Soap and Cleaning Compounds

INDUSTRY PROFILE

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Industrie, Sciences et Technologie Canada

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I N D U S T R Y P R O F I L E

1990–1991

SOAP AND CLEANING COMPOUNDS

FOREWORD

In a rapidly changing global trade environment, the international competitiveness of Canadian industry is the key to growth and prosperity. Promoting improved performance by Canadian firms in the global marketplace is a central element of the mandates of Industry, Science and Technology Canada and International Trade Canada. This Industry Profile is one of a series of papers in which Industry, Science and Technology Canada assesses, in a summary form, the current competitiveness of Canada's industrial sectors, taking into account technological, human resource and other critical factors. Industry, Science and Technology Canada and International Trade Canada assess the most recent changes in access to markets, including the implications of the Canada-U.S. Free Trade Agreement. Industry participants were consulted in the preparation of the profiles.

Ensuring that Canada remains prosperous over the next decade and into the next century is a challenge that affects us all. These profiles are intended to be informative and to serve as a basis for discussion of industrial prospects, strategic directions and the need for new approaches. This 1990–1991 series represents an updating and revision of the series published in 1988–1989. The Government will continue to update the series on a regular basis.

Michael H. Wilson
Minister of Industry, Science and Technology
and Minister for International Trade

Structure and Performance

Structure

The soap and cleaning compounds industry comprises establishments primarily engaged in the manufacture of soap in any form, synthetic detergents, cleansers, washing powders and cleansing preparations, including scouring powders and hand cleaners. It also includes plants that produce household laundry bleaches and bluing.

"Soap" is the term used to describe cleaning products whose starting raw materials are fats and oils of either animal or vegetable origin. These are converted into fatty acids, which are added to an alkali to react chemically in a process known as "saponification," an old and relatively unchanging procedure. The raw soap is then refined, conditioned and mixed with preservatives; then, depending on the end use, ingredients such as perfumes, colourants and disinfectants are added. Soaps represent approximately 10 percent of the value of the industry's shipments.

Synthetic detergents, developed during and after World War II, are also known as "syndets." Their active ingredients are surface-active agents, or "surfactants." As the term suggests, these organic chemical substances reduce the surface tension of water, allowing the water to "wet out" and displace contaminants such as dirt, grease and grime from textiles and surfaces. Surfactants are produced in large part from petroleum chemicals, and detergents represent only one of the markets for surfactants, although an important one. Others include water treatment chemicals, textile chemicals, pulp and paper chemicals, paints, personal care products, agricultural chemicals, oil production chemicals and food processing.

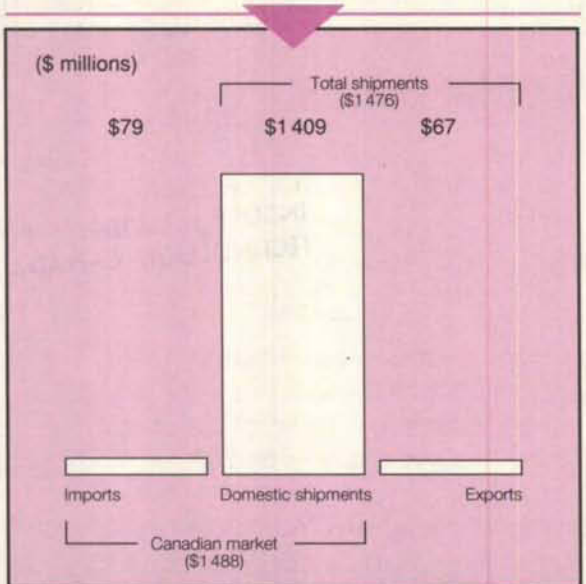

Figure 1 — Imports, Exports and Domestic Shipments, 1988

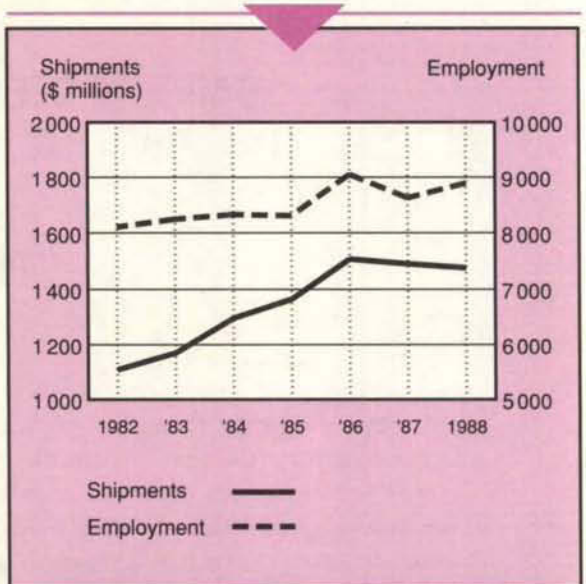

Figure 2 — Total Shipments and Employment

Although surfactants are the most important part of a synthetic detergent formulation, other ingredients are also added, such as "builders" (ingredients that increase the detergent's effectiveness by maintaining the displaced contaminants in suspension), corrosion inhibitors, foam stabilizers, bleaches, enzymes and perfumes. Synthetic detergents represent approximately 55 percent of industry shipments.

Other cleaning compounds include industrial, institutional and domestic cleaning products of various formulations for floors, walls and rugs. Products such as drain cleaners, oven cleaners, bleaches and disinfectants are also included in this group. Together, these other cleaning compounds account for approximately 35 percent of the industry's shipments.

The soap and cleaning compounds industry in 1988 consisted of 145 establishments owned by about 80 firms and employing 8 892 people. Its 1988 shipments totalled $1 476 million (Figure 1). The industry focuses on the Canadian market, with exports representing 4.5 percent of shipments. Imports account for 5.3 percent of the Canadian market. The United States market accounted for 72.8 percent of the total exports in 1988, while 72.0 percent of imports are from the United States.

The industry is concentrated in southern Ontario, where 86 percent of the shipments originate and where 76 percent of the jobs are located.

Subsidiaries of major multinationals account for more than 90 percent of the market. Firms such as Lever Brothers, Colgate-Palmolive Canada, Procter & Gamble and Witco Canada direct most of their cleaning products to the consumer market.

Most of the materials required by this industry are available from Canadian production. The large multinational subsidiaries to varying degrees are integrated both vertically and horizontally. For example, they may produce many of the raw materials they require, such as surfactants. They may also manufacture their own plastic containers and other packaging. These same firms have branched out into other areas, such as food production, personal care products and industrial chemicals.

Smaller firms tend to focus on one or two of the industry's market areas. Thus, they may choose to concentrate on such products as industrial and institutional cleaners, bar soap for hotels and luxury soaps.

Generally, consumer products are marketed through grocery and drugstore systems, while industrial and institutional products are often sold directly by manufacturers. For consumer products, which represent approximately 80 percent of the total market, advertising is considered paramount for success and is estimated to represent as much as 25 percent of the selling price.

Performance

The soap and cleaning compounds market is essentially mature. The growth in shipments through the 1980s (Figure 2) was largely due to inflation. Exports have grown from 2.8 percent of all shipments in 1982 to 4.5 percent in 1988, but are still not significant. Imports

represented 3.0 percent of the Canadian market in 1982 and 5.3 percent in 1988.

The rate of investment for this industry has averaged 4 percent of sales between 1982 and 1988, with an average of approximately 85 percent of investment directed to machinery and equipment. The industry's average net profit from 1982 to 1987 was 4.9 percent of income.

Strengths and Weaknesses

Structural Factors

With minor exceptions, this industry, made up mainly of branch plants of U.S.-based firms, has maintained its share of the domestic market and has not attempted to compete in foreign markets.

Canadian detergent plants are smaller and more diversified than those of their U.S. counterparts. Labour costs are nearly equivalent. The cost of raw materials is higher in Canada for some of the inputs. Canadian markets for individual products are smaller in value, but are geographically larger. As a result, transportation and marketing costs are generally higher in Canada than in the United States. These cost disadvantages are somewhat offset by other costs faced by foreign suppliers to the Canadian market, including import duties, labelling requirements, the metric packaging sizes and product registration requirements, as well as exchange rate fluctuations.

Imports are not significant, consisting mainly of specialized products for which the level of demand is not sufficient to justify Canadian production or samples to be test-marketed on a trial basis. While exports are not important when viewed as a percentage of shipments, some Canadian-owned firms, usually small to medium-sized ones, have been successful in exporting to both the United States and the European Community (EC). These firms usually offer unique products or are able to capitalize on their ability and willingness to produce smaller quantities more efficiently than some of the larger firms.

Trade-Related Factors

Canadian tariff rates, which have been reduced over the years, were originally a major factor in the decisions of foreign companies to establish plants in Canada.

Canadian duty rates for soap and cleaning products (with some exceptions) from countries having Most Favoured Nation status are 12.8 percent. Automatic dishwashing detergents are subject to a 19.4 percent duty. Castile and laundry soaps have tariffs based on weight, amounting to 1.37 cents per kilogram and 2.56 cents per kilogram, respectively. American tariff rates vary from 3.1 percent to 7.7 percent. The EC rate is 6.9 percent, while the Japanese rate varies between 6 and 8 percent, with most items at 6.2 percent.

Most of the products in this industry are directed to the consumer market and, as a result, must meet the labelling requirements of the country in which they are sold. Many of the industrial and institutional products are marketed as germicides and therefore must meet the requirements of the *Pest Control Products Act* and other safety and health legislation and regulations. When markets are relatively small, these requirements can act as a deterrent to importers, who may feel that the results would not repay the extra efforts.

Under the Canada-U.S. Free Trade Agreement (FTA), both countries are phasing out their duties on soap and cleaning compounds imported from each other. The phase-out began on 1 January 1989 and will be completed on 1 January 1993.

Technological Factors

In general, the Canadian industry is not at a technological disadvantage relative to its U.S. counterpart. The international firms make their technology and the results of their research and development (R&D) readily available to their Canadian subsidiaries. The smaller Canadian and regional firms, on the other hand, specialize in meeting particular demands such as those of industrial and institutional markets. They maintain their own laboratories and carry out their own R&D.

Environmental and health considerations have led to new product developments. For example, to reduce the quantity of phosphates that were being dumped into major waterways, low-phosphate detergents were developed. Other important R&D advances for the industry include developing "builders" to replace phosphates and formulating surfactants that are biodegradable. New packaging systems now being introduced are being marketed as "environmentally friendly." For example, liquid cleaners can be purchased in plastic film pouches, which, when emptied, take up little space, thus reducing garbage bulk.

Other Factors

The soap and cleaning compounds industry works closely with government departments, especially those involved in regulatory activities. Laws dealing with the transportation of dangerous goods, the workplace and labelling as well as the *Pest Control Products Act* all affect this industry. Through the Canadian Manufacturers of Chemical Specialties Association, the industry has helped develop these regulations to ensure that the products and processes conform to legislative requirements.

Evolving Environment

Demographic trends and changing consumer demands are fuelling new product development. Manufacturers are adapting these products to meet the needs of a population that includes smaller families, more working women and a greater number of single individuals.

The gradual replacement of powders by liquids in some cleaning processes is another example of how market research can result in new products. Liquids are more easily and accurately measured, dissolve more readily, do not give off irritating dust, do not cake and can be applied undiluted or unmixed for spot treatment. New fabrics demand the development of new types of detergents, incorporating newly developed surfactants and products capable of cleaning effectively in cold water.

The soap and cleaning compounds market is expected to maintain its present growth rate. While the industry will continue to develop new products in response to consumer needs and tastes, additional environmental and safety regulations will have to be met both in Canada and in the United States. Legislation dealing with the disposal of household hazardous waste that is now being developed could include cleaning compounds. For example, the state of Washington has placed soaps and detergents on a preliminary list of hazardous materials.

Pressure to find substitutes to replace phosphates in cleaning compounds will continue to be a priority. Innovation will focus on multifunctional products, especially heavy-duty liquids, combining as many of the following properties as possible: higher concentration; increased effectiveness with all water temperatures, fabric types and soils; and greater convenience. Examples of new agents being considered include polymers and copolymers, which may prove effective in enhancing the activity of "builders" and as antiredeposition agents, which keep the soil from being redeposited on the fabric during the wash cycle.

Several new delivery systems are being marketed, including dissolving packets containing premeasured doses and fabric pieces impregnated with detergent, softener, stain remover and antistatic agents. If these efforts are successful, they could slow the growth in sales of powder and liquid laundry detergents.

The trend toward synthetic toiletry soaps is expected to continue. Growth in this area has been stimulated by the demand for products incorporating enhanced skin-conditioning properties.

The Canadian and U.S. laundry detergent industries are undergoing a dynamic change, largely because of the switch from powders to liquids. Liquids have captured one-third of the market and this may increase to 50 percent by 1995.

Petrochemicals are expected to continue to be the major source of input materials for the foreseeable future. The price fluctuation for some of these items (for example, ethylene oxide) will continue to be an important factor. The industry will attempt to develop new, more effective enzyme systems, such as lipase and cellulase, which will facilitate the removal of all sorts of stains from various fabrics in all water temperatures. The search for a "builder" system that will cost-effectively replace phosphates will continue. Meanwhile, phosphate producers will attempt to make phosphates more environmentally acceptable.

The longer-run effect of the FTA on this industry, while still uncertain, will ultimately depend on how the major multinational firms decide to serve the North American market. Canadian plants currently have greater tariff protection than plants in the United States. Costs are higher in Canada, mainly because of the need to manufacture a large number of products with short production runs.

The FTA would seem to have caused part of the industry to adjust and to rationalize. This has occurred between plants in Canada and the northeastern United States. All of the major Canadian production facilities are located close to large U.S. markets. Lever Brothers and Procter & Gamble have expanded and upgraded their Canadian facilities in order to take advantage of the FTA. Also, Colgate-Palmolive has acquired the bleach division from Bristol-Myers/Squibb, indicating a commitment to strengthen its Canadian presence. Many input materials for this industry are petroleum chemical derivatives, and these will continue to be available in Canada at competitive prices.

The FTA has not had a significant impact on the smaller, Canadian-owned national and regional firms. Such factors as specialized small markets, different labelling and regulatory requirements, different measurement systems, the specialized service component of some of the products and transportation costs may continue to require local production facilities to serve local markets.

At the time of writing, the Canadian and U.S. economies were showing signs of recovering from a recessionary period. During the recession, companies generally experienced reduced demand for their products. Pressures to make longer-term adjustments were also generated; in some cases, the cyclical pressures may have accelerated adjustments and restructuring. With the signs of recovery, though still uneven, the medium-term outlook will correspondingly improve. The overall impact on the industry will depend on the pace of the recovery.

Competitiveness Assessment

With some minor exceptions, this industry does not compete internationally and, until the implementation of the FTA, has served mainly the Canadian market behind a relatively high tariff. Because of the higher costs incurred in producing a wide range of products for a smaller market, Canadian firms have not been cost-competitive with their U.S. counterparts.

The ultimate impact of the FTA may depend largely upon decisions being taken by multinational firms to rationalize production of these products on a North American basis. While it is possible that some of the less efficient manufacturing facilities could be phased out in favour of larger, more efficient American plants, it is now apparent that most of them can and are being upgraded, where necessary, to become competitive.

For further information concerning the subject matter contained in this profile, contact

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PRINCIPAL STATISTICS[a]

	1982	1983	1984	1985	1986	1987	1988
Establishments	133	138	137	133	155	131	145
Employment	8 103	8 242	8 323	8 305	9 050	8 625	8 892
Shipments ($ millions)	1 108	1 169	1 296	1 365	1 507	1 490	1 476
GDP[b] (constant 1981 $ millions)	342.1	350.7	389.8	373.1	376.6	361.5	360.2
Investment[c] ($ millions)	40.0	29.7	63.5	57.9	52.0	69.5	71.0
Profits after tax[d] ($ millions)	88.2	97.4	105.0	128.1	104.1	80.7	N/A
(% of income)	5.6	5.9	5.6	5.1	4.0	3.2	N/A

[a] For establishments, employment and shipments, see *Chemical and Chemical Products Industries*, Statistics Canada Catalogue No. 46-250, annual (SIC 3761, soap and cleaning compounds industry).

[b] See *Gross Domestic Product by Industry*, Statistics Canada Catalogue No. 15-001, monthly.

[c] See *Capital and Repair Expenditures, Manufacturing Subindustries, Intentions*, Statistics Canada Catalogue No. 61-214, annual.

[d] See *Corporation Financial Statistics*, Statistics Canada Catalogue No. 61-207, annual.

N/A: not available

TRADE STATISTICS[a]

	1982	1983	1984	1985	1986	1987	1988[b]
Exports ($ millions)	31	25	27	63	78	57	67
Domestic shipment ($ millions)	1 077	1 144	1 269	1 302	1 429	1 433	1 409
Imports ($ millions)	34	37	39	40	45	56	79
Canadian market ($ millions)	1 111	1 181	1 308	1 342	1 474	1 489	1 488
Exports (% of shipments)	2.8	2.1	2.0	4.6	5.1	3.8	4.5
Imports (% of Canadian market)	3.0	3.1	3.0	3.0	3.0	3.8	5.3

[a] See *Exports by Commodity*, Statistics Canada Catalogue No. 65-004, monthly; and *Imports by Commodity*, Statistics Canada Catalogue No. 65-007, monthly.

[b] It is important to note the 1988 data are based on the Harmonized Commodity Description and Coding System (HS). Prior to 1988, the shipments, exports and imports data were classified using the Industrial Commodity Classification (ICC), the Export Commodity Classification (XCC) and the Canadian International Trade Classification (CITC), respectively. Although the data are shown as a continuous historical series, users are reminded that HS and previous classifications are not fully compatible. Therefore, changes in the 1988 levels reflect not only changes in shipment, export and import trends, but also changes in the classification systems. It is impossible to assess with any degree of precision the respective contribution of each of these two factors to the total reported changes in 1988 levels.

SOURCES OF IMPORTS[a] (% of total value)

	1982	1983	1984	1985	1986	1987	1988
United States	85.5	82.6	80.3	71.9	70.4	75.8	72.0
European Community	9.4	13.7	14.5	22.2	23.6	17.9	20.5
Pacific Rim	1.1	2.1	2.0	1.9	1.9	2.1	1.4
Other	4.0	1.6	3.2	4.0	4.1	4.2	6.1

[a]See *Imports by Commodity*, Statistics Canada Catalogue No. 65-007, monthly.

DESTINATIONS OF EXPORTS[a] (% of total value)

	1982	1983	1984	1985	1986	1987	1988
United States	66.0	70.5	67.7	79.5	86.7	72.5	72.8
European Community	12.8	7.9	10.0	6.4	4.8	9.5	7.1
Pacific Rim	4.1	3.6	2.9	0.4	0.7	3.0	2.9
Other	17.1	18.0	19.4	13.7	7.8	15.0	17.2

[a]See *Exports by Commodity*, Statistics Canada Catalogue No. 65-004, monthly.

REGIONAL DISTRIBUTION[a] (average over the period 1986 to 1988)

	Atlantic	Quebec	Ontario	Prairies	British Columbia
Establishments (% of total)	5	32	45	9	9
Employment (% of total)	X	16	76	X	3
Shipments (% of total)	X	10	86	X	2

[a]See *Chemical and Chemical Products Industries*, Statistics Canada Catalogue No. 46-250, annual (SIC 3761, soap and cleaning compounds industry).
X: confidential

MAJOR FIRMS

Name	Country of ownership	Location of major plants
Boyle-Midway (Canada) Ltd.	United States	Toronto, Ontario
CCL Industries Inc.	Canada	Toronto, Ontario
Colgate-Palmolive Canada Inc.	United States	Toronto, Ontario
Diversey Corporation	Canada	Mississauga, Ontario
Ecolab Ltd.	United States	Mississauga, Ontario
Lever Brothers Limited	United Kingdom	Toronto, Ontario
Procter & Gamble Inc.	United States	Brockville, Ontario Hamilton, Ontario
Witco Canada Inc.	United States	Willowdale, Ontario

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