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DEPARTMENT OF TRADE AND COMMERCE

DOMINION BUREAU OF STATISTICS

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MINING, METALLURGICAL & CHEMICAL STATISTICS

THE ACIDS, ALKALIES AND SALTS INDUSTRY

IN

CANADA

1946

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Dominion Statistician: Herbert Marshall
Director - Division of Census of Industry and Merchandising: W. H. Losee
Chief - Mining, Metallurgical and Chemical Statistics: H. McLeod

Annual Industry Report — Chemicals and Allied Products Group

THE ACIDS, ALKALIES AND SALTS INDUSTRY, 1946

Twenty-nine plants in Canada, classified under the Acids, Alkalies and Salts Industry, were engaged chiefly in the production of heavy chemicals in 1946. Production reported by this group was valued at $47,301,400, a decrease of 29.9 per cent from the total for the previous year. Eighteen of these plants were located in Ontario; 8 in Quebec; 2 in British Columbia, and 1 in Nova Scotia. These concerns gave employment to an average of 5,338 people who were paid $11,158,999 in salaries and wages. Materials used in manufacturing processes cost $14,650,883 and expenditures for fuel and electricity amounted to $6,431,503.

The following chemicals were made by the factories in this group: acetaldehyde, acetic anhydride, acetone, acetylene black, acetylene gas, glacial acetic acid, hydrochloric acid, hydrofluosilicic acid, monochloro acetic acid, sulphuric acid, phosphoric acid, nitric acid, stearic acid, fatty acids, acid calcium phosphate, aluminum sulphate, synthetic ammonia, ammonium chloride, ammonium nitrate, aniline oil, butyl acetate, butyl alcohol, calcium carbide, calcium chloride, calcium cyanamide, calcium cyanide, carbon bisulphide, chloral, chlorine (liquid and gas), chloride of lime, dibutyl phthalate, dicyandiamide, diphenylamine, croton aldehyde, ethyl acetate, ferric chloride, ferrophosphorus, guanidine nitrate, anhydrous hydrogen chloride, liquid hydrogen peroxide, paraldehyde, pentasol acetate, perchlorethylene, yellow phosphorus, amorphous phosphorus, potassium chlorate, sodium acid pyrophosphate, soda ash, sal soda, caustic soda, sodium chlorate, sodium hypochlorite, sodium silicate, salt cake, anhydrous sodium sulphite, sodium metabisulphite, sodium thiosulphite, phosphate of sodium (mono-di-tri-tetra) sulphur monochloride, trichlorethylene, vinyl acetate, vinyl acetate resins, zinc oxide, zinc chloride, zinc dust, plating and galvanizing salts, satin white, 2,4-D, plasticizers, D.D.T., aluminum fluoride, rock wool, cerium, weed killer, etc. Separate production figures are published for sulphuric acid only, as most of the other items were made by less than three firms.

The output of sulphuric acid decreased to 637,094 tons (66° Be) in 1946 from 713,000 tons in 1945. Nine plants were operated by seven companies, as follows: The Consolidated Mining and Smelting Company of Canada, Limited, at Trail, British Columbia; Canadian Industries Limited, at Copper Cliff, Ontario, 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; and the Welland Chemical Works, Limited, at Niagara Falls, Ontario. The first two of these works, at Trail and Copper Cliff, operated entirely on sulphur-bearing smelter gases.

This report was prepared by J. J. Parchelo, Statistician, Metal & Chemical Products.

Table 1 - PRINCIPAL STATISTICS OF THE ACIDS, ALKALIES AND SALTS INDUSTRY, 1936-1946

Year	Number of plants	Average number of employees	Salaries and wages	Cost of fuel and electricity at works	Cost of materials at works	Gross selling value of products at works
			$	$	$	$
1936	20	2,966	3,988,310	2,316,389	4,680,299	18,959,512
1937	21	3,863	4,896,618	2,810,364	6,008,977	22,410,168
1938	24	2,991	4,571,579	2,349,819	5,223,443	20,476,578
1939	25	3,128	5,032,898	2,548,217	6,021,716	23,056,606
1940	27	4,002	6,627,695	3,794,629	8,818,251	31,000,928
1941	32	6,482	11,169,284	5,701,507	17,108,347	50,109,348
1942	35	7,842	14,128,610	7,615,359	23,927,969	65,123,577
1943	38	8,045	15,057,723	8,502,717	27,714,019	78,359,453
1944	37	7,964	15,752,782	8,980,955	29,540,390	81,323,151
1945	35	7,022	14,527,508	8,598,563	22,351,361	67,467,062
1946	29	5,338	11,158,999	6,431,503	14,650,883	47,301,400
Per cent change - 1946 from 1945	..	-24.0	-23.2	-25.2	-34.5	-29.9

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 - PRINCIPAL STATISTICS, BY PROVINCES, 1945 and 1946

Province	Number of plants	Average number of employees	Salaries and wages	Cost of fuel and electricity at works	Cost of materials at works	Gross selling value of products at works
			$	$	$	$
1945						
Nova Scotia	1)					
Quebec	10)	2,527	4,915,785	2,579,289	10,028,454	20,388,800
Ontario	20)					
Alberta	1)					
British Columbia	3)	4,495	9,611,723	6,019,274	12,322,907	47,078,262
CANADA	35	7,022	14,527,508	8,598,563	22,351,361	67,467,062
1946						
Nova Scotia	1)					
Quebec	8)	2,250	4,629,979	1,917,152	6,436,552	19,436,100
Ontario	18)					
British Columbia	2)	3,088	6,529,020	4,514,351	8,214,331	27,865,300
CANADA	29	5,338	11,158,999	6,431,503	14,650,883	47,301,400

Table 3 - EMPLOYEES, SALARIES AND WAGES, BY PROVINCES, 1945 and 1946

Province	Average Number of Employees					Salaries	Wages	TOTAL SALARIES and WAGES
	On Salaries		On Wages		Total			
	Male	Female	Male	Female				
						$	$	$
1945								
Quebec ...	306	96	2,073	41	2,516	1,157,255	3,724,633	4,881,888
Ontario ..	530	244	2,864	173	3,811	1,928,201	5,994,373	7,922,574
Other provinces	83	35	509	68	695	295,020	1,428,026	1,723,046
CANADA..	919	375	5,446	282	7,022	3,380,476	11,147,032	14,527,508
1946								
Quebec ...	287	71	1,855	27	2,240	1,135,460	3,460,782	4,596,242
Ontario ..	358	91	2,296	37	2,782	1,167,754	4,582,143	5,749,897
Other provinces	35	5	276	...	316	132,411	680,449	812,860
CANADA..	680	167	4,427	64	5,338	2,435,625	8,723,374	11,158,999

Table 4 - WAGE-EARNERS, BY MONTHS, 1945 and 1946 (On the last work-day of each month)

Month	1945			1946		
	Male	Female	Total	Male	Female	Total
January	5,538	468	6,006	4,414	77	4,491
February	5,523	460	5,983	4,441	66	4,507
March	5,525	445	5,970	4,377	66	4,443
April	5,575	431	6,006	4,444	63	4,507
May	5,647	414	6,061	4,620	60	4,680
June	5,462	273	5,735	4,677	65	4,742
July	5,532	267	5,799	4,310	65	4,375
August	5,452	200	5,652	4,205	62	4,267
September	5,330	159	5,489	4,172	62	4,234
October	5,290	137	5,427	4,474	63	4,537
November	5,227	121	5,348	4,493	62	4,555
December	5,299	104	5,403	4,497	62	4,559
AVERAGE	5,446	282	5,728	4,427	64	4,491

Table 5 - FUEL AND ELECTRICITY USED, 1945 and 1946

Kind	Unit of measure	1945		1946	
		Quantity	Cost at works	Quantity	Cost at works
			$		$
Bituminous coal -					
Canadian	ton	42,950	258,707	8,504	73,666
Foreign	ton	308,357	2,189,631	193,734	1,392,269
Anthracite coal	ton	696	8,035	841	10,142
Coke	ton	960	11,806	2,825	33,121
Gasoline	Imp.gal.	146,486	32,634	103,950	25,179
Fuel oil	Imp.gal.	2,382,538	162,871	3,329,502	220,851
Gas--Manufactured ...	M cu.ft.	1,180	1,014	324	287
Natural	M cu.ft.	152,342	108,777	1,341	1,010
Other fuel	...	...	225,048	...	194,510
Electricity purchased	K.W.H.	1,310,702,738	5,600,040	553,324,332	4,480,468
TOTAL	...	...	8,598,563	...	6,431,503
Electricity generated for own use	K.W.H.	46,085,413	...	92,374,573	...

Table 6 - POWER EQUIPMENT, 1945 and 1946

Kind	Ordinarily in Use		In Reserve or Idle	
	Number of units	Total rated horse power	Number of units	Total rated horse power
1945				
Steam engines and steam turbines..	50	19,070	15	1,685
Diesel engines	1	38	...	...
Gasoline, gas and oil engines	13	302	3	215
Hydraulic turbines or water wheels	5	10,520	...	...
Total Primary Equipment	69	29,930	18	1,900
Electric motors operated by purchased power	5,738	129,524	973	13,095
TOTAL	5,807	159,454	991	14,995
Electric motors operated by above primary units	1,062	11,861	247	1,055
Stationary power boilers	36	19,529	9	2,197
Motor-generator sets	74	32,427	5	484
1946				
Steam engines and steam turbines..	29	14,586	8	1,128
Diesel engines	1	38	...	...
Gasoline, gas and oil engines	13	347	2	165
Hydraulic turbines or water wheels	5	10,520	...	...
Total Primary Equipment	48	25,491	10	1,293
Electric motors operated by purchased power	4,886	74,219	834	9,377
TOTAL	4,934	99,710	844	10,670
Electric motors operated by above primary units	1,106	11,232	276	1,353
Stationary power boilers	32	12,296	7	1,647
Motor-generator sets	47	31,549k.v.a.	2	309k.v.a.

Table 7 - MATERIALS USED, 1945 and 1946

Material	Unit of measure	1945		1946	
		Quantity	Cost at works	Quantity	Cost at works
			$		$
Acetone	lb.	286,483	28,797	26,595	2,859
Acetylene	lb.	72,411,408	500,930	1,772,070	89,731
Acid -					
Acetic, 99½%	lb.	426	71	20,292	2,309
Hydrochloric (muriatic).	lb.	381,518	5,601	899,262	11,661
Nitric, 42° Be	lb.	867,152	14,681	157,252	8,840
Sulphuric, 66° Be	lb.	13,140,289	97,309	9,887,498	101,827
Aluminum sulphate	lb.	171,367	2,200	182,836	2,420
Ammonia liquor	lb.NH3	655,953	44,841	451,464	31,426
Ammonia, anhydrous	lb.	2,381,493	105,311	2,389,114	107,578
Benzol	lb.	3,441,310	101,041	2,481,981	65,827
Calcium chloride	lb.	1,042,130	16,458	937,380	13,169
Chlorine, liquid	lb.	59,650,708	1,400,618	7,117,816	142,524
Coal (except for fuel) -					
Anthracite	ton	5,678	50,421	3,866	34,094
Bituminous	ton	1,129	11,375	1,150	12,149

Table 7 - MATERIALS USED, 1945 and 1946 (Concluded)

Material	Unit of measure	1945 Quantity	1945 Cost at works	1946 Quantity	1946 Cost at works
			$		$
Coke (except for fuel) -					
Petroleum	ton	87,604	1,185,529	34,361	394,281
Other	ton	225,308	2,703,684	123,098	1,449,616
Electrodes (purchased)	...	...	471,044	...	450,121
Fluorspar	ton	15,571	416,416	14,360	472,812
Graphite	lb.	235,054	37,438	248,674	36,675
Limestone	ton	744,867	1,052,033	667,950	933,061
Lime, hydrated	ton	67,221	103,512	33,832	79,905
Lime, quick	ton	1,266	13,724	1,193	15,219
Mercury	lb.	53,701	93,782	45,005	59,335
Potassium hydroxide (caustic potash)	lb.	1,200	118	248,940	8,191
Pyrites	ton	47,015	261,399	59,874	318,961
Quartz, quartzite and silica sand	ton	26,516	121,434	19,305	87,879
Sodium carbonate (soda ash)	lb.	38,020,505	482,654	28,405,028	361,207
Sodium chloride, dry, and brine (salt content)	ton	303,631	1,092,686	246,012	775,517
Sodium bichromate	lb.	76,078	8,193	65,565	6,360
Sodium hydroxide (caustic soda)	lb.	6,069,932	178,063	3,992,839	121,690
Sodium nitrate	lb.	992,126	26,245	1,036,269	27,688
Sodium silicate (water glass)	lb.	12,128,000	169,704	12,275,725	167,351
Sodium sulphate (salt cake)	lb.	249,205	3,072	133,970	1,671
Sodium sulphide	lb.	180,792	8,750	247,891	14,377
Sulphur (brimstone)	ton	57,294	1,516,423	45,346	1,133,896
Containers of all kinds and packing materials	...	...	1,527,025	...	1,232,592
Steel sheets for making containers	ton	7,037	719,641	4,632	609,651
Lumber	M bd.ft.	...	276,585	233	11,563
All other materials and supplies	...	...	7,502,553	...	5,254,850
TOTAL	...	...	22,351,361	...	14,650,883

TOTAL PRODUCTION OF CHEMICALS IN CANADA

It is very difficult, if not impossible, 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 great number of different industries. Ethyl alcohol, for example, is a product of the distilled liquors industry; methyl alcohol comes under wood distillation; fine chemicals are made in the pharmaceutical 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 which gives a fairly good summary of the total

output as gathered up from all industries, this being shown below. 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 1946 was around $104,023,000 compared with $119,731,000 in 1945.

Table 8 - TOTAL PRODUCTION OF CHEMICALS IN CANADA, 1945 and 1946

Commodity	Selling Value at Works	
	1945	1946
	$	$
Acids, including acetic, muriatic, nitric, sulphuric, phosphoric, and stearic	8,116,000	6,901,000
Calcium compounds, including carbide, chloride, phosphide, cyanamide, cyanide, acid phosphate, grey acetate, arsenate, chloride of lime, etc.	12,573,000	16,049,000
Sodium compounds, including hydroxide, phosphate, silicate, hypochlorite, bisulphite, salt cake, Glauber's salt, chlorate, acid pyrophosphate, soda ash, sal soda, bisulphate, etc. (pharmaceutical salts included elsewhere)	8,600,000	6,459,000
Organic chemicals, including acetic anhydride, butyl acetate, ethyl acetate, paraldehyde, pentasol acetate, vinyl acetate, ethyl alcohol, methyl hydrate, glycerine, phenol, cresol, benzol, etc. (acetic acid and acetylene included elsewhere)	35,189,000	19,260,000
Compressed and liquefied gases, etc., including acetylene, carbon dioxide, oxygen, nitrous oxide, liquid sulphur dioxide, liquid chlorine, anhydrous and aqua ammonia, etc.	12,983,000	11,967,000
Ammonium sulphate, ammonium nitrate (fertilizer grade), ammonium phosphate, and superphosphate*	18,734,000	30,846,000
Other chemicals, 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.	23,536,000	12,541,000
TOTAL	119,731,000	104,023,000

(*)Ammonium nitrate (fertilizer grade) not included in 1945 figures.

Table 9 - IMPORTS INTO CANADA OF ACIDS AND CERTAIN INORGANIC CHEMICALS, 1945 and 1946

Commodities		1945 Quantity	1945 Value	1946 Quantity	1946 Value
			$		$
Acids					
Inorganic acids -					
Acid, boracic, in packages of not less than 25 pounds ...	lb.	3,054,942	165,321	2,447,450	128,698
Acid, hydrofluosilicic	lb.	63,635	10,255	70,661	12,502
Acid, muriatic	lb.	509,087	19,362	726,127	19,719
Acid, nitric	lb.	925,045	49,653	1,267,706	53,877
Acid, phosphoric	lb.	908,392	62,690	354,219	26,473
Acid, sulphuric	lb.	298,635	17,454	331,516	18,670
Acid, arsenic	lb.	5,013,269	185,133	3,775,639	146,092
Acid, chromic	lb.	262,975	48,590	502,611	89,379
Organic acids -					
Acid, salicylic and acety-salicylic	lb.	310,695	114,646	322,874	129,095
Acid, lactic	lb.	960,973	111,946	752,227	72,307
Acid, nicotinic	lb.	1,459	4,985	3,562	8,626
Acid, oleic, or red oil	lb.	...	128,294	460,213	69,008
Acid, acetic and pyroligneous	gal.	329	865	367	668
Acid, citric	lb.	1,089,007	277,131	1,422,806	350,552
Acid, cresylic	lb.	430,726	43,521	280,213	31,963
Xanthates and sulpho-thio-phosphoric (dithio-phosphoric compounds, for concentrating ores, metals or minerals	lb.	3,510,583	757,583	3,767,457	735,367
Acid, oxalic	lb.	622,550	78,852	649,172	75,880
Acid, stearic	lb.	...	167,096	744,214	138,271
Acid, tannic	lb.	35,960	34,333	780,696	117,221
Tartaric acid crystals or powder	lb.	1,044,198	786,652	846,478	515,938
Acid, ascorbic	lb.	2,330	19,939	7,513	64,267
Acid, formic	lb.	466,225	47,826	455,959	46,143
Acid, carbolic, or phenol ...	lb.	3,540,008	353,478	3,862,299	361,085
Acids, other, n.o.p.	lb.	534,471	112,536	2,566,688	220,464
Total Acids	...	...	3,598,141	...	3,432,265
Inorganic Chemicals, n.o.p.					
Alum, in bulk, ground or unground, but not calcined ..	cwt.	10,322	36,203	15,794	47,327
Chloralum or chloride of aluminum	cwt.	10,194	86,684	4,068	31,500
Sulphate of iron (copperas) ...	cwt.	18,349	16,624	23,908	25,937
Sulphate of alumina or alum cake	cwt.	697,666	877,780	538,646	664,095
Ammonia, nitrate of	lb.	167,622	8,718	164,614	7,802
Sal ammoniac	lb.	579,430	19,838	1,468,608	50,380
Sal ammoniac skimmings	lb.	560,892	35,567	168,912	11,524
Ammonia, anhydrous	lb.	338,990	11,962	4,113,103	120,460
Ammonia compounds, n.o.p.	lb.	3,641,141	120,675	3,287,303	136,711

Table 9 - IMPORTS INTO CANADA OF ACIDS AND CERTAIN INORGANIC CHEMICALS, 1945 and 1946 (Continued)

Commodities		1945 Quantity	1945 Value	1946 Quantity	1946 Value
			$		$
Antimony, arsenic, copper, tin and zinc compounds -					
Antimony salts, viz., tartar emetic, chloride and lactate (antimonine)	lb.	102,518	36,728	81,521	24,089
Arsenous oxide and arsenic sulphide	lb.	...	...	500	140
Copper, sub-acetate of, or verdigris, dry, and precipitate of	lb.	400	124	1,142	336
Copper, sulphate of	lb.	6,518,854	417,808	1,352,750	108,965
Tin, bichloride of, and tin crystals	lb.	3,865	1,923	14,910	7,101
Zinc, chloride of	lb.	270,925	16,532	543,183	29,761
Zinc, sulphate of	lb.	825,141	49,854	685,810	26,713
Bismuth and lead compounds -					
Bismuth salts	...	...	11,264	...	12,724
Lead, acetate of, not ground.	lb.	134,521	14,428	120,280	15,200
Lead, nitrate of, not ground.	lb.	146,362	15,244	277,907	34,818
Compounds of tetraethyl lead.	lb.	12,030,857	4,056,553	12,671,641	4,075,721
Bromine, chlorine and iodine compounds -					
Bromine	lb.	3,332	1,918	16,786	4,454
Chlorine, liquid, or chlorine gas	lb.	6,920,561	173,990	9,246,836	205,681
Iodine, crude	lb.	103,828	149,943	103,931	140,558
Iodized mineral salts, for use in the feeding of animals	...	...	1,875	...	5,269
Calcium compounds -					
Calcium arsenate or arsenate of lime	lb.	31,398	2,453	60,056	4,292
Calcium chloride	cwt.	54,850	60,373	63,481	69,737
Chloride of lime	cwt.	3,315	26,095	12,611	105,630
Calcium molybdate, vanadium oxide and tungsten oxide for the manufacture of steel	lb.	8,295	7,850	20,950	15,142
Calcium compounds, n.o.p.	lb.	1,462,474	126,191	1,976,250	201,183
Potash and potassium compounds n.o.p. -					
Argols	lb.	1,704	403	250	135
Cream of tartar in crystals	lb.	339,840	184,074	243,948	104,908
Potash and pearl ash	lb.	143,089	10,845	350,935	20,209
Potash, bicarbonate of	lb.	30,194	5,820	14,645	2,483
Potash, bichromate of, crude.	lb.	209,703	22,249	261,010	27,283
Potash, caustic	lb.	2,639,651	140,006	4,370,143	209,983

Table 9 - IMPORTS INTO CANADA OF ACIDS AND CERTAIN INORGANIC CHEMICALS, 1945 and 1946 (Continued)

Commodities		1945 Quantity	1945 Value	1946 Quantity	1946 Value
			$		$
Potash and potassium compounds n.o.p. (Concluded)					
Potash, chlorate of, not further prepared than ground	lb.	1,758	497	329,630	35,866
Potash, red and yellow, prussiate of	lb.	22,334	6,537	27,530	6,748
Potash, nitrate of, or salt petre	lb.	1,468,060	10,517	820,839	53,155
Potash compounds, n.o.p.	lb.	1,046,955	208,271	815,804	174,012
Soda and sodium compounds, n.o.p. -					
Baking powder	lb.	24	10	...	...
Borax, in packages of not less than 25 pounds, and fused borax known as borax-glass	lb.	11,425,740	329,412	14,512,114	395,431
Glauber salts	lb.	2,032,640	29,452	2,516,125	33,136
Soda, arseniate, binarseniate and stannate of	lb.	47,250	16,980	82,668	15,920
Soda ash or barilla	lb.	4,457,967	91,655	10,691,957	182,614
Soda, bicarbonate of	lb.	15,602,364	243,543	15,814,381	244,934
Soda, bichromate of	lb.	4,128,205	328,527	4,807,285	373,500
Soda, bisulphate of, or nitre cake	lb.	1,799,469	29,851	2,092,780	32,994
Soda, bisulphite of	lb.	52,144	2,028	32,552	1,405
Soda, caustic, in packages	lb.	850,038	41,294	2,961,226	148,613
Soda, caustic, in solution	lb.	21,618,912	216,651	40,819,127	393,131
Soda, chlorate of	lb.	...	...	211,848	13,099
Sodium cyanide	lb.	2,512,388	301,550	3,902,864	435,390
Soda, hyposulphite of	lb.	463,185	17,032	574,310	24,566
Soda, nitrite of	lb.	545,867	24,375	767,164	37,477
Soda, peroxide of	lb.	184,827	32,790	28,104	4,316
Soda phosphate, di-sodium	lb.	180,319	10,962	350,721	22,853
Soda phosphate, tri-sodium	lb.	2,871,762	93,486	5,883,378	189,124
Soda phosphate, n.o.p.	lb.	2,297,845	191,229	5,166,317	349,790
Soda, prussiate of	lb.	318,830	35,509	753,497	83,160
Soda, sal	lb.	113,420	1,633	818,376	12,066
Soda, silicate of, in crystals or in water solution	lb.	3,240,934	75,188	16,338,578	230,906
Soda, sulphate of, crude, or salt cake	lb.	27,069,880	120,982	41,762,452	244,617
Soda, sulphide of	lb.	4,480,635	141,566	6,122,663	189,455
Soda, sulphite of	lb.	612,332	31,000	580,965	24,083
Soda, benzoate of	lb.	166,881	66,441	91,435	38,251
Soda, bromide of	lb.	29,000	7,424	57,100	12,573
Soda, citrate of	lb.	7,275	1,853	40,226	8,489
Soda, fluoride of	lb.	789,795	64,771	538,673	50,819
Soda, antimonate of	lb.	254,000	43,907	228,000	36,668
Sodium compounds, n.o.p.	lb.	13,440,269	1,107,046	17,411,374	1,430,586

Table 10 - IMPORTS INTO CANADA OF ACIDS AND CERTAIN INORGANIC CHEMICALS, 1945 and 1946 (Concluded)

Commodities		1945		1946	
		Quantity	Value	Quantity	Value
			$		$
Other Inorganic Chemicals -					
Acid phosphate, not medicinal	lb.	1,142,848	83,859	1,778,495	120,647
Barium, peroxide of, non-alcoholic, for the manufacture of peroxide of hydrogen	lb.	3,180	374	...	...
Hydrogen peroxides, solutions of	lb.	15,126	3,123	17,244	2,978
Magnesium carbonate, basic or otherwise, excepting crude rock; and magnesium carbonate, for use in the compounding or manufacture of rubber products	lb.	577,247	38,921	742,483	40,994
Magnesium salts or compounds, n.o.p.	lb.	739,657	57,056	1,380,435	80,893
Magnesium sulphate, or Epsom salts	lb.	5,089,470	101,695	6,925,714	132,342
Mercury salts	...	...	9,732	...	2,950
Phosphorus and compounds thereof, n.o.p.	lb.	67,115	60,767	149,976	64,860
Radium	...	...	357	...	17,222
Molybdenum oxide	lb.	180,200	151,991	30,200	23,082
TOTAL INORGANIC CHEMICALS, n.o.p.	...	...	11,270,438	...	12,563,967
Acid, sulphuric	cwt.	224,050	252,857	65,925	56,123
Acids, n.o.p.	cwt.	345,489	2,577,623	273,019	2,004,058
TOTAL ACIDS	...	...	2,830,480	...	2,060,181
Ammonium sulphate	cwt.	3,623,788	6,179,877	3,108,934	5,218,549
Ammonium compounds, n.o.p.	cwt.	99,766	289,606	2,922	21,495
Arsenic	cwt.	60,701	282,718	17,183	74,252
Acetate of lime	cwt.	67,819	219,856	36,750	99,805
Calcium compounds	cwt.	1,218,250	4,027,371	833,631	2,813,471
Lye	...	...	24,026	...	13,719
Baking powder	cwt.	18,876	243,566	11,444	168,173
Soda and sodium compounds	cwt.	1,965,940	5,419,817	1,589,111	4,413,623
Cobalt oxide and cobalt salts.	lb.	555,522	975,035	456,088	608,767
Inorganic chemicals, n.o.p.	...	...	1,202,788	...	356,679
TOTAL OTHER CHEMICALS	...	...	18,864,660	...	13,788,533

LIST OF FIRMS IN THE ACIDS, ALKALIES AND SALTS INDUSTRY, 1946

Name and Location of Plant	Principal Chemicals Made
Dominion Steel & Coal Corp. Ltd. Sydney, Nova Scotia.	Sulphuric acid
Aluminum Company of Canada, Ltd. Arvida, Quebec.	Sulphuric acid; aluminum sulphate (alum); aluminum fluoride.
Canadian Industries Limited, Shawinigan Falls, Quebec.	Perchlorethylene; trichlorethylene; chlorine (liquid and gas); anhydrous hydrogen chloride; sodium hydroxide (caustic soda); hydrogen peroxide; monochlorbenzene; chloroform.
Electric Reduction Co. of Canada, Buckingham, Quebec.	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.
The Nichols Chemical Co. Ltd., Valleyfield, Quebec.	Sulphuric acid; aluminum sulphate; D.D.T. products.
Shawinigan Chemicals Ltd., Shawinigan Falls, Quebec.	Monochloroacetic acid; acetaldehyde; acetic anhydride, acetone; acetylene black; acetylene gas; acetic acid; butyl acetate; butyl alcohol; calcium carbide; dibutyl phthalate; ethyl acetate; pentasol acetate; vinyl acetate; vinyl acetate resins; cerium; chloral; croton aldehyde; paraldehyde.
Zinc Oxide Co. of Canada. Ltd., Montreal, Quebec.	Zinc oxide.
Brunner, Mond Canada, Ltd., Amherstburg, Ontario.	Calcium chloride; sodium carbonate (soda ash)
Canadian Hanson & Van Winkle Co. Ltd., Toronto, Ontario.	Electroplaters' chemicals.

LIST OF FIRMS IN THE ACIDS, ALKALIES AND SALTS INDUSTRY, 1946
(Continued)

Name and Location of Plant	Principal Chemicals Made
Canadian Industries Limited, Hamilton, Ontario.	Hydrochloric (muriatic) acid; sulphuric acid; ammonium chloride; sodium silicate; sodium sulphate (salt cake); sodium sulphite (anhydrous); sodium metabisulphite; sodium thiosulphite; zinc chloride (50% solution); soldering and galvanizing fluxes.
Canadian Industries Limited, Cornwall, Ontario.	Hydrochloric (muriatic) acid; chlorine (liquid); sodium hydroxide (caustic soda); sodium hypochlorite.
Canadian Industries Limited, Copper Cliff, Ontario.	Sulphuric acid.
Canadian Industries Limited, Windsor, Ontario.	Chlorine (liquid); chloride of lime; sodium hydroxide (caustic soda); ferric chloride; sulphur monochloride; sodium hypochlorite.
Church & Dwight Ltd., Amherstburg, Ontario.	Sodium carbonate (sal soda).
Cornwall Chemicals Limited, Cornwall, Ontario.	Carbon bisulphide.
Electro Metallurgical Company of Canada, Ltd., Welland, Ontario.	Calcium carbide.
W. C. Hardesty Co. of Canada Ltd., New Toronto, Ontario.	Hydrogenated stearic acid; hydrogenated tallow fatty acids; tallow fatty acids; cocoanut fatty acids; mixed fatty acids; glycerine; hydrogenated fish oils.
H. S. & T. Crystal Co. Ltd., New Toronto, Ontario.	Satin white.
Naugatuck Chemicals, Division of Dominion Rubber Co. Ltd., Elmira, Ontario.	Aniline; rubber accelerators and specialties; nitrobenzene; D.D.T.; 2,4-D; diphenylamine; plasticizers.

LIST OF FIRMS IN THE ACIDS, ALKALIES AND SALTS INDUSTRY, 1946
(Concluded)

Name and Location of Plant	Principal Chemicals Made
National Silicates Ltd., New Toronto, Ontario.	Sodium silicate; sodium metasilicate.
The Nichols Chemical Co. Ltd., Sulphide, Ontario.	Hydrochloric (muriatic) acid; nitric acid; sulphuric acid; ammonia (aqua).
North American Cyanamid Ltd., Niagara Falls, Ontario.	Calcium cyanamide; calcium cyanide; sodium silicate.
Nuodex Products of Canada, Ltd., Leaside, Ontario.	Lead naphthenate; cobalt naphthenate; manganese naphthenate; zinc naphthenate; copper naphthenate; calcium naphthenate; iron naphthenate; potassium naphthenate.
Watts Chemical Company, Toronto, Ontario.	Zinc oxide; zinc dust.
Welland Chemical Works Ltd., Niagara Falls, Ontario.	Ammonia (anhydrous); ammonium nitrate; dicyandiamide; guanidine nitrate; sulphuric acid.
Consolidated Mining and Smelting Co. of Canada, Ltd., Tadanac, British Columbia.	Hydrofluosilicic acid; sulphuric acid.
The Nichols Chemical Co. Ltd., Barnet, British Columbia.	Sulphuric acid.