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THE ACIDS, ALKALIES AND SALTS INDUSTRY

1955

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NOTICE

The annual reports prepared by the Industry and Merchandising Division of the Bureau of Statistics are divided into 3 volumes, as follows: **Volume I** - The Primary Industries, including mining, forestry and fisheries; **Volume II** - Manufacturing; **Volume III** - Merchandising and Services. The volumes are made up of parts, and the parts in turn are subdivided according to the industries or provinces which they comprise.

Volume II consists of the following parts, the first two of which deal with manufacturing as a whole and the balance with the major manufacturing groups.

- I - General Review of the Manufacturing Industries, \$1.50
- II - The Manufacturing Industries of Canada, (7 sections, as follows):
 - Section A. Summary for Canada, 25¢
 - Section B. Atlantic Provinces, 50¢
 - Section C. Quebec, 25¢
 - Section D. Ontario, 25¢
 - Section E. Prairie Provinces, 40¢
 - Section F. British Columbia, 25¢
 - Section G. The Manufacturing Industries of Canada, Regional Distribution, 75¢
- III - Foods and Beverages
- IV - Tobacco and Tobacco Products
- V - Rubber Products
- VI - Leather Products
- VII - Textile Mills
- VIII - Knitting Mills
- IX - Clothing
- X - Wood and Paper Products
- XI - Printing Trades
- XII - Iron and Steel Products
- XIII - Transportation Equipment
- XIV - Non-ferrous Metal Products
- XV - Electrical Apparatus and Supplies
- XVI - Non-metallic Mineral Products
- XVII - Products of Petroleum and Coal
- XVIII - Chemicals and Allied Products
- XIX - Miscellaneous Manufactures

The present report belongs in Part XVIII, Chemicals and Allied Products. It is punched to permit of filing in a ring binder along with others of the group. The reports in this group are:

- A - General Review, 25¢
- B - The Acids, Alkalies and Salts Industry, 25¢
- C - The Fertilizers Industry, 25¢
- D - The Fertilizer Trade in Canada, 25¢
- E - The Medicinal and Pharmaceutical Preparations Industry, 25¢
- F - The Paints, Varnishes and Lacquers Industry, 25¢
- G - The Primary Plastics Industry, 25¢
- H - The Soaps, Washing Compounds and Cleaning Preparations Industry, 25¢
- I - The Toilet Preparations Industry, 25¢
- J - The Vegetable Oils Industry, 25¢
- K - The Inks Industry, 25¢
- L - The Adhesives Industry, 25¢
- M - The Polishes and Dressings Industry, 25¢
- N - The Compressed Gases Industry, 25¢
- O - The Coal Tar Distillation Industry, 25¢
- P - The Miscellaneous Chemical Products Industry, 25¢

THE ACIDS, ALKALIES AND SALTS INDUSTRY

1955

Forty-five plants in Canada, classified under the Acids, Alkalies and Salts Industry, were engaged chiefly in the production of chemicals in 1955. Factory shipments reported by this group were valued at \$172,255,750, an increase of 21.3 per cent over the total for the previous year. Twenty-one of these plants were located in Ontario, 16 in Quebec, 2 in British Columbia, 3 in Alberta and 1 in each of Nova Scotia, Saskatchewan and the Northwest Territories. These concerns gave employment to 8,597 people who were paid \$35,547,851 in salaries and wages. Materials used in manufacturing processes cost \$61,686,514 and expenditures for fuel and electricity amounted to \$15,033,501.

Except for sulphuric acid, caustic soda and chlorine, separate figures for the production of chemicals in this group are not published as many of the individual items were made by only one or two concerns. However, a special compilation which gives a fairly good summary of the total output of chemicals as gathered up from all industries is shown in Table 4. A list of the more important chemicals made by the factories in this group is shown in the directory which appears at the back of this bulletin.

The output of sulphuric acid (100% acid) increased to 950,277 tons in 1955 from the 923,800 tons produced in 1954. Twelve plants were operated by nine companies, as follows: The Consolidated Mining and Smelting Company of Canada Limited, at Trail, British Columbia; Canadian Industries Limited, at Copper Cliff and Hamilton, Ontario; Nichols Chemical Company Limited, at Sulphide, Ontario, Valleyfield, Quebec, and Barnet, British Columbia; Dominion Steel and Coal Corporation Limited, at Sydney, Nova Scotia; Aluminum Company of Canada Ltd. at Arvida, Quebec; the North American Cyanamid Limited (Welland Works), at Niagara Falls, Ontario; Gunnar Mines at Uranium City, Saskatchewan; Inland Chemicals Limited, at Fort Saskatchewan, Alberta; and Eldorado Mining and Refining Ltd., at Port Radium, Northwest Territories. The first two of these works, at Trail and Copper Cliff, operated entirely on sulphur-bearing smelter gases.

Production of chlorine, either as a gas or liquid, totalled 193,000 tons in 1955, while the output of caustic soda amounted to 226,000 tons. In 1955 there were ten caustic soda-chlorine plants in Canada. Canadian Industries Limited, had works at Cornwall, Ontario, and at Shawinigan Falls, Quebec. Other producers included Dow Chemical of Canada, Limited, Sarnia, Ontario; Standard Chemical Company, Limited, Beauharnois, Quebec; Aluminum Company of Canada Limited, Arvida, Quebec; Western Chemical Limited, Duvernay, Alberta; the Canadian International Paper Company, Temiskaming, Quebec; the Howard Smith Paper Mills Limited, Cornwall, Ontario; the KVP Company Limited, Espanola, Ontario; and the Marathon Paper Mills of Canada Ltd., Marathon, Ontario. The last four concerns are paper mills which make these chemicals for their own use.

Note: Figures for value added by manufacture, shown in Table 1, prior to 1952 were obtained by subtracting the cost of materials used, including fuel and electricity, from the value of production. In 1952 the gross value of production was replaced by value of factory shipments, f.o.b. plant. As no information on inventory change is available for 1952 and 1953, value added figures for these years were obtained by subtracting from the value of shipments the cost of materials, fuel and electricity. In 1954 and 1955 information on the value of year-end inventory holdings at plant and plant warehouses was collected as part of the annual Census of Industry and information thus made available was taken into account in calculating the value added figures for 1954 and 1955.

TABLE 1. Principal Statistics of the Acids, Alkalies and Salts Industry, Significant Years 1929-1955 and by Provinces, 1954 and 1955

| Year and province | Estab-lish-ments | Em-ployees | Salaries and wages | Cost of fuel and electricity at plant | Cost at plant of materials used | Value added by manufacture ¹ | Gross selling value of products ¹ |
|-----------------------------|------------------|--------------|--------------------|---------------------------------------|---------------------------------|---|--|
| | No. | No. | \$ | \$ | \$ | \$ | \$ |
| 1929 | 15 | 2,897 | 4,338,686 | 2,921,129 | 6,301,121 | 18,799,722 | 28,021,972 |
| 1931 | 14 | 1,694 | 2,426,880 | 2,167,585 | 2,407,682 | 6,377,230 | 10,952,497 |
| 1937 | 21 | 3,359 | 4,893,418 | 2,810,364 | 6,008,977 | 13,590,827 | 22,410,168 |
| 1939 | 25 | 3,128 | 5,032,898 | 2,548,217 | 6,021,716 | 14,486,673 | 23,056,606 |
| 1944 | 28 | 7,964 | 15,752,782 | 8,980,955 | 29,540,390 | 42,801,806 | 81,323,151 |
| 1946 | 29 | 5,338 | 11,158,999 | 6,431,503 | 14,650,883 | 26,219,014 | 47,301,400 |
| 1949 | 28 | 5,861 | 16,504,908 | 7,355,353 | 27,392,521 | 39,663,922 | 74,411,796 |
| 1951 | 29 | 7,371 | 24,579,398 | 11,127,663 | 39,238,794 | 67,456,301 | 117,822,758 |
| 1952 | 29 | 7,591 | 27,208,422 | 11,167,181 | 37,777,278 | 65,243,067 | 114,187,526 |
| 1953 | 41 | 8,278 | 31,174,479 | 13,264,151 | 43,083,175 | 70,952,111 | 127,299,437 |
| 1954 | | | | | | | |
| Nova Scotia | 1 | 3,452 | 13,965,190 | 5,219,662 | 21,910,974 | 28,696,766 | 56,229,798 |
| Quebec | 15 | | | | | | |
| Ontario | 22 | 4,507 | 17,505,366 | 7,758,764 | 25,091,181 | 44,492,971 | 77,333,737 |
| Alberta | 2 | | | | | | |
| British Columbia | 2 | 449 | 1,955,308 | 379,953 | 2,398,396 | 6,186,552 | 8,438,066 |
| Northwest Territories | 1 | | | | | | |
| Canada | 43 | 8,408 | 33,425,864 | 13,358,379 | 49,400,551 | 79,376,289 | 142,001,601 |
| 1955 | | | | | | | |
| Nova Scotia | 1 | 3,648 | 15,409,741 | 5,344,111 | 27,709,287 | 35,153,060 | 67,849,364 |
| Quebec | 16 | | | | | | |
| Ontario | 21 | 4,455 | 17,876,310 | 8,927,890 | 30,991,574 | 52,176,835 | 92,645,255 |
| Saskatchewan | 1 | | | | | | |
| Alberta | 3 | 494 | 2,261,800 | 761,500 | 2,985,653 | 7,694,104 | 11,761,141 |
| British Columbia | 2 | | | | | | |
| Northwest Territories | 1 | | | | | | |
| Canada | 45 | 8,597 | 35,547,851 | 15,033,501 | 61,686,514 | 95,023,999 | 172,255,750 |

1. See footnote to Text.

Note: Profits or losses cannot be calculated from above figures as data are not available for general expense items, such as interest, rent, depreciation, taxes, insurance, advertising, etc.

TABLE 2. Inventories¹, 1955

| | Raw materials and supplies | Goods in process | Finished goods of own manufacture | Total |
|--|----------------------------|------------------|-----------------------------------|-------------------|
| | \$ | \$ | \$ | \$ |
| Opening: | | | | |
| Nova Scotia and Quebec | 6,898,303 | 114,279 | 3,660,496 | 10,673,078 |
| Ontario | 6,906,357 | 823,746 | 4,060,054 | 11,790,157 |
| Saskatchewan, Alberta, British Columbia and North-west Territories | 664,357 | 280,811 | 1,118,379 | 2,063,547 |
| Canada | 14,469,017 | 1,218,836 | 8,838,929 | 24,526,782 |
| Closing: | | | | |
| Nova Scotia and Quebec | 6,689,463 | 406,343 | 4,017,590 | 11,113,396 |
| Ontario | 6,990,644 | 906,161 | 3,511,098 | 11,407,903 |
| Saskatchewan, Alberta, British Columbia and North-west Territories | 1,178,795 | 221,513 | 798,505 | 2,198,813 |
| Canada | 14,858,902 | 1,534,017 | 8,327,193 | 24,720,112 |

1. (a) Book value of all manufacturing inventories owned and held at plant and plant warehouses.

(b) Beginning with 1954 information on the value of year-end inventory holdings at plant and plant warehouses is being collected as part of the annual Census of Industry. These data were formerly collected by a separate survey. The summarized results for the Acids, Alkalies and Salts Industry for the year under review are shown in the above table.

(c) The opening inventory for 1955 does not necessarily agree with the closing inventory for 1954 because of the addition of new plants, the transfer of plants to other industries and plants going out of business, etc. However, the value added figures for the previous year have not been recalculated to allow for the revisions mentioned above.

TABLE 3. Materials Used in the Acids, Alkalies and Salts Industry, 1954 and 1955

| Material | 1954 | | 1955 | |
|---|-------------------------------|---------------------|------------|---------------------|
| | Quantity | Cost at works \$ | Quantity | Cost at works \$ |
| Acetone | lb. 902,433 | 92,834 | 1,067,389 | 96,351 |
| Acetylene | M cu. ft. 44,620 | 394,088 | 43,125 | 380,120 |
| Acid: | | | | |
| Acetic, 99% | lb. 10,436 | 1,427 | 10,774 | 1,435 |
| Hydrochloric (muriatic) | " 2,787,002 | 60,036 | 4,203,750 | 98,907 |
| Nitric, 42% Be | " 1,984,244 | 96,225 | 2,429,979 | 121,538 |
| Sulphuric, 100% | " 19,259,013 | 322,004 | 24,698,281 | 415,654 |
| Alcohol: | | | | |
| Butyl | lb. 248,957 | 50,092 | 546,467 | 65,944 |
| Ethyl | Imp. gal. 3,786 | 4,719 | 8,538 | 10,988 |
| Isopropyl | lb. 174,377 | 23,720 | 107,572 | 17,726 |
| Methyl | Imp. gal. 1,376,151 | 419,767 | 1,663,190 | 458,095 |
| Ammonia liquor | lb. NH ₃ 1,247,792 | 91,329 | 1,303,946 | 91,909 |
| Ammonia, anhydrous | lb. 12,545,001 | 679,761 | 16,441,076 | 926,642 |
| Benzol | " 1,926,936 | 107,831 | 2,490,355 | 132,977 |
| Calcium chloride | " 434,100 | 11,470 | 483,150 | 10,694 |
| Carbon, activated | " 522,765 | 190,023 | 246,384 | 92,459 |
| Chlorine, liquid | " 45,763,688 | 1,063,147 | 6,856,651 | 233,793 |
| Coal (except for fuel): | | | | |
| Anthracite | tons 27,184 | 380,728 | 12,259 | 149,511 |
| Bituminous | " - | - | - | - |
| Coke (except for fuel): | | | | |
| Petroleum | tons - | - | 3,161 | 55,209 |
| Other | " 188,525 | 3,385,543 | 243,079 | 4,257,774 |
| Electrodes (purchased) | - | 685,217 | - | 687,100 |
| Fatty acid (oleic, stearic, etc.) | lb. 372,604 | 58,705 | 387,673 | 56,993 |
| Fluorspar | tons 63,751 | 1,985,027 | 68,592 | 1,978,468 |
| Formaldehyde | lb. 1,155,597 | 46,172 | 976,862 | 36,078 |
| Graphite | lb. 496,753 | 113,769 | 687,303 | 153,052 |
| Limestone | tons 958,176 | 1,697,758 | 1,035,368 | 1,832,345 |
| Lime, hydrated | " 35,376 | 246,131 | 8,762 | 49,238 |
| Lime, quick | " 16,349 | 256,720 | 17,747 | 289,574 |
| Mercury | lb. 134,870 | 283,794 | 123,428 | 328,624 |
| Phenol | " 845,200 | 143,136 | 1,388,392 | 240,263 |
| Petrochemical feed stocks | - | 2,794,897 | - | 3,694,843 |
| Phthalic anhydride | lb. 1,325,316 | 241,513 | 1,740,959 | 342,758 |
| Pyrites | tons 74,465 | 659,581 | 123,619 | 999,695 |
| Quartz, quartzite and silica sand | tons 51,818 | 314,893 | 52,487 | 323,525 |
| Sodium carbonate (soda ash) | lb. 81,557,426 | 1,755,005 | 87,091,488 | 1,803,859 |
| Sodium chloride, dry and brine (salt content) | tons 645,993 | 2,951,810 | 792,525 | 3,476,596 |
| Sodium bichromate | lb. 116,697 | 11,564 | 136,340 | 16,379 |
| Sodium hydroxide (caustic soda) | " 23,420,572 | 863,539 | 24,210,335 | 879,112 |
| Sodium nitrate | " 265,264 | 9,454 | 513,427 | 22,771 |
| Sodium silicate (water glass) | " 1,400 | 42 | - | - |
| Sodium sulphide | " 145,833 | 7,881 | 151,377 | 7,099 |
| Sulphur (brimstone) | tons 80,871 | 2,989,836 | 82,947 | 3,105,280 |
| Urea | lb. 460,263 | 30,697 | 501,755 | 31,051 |
| Zinc oxide | lb. 63,061 | 8,973 | 71,258 | 9,071 |
| Containers of all kinds and packing materials | - | 3,009,104 | - | 3,440,783 |
| Steel sheets for making containers | tons 3,823 | 610,087 | 5,510 | 891,402 |
| Lumber | M bd. ft. 161 | 10,648 | 176 | 11,670 |
| All other materials and supplies | - | 20,239,854 | - | 29,361,159 |
| Total | - | 49,400,551 | - | 61,686,514 |

Total Production of Chemicals

It is very difficult to get, from official reports, the statistics covering the total production in Canada of heavy and fine chemicals. There are two reasons for this, the first being that data for many of the individual items cannot be shown because they were made by only one or two concerns, and the second being that chemicals are made in a number of different industries. Ethyl alcohol, for example, is a product of the distilled liquors industry; methyl alcohol comes under wood distillation; some fine chemicals are made in the phar-

maceutical industry; ammonium sulphate is produced in coke plants; cobalt and nickel salts are made in the non-ferrous metal refineries, and so on. The Bureau has made, therefore, a special compilation shown in Table 4 which gives a fairly good summary of the total output as gathered up from all industries. The values cover only the products made for sale as there is no adequate record of the intermediates made for the further use of the producers. The output in 1955 was around \$339,677,000 compared with \$279,846,000 in 1954.

TABLE 4. Total Production of Chemicals, 1954 and 1955

| | Selling value at works | |
|--|------------------------|--------------------|
| | 1954 | 1955 |
| | \$ | \$ |
| <i>Acids</i> , including acetic, muriatic, nitric, sulphuric, phosphoric, stearic, etc. | 19,174,000 | 21,140,000 |
| <i>Calcium compounds</i> , including carbide, chloride, phosphide, cyanamide, cyanide acid phosphate, grey acetate, arsenate, chloride of lime, etc. | 16,469,000 | 18,505,000 |
| <i>Sodium compounds</i> , including hydroxide, phosphate, cyanide, silicate, hypochlorite, bisulphite, salt cake, Glauber's salt, chlorate, acid pyrophosphate, soda ash, sal soda, bisulphate, etc., (pharmaceutical salts included elsewhere)..... | 30,664,000 | 35,096,000 |
| <i>Organic chemicals</i> , including acetic anhydride, butyl acetate, ethyl acetate, paraldehyde, glycols, pentasol acetate, vinyl acetate, ethyl alcohol, methyl hydrate, glycerine, phenol, cresol, benzol, etc., (acetic acid and acetylene included elsewhere) | 72,936,000 | 82,934,000 |
| <i>Compressed and liquefied gases, etc.</i> , including acetylene, carbon dioxide, oxygen, nitrous oxide, liquid sulphur dioxide, liquid chlorine, anhydrous and aqua ammonia, liquefied petroleum gases, etc. | 33,723,000 | 38,951,000 |
| <i>Fertilizer chemicals</i> , including ammonium sulphate, ammonium nitrate (fertilizer grade), ammonium phosphate, and superphosphate..... | 45,386,000 | 59,746,000 |
| <i>Synthetic resins</i> , including casein type, vinyls, polystyrene, phenol-formaldehyde, urea-formaldehyde, alkyds, sodium carboxymethylcellulose, etc..... | 36,647,000 | 49,430,000 |
| <i>Other chemicals</i> , including white lead, zinc oxide, red lead, litharge, cobalt salts, nickel salts, ferric chloride, lead arsenate, phosphorus, white arsenic, ammonium nitrate, fine chemicals, precious metal salts, etc. | 24,847,000 | 33,875,000 |
| Total | 279,846,000 | 339,677,000 |

TABLE 5. Production, Imports, Exports and Apparent Consumption of Sulphuric Acid, 1925-1955

| Year | Production | Imports | Exports | Apparent consumption ¹ |
|-------------------------|------------|---------|---------|-----------------------------------|
| Short tons of 100% acid | | | | |
| 1925 | 77,700 | 52 | 19,179 | 58,573 |
| 1930 | 100,020 | 150 | 571 | 99,599 |
| 1935 | 209,083 | 83 | 1,027 | 208,139 |
| 1940 | 301,444 | 142 | 2,244 | 299,342 |
| 1945 | 664,302 | 149 | 11,203 | 653,248 |
| 1946 | 593,577 | 166 | 3,296 | 590,447 |
| 1947 | 668,802 | 116 | 29,909 | 639,009 |
| 1948 | 679,448 | 59 | 29,478 | 650,029 |
| 1949 | 707,717 | 24 | 17,336 | 690,405 |
| 1950 | 756,110 | 332 | 44,417 | 712,025 |
| 1951 | 820,867 | 1,162 | 57,000 | 765,029 |
| 1952 | 816,270 | 85 | 33,135 | 783,220 |
| 1953 | 822,608 | 70 | 47,889 | 774,789 |
| 1954 | 923,800 | 110 | 21,930 | 901,980 |
| 1955 | 950,277 | 151 | 29,578 | 920,850 |

1. No allowance made for changes in inventories.

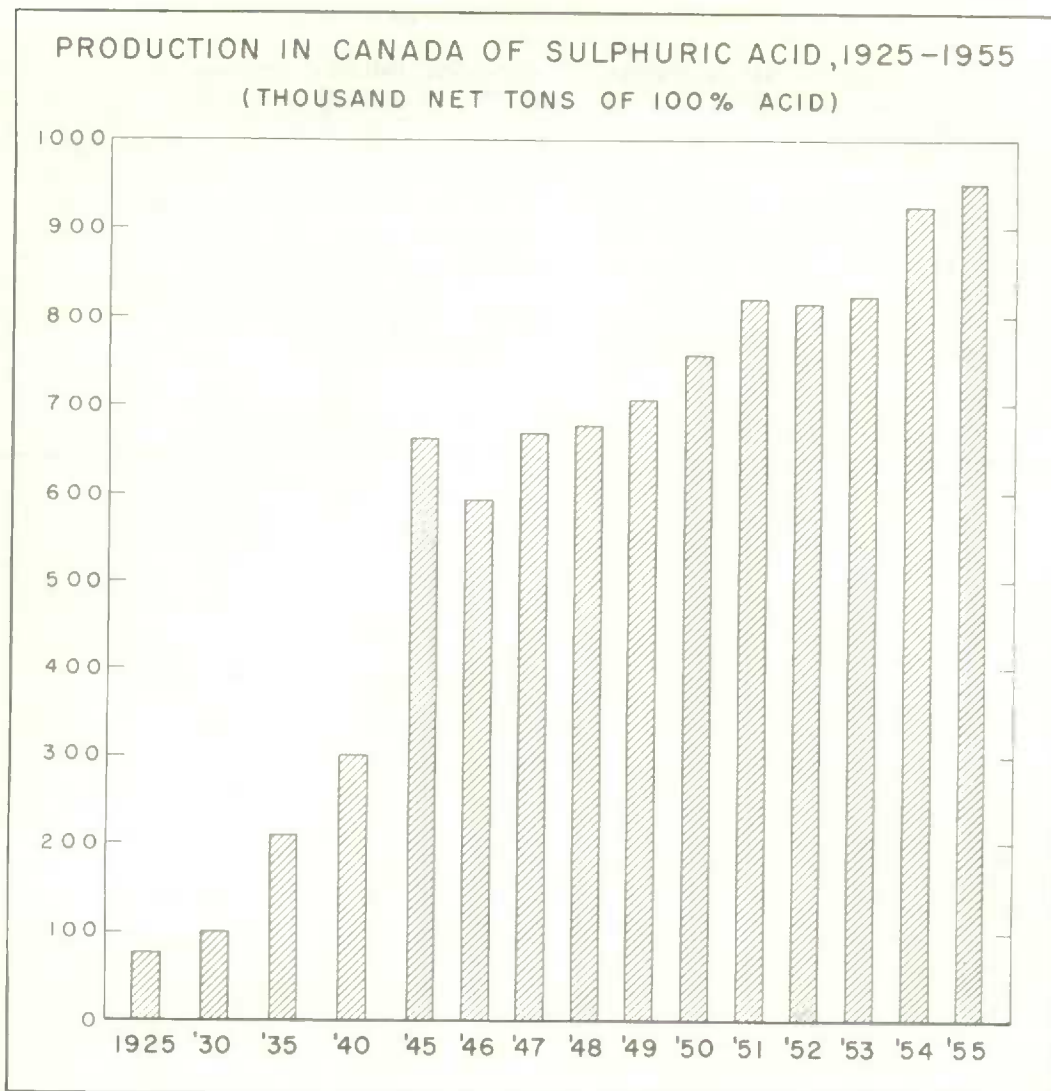


TABLE 6. Production, Imports and Exports of Chlorine and Caustic Soda, 1951-1955

| Year | Chlorine | Caustic soda ² |
|----------------------------|----------|---------------------------|
| | | (100% Na OH) |
| Tons | | |
| (a) Production: | | |
| 1951 | 155,000 | 180,000 |
| 1952 | 169,000 | 190,000 |
| 1953 | 169,000 | 192,000 |
| 1954 | 167,000 | 199,000 |
| 1955 | 193,000 | 226,000 |
| (b) Imports: | | |
| 1951 | 12,916 | 23,300 |
| 1952 | 15,800 | 28,500 |
| 1953 | 20,400 | 43,700 |
| 1954 | 32,100 | 65,900 |
| 1955 | 38,000 | 73,300 |
| (c) Exports ¹ : | | |
| 1952 | 14,200 | 6,600 |
| 1953 | 17,900 | 2,600 |
| 1954 | 2,900 | 200 |
| 1955 | 10,400 | 100 |

1. Not available separately prior to 1952.

2. Imports of caustic soda solution shown in Table 14 represent gross weight which is in terms of 50% Na OH approximately. Figures in Table 6 have been converted to 100% Na OH to agree with the basis used in production and exports.

TABLE 7. Consumption of Sulphuric Acid, by Industries, 1953-1955

| Industry | 1953 | 1954 | 1955 |
|---|-------------------------|----------------------------|---------------------|
| | Short tons of 100% acid | | |
| Fertilizers | 485,600 | 603,200 | 577,100 |
| Heavy chemicals | 124,400 | 123,400 | 139,700 |
| Explosives | 29,000 | 4 | 4 |
| Non-ferrous metal smelting and refining | 19,300 | 19,300 ¹ | 24,500 ¹ |
| Textiles | 30,200 | 4 | 4 |
| Coke and gas | 33,600 | 31,000 | 37,900 |
| Petroleum refining | 7,400 | 5,400 ² | 6,500 |
| Leather tanning | 2,100 | 1,900 | 2,300 |
| Iron and steel | 29,900 | 25,800 ² | 35,300 |
| Electrical apparatus | 5,700 | 6,000 | 8,100 |
| Plastics | 9,100 | 13,700 | 15,000 |
| Soaps | 10,400 | 10,600 | 11,300 |
| Adhesives | 300 | 500 | 200 |
| Miscellaneous chemicals | 3,000 | 4 | 4 |
| Sugar refining | 400 | 300 | 300 |
| Pulp and paper | 6,900 | 9,300 | 8,700 |
| Vegetable oils | 100 | 100 | 100 |
| Sausage and sausage casings | N.A. | 4 | 4 |
| Miscellaneous ³ | - | 72,000 ² | 70,800 |
| Total accounted for | 797,400 | 922,500² | 937,800 |

1. Estimated.

2. Revised.

3. Includes explosives, textiles, miscellaneous chemicals and sausage and sausage casings groups in 1954 and 1955.

4. Included with "miscellaneous".

TABLE 8. Available Data on Consumption of Chlorine, by Industries, 1953-1955

| Industry | 1953 | 1954 | 1955 |
|---|----------------|--------------------|--------------------|
| | Tons | | |
| Pulp and paper | 97,400 | 114,700 | 128,600 |
| Heavy chemicals | 65,300 | 69,300 | 70,000 |
| Soaps | 3,300 | 3,900 | 4,000 |
| Municipal waterworks | 1,340 | 1,400 ¹ | 1,600 |
| Mining | 3,000 | 3,000 ¹ | 3,000 ¹ |
| Starch and glucose | 160 | 100 | 60 |
| Dyeing and finishing of textiles | 30 | 10 | 10 |
| Miscellaneous chemicals | 50 | 50 | 500 |
| Fertilizers | 30 | 30 | 35 |
| Synthetic textiles | 30 | 30 | 30 ¹ |
| Primary plastics | 140 | 200 | 200 |
| Medicinal and pharmaceutical preparations | 230 | 140 | 100 |
| Total accounted for | 171,010 | 192,860 | 208,135 |

1. Estimated.

TABLE 9. Available Data on Consumption of Caustic Soda, by Industries, 1953-1955

| Industry | 1953 | 1954 | 1955 |
|--|---------|--------------------|--------------------|
| | Tons | | |
| Pulp and paper | 102,200 | 117,100 | 122,900 |
| Soaps, washing compounds and cleaning preparations | 19,600 | 20,000 | 21,200 |
| Heavy chemicals | 53,900 | 52,900 | 54,900 |
| Synthetic textiles and silk industry | 19,200 | 5 | 5 |
| Petroleum refining | 6,900 | 8,200 | 8,700 |
| Primary plastics | 6,100 | 7,600 | 9,400 |
| Miscellaneous chemicals | 3,300 | 5 | 5 |
| Miscellaneous foods | 1,500 | 1,400 | 1,400 |
| Mining | 1,400 | 1,400 ¹ | 1,400 ¹ |
| Coke and gas | 800 | 1,000 | 1,500 |
| Medicinals and pharmaceuticals | 1,500 | 1,100 | 1,100 |
| Non-ferrous metal refining | 260 | 2 | 2 |

TABLE 9. Available Data on Consumption of Caustic Soda, by Industries, 1953-1955 - Concluded

| Industry | 1953 | 1954 | | 1955 |
|--|----------------|----------------|---|----------------|
| | | Tons | | |
| Starch and glucose..... | 400 | 400 | 4 | |
| Dyeing and finishing of textiles | 90 | 60 | | 100 |
| Toilet preparations | 300 | 300 | | 300 |
| Compressed gases | 170 | 200 | | 200 |
| Fertilizers..... | 420 | 200 | | 200 |
| Sausage and sausage casings | n.a. | 5 | | 5 |
| Sugar refining | 30 | 50 | | 50 |
| Vegetable oils | 130 | 50 | | 50 |
| Adhesives | 630 | 900 | | 80 |
| Miscellaneous ³ | — | 30,700 | | 37,200 |
| Total accounted for | 218,570 | 243,560 | | 260,680 |

1. Estimated.

2. Included with "mining".

3. Includes synthetic textiles, miscellaneous chemicals and sausage and sausage casings groups in 1954.

4. Included with miscellaneous foods.

5. Included with "miscellaneous".

TABLE 10. Principal Statistics of the Acids, Alkalies and Salts Industry in Canada, Grouped According to Size of Establishment, 1954 and 1955

| Establishments having a production of | Estab- | Employees | Salaries and wages | Cost at plant of materials used | Selling value of factory shipments |
|---------------------------------------|-----------|--------------|--------------------|---------------------------------|------------------------------------|
| | lishments | | | | |
| | No. | No. | \$ | \$ | \$ |
| 1954 | | | | | |
| \$25,000 to \$49,999 | 1 | 26 | 114,204 | 202,323 | 367,029 |
| \$50,000 to \$99,999 | 1 | | | | |
| \$100,000 to \$199,999 | 2 | | | | |
| \$200,000 to \$499,999 | 5 | 149 | 524,212 | 853,059 | 1,706,688 |
| \$500,000 to \$999,999 | 7 | 346 | 1,220,511 | 2,807,728 | 5,758,184 |
| \$1,000,000 to \$4,999,999 | 18 | 1,986 | 8,025,324 | 14,924,606 | 38,792,778 |
| \$5,000,000 and over..... | 9 | 5,500 | 21,415,165 | 30,612,835 | 95,376,922 |
| Head offices | — | 401 | 2,126,448 | — | — |
| Total | 43 | 8,408 | 33,425,864 | 49,400,551 | 142,001,601 |
| 1955 | | | | | |
| \$50,000 to \$99,999 | 1 | 17 | 61,915 | 283,037 | 398,544 |
| \$100,000 to \$199,999 | 2 | | | | |
| \$200,000 to \$499,999 | 6 | 90 | 353,968 | 1,057,088 | 1,910,849 |
| \$500,000 to \$999,999 | 7 | 302 | 1,142,972 | 2,815,227 | 4,919,957 |
| \$1,000,000 to \$4,999,999 | 19 | 1,700 | 6,644,391 | 18,343,008 | 43,519,966 |
| \$5,000,000 and over..... | 10 | 5,853 | 23,982,404 | 39,188,154 | 121,506,434 |
| Head offices | — | 635 | 3,362,201 | — | — |
| Total | 45 | 8,597 | 35,547,851 | 61,686,514 | 172,255,750 |

TABLE 11. Employees and Earnings, by Provinces, 1954 and 1955

| Province | Number of employees | | | | Total | Earnings | | Total earnings |
|-----------------------|---------------------|------------|--------------|-----------|--------------|-------------------|-------------------|-------------------|
| | Administrative | | Workmen | | | Admin-istrative | Workmen | |
| | Male | Female | Male | Female | | | | |
| | | | | | \$ | \$ | \$ | |
| 1954 | | | | | | | | |
| Quebec | 693 | 179 | 2,552 | 19 | 3,443 | 4,442,686 | 9,456,830 | 13,899,516 |
| Ontario | 1,245 | 346 | 2,893 | 23 | 4,507 | 6,652,570 | 10,852,796 | 17,505,366 |
| Other provinces | 96 | 43 | 319 | — | 458 | 601,742 | 1,419,240 | 2,020,982 |
| Canada | 2,034 | 568 | 5,764 | 42 | 8,408 | 11,696,998 | 21,728,866 | 33,425,864 |
| 1955 | | | | | | | | |
| Quebec | 787 | 261 | 2,574 | 17 | 3,639 | 5,529,987 | 9,832,033 | 15,362,020 |
| Ontario | 1,192 | 295 | 2,939 | 29 | 4,455 | 6,509,588 | 11,366,722 | 17,876,310 |
| Other provinces | 133 | 30 | 334 | 6 | 503 | 761,982 | 1,547,539 | 2,309,521 |
| Canada | 2,112 | 586 | 5,847 | 52 | 8,597 | 12,801,557 | 22,746,294 | 35,547,851 |

TABLE 12. Production Workers, by Months, 1954 and 1955

| Month | 1954 | | | 1955 | | |
|----------------------|--------------|-----------|--------------|--------------|-----------|--------------|
| | Male | Female | Total | Male | Female | Total |
| | Number | | | | | |
| January | 6,055 | 44 | 6,099 | 5,646 | 42 | 4,688 |
| February | 5,989 | 46 | 6,035 | 5,755 | 45 | 5,800 |
| March | 5,928 | 50 | 5,978 | 5,751 | 44 | 5,795 |
| April | 5,816 | 42 | 5,858 | 5,649 | 47 | 5,726 |
| May | 5,817 | 45 | 5,862 | 5,831 | 47 | 5,878 |
| June | 5,842 | 41 | 5,883 | 5,952 | 49 | 6,001 |
| July | 5,782 | 43 | 5,825 | 5,991 | 60 | 6,051 |
| August | 5,659 | 44 | 5,703 | 5,982 | 55 | 6,037 |
| September | 5,688 | 41 | 5,729 | 5,939 | 55 | 5,994 |
| October | 5,610 | 41 | 5,651 | 5,943 | 59 | 6,002 |
| November | 5,547 | 38 | 5,585 | 5,903 | 61 | 5,964 |
| December | 5,445 | 38 | 5,483 | 5,822 | 64 | 5,886 |
| Average | 5,764 | 42 | 5,806 | 5,847 | 52 | 5,899 |

TABLE 13. Capital and Repair Expenditures in the Acids, Alkalies and Salts Industry, 1951-1955

| Year | Capital expenditures | | | Repair and maintenance expenditures | | | Total capital and repair expenditures |
|-------------------------|----------------------|-------------------------|-----------|-------------------------------------|-------------------------|-----------|---------------------------------------|
| | Construction | Machinery and equipment | Sub-total | Construction | Machinery and equipment | Sub-total | |
| | \$'000 | | | | | | |
| 1951 | 2,448 | 9,050 | 11,498 | 1,222 | 9,871 | 11,093 | 22,591 |
| 1952 | 41,591 | 40,822 | 82,413 | 1,638 | 10,661 | 12,299 | 94,712 |
| 1953 | 22,272 | 56,536 | 78,808 | 1,451 | 11,077 | 12,528 | 91,336 |
| 1954 | 2,350 | 6,258 | 8,608 | 2,525 | 12,334 | 14,859 | 23,467 |
| 1955 ¹ | 8,367 | 11,346 | 19,713 | 1,933 | 11,614 | 13,547 | 33,260 |

1. Preliminary.

TABLE 14. Imports of Acids and Certain Inorganic Chemicals, 1954 and 1955

| Commodity | 1954 | | 1955 | | |
|--|----------|------------|------------------|------------|------------------|
| | Quantity | Value | Quantity | Value | |
| | | \$ | | \$ | |
| ACIDS | | | | | |
| Inorganic acids: | | | | | |
| Acid, boracic, in packages of not less than 25 pounds | lb. | 2,349,177 | 127,528 | 3,019,580 | 185,356 |
| Acid, hydrofluosilicic | " | 104,476 | 12,323 | 157,312 | 16,786 |
| Acid, muriatic | " | 2,633,492 | 42,992 | 1,002,680 | 14,042 |
| Acid, nitric | " | 862,809 | 42,627 | 487,792 | 27,031 |
| Acid, phosphoric | " | 701,299 | 57,401 | 444,131 | 45,302 |
| Acid, sulphuric | " | 220,285 | 3,884 | 301,732 | 6,717 |
| Acid, arsenic | " | 1,099,314 | 38,641 | 847,413 | 32,110 |
| Acid, chromic | " | 842,175 | 209,424 | 1,183,090 | 302,200 |
| Organic acids: | | | | | |
| Acid, salicylic and acetylsalicylic | lb. | 664,697 | 340,473 | 736,978 | 398,741 |
| Acid, lactic | " | 565,575 | 113,241 | 575,917 | 131,609 |
| Acid, nicotinic | " | 86,863 | 244,297 | 205,525 | 458,373 |
| Acid, oleic, or red oil | " | 1,265,090 | 236,957 | 1,569,147 | 285,207 |
| Acid, acetic and pyroigneous | gal. | 1,156 | 1,390 | 921 | 2,793 |
| Acid, citric | lb. | 1,100,095 | 254,609 | 167,413 | 47,024 |
| Acid, cresylic | " | 381,685 | 30,826 | 623,205 | 54,088 |
| Xanthates and sulpho-thiophosphoric (dithiophosphoric compounds, for concentrating ores, metals or minerals) | " | 6,397,681 | 1,563,377 | 7,173,049 | 1,723,476 |
| Acid, oxalic | " | 708,254 | 97,683 | 1,204,523 | 155,113 |
| Acid, stearic | " | 1,060,626 | 155,326 | 1,506,007 | 220,493 |
| Acid, tannic | " | 333,079 | 71,903 | 314,184 | 60,209 |
| Tartaric acid crystals or powder | " | 763,095 | 197,818 | 818,595 | 259,757 |
| Acid, ascorbic | " | 33,906 | 249,576 | 43,048 | 267,258 |
| Acid, fomic | " | 496,268 | 56,208 | 929,975 | 95,008 |
| Acid, carbolic or phenol | " | 7,933,646 | 1,232,148 | 8,059,780 | 1,284,810 |
| Acids, other, n.o.p. | " | 3,589,322 | 1,018,600 | 5,788,830 | 1,429,550 |
| Total acids | - | - | 6,399,252 | - | 7,503,053 |
| INORGANIC CHEMICALS, N.O.P. | | | | | |
| Alum, in bulk, ground or unground, but not calcined | cwt. | 17,481 | 64,338 | 20,656 | 75,582 |
| Chloralum or chloride of aluminum | " | 10,403 | 121,286 | 16,841 | 133,686 |
| Sulphate of iron (copperas) | " | 14,875 | 25,554 | 17,798 | 29,040 |
| Sulphate of alumina or alum cake | " | 339,204 | 591,073 | 291,266 | 521,659 |
| Ammonia, nitrate of | lb. | 1,628,615 | 86,017 | 1,659,787 | 94,531 |
| Sal ammoniac | " | 613,254 | 33,986 | 566,394 | 33,048 |
| Sal ammoniac skimmings | " | 274,037 | 24,208 | 675,299 | 63,079 |
| Ammonia, anhydrous | " | 54,037,690 | 2,280,305 | 46,583,593 | 1,986,963 |
| Ammonia compounds, n.o.p. | " | 6,412,502 | 283,455 | 6,236,698 | 324,295 |
| Antimony, arsenic, copper, tin and zinc compounds: | | | | | |
| Antimony salts, viz., tartar emetic, chloride and lactate (antimonine) | lb. | 27,000 | 14,669 | 38,664 | 19,712 |
| Arsenious oxide and arsenic sulphide | - | - | - | - | - |
| Copper, sub-acetate of, or verdigris, dry, and precipitate of | lb. | 400 | 194 | - | - |
| Copper, sulphate of | " | 2,125,312 | 206,490 | 2,265,558 | 309,963 |
| Tin, bichloride of, and tin crystals | " | 8,012 | 7,671 | 10,402 | 10,285 |
| Zinc, chloride of | " | 296,229 | 27,722 | 257,454 | 28,299 |
| Zinc, sulphate of | " | 2,814,210 | 123,535 | 2,829,330 | 143,508 |
| Bismuth and lead compounds: | | | | | |
| Bismuth salts | - | - | 31,136 | - | 21,799 |
| Lead, acetate of, not ground | lb. | 89,478 | 13,967 | 160,084 | 26,602 |
| Lead, arsenate of | " | 98,168 | 16,447 | 130,800 | 22,912 |
| Lead, nitrate of, not ground | " | 237,984 | 34,516 | 313,885 | 48,219 |
| Compounds of tetraethyl lead | " | 30,590,786 | 11,429,398 | 35,058,685 | 12,707,249 |
| Bromine, chlorine and iodine compounds: | | | | | |
| Bromine | lb. | 79,603 | 12,880 | 31,686 | 14,625 |
| Chlorine, liquid, or chlorine gas | " | 64,274,784 | 1,811,338 | 75,978,923 | 2,158,803 |
| Iodine, crude | " | 102,087 | 121,506 | 111,826 | 153,509 |
| Iodized mineral salts, for use in the feeding of animals | - | - | 22,218 | - | 5,295 |

TABLE 14. Imports of Acids and Certain Inorganic Chemicals, 1954 and 1955 - Concluded

| Commodity | 1954 | | 1955 | |
|--|----------------|-------------------|-------------|-------------------|
| | Quantity | Value | Quantity | Value |
| | | \$ | | \$ |
| Calcium compounds: | | | | |
| Calcium arsenate | lb. 110,000 | 6,050 | 564,865 | 28,601 |
| Calcium chloride | cwt. 166,380 | 220,135 | 355,178 | 471,565 |
| Chloride of lime | " 29,448 | 186,844 | 36,966 | 246,746 |
| Calcium molybdate, vanadium oxide and tungsten oxide, for the manufacture of steel | lb. 121,339 | 73,950 | 129,130 | 174,249 |
| Calcium compounds, n.o.p. | " 4,830,197 | 612,289 | 5,096,921 | 578,055 |
| Potash and potassium compounds, n.o.p.: | | | | |
| Argols | - | - | - | - |
| Cream of tartar in crystals | lb. 247,466 | 48,412 | 305,705 | 74,413 |
| Potash and pearl ash | " 255,787 | 23,026 | 474,303 | 40,384 |
| Potash, bicarbonate of | " 9,460 | 1,253 | 11,080 | 1,514 |
| Potash, bichromate of, crude | " 303,418 | 42,305 | 255,474 | 38,546 |
| Potash, caustic | " 5,445,133 | 288,058 | 4,940,584 | 274,830 |
| Potash, chlorate of, not further prepared than ground | " 118,242 | 15,587 | 131,588 | 18,656 |
| Potash, red and yellow, prussiate of | " 19,534 | 7,045 | 27,524 | 8,648 |
| Potash, nitrate of, or saltpetre | " 989,308 | 58,546 | 1,240,077 | 81,253 |
| Potash compounds, n.o.p. | " 2,335,059 | 388,433 | 3,246,801 | 485,963 |
| Soda and sodium compounds, n.o.p.: | | | | |
| Borax, in packages of not less than 25 pounds, and fused borax known as borax-glass | lb. 16,905,673 | 511,006 | 18,844,042 | 552,338 |
| Glauber's salt | " 10,267,472 | 144,979 | 7,775,968 | 131,447 |
| Soda, arseniate, binarseniate and stannate of | " 109,772 | 27,343 | 94,990 | 32,843 |
| Soda ash or barilla | " 187,665,644 | 2,516,720 | 237,799,515 | 3,308,412 |
| Soda, bicarbonate of | " 16,643,466 | 331,426 | 17,033,493 | 353,892 |
| Soda, bichromate of | " 4,345,491 | 443,798 | 6,763,005 | 736,333 |
| Soda, bisulphate of, or nitre cake | " 2,393,310 | 65,233 | 2,491,955 | 58,039 |
| Soda, bisulphite of | " 555,009 | 25,275 | 1,292,700 | 58,922 |
| Soda, caustic, in packages | " 13,026,775 | 514,883 | 18,788,909 | 710,989 |
| Soda, caustic, in solution | " 237,509,516 | 3,003,865 | 255,708,597 | 3,409,803 |
| Soda, chlorate of | " 299,936 | 25,834 | 121,050 | 8,983 |
| Sodium cyanide | " 7,581,788 | 933,896 | 9,055,531 | 1,141,580 |
| Sodium glutamate | " 892,703 | 1,338,788 | 1,191,755 | 1,677,444 |
| Soda, hyposulphite of | " 556,649 | 26,237 | 779,458 | 38,235 |
| Soda, nitrite of | " 1,147,581 | 47,525 | 1,517,150 | 62,723 |
| Soda, peroxide of | " 830,627 | 129,935 | 723,672 | 105,523 |
| Soda phosphate, di-sodium | " 83,130 | 6,245 | 59,700 | 4,730 |
| Soda phosphate, tri-sodium | " 841,180 | 42,895 | 864,010 | 41,262 |
| Soda phosphate, n.o.p. | " 5,386,124 | 500,144 | 3,244,597 | 350,583 |
| Soda, prussiate of | " 720,632 | 76,943 | 768,972 | 86,080 |
| Soda, sal | " 65,000 | 1,269 | 370,220 | 24,861 |
| Soda, silicate of, in crystals or in water solution | " 5,161,792 | 184,877 | 5,422,613 | 209,735 |
| Soda, sulphate of, crude, or salt cake | " 60,470,777 | 482,652 | 59,855,362 | 574,440 |
| Soda, sulphide of | " 2,282,841 | 102,739 | 3,455,738 | 165,304 |
| Soda, sulphite of | " 6,902,951 | 167,882 | 4,616,081 | 113,481 |
| Soda, benzoate of | " 122,800 | 41,357 | 19,625 | 7,764 |
| Soda, bromide of | " 50,945 | 17,852 | 36,587 | 11,673 |
| Soda, citrate of | " 103,151 | 25,592 | 87,343 | 24,339 |
| Soda, fluoride of | " 208,310 | 27,966 | 732,902 | 89,710 |
| Soda, antimonate of | " 317,380 | 84,298 | 370,100 | 104,910 |
| Sodium compounds, n.o.p. | " 16,050,376 | 1,518,557 | 17,375,005 | 1,576,737 |
| Other inorganic chemicals: | | | | |
| Acid phosphate, not medicinal | lb. 2,288,097 | 206,559 | 2,361,776 | 204,983 |
| Hydrogen peroxides, solutions of | " 523,006 | 132,459 | 1,404,925 | 314,829 |
| Magnesium carbonate, basic or otherwise, excepting crude rock; and magnesium carbonate, for use in the compounding or manufacture of rubber products | " 739,468 | 51,917 | 797,879 | 58,823 |
| Magnesium salts or compounds, n.o.p. | " 12,195,325 | 342,572 | 10,553,814 | 267,002 |
| Magnesium sulphate, or Epsom salts | " 4,730,761 | 70,374 | 4,752,058 | 69,009 |
| Mercury salts | - | 18,472 | - | 11,258 |
| Phosphorus and compounds thereof, n.o.p. | lb. 162,292 | 30,618 | 126,226 | 47,611 |
| Radium | - | 282,133 | - | 850,256 |
| Molybdenum oxide | lb. 423,344 | 207,744 | 658,060 | 545,518 |
| Barium peroxide | " - | - | 4,900 | 1,117 |
| Total inorganic chemicals, n.o.p. | - | 34,066,701 | - | 39,599,607 |

TABLE 15. Exports of Acids and Inorganic Chemicals, 1954 and 1955

| Commodity | 1954 | | 1955 | | |
|---|----------|-------------|---------------------|-------------|---------------------|
| | Quantity | Value | Quantity | Value | |
| | | \$ | | \$ | |
| Acid, sulphuric | cwt. | 438, 594 | 417, 295 | 591, 558 | 554, 109 |
| Acids, n.o.p. | " | 166, 087 | 1, 293, 777 | 345, 603 | 1, 318, 768 |
| Total acids | - | - | 1, 711, 072 | - | 1, 872, 877 |
| Ammonium sulphate | cwt. | 3, 095, 199 | 6, 964, 552 | - | 10, 978, 475 |
| Ammonium compounds, n.o.p. | " | 12, 172 | 51, 094 | 6, 327 | 26, 723 |
| Arsenic | " | 14, 226 | 58, 871 | 9, 406 | 40, 794 |
| Acetate of lime | - | - | - | - | - |
| Calcium compounds | cwt. | 691, 513 | 2, 436, 420 | 703, 362 | 2, 805, 619 |
| Lye | - | - | 1, 141 | - | 788 |
| Baking powder | cwt. | 41 | 616 | 21 | 369 |
| Soda and sodium compounds | " | 2, 549, 642 | 6, 532, 614 | 1, 513, 908 | 7, 023, 374 |
| Cobalt oxide and cobalt salts | lb. | 836, 205 | 1, 454, 648 | 1, 640, 282 | 2, 894, 384 |
| Chlorine, liquid, or chlorine gas | cwt. | 58, 775 | 173, 859 | 208, 937 | 492, 585 |
| Caustic soda | " | 3, 770 | 10, 201 | 1, 630 | 4, 417 |
| Total other chemicals | - | - | 17, 684, 016 | - | 24, 267, 528 |

List of Firms in the Acids, Alkalies and Salts Industry, 1955

| Name and location of plant | Principal chemicals made |
|---|--|
| Nova Scotia: Dominion Iron & Steel, Ltd. Sydney | Sulphuric acid. |
| Quebec: Aluminum Company of Canada, Ltd. Arvida | Sulphuric acid; aluminum sulphate (alum); aluminum fluoride; refined fluor-spar; liquid chlorine; recovered cryolite; sodium hydroxide (caustic soda); aluminum chloride. |
| B. A. - Shawinigan Limited | Acetone; phenol, isopropyl alcohol, cumene. |
| Canadian Industries Limited | Perchloroethylene; trichloroethylene; chlorine (liquid); anhydrous hydrogen chloride; sodium hydroxide (caustic soda); hydrogen peroxide (liquid); chloroform, hydrogen gas; calcium hypochlorite. |
| Carbide Chemicals Company, Div. of Union Carbide Canada Ltd. | Ethylene glycol, diethylene glycol, anti-freeze. |
| Defence Industries Limited | Hexachlorethane. |
| Durham Industries (Canada) Limited | Zinc oxide. |
| Electric Reduction Co. of Canada | Phosphoric acid; acid calcium phosphate; phosphorus (amorphous and yellow); potassium chlorate; sodium acid pyrophosphate; sodium chlorate; phosphates of sodium (mono-di-tri-tetra); weed-killing mixtures; ferrophosphorus; phosphorus sesquisulphide; rock wool; sodium tripolyphosphate. |
| Electric Reduction Co. of Canada | Yellow phosphorus, ferrophosphorus. |
| Monsanto (Canada) Limited | Anhydrous caffeine; plasticizers; sodium benzoate; phenacetin; acetic acid, oil additives. |
| The Nichols Chemical Co. Ltd. | Sulphuric acid; aluminum sulphate; pyrites cinder. |
| Shawinigan Chemicals Ltd. | Monochloroacetic acid; acetaldehyde; acetic anhydride; acetylene black; acetylene gas; acetic acid; butyl acetate; butyl alcohol; calcium carbide; dibutyl phthalate; ethyl acetate; pentasol acetate; vinyl acetate; vinyl acetate resins; cerium; paraldehyde; crotonic acid; polyvinyl alcohol; butyraldehyde; formvar resin. |

List of Firms in the Acids, Alkalies and Salts Industry, 1955 - Continued

| Name and location of plant | Principal chemicals made |
|---|---|
| Quebec - concluded: | |
| Shell Oil Company of Canada, Limited Montreal East | Acetone; isopropyl alcohol; isopropyl ether. |
| Standard Chemical Company Limited Beauharnois | Chlorine (liquid); sodium hydroxide (caustic soda); hydrogen gas. |
| St. Maurice Chemicals Limited Varennes | Formaldehyde; pentaerythritol. |
| Sturge (Canada) Limited Valleyfield | Citric acid. |
| Zinc Oxide Co. of Canada, Ltd. Montreal | Zinc oxide. |
| Ontario: | |
| Brunner Mond Canada, Ltd. Amherstburg | Calcium chloride; sodium carbonate (soda ash). |
| Cabot Carbon of Canada, Limited Sarnia | Carbon black. |
| Canadian Felling Zinc Oxide Ltd. Milton | Zinc oxide. |
| Canadian Industries Limited Hamilton | Hydrochloric (muriatic) acid; sulphuric acid; ammonium chloride; sodium sulphate (salt cake); sodium sulphite (anhydrous); sodium metabisulphite; sodium thiosulphite; zinc chloride (50% solution); soldering and galvanizing fluxes. |
| Canadian Industries Limited Cornwall | Hydrochloric (muriatic) acid; chlorine (liquid); sodium hydroxide (caustic soda); sodium hypochlorite; hydrogen gas. |
| Canadian Industries Limited Copper Cliff | Sulphuric acid; liquid sulphur dioxide. |
| Church & Dwight Ltd. Amherstburg | Sodium carbonate (sal soda). |
| Cornwall Chemicals Limited Cornwall | Carbon bisulphide; sodium hydrosulphide. |
| Dow Chemical of Canada Ltd. Sarnia | Ethylene glycol; diethylene glycol; triethylene glycol; ethylene dichloride; styrene; chlorine (liquid); sodium hydroxide (caustic soda); carbon tetrachloride; trichlorethylene; perchlorethylene; hydrochloric (muriatic) acid; ammonia, anhydrous, 100%; ethylene oxide; sodium carbonate. |
| Dupont Co. of Canada Ltd. Maitland | Adipic acid; hexamethylenediamine. |
| W.C. Hardesty Co. of Canada Ltd. New Toronto | Hydrogenated stearic acid; vegetable fatty acids; animal fatty acids; glycerine; oleic acid; castor fatty acids. |
| Howards & Sons (Canada) Ltd. Cornwall | Dimethylcyclohexyl phthalate; dicyclohexyl phthalate; methylcyclohexanol; cyclohexanol. |
| Kemball, Bishop, & Co. (Canada) Ltd. Cornwall | Citric acid. |
| Naugatuck Chemicals Division of Dominion Rubber Co. Ltd. Elmira | Aniline, rubber accelerators and specialties; D.D.T.; 2, 4-D; sodium sulphamethazine; nitrobenzol; ammonia, anhydrous, 100%; synthetic resin (alkyd polyester type); weed killer; hydrochloric acid; aniline oil. |
| National Silicates Ltd. New Toronto | Sodium silicate; sodium metasilicate. |
| The Nichols Chemical Co. Ltd. Sulphide | Hydrochloric (muriatic) acid; nitric acid; sulphuric acid; ammonia (aqua); pyrites cinder; aluminum chloride. |

List of Firms in the Acids, Alkalies and Salts Industry, 1955 - Concluded

| Name and location of plant | Principal chemicals made |
|---|--|
| Ontario - concluded: | |
| Noranda Mines Limited Port Robinson | Sulphur dioxide; iron sinter |
| North American Cyanamid Ltd. Niagara Falls | Calcium cyanamide; sodium cyanide; lime, unhydrated; calcium carbide |
| Nuodex Products of Canada, Ltd. Leaside | Lead naphthenate; cobalt naphthenate; manganese naphthenate; zinc naphthenate; copper naphthenate; calcium naphthenate; iron naphthenate; lead octoate; cobalt octoate; calcium octoate; cobalt tallate. |
| North American Cyanamid Ltd., (Welland works) Niagara Falls | Ammonia (anhydrous); dicyandiamide; guanidine nitrate; sulphuric acid; urea-formaldehyde adhesives; nitric acid; picrite; thiourea. |
| Petro-Chemsol Chemicals Ltd. Petrolia | Benzene; toluene; xylene; aromatic naphthas |
| Saskatchewan: | |
| Gunnar Mines Limited Uranium City | Sulphuric acid |
| Alberta: | |
| Canadian Chemical Company Limited Edmonton | Acetone; acetic anhydride; acetic acid; iso-butyl alcohol; propylene glycol; formaldehyde; methyl alcohol; pentaerythritol; n-propyl acetate; n-propyl alcohol; solvents. |
| Western Chemicals Limited Duvernay | Chlorine (liquid); sodium hydroxide (caustic soda); hydrochloric acid |
| Inland Chemicals Ltd. Fort Saskatchewan | Sulphuric acid. |
| British Columbia: | |
| Consolidated Mining and Smelting Co. of Canada, Ltd. Tadanac | Hydrofluosilicic acid; sulphuric acid; ammonia, aqua |
| The Nichols Chemical Co. Ltd. Barnet | Sulphuric acid; pyrites cinder |
| Northwest Territories: | |
| Eldorado Mining & Refining Ltd. Port Radium | Sulphuric acid |

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