Fred. O. and Co	La Havre St., Bridgewater	Bridgewater.
New Brunswick—		
Wilson-Murray Co., Ltd	23-27 Water St., St. John	St. John.
Quebec—		
Bee Products Ltd	115 Youville Sq., Montreal	Montreal.
Bush, W. J. and Co. (Canada), Limited	432 St. Helen St., Montreal	Montreal.
Corrizo Extract Co	211-215 W. 20th St., New York City, N.Y., U.S.A	2035 Bleury St., Montreal.
Jonas, Henri and Co	173-177 St. Paul St. W., Montreal	Montreal.
Les Produits Gauvin Ltée	215 St. Paul St., W. Montreal	Montreal.
Moulin Economique Tremblay, Thos	5020 Bordeaux St., Montreal	Montreal.
Radio Mfg Co	1453 rue Cuvillier, Montreal	Montreal.
Rose and Laflamme Ltd	500 St. Paul St. West, Montreal	Montreal.
Stuart Brothers	41-43 Youville Square, Montreal	Montreal.
Ontario—		
Canadian Extract & Supply Co	12 Mercer St., Toronto	Toronto.
Cressy, John R. Co	296 Gladstone Ave., Toronto	Toronto.
Fritzsche Bros. of Canada, Ltd	93-95 Church St., Toronto	Toronto.
Jell-O Company of Canada, Ltd	Le Roy, N.Y	Niagara St., Bridgeburg
Horne, Harry Co., Ltd	1297 Queen St. W., Toronto	Toronto.
Ottens, Henry H. and Co., Limited	129 S. Front St., Philadelphia, Pa., U.S.A	3 Jarvis St., Toronto.
Patrick, W. G. and Co., Limited	51 Wellington Street West, Toronto	Toronto.
Shirriff's Limited	2-24 Matilda St., Toronto	Toronto.
Willson & Warden	58 Duchess St., Toronto	Toronto.
Alberta—		
Pure Standard Products, Ltd	10865-96th St., Edmonton	Edmonton.
British Columbia—		
Grantham, F. C. Co., Ltd	535-14th Ave. W., Vancouver	Vancouver.
Spencer, David, Ltd	1254 Hornby St., Vancouver	Vancouver.

Miscellaneous Chemical Industries—Continued

(f) Insecticides

Name	Head Office Address	Location of Plant
Quebec—		
Canada Paint Co., Ltd	572 William St., Montreal	10 Hunter St., Montreal.
Cowan, John, Chemical Co Ltd	9 Dalhousie St., Montreal	Montreal.
Maheu, P. H	3136 Masson St., Montreal	Montreal.
The Kennedy Mfg Co	170 William St., Montreal	Montreal.
Ontario—		
Bonner's Columbian Insecticides	258 George St., Toronto	Toronto.
Canada Rex Spray Co., Ltd	Brighton	Brighton.
Common Sense Mfg. Co	393 Queen St. W., Toronto 2	Toronto.
Deloro Smelting & Refining Co. Ltd	Deloro	Deloro.
Niagara Brand Spray Co., Ltd	Burlington	Burlington.
Tanglefoot Co	Grand Rapids, Mich., U.S.A	Walkerville
Williams Chemical Co., Ltd, The	Russell	Russell.
Manitoba—		
City Chemical Co	233 Fort St., Winnipeg	Winnipeg.
Riess, Charles and Co	360 Banning St., Winnipeg	Winnipeg.
Alberta—		
Bingo Products Ltd	802 Lancaster Bld., Calgary	Calgary.
Dominion Bait Co	P.O. Box 171, Lethbridge	Lethbridge.
Dunlap Mfg. Co., Ltd	Stettler	Stettler.
British Columbia—		
Oliver Chemical Co., Ltd	Penticton	Penticton.

(g) Polishings and Dressings

Quebec—		
American Metal Polish Co	2396 Moreau St., Montreal	Montreal.
Beaver Products Co., Ltd	St. Janvier, Co. Terrebonne	Terrebonne.
Boston Blacking Co	3rd and Potter Sts., East Cambridge, Mass., U.S.A.	420 McGill St., Montreal
Coleman Engineering Co	392 St. James St., Montreal	159 Richardson St.,Montreal.
Dominion Safe Co	7262 St. Denis St., Montreal	Montreal.
Ducharme, Jos	5375 rue St. Laurent, Montreal	Montreal.
Hall Thompson Co. of Canada, Ltd	6946 Jeanne Mance St., Montreal	Montreal.
La-Lo Manufacturing Co., Ltd	365 Aqueduct St., Montreal	Montreal.
Lustre Canadien Ltd	751 St. Laurent St., Montreal	St. Jérome.
Manufacturers Sales Corp. Ltd	320 Notre Dame St. West, Montreal	Montreal.
Royal Crescent Products Co	930 St. George St., Montreal	Montreal.
Sta-Brite Products, Ltd	52 Westminster Ave. N., Montreal W	Montreal.
Star Dressing Co	Rear 2055 Hutchison St., Montreal	Montreal.
Sultana Limited	1000 Amherst St., Montreal	Montreal.
Vol Peek Mfg. Co	30 St. Francois Xavier St., Montreal	Montreal.
Ontario—		
Capo Polishes Co	58 Catherine St. N., Hamilton	Hamilton.
Channell Chemical Co. Ltd	361 Sorauren Ave., Toronto	Toronto.
Cooke, George, Co., Ltd	174 King St. E., Toronto	Toronto.
Commercial Oil Co., Ltd	420 Jackson St. W., Hamilton	Hamilton.
Damon Specialty Co	29 Temperance St., Toronto	Toronto.
Hawes, Edward and Co., Ltd	71 Duke St., Toronto	Toronto.
Hay's Oil Co	125 Bolton St., Toronto	Toronto.
Home Products Co	151 Hyde Park Ave., Hamilton	Hamilton.
Instant Polish Co., Ltd	Barrie	Barrie.
John Bull Mfg. Co	1 O'Reilly St., Hamilton	Hamilton.
Lacon Finish Co. of Canada	75 Oak Ave., Hamilton	Hamilton.
Lightnin' Polish Co. Ltd	152 Church St., Weston	Weston.
Lion Polish Co., Ltd	106 Jarvis St., Toronto	Toronto.
Liquid Veneer Corporation	375 Ellicott St., Buffalo, N.Y	Bridgeburg.
National Chemical Compounds, Limited	2 Clinton Place, Toronto	Toronto.
Nonsuch Mfg. Co. Ltd	257 Logan Ave., Toronto	9 Busy St., Toronto
Norwesco of Canada, Ltd	1293 Dundas St. W., Toronto	Toronto.
Permanent Ink Co., Ltd	302 Cumberland Ave., Hamilton	Hamilton.
Red Seal Oil & Polish Co	333 Bathurst St., Toronto 2	Toronto.
Solient Mfg. Co	12 Simcoe St. S., Oshawa	Oshawa.
Tilley, Charles & Sons, Ltd	90 Richmond St., Toronto	Toronto.
2 in 1 Polishes Ltd	75 Hughson St. N., Hamilton	Hamilton.
Manitoba—		
Lexo Products	550 Balmoral St., Winnipeg	Winnipeg.
British Columbia—		
Amberine Products, Ltd	1032 Balmoral Road, Victoria	Victoria.

Miscellaneous Chemical Industries—Concluded

(h) Sweeping Compounds

Name	Head Office Address	Location of Plant
New Brunswick—		
No-Dust Mfg. Co	8 Marsh Bridge, Saint John	St. John.
Quebec—		
Conway Mfg. Co	28 Bank St., Sherbrooke	Sherbrooke.
Dust-No-Dirt Mfg. Co	1772 Savoie St., Montreal	Montreal.
Ontario—		
Dustbane Manufacturing Co., Ltd	51 Sparks St., Ottawa	Ottawa.
Soclean Limited	444 King St. W., Toronto	Toronto.
Manitoba—		
Dustbane Western Ltd	51 Sparks St., Ottawa, Ont	80 Lombard St., Winnipeg.

(i) Miscellaneous Chemical Products, N.E.S.

Ontario—		
American Chemical Paint Co	Ambler, Pa., U.S.A	425 Pierre St., Windsor.
Anti-Borax Compound Co	918 McDougall St., Windsor	Windsor.
Carbonex of Canada, Ltd	Gerrard St., Hamilton	Hamilton.
Champion Chemical Co	Linden & Monroe Sts., Springfield, Ohio	Windsor.
Hansen's Chr. Canadian Laboratory	Little Falls, New York, U.S.A	201 Church St., Toronto
Lefebvre, P. A. & Co	Alexandria	Alexandria.
Mead Johnson and Co. of Canada, Ltd	Evansville, Indiana, U.S.A	Belleville.
Quaker City Chemical Co. of Canada, Ltd	Birmingham St. & Whitfield Ave., Hamilton	Hamilton.
Richardson-Hansen Co., Ltd	St. Marys	St. Marys.
Sterne, G. F. & Sons	124 Bruce St., Brantford	Brantford.
Yocum Faust, Ltd	123 St. George St., London	London.
Manitoba—		
Robinson and Webber Co., Ltd	57 Victoria St., Winnipeg	Winnipeg.
Saskatchewan—		
Fairview Chemical Co., Ltd	1355 St. John St., Regina	Regina.
British Columbia—		
British American Chemical Co., Ltd	431 Seymour St., Vancouver	Vancouver.

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