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SPECIAL CONSULAR REPORTS.

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# ACETIC ACID

IN

# FOREIGN COUNTRIES.

VOL. XXII—PART I.

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REPORTS FROM THE CONSULS OF THE UNITED STATES IN ANSWER  
TO INSTRUCTIONS FROM THE DEPARTMENT OF STATE.

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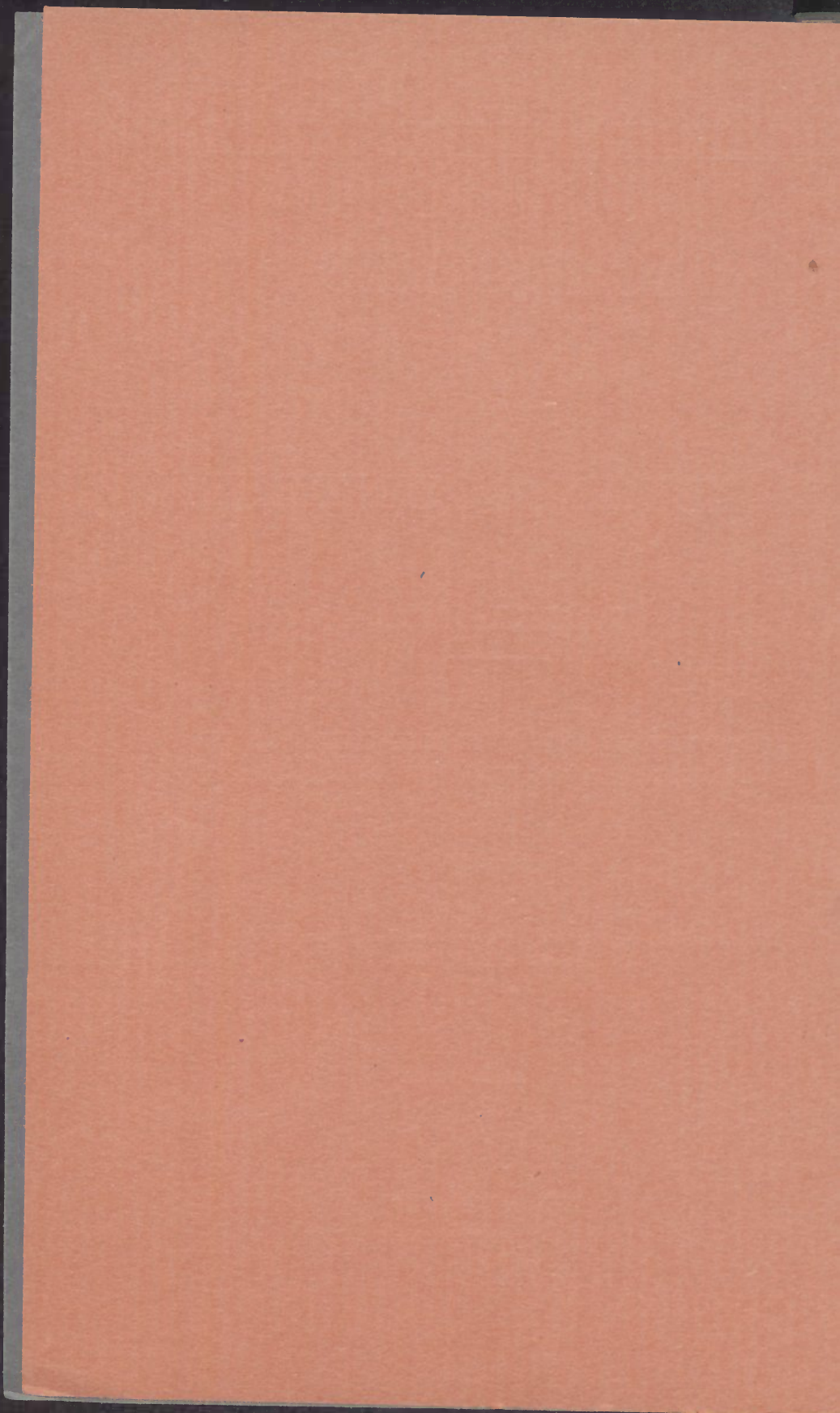
Issued from the Bureau of Foreign Commerce,  
Department of State.

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WASHINGTON:  
GOVERNMENT PRINTING OFFICE.  
1900.

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## PUBLICATIONS OF THE BUREAU OF FOREIGN COMMERCE.<sup>1</sup>

The publications of the Bureau of Foreign Commerce, Department of State, are:

I.—COMMERCIAL RELATIONS, being the annual reports of consular officers on the commerce, industries, navigation, etc., of their districts.

II.—CONSULAR REPORTS, issued monthly, and containing miscellaneous reports from diplomatic and consular officers.

III.—ADVANCE SHEETS, CONSULAR REPORTS, issued daily, except Sundays and legal holidays, for the convenience of the newspaper press, commercial and manufacturing organizations, etc.

IV.—EXPORTS DECLARED FOR THE UNITED STATES, issued quarterly, and containing the declared values of exports from the various consular districts to the United States for the preceding three months.

V.—SPECIAL CONSULAR REPORTS, containing series of reports from consular officers on particular subjects, made in pursuance to instructions from the Department.

Following are the special publications issued by the Bureau prior to 1890:

Labor in Europe, 1878, one volume; Labor in Foreign Countries, 1884, three volumes; Commerce of the World and the Share of the United States Therein, 1879; Commerce of the World and the Share of the United States Therein, 1880-81; Declared Exports for the United States, First and Second Quarters, 1883; Declared Exports for the United States, Third and Fourth Quarters, 1883; Cholera in Europe in 1884, 1885; Trade Guilds of Europe, 1885; The Licorice Plant, 1885; Forestry in Europe, 1887; Emigration and Immigration, 1885-86 (a portion of this work was published as CONSULAR REPORTS No. 76, for the month of April, 1887); Rice Pounding in Europe, 1887; Sugar of Milk, 1887; Wool Scouring in Belgium, 1897; Cattle and Dairy Farming in Foreign Countries, 1888 (issued first in one volume, afterwards in two volumes); Technical Education in Europe, 1888; Tariffs of Central America and the British West Indies, 1890.

The editions of all these publications, except Tariffs in Central America, etc., are exhausted, and the Department is, therefore, unable to supply copies.

In 1890 the Department decided to publish reports on special subjects in separate form, to be entitled SPECIAL CONSULAR REPORTS. There are now the following SPECIAL CONSULAR REPORTS:

Vol. 1 (1890).—Cotton Textiles in Foreign Countries, Flies in Spanish America, Carpet Manufacture in Foreign Countries, Malt and Beer in Spanish America, and Fruit Culture in Foreign Countries.

Vol. 2 (1890 and 1891).—Refrigerators and Food Preservation in Foreign Countries, European Emigration, Olive Culture in the Alpes Maritimes, and Beet-Sugar Industry and Flax Cultivation in Foreign Countries.

Vol. 3 (1891).—Streets and Highways in Foreign Countries. (New edition, 1897.)

Vol. 4 (1891).—Port Regulations in Foreign Countries.

Vol. 5 (1891).—Canals and Irrigation in Foreign Countries. (New edition, 1898.)

Vol. 6 (1891 and 1892).—Coal and Coal Consumption in Spanish America, Gas in Foreign Countries, and India Rubber.

Vol. 7 (1892).—The Slave Trade in Foreign Countries and Tariffs of Foreign Countries.

Vol. 8 (1892).—Fire and Building Regulations in Foreign Countries.

Vol. 9 (1892 and 1893).—Australian Sheep and Wool, and Vagrancy and Public Charities in Foreign Countries.

Vol. 10 (1894).—Lead and Zinc Mining in Foreign Countries and Extension of Markets for American Flour. (New edition, 1897.)

Vol. 11 (1894).—American Lumber in Foreign Markets. (New edition, 1897.)

Vol. 12 (1895).—Highways of Commerce. (New edition, 1899.)

Vol. 13 (1896 and 1897).—Money and Prices in Foreign Countries.

Vol. 14 (1898).—The Drug Trade in Foreign Countries.

Vol. 15 (1898).—Part I. Soap Trade in Foreign Countries; Screws, Nuts, and Bolts in Foreign Countries; Argols in Europe; Rabbits and Rabbit Furs in Europe; and Cultivation of Ramie in Foreign Countries. Part II. Sericulture and Silk Reeling and Cultivation of the English Walnut.

Vol. 16 (1899).—Tariffs of Foreign Countries. Part I. Europe. Part II. America. Part III. Asia. Part IV. Africa. Part V. Australasia and Polynesia. (Parts III, IV, and V not yet published.)

Vol. 17 (1899).—Disposal of Sewage and Garbage in Foreign Countries; Foreign Trade in Coal Tar and By-Products.

Vol. 18 (1900).—Merchant Marine of Foreign Countries.

Vol. 19 (1900).—Paper in Foreign Countries, and Uses of Wood Pulp.

Vol. 20 (1900).—Part I. Book Cloth in Foreign Countries; Market for Ready-Made Clothing in Latin America; Foreign Imports of American Tobacco; Cigar and Cigarette Industry in Latin America. Part II. School Gardens in Europe. Part III. The Slave Trade in Foreign Countries.

Vol. 21 (1900).—Part I. Foreign Markets for American Coal. Part II. Vehicle Industry in Europe. Part III. Trusts and Trade Combinations in Europe.

Vol. 22 (1900).—Part I. Acetic Acid in Foreign Countries.

Of these SPECIAL CONSULAR REPORTS, Australian Sheep and Wool, Cotton Textiles in Foreign Countries, Flies in Spanish America, Fire and Building Regulations, Gas in Foreign Countries, Lead and Zinc Mining, Malt and Beer in Spanish America, Port Regulations, Refrigerators and Food Preservation, Vagrancy, etc., are exhausted, and no copies can be supplied by the Department.

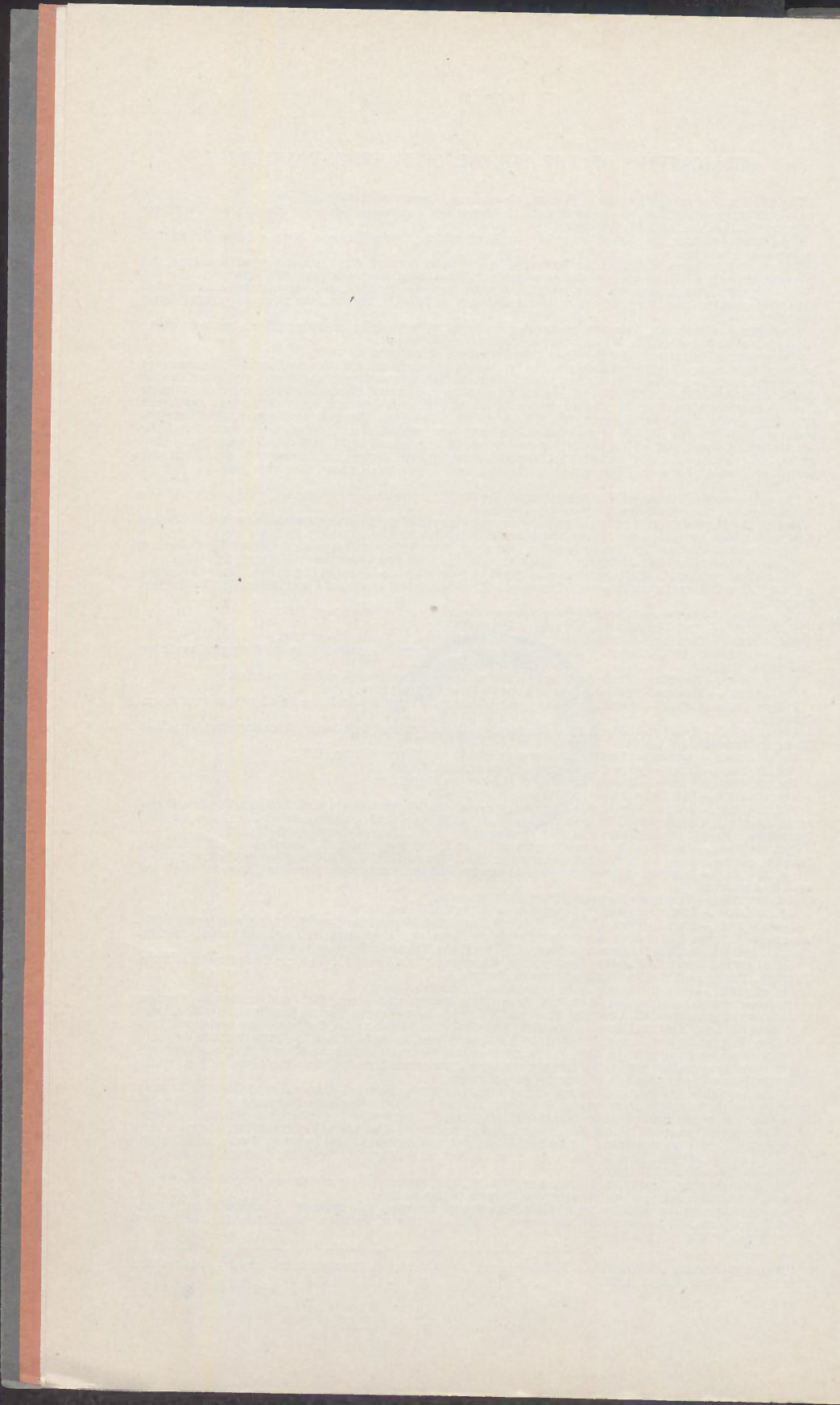
There was also published, in 1899, Proclamations and Decrees during the War with Spain, comprising neutrality circulars issued by foreign countries, proclamations by the President, orders of the War and Navy Departments, and war decrees of Spain.

Of the monthly CONSULAR REPORTS, many numbers are exhausted or so reduced that the Department is unable to accede to requests for copies. Of the publications of the Bureau available for distribution, copies are mailed to applicants without charge. In view of the scarcity of certain numbers, the Bureau will be grateful for the return of any copies of the monthly or special reports which recipients do not care to retain. Upon notification of willingness to return such copies, the Department will forward franking labels to be used in lieu of postage in the United States, Canada, the Hawaiian Islands, and Mexico.

Persons receiving CONSULAR REPORTS regularly, who change their addresses, should give the old as well as the new address in notifying the Bureau of the fact.

In order to prevent confusion with other Department bureaus, all communications relating to Consular Reports should be carefully addressed, "Chief, Bureau of Foreign Commerce, Department of State, Washington, U. S. A."

<sup>1</sup> Formerly Bureau of Statistics. Name changed to Bureau of Foreign Commerce by order of the Secretary of State, July 1, 1897.



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## ACETIC ACID IN FOREIGN COUNTRIES.

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### DEPARTMENT INSTRUCTION.

DEPARTMENT OF STATE,  
*Washington, February 28, 1900.*

*To the consular officers of the United States.*

GENTLEMEN: Under date of the 14th instant a leading chemical house in New York writes as follows to the Department:

In the manufacture of acetic acid we have reached a point at which it is believed a foreign commerce can be started. We would like to learn the following facts:

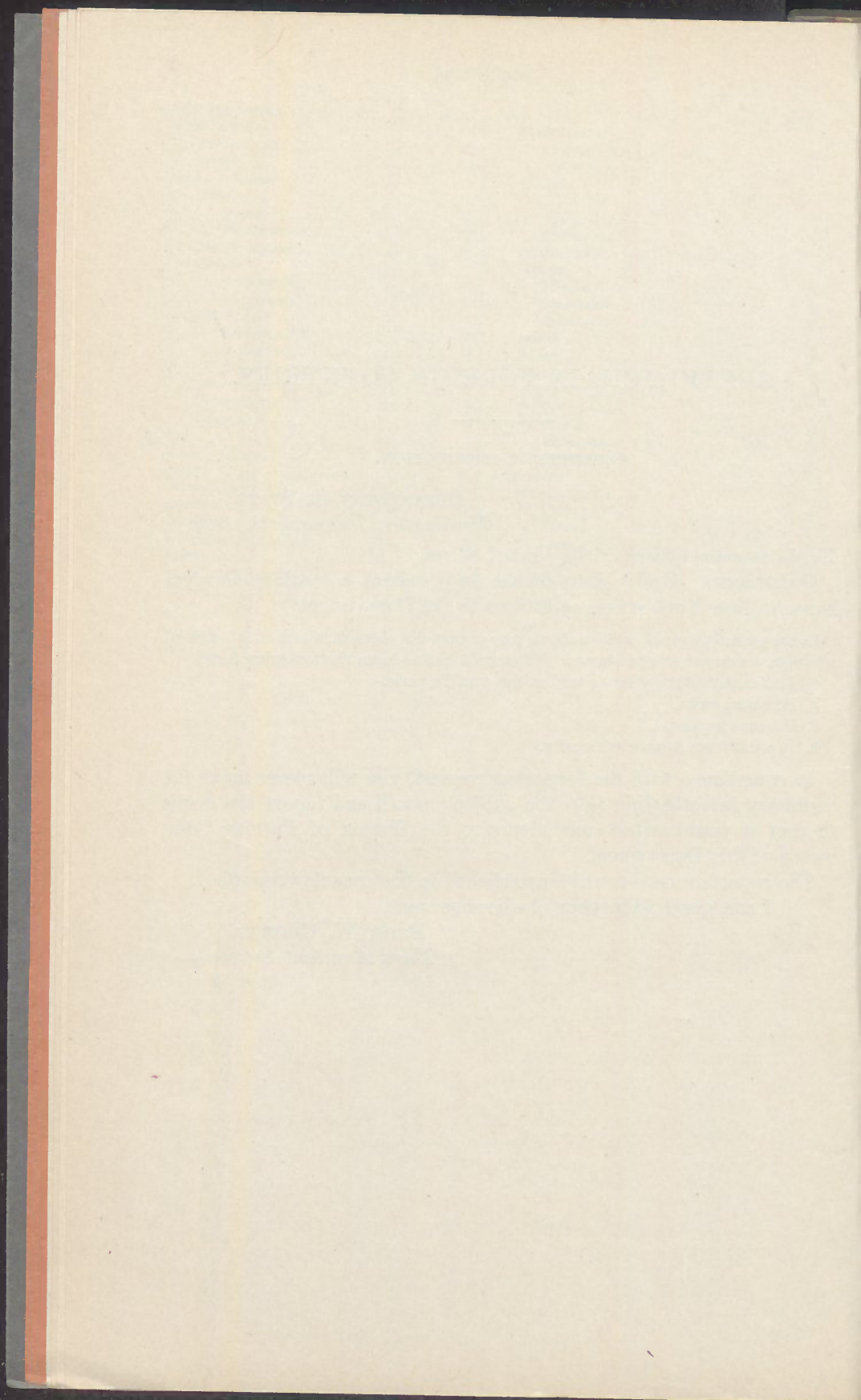
1. The consumption of acetic acid at the world's ports.
2. Its ruling price.
3. Whence imported.
4. In what form demanded locally.

In compliance with the foregoing request, you will please make the necessary investigation into the subject named and report the result thereof at your earliest convenience to the Bureau of Foreign Commerce of this Department.

The reports received will be published in the consular reports.

I am, gentlemen, your obedient servant,

THOS. W. CRIDLER,  
*Third Assistant Secretary.*



## EUROPE.

### AUSTRIA-HUNGARY.

#### BUDAPEST.

Ferdinand Neruda, the leading dealer in chemicals in this city, informs me as follows with respect to the acetic acid trade in the Kingdom of Hungary:

*Consumption.*—Acetic acid is in considerable demand in Hungary, wherein there are two factories supplying the same.

*Price.*—The price of 100° acetic acid to-day (acid acetic glaciale) is 92 crowns (\$18.68) per 100 kilograms (220.46 pounds).

*Whence imported.*—The two factories mentioned are the "Klotild" chemical factory at Nagy Bócsko and Moritz Pálffy & Co., at Szómolány, Hungary; also import acetic acid from Austrian Silesia.

*Form in demand.*—Hungarian chemical houses use 100° crystal, while vinegar manufacturers buy 60° and 40° and dilute it for table vinegar.

FRANK DYER CHESTER, *Consul.*

BUDAPEST, April 9, 1900.

#### PRAGUE.

*Consumption.*—As no statistics of the consumption of acetic acid are kept here, no definite amount can be given, but it seems to be the general opinion of those dealing in acetic acid that there are consumed about 660,000 pounds.

*Price.*—The average ruling price for acetic acid, 80 per cent pure, during the last years has been 30 florins per 100 kilograms (\$12 per 220.46 pounds).

*Whence imported.*—The refineries producing acetic acid are situate in Hungary, Slavonia, and Bosnia.

*Form in demand.*—Acetic is sold in a concentrated chemically pure form, being 80 per cent pure.

HUGO DONZELMANN, *Consul.*

PRAGUE, June 7, 1900.

#### REICHENBERG.

*Consumption.*—Immense quantities of acetic acid are used in this consular district. It is impossible to say how much, no statistics being

available. The consumption is chiefly in dye works connected with cloth factories, of which there are several hundred in the district.

*Price.*—The price of acetic acid is 24 to 30 crowns per 100 kilograms for common (\$4.87 to \$6.09 per 220.46 pounds), and 56 crowns per 100 kilograms for refined (\$11.37 per 220.46 pounds).<sup>1</sup>

*Whence imported.*—Most of the acetic acid comes from the city of Aussig, on the Elbe, within this consular district. The remainder comes from other parts of the Empire. None is imported.

*Form in demand.*—The only form in which acetic acid is used in this district is liquid.

FRANK W. MAHIN, *Consul.*

REICHENBERG, *April 25, 1900.*

### TRIESTE.

*Consumption.*—The consumption of acetic acid at this port is only about 200 quintals (44,000 pounds) a year. In this connection, however, it should be noted that a large quantity of wine vinegar is consumed among the better classes here. This is a wine-producing country, and as the wine is not always properly cared for a comparatively large portion of it turns into vinegar. This vinegar is preferred to the chemical product on account of its better flavor or aroma and supposed greater wholesomeness. The acetous fermentation of poor wine is as a rule not a source of loss to its owner, for thoroughly sour wine vinegar is worth more than half sour wine.

*Price.*—Acetic acid is bought at present at from 24 to 26 florins (\$9.74 to \$10.26) per quintal (220.46 pounds). It comes in large flasks containing from 25 to 50 kilograms (55 to 110 pounds), and the cost of the flask is included in the price. The present quotations are considered abnormally low. The average price last year was 38 florins (\$15.43) per quintal. It is generally believed that when the present hard strife among the manufacturers comes to an end, there will be an advance over even last year's price.

*Whence imported.*—The article is brought hither from the Austrian province of Bohemia. The principal manufacturers are Dr. Julius Smelzer, at Teplitz, and L. Erzinger's Fabriken, at Aussig.

*Form in demand.*—The strength of acetic acid demanded in this market is 80 per cent, and the prices given are for this degree of purity. There are also small quantities of the chemically pure acid used here in certain arts, as well as for scientific purposes.

*Duty.*—The Austrian import duty on acetic acid is 20 florins gold (\$9.74) per quintal (220.46 pounds).

FREDK. W. HOSSFELD, *Consul.*

TRIESTE, *April 21, 1900.*

<sup>1</sup> It will be noted that there is a disparity in the prices quoted in the various reports. The consuls probably refer to different grades; the markets also are doubtless influenced by local conditions.

## VIENNA.

*Consumption.*—Acetic acid is demanded locally in the pure concentrated form, as vegetable acid, as glacial acetic acid for the preparation of vinegar for consumption, and as subacetate. Its uses are manifold. Diluted, in the form of vinegar, it is employed as an article of food and to conserve raw fruits and vegetables. As vegetable acid it is used for the impregnation of ligneous earth and ropes, also as an anti-septic. The largest part, however, is used in the manufacture of glacial acetic acid and of subacetates. These salts, as, for instance, subacetate iron or subacetate aluminium, are largely used as mordants in dyeing and calico printing.

Exact statistics as to the amount of consumption in this district are not obtainable, but it exceeds several hundred thousand pounds. There are two large factories in Vienna where this article is produced, that of Victor Alder, X, Humboldtgasse, 33, and that of Wilhelm Neuber, VI, Brückengasse, 1, and a factory in Trzynitz, Silesia, owned by Emil Friedel. The exports are far in excess of the imports, as shown in the appended tables.

*Price.*—The ruling price is 6 cents a pound wholesale and 11 cents retail.

*Imports.*

Whence imported.	Quantity.	Value.
	<i>Tons.</i>	
Germany.....	6.8	\$1,008.00
Italy.....	.4	64.00
Switzerland.....	.1	16.00
1898.....	7.3	1,168.00
1897.....	4.1	656.00
1896.....	4.4	880.00
1895.....	5.6	1,232.00
1894.....	6.6	1,584.00

During the first half of 1899, 4.6 tons were imported from Germany, valued at \$736.

*Exports.*

Whither exported.	Quantity.	Value.
	<i>Tons.</i>	
Bulgaria.....	12.7	\$1,930.40
Egypt.....	.1	14.80
France.....	12.9	1,857.60
Germany.....	94.4	12,838.40
Great Britain.....	283.2	38,515.20
Greece.....	.6	88.80
Hamburg (free zone).....	2.5	370.00
Italy.....	4.	592.00
Montenegro.....	.3	44.40
Romania.....	18.2	2,766.40
Russia.....	5.8	858.40
Servia.....	1.6	236.80
Trieste (free zone).....	1.5	222.00
Turkey.....	3.4	503.20
1898.....	441.2	60,838.40
1897.....	285.5	43,396.00
1896.....	215.	34,400.00
1895.....	133.2	23,976.00
1894.....	114.3	23,856.00

During the first half of 1899, 313.3 tons, valued at \$47,621.60, were exported to Great Britain, Germany, Italy, Roumania, and Servia, of which quantity 252.8 tons went to Great Britain.

CARL BAILEY HURST, *Consul-General*.

VIENNA, *April 18, 1900.*

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## BELGIUM.

### ANTWERP.

*Consumption.*—The consumption of acetic acid in this consular district, as far as can be learned from the leading dealer in chemical products located in this city, is very little, commercially speaking. He estimates the consumption for the whole of Belgium at about 661,380 pounds per annum. Of this quantity about 551,150 pounds, at a strength of about 40°, is used for industrial purposes and in the manufacture of chemicals, etc., and about 110,230 pounds at a strength of 80° in the manufacture of vinegar.

As far as can be learned, there is no manufacture of acetic acid in this consular district, and the most of that in use here comes from manufacturers located at Ghent.

*Price.*—The prices rule at about \$3.86 per 220.46 pounds for the variety at a strength of 40°, and about \$15.44 per 220.46 pounds for that at a strength of 80°.

*Whence imported.*—As far as can be learned, there is very little imported and, inasmuch as the custom-house here does not classify this article specifically, but includes it under the rubric of divers chemical products, it is impossible to ascertain officially and definitely the exact quantity. It is stated, however, by the firm above referred to that the quantity is very small and scarcely worthy of being taken into consideration commercially. What little is imported comes from Germany, and that over 40° in strength pays a duty of \$14.47 per 26.417 gallons.

GEO. F. LINCOLN, *Consul-General*.

ANTWERP, *April 14, 1900.*

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### BRUSSELS.

*Consumption.*—There are no records showing the amount of acetic acid consumed in this consular district. The annual consumption of acetic acid in Belgium is about 400,000 kilograms (881,840 pounds); 300,000 kilograms (661,380 pounds) at a strength of 40 per cent for industrial purposes, and 100,000 kilograms (220,460 pounds) at a strength of 80 per cent for the manufacture of vinegar.

*Price.*—The wholesale price is 80 francs (\$15.44) per 100 kilograms net, not including the duties. Retail price is from 2.30 to 2.50 francs (45 to 49 cents) per kilogram (2.2046 pounds).

*Duty.*—The duty on acetic acid coming into Belgium is as follows: Of a strength above 40°, 75 francs (\$14.48) per hectoliter (26.417 gallons), and for crystallized, 187½ francs (\$36.19) per 100 kilograms (220.46 pounds).

*Whence imported.*—The most prominent manufacturer of acetic acid in Belgium is the Usines des Moulins, at Ghent. Germany is the only country from which acetic acid is imported into Belgium. In 1898, 176 kilograms (387 pounds) of crystallized acetic acid were imported into this consular district for consumption, and in 1899, 277 kilograms (609 pounds).

*Form in demand.*—The acetic acid used in this district is demanded in the crystallized form. It is used in the manufacture of vinegar, industrial and chemical purposes, and in the manufacture of dyes and sulphate of lead.

GEO. W. ROOSEVELT, *Consul.*

BRUSSELS, April 4, 1900.

#### GHENT.

*Consumption.*—I am unable to obtain any positive figures as to the consumption of acetic acid in this city or consular district, but I am informed by credible persons in the trade that the consumption is large. The statistics of the port of Ghent for 1899 give an importation of 4,500 kilograms (9,921 pounds) and an exportation of 49,203 kilograms (108,473 pounds). It is said that the importation and exportation by rail, of which no statistics are to be had, are considerably more than that by water.

*Whence imported.*—Acetic acid is imported from Germany. There is also a small quantity imported from France. It is manufactured to quite an extent in this city, but of a very inferior quality. The largest producer, the "Usines des Moulins," exports almost its entire production to Switzerland, where it is employed for dyeing and coloring purposes.

*Price.*—The ruling prices at the factory of the following brands are: E. Merck (German), 99–100° (crystallized), varying according to quantity purchased, from 92 to 97 francs (\$17.76 to \$18.72) per 100 kilograms (226.46 pounds); E. DeHaën (German), 99–100° (crystallized), from 80 to 85 francs (\$15.44 to \$16.41); Usines des Moulins, 40°, from 115 to 125 francs (\$22.20 to \$24.13). Railroad freight rates from Darmstadt to Ghent, 6.50 francs (\$1.25) per 100 kilograms (220.46 pounds); from List, 5.50 francs (\$1.06).

Tariff is graded according to degree of acid.

If destined for industrial use, entry is free.

*Form in demand.*—Acetic acid is chiefly employed here for making vinegar.

RICHARD LE BERT, *Consul*.

GHENT, *April 6, 1900.*

## FRANCE.

### BORDEAUX.

*Consumption.*—While there are no manufacturers of acetic acid in this district, the acid used is said to be entirely of French manufacture.

*Price.*—The price of acetic acid used in the manufacture of vinegar is 1 franc (19. 3cents) per kilogram (2.2046 pounds); for crystallized, 4.50 francs (86.8 cents) per kilogram.

*Form in demand.*—The local demand is in two forms: Commercial, for making vinegar, which is largely exported to the United States; and concentrated and crystallized for lotions, etc.

ALBION W. TOURGEE, *Consul*.

BORDEAUX, *April 26, 1900.*

### HAVRE.

*Consumption.*—The consumption of acetic acid in the consular district or the port of Havre is not very easy to ascertain. No statistics are kept of such consumption, and several wholesale dealers in drugs and chemicals whom I have interviewed are unable to give me even an approximate estimate. It is, however, employed on a very large scale in France for the same purpose as in the United States, namely, for making vinegar. Its use for medicinal purposes is almost nil.

*Price.*—The wholesale prices of acetic acid quoted by the leading French manufacturers of that article are as follows:

	Per 220.46 pounds.
Crystallizable (crystals, pure) .....	\$27. 02
80 per cent solution .....	20. 25
40 per cent solution .....	10. 60
33 per cent solution .....	5. 40

These prices are without discount.

*Whence imported.*—During the year ended December 31, 1899, no acetic acid was imported into Havre for consumption in France, though 18,646 pounds of the article came through in transit to be transshipped. Of this quantity, 2,103 pounds came from Germany and 16,543 pounds from Belgium.

*Form in demand.*—The acetic acid most in demand for commercial purposes is the 40 per cent solution, which, on being mixed with a little more than three parts of water, makes wholesome vinegar.

*Duty.*—There are two rates of duty on acetic acid entering France. First, the duty levied on acid which, on passing through the custom-house, is treated by a process which renders it useless for the purpose of making vinegar. This process, which must be performed under the supervision of a customs inspector, consists of adding to the acetic acid one-quarter of 1 per cent of its volume of wood tar, or one-half of 1 per cent of its volume of phenic acid. Second, the duty levied on acetic acid imported for making vinegar, said duty being nothing more nor less than the duty on vinegar itself.

The two rates of duty mentioned are given below. These rates, taken from the maximum tariff, are applicable to acids coming from the United States. The minimum tariff applicable to acetic acid from countries having a reciprocity agreement with France is just one-half of the maximum tariff.

*Customs duty on acetic acid rendered unfit for vinegar making.*

Per 220.46 pounds:

Acid containing less than 40 per cent of crystallizable acid .....	\$1.93
Acid containing from 40 per cent to 80 per cent of crystallizable acid.....	3.86
Acid containing over 80 per cent of crystallizable acid.....	5.79

*Customs duty on acetic acid intended for vinegar making.*

Per 26.418 gallons:

Solutions containing 8° or less of crystallizable acid.....	\$1.54
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Per degree and per 26.418 gallons:

Solutions containing over 8° of crystallizable acid .....	.193
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*Freight.*—The freight on acetic acid from New York to Havre by the cargo boats of the Compagnie Générale Transatlantique would be 26½ cents per 100 pounds.

A. M. THACKARA, *Consul.*

HAVRE, May 17, 1900.

NICE.

About 2,000 kilograms (2 tons) of acetic acid are consumed at this port each year.

It is brought here from Marseilles and Paris, and there are no means of ascertaining if it is manufactured at those points; but buyers here consider the product to be "French acetic acid." It is purchased in liquid form, but crystallizable, of good taste, and of full strength (100°), which is about 35° to 40° over proof according to the French scale. In this shape, buyers pay 2 francs (38.6 cents) per kilogram (2.2046 pounds) at Nice, exclusive of excise tax, which is also paid by the buyers.

The acid is crystallized here and reduced to 26° (French scale) of strength, and it is retailed in this form.

HAROLD S. VAN BUREN, *Consul*.

NICE, *February 28, 1900.*

#### LYONS.

*Consumption.*—It is estimated that between 500 and 600 tons of acetic acid are consumed annually in the Lyonnese region, including the territory between this city and Marseilles known as the southwest of France.

*Price.*—The ruling prices are:

	Per 220.46 pounds.
35 per cent of acid.....	\$5.79
40 per cent of acid.....	6.18
80 per cent of acid.....	19.30

*Form in demand.*—It is demanded in Lyons in the form of 40 per cent strong. In dying silk, it is diluted. It is produced in all the large cities in France; but little, if any, is imported. When imported it is always so treated as to prevent its being used as vinegar.

Since preparing the foregoing I have received a letter from M. Cartier, the president of the combined chemical mills of the Rhône, relative to the customs duties on acetate of lime. He says:

Pure acetate of lime is, under the rule applying to nonenumerated products which have not an alcohol basis, paying a duty of 5 per cent ad valorem.

Acetate of lime of commerce (pyrolignite of lime) pays a customs duty of 2 francs (38.6 cents) per 100 kilograms (220.46 pounds) on the crude weight.

JOHN C. COVERT, *Consul*.

LYON, *April 7, 1900.*

#### MARSEILLES.

Comparatively little can be learned at Marseilles on the subject of acetic acid. The article is not an important one, commercially speaking, at this port, and as the stock purchased for this city arrives by rail from the interior, the amount entered for local consumption is difficult to estimate. The point of supply is the region about Lyons and a section in the north of France, near Paris. Homemade acetic acid, known as "bon gout" (good taste), 80°, at present sells for \$22.19 per 220.46 pounds in bond, but is subject to an additional duty of \$19.68 per 220.46 pounds for excise taxes and octroi duty when con-

sumed here. American acetic acid would be obliged to pay these taxes, and in addition the import duty,<sup>1</sup> that is, on comparatively pure acetic acid (crystallizable) of 93°, 93 francs (\$17.94) per 100 kilos.

ROBERT P. SKINNER, *Consul-General*.

MARSEILLES, April 26, 1900.

### PARIS.



*Whence imported.*—Ordinary acetic acid is imported into France principally from Belgium. Switzerland and Algeria furnish comparatively small quantities.

The Government publication issued in 1898 for the year 1897 gives the following in reference to acetic acid imported for actual use in France:

	Pounds.
From Belgium .....	746,964
From Switzerland .....	3,714
From Algeria .....	378
From other countries .....	1,683
Total .....	752,739

representing a value of \$19,811.

On this, the duty paid amounted to \$3,337.

The following statement gives the quantities and values of acetic acid imported into France during the last three years:

Year.	Amount.		Value.	
	Kilos.	Pounds.	Francs.	Dollars.
1897 .....	342,154	752,739	102,647	19,811
1898 .....	435,992	959,182	87,198	16,829
1899 .....	400,000	880,000	80,000	15,440

*Forms in demand.*—Acetic acid is used in the preparation of eatables and also in the arts, and is delivered in ("tourie") carboys, and also in petroleum tanks. The carboys are charged at 5 francs each, which amount is refunded upon their return.

*Prices.*—The kinds of acid used and the prices are as follows, per 220.46 pounds, net:

In the preparation of eatables and in the arts: 100°, \$26 to \$30; 80°, \$22, the price varying according to quality and taste. For use in the industries: 40°, \$6.56; 35°, \$6.18.

The 35° and 40° are ordered in the greatest quantities.

JOHN K. GOWDY, *Consul-General*.

PARIS, June 7, 1900.

<sup>1</sup> See Havre report for customs duties.

## ROUBAIX.

*Consumption.*—The use of acetic acid is becoming more extensive in Roubaix on account of its replacing sulphuric acid advantageously for dyeing purposes. It is said to fix the dyes much better, and gives them a finer luster. It is probable that the increasing demand will result in the establishment of a depot for this acid in Roubaix, the acid not being manufactured in this district.

It is impossible to give the exact figure of importation of acetic acid into Roubaix, as it is classed with chemicals.

*Forms in demand.*—This acid is always put up in barrels. It is used for dyeing purposes, and sometimes in the manufacture of vinegar. The most extensive use, however, is in the manufacture of white lead.

*Price.*—The selling price is 28 francs per 100 kilos for orders of 5,000 kilos, less 3 per cent discount.

W. T. ATWELL, *Consul.*

ROUBAIX, *April 30, 1900.*

## GERMANY.

## THE ACETIC ACID INDUSTRY.

Acetic acid ( $C_2H_4O_2$ ) is made in Germany from wood by destructive distillation. When wood is so distilled it produces gases 20 to 35 per cent, tar 3 to 9 per cent, wood vinegar 35 to 45 per cent, and charcoal 20 to 30 per cent. The wood vinegar contains the acetic acid.

The wood is distilled in iron retorts in the same method as that for producing illuminating gas, at a temperature not exceeding  $500^{\circ}C$ .

The resulting products pass through an iron pipe leading from the top of the retort into the condenser. The acetic acid, tar, methyl alcohol, and acetone are condensed and flow into a receiver, where the tar sinks to the bottom, while the lighter portion, containing the acetic acid, passes on to a second receiver. The gas from the distillation is allowed to escape by another tube into the air or is stored for use as fuel under the retorts.

These receivers are made of wood in the smaller factories; in the large plants they are built of cement-like cisterns in the ground. The product which is caught in the second receiver consists of acetic acid, wood, naphtha, acetone, and various other substances, and must be further distilled in order to separate the acetic acid.

The acid so obtained is still crude and contaminated with tarry substances. Now comes the purification. There are two methods:

First. The solution containing the crude acid is treated with lime,

which forms a precipitate of calcium acetate. This is subjected to a roasting process, which expels the organic matter, then treated with hydrochloric acid and distilled in a copper still. The pure acetic acid comes over into the receiver and calcium chloride is left behind.

Second. The second method of obtaining the acid pure is by the use of Glauber salts (sodium sulphate).

The crude acid is treated with the sodium sulphate, forming a sodium acetate. This sodium acetate is purified by crystallization and dried. It is then treated with sulphuric acid and distilled. The acetic acid issues pure, leaving the sodium sulphate behind.

#### LITERATURE ON THE SUBJECT.

Further information can be obtained from the *Handbuch der Chemischen Technologie*, von Rudolf Wagner, Leipzig, 1899, and from an article on the "Modern distillation of wood," republished in the weekly periodical published by Paul Parey, No. 10 Hedemannstrasse, Berlin, S.W., entitled "Die deutsche Essig Industrie, No. 11, March 14, 1900, and No. 12, March 21, 1900, and which appeared originally in No. 7 of the *Zeitschrift für angewandte Chemie*," 1900. The last mentioned article not only applies to the manufacture of acetic acid, but also to the by-products, acetate of lime, methyl-alcohol, acetone, and charcoal, and will be found full of interesting details as to kind of plant and materials used and expense of manufacture.

#### IMPORTS AND EXPORTS.

The following statement of the imports and exports of vinegar, acetic acid, etc., compiled from the registry of the imperial statistical office of customs, is taken from the weekly magazine of the German vinegar industry above referred to. Separate statistics of acetic acid are not given:

##### *Imports into Germany.*

Whence imported.	1899.	1898.
In barrels:		
France .....	18,108	16,584
Italy .....	2,424	1,836
All other countries .....	1,128	1,800
Total in barrels .....	21,660	20,220
In bottles:		
France .....	972	208
England .....	48	60
Other countries .....	2	36
Total in bottles .....	1,022	304

*-Exports from Germany.*

Whither exported.	1899.	1898.
In barrels:		
Belgium .....	84,504	92,652
Great Britain .....	51,948	72,156
Netherlands .....	32,100	38,496
Other countries .....	124,044	128,124
Total in barrels .....	292,596	331,428
In bottles:		
Great Britain .....	40,308	51,684
Japan .....	38,448	11,172
Switzerland .....	31,584	29,832
Spain .....	20,160	11,976
Belgium .....	19,884	9,828
Netherlands .....	19,740	12,648
Argentine .....	15,552	7,332
Other countries together .....	84,204	104,220
Total .....	269,880	238,692

A small quantity is exported in casks, and the exports in glass steadily rise. The export in casks to the Netherlands is somewhat greater, but that to Belgium and Great Britain is less. The export in bottles to Great Britain shows a decrease, while the same to the other six markets shows an increase. The three chief markets for vinegar, acetic acid, etc., are Belgium, Great Britain, and the Netherlands. The increase in the export to Japan and the Argentine Republic is worthy of note.

The manufacture of acetic acid in Brunswick is not important. There is only one factory in this city, where it is produced in a limited quantity, namely, in the Chemische Fabrik Eisenbütte. The price is regulated by the quantity of acid: 220 pounds, 80 per cent acetic acid, \$12.38; 220 pounds, 100 per cent acetic acid, \$16.66.

TALBOT J. ALBERT, *Consul.*

BRUNSWICK, *April 26, 1900.*

The following has been received from Consul-General Guenther of Frankfort:

In order to obtain the information asked for, I addressed the Association for Chemical Industry, of Frankfort on the Main, and the Chemical Department of the German Gold and Silver Refining Company, of the same place, firms which have frequently furnished valuable technical information to this office.

I herewith give their reply in translation:

[From the Association for Chemical Industry.]

FRANKFORT ON THE MAIN, *April 2, 1900.*

In response to your esteemed request of March 30 we would respectfully say, that the consumption territory of acetic acid in Germany is an exceedingly large one and of such a nature that one can not well speak of most important places. A line

must also be drawn between articles intended for consumption as food and those employed for technical purposes. For this reason and on account of the varying strength of acetic acid, it is impossible to arrive at an average price. There exist in Germany at present a large number of factories which export a considerable over-production and have made the home prices so low that the freight charges for a few hundred kilometers play an important rôle. This in conjunction with the tariff renders importation into Germany impossible. In view of these circumstances, we are not in a position to give you more detailed information.

[From the Deutsche Gold and Silber-Scheideanstalt.]

FRANKFORT ON THE MAIN, April 2, 1900.

It gives us great pleasure to comply with your request contained in your favor of the 30th ultimo.

It seems to us, however, that a mistake exists, and the belief that acetic acid is imported into Germany is erroneous. Quantities of acetic acid worth mentioning are not imported; not because a low protective tariff prevents importation, but because the highly developed chemical industry of Germany has established a correspondingly large manufacture of acetic acid in the Empire, which not only fully supplies the German market, but masters the export trade in large dimensions also. An estimate of the consumption of acetic acid in the various forms is, according to our opinion, impossible.

The various forms in which acetic acid is furnished are: Technical acetic acid, from 30 per cent to 100 per cent; chemically pure acetic acid. It would therefore be impossible to arrive at an average price for the article.

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#### BAVARIA.

Acetic acid is chiefly manufactured in Germany by the dry distillation of wood.

Acetic acid in the liquid state is not imported into Bavaria, but is exported.

The chemical factories in Germany which manufacture acetic acid obtain this product by distillation of holzessigsaurer kalk (calcium aceticum crudum) with sulphuric acid.

The chemical factories in my consular district do not import calcium aceticum crudum, but I am informed that the following German firms are importing the same from either the United States or Russia, viz: Hartmann & Hauers, Hanover; E. De Haen, List, near Hanover; Hugo Blank, Berlin; Actiengesellschaft für Trebertrocknung, Cassel, and others.

I am unable, however, to give any statistics concerning the importation of calcium aceticum crudum, as the Kingdom of Bavaria has no separate statistics. They are included in those of the German Empire.

Only a small part of the acetic acid which is obtained from calcium aceticum crudum is used in Germany for food purposes. This is known in the trade as acetic essence. The acetic acid used here for vinegar making is mostly manufactured from alcohol by fermentation.

Acetic acid won by the dry distillation of wood is chiefly used for technical purposes, for making chemical products, like plumbum aceticum, etc.

Aether aceticum, which is also produced from acetic acid, is used in the pharmacopœa, and also in the manufacture of liquors and explosives.

There is no import duty in Germany on calcium aceticum crudum, but I am told that the distillers who produce vinegar from alcohol are trying their utmost to induce the German Government to put a duty on this product.

GUSTAV C. E. WEBER, *Consul*.

NUREMBERG, *April 12, 1900.*

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#### COBURG.

*Consumption.*—Acetic acid is consumed in this district in all its forms, but principally as vinegar, for general use—a 6 per cent solution. It is also sold, in solution of 30 per cent, under the trade name of "vinegar essence," and again in solutions of 50 and 80 per cent strength, but the pure acetic acid has a very limited sale.

*Prices.*—Wholesale, 6 per cent solution, \$1.90 per hectoliter (26.417 gallons); 9 per cent solution, \$2.86 per hectoliter. Retail, about \$4.76 (6 per cent solution) per hectoliter. The pure acetic acid sells, wholesale, at 20 cents to 21.4 cents per kilo (2.2046 pounds); at retail the price runs from 33 cents to 48 cents per kilo. There are no factories in this consular district.

OLIVER J. D. HUGHES, *Consul*.

COBURG, *March 30, 1900.*

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#### CREFELD.

Acetic acid is used a great deal in silk dyeing and in the preparation of some dyestuffs. As the manufacture of dyestuffs and silk-dyeing are important branches of Crefeld's industries, an immense quantity of this article is used here. It is not possible to state this amount with any degree of certainty. The best quality used for dyeing purposes costs 17 marks (\$4.05) per 100 kilos (220.46 pounds).

The acid is manufactured in this consular district. None is imported from foreign countries, the demand being supplied by the German manufacturers. It is used both in the refined and the raw state.

JULIAN PHELPS, *Consul*.

CREFELD, *May 4, 1900.*

## DRESDEN.

*Consumption.*—Acetic acid (acidum aceticum) is used here for the manufacture of vinegar and is made out of wood pulp.

It is not possible to tell, even approximately, the quantity of acetic acid consumed in Dresden, but it is large, as it is not only used by the vinegar distillers, but by nearly every druggist who makes his own vinegar.

There are no manufacturers of acetic acid in this consular district, and I learn from the largest dealers in this commodity in Dresden—Messrs. Gehe & Co.—that the two most important manufacturers in Germany are Hartmann & Hauers, in Hanover, and Actiengesellschaft für Trebertrocknung, in Cassel.

*Imports.*—Gehe & Co. tell me that they have never imported acetic acid from foreign countries, and while they doubt the possibility of American acetic acid competing with the German product, they are not unwilling to try it.

*Price.*—The wholesale ruling prices are: Acidum aceticum anhydricum purum, 20 cents per hectogram; acidum aceticum dilutum (P. G. III),<sup>1</sup> 30 per cent, 8.3 cents per kilo (2.2046 pounds); acidum aceticum purissimum, 50 per cent, 11.9 cents per kilo; acidum aceticum purissimum, 80 per cent, 19.8 cents per kilo; acidum aceticum glaciale, 100 per cent, 21.5 cents per kilo; acidum aceticum glaciale (P. G. III), 96 per cent, 21.5 cents per kilo.

*Packing.*—The usual form in which acetic acid is demanded here is: Demijohns of 20 kilos (44.092 pounds) each; carboys of 60 kilos (132.276 pounds) each; or kegs; the latter the least preferred.

*Vinegar distillers.*—The principal vinegar distillers in Dresden and suburbs are: Carl G. Hermann, Dresden, Wachsbleich-Strasse, 11; Salomonis Essig-Fabrik H. Roesner, Dresden, Rosen-Strasse, 96; Paul Schieck, Dresden, Paul Gerhardt-Strasse; Georg Schinke, Dresden, Oschatzer-Strasse, 21; Senf- und Essig-Fabrik Wilh. Thomas, Dresden, Stephanien Strasse, 64; B. Thiele's Nachfolger, Dresden, Freiberger-Platz, 9; Löbtau Spirit-Fabrik Crone & Höfer, Dresden-Löbtau, Tharandter-Strasse, 5.

CHAS. L. COLE, *Consul-General.*

DRESDEN, April 20, 1900.

## HAMBURG.

*Consumption.*—Although acetic acid is an important commercial article at this mercantile center, the actual local consumption thereof is not considerable, for the reason that those branches of industry by

<sup>1</sup>P. G. III stands for Pharmacopœa Germanica.

which it is consumed are not represented in this consular district. As the annual statistics issued by the commercial statistical bureau of this city do not specify the article, but only quote the same in connection with other acids, it is difficult to state how large a quantity is consumed by the local demand. It is hard to give any reliable statistics as to the local consumption, for the reason that the local demand is supplied by the factories established in Hamburg and its vicinity, which naturally decline to give any information with regard to the quantities supplied by them. Every manufacturer keeps his business matters entirely secret, and it is an impossibility to state the output of the different factories, for, even if the quantities of the raw material consumed are known, it must be taken into consideration that, besides acetic acid, such factories manufacture acetone, used for the manufacture of smokeless powder.

*Imports.*—Acetic acid is not imported by Germany; it is largely exported. Even among experts, the opinion is predominant that the importation of acetic acid into Germany is impossible, and that, especially in Hamburg, for its own demand, the article can be supplied by the local manufacturers at a much lower price and on more favorable terms than from any other part of the world.

*Price.*—Acetic acid is used for dyeing purposes and the manufacture of table vinegar, etc. The price of acetic acid used for dyeing purposes depends upon the purity and the respective grade; generally, acetic acid of 25 to 40 per cent is used. For the manufacture of vinegar, etc., a grade of high percentage—generally 100 per cent—is demanded; the price therefor is 60 marks per 100 kilos (\$14.28 per 220.46 pounds), "franco Hamburg."

HUGH PITCAIRN, *Consul*.

HAMBURG, *May 23, 1900.*

#### HANOVER.

*Consumption.*—A large amount of acetic acid of German production is consumed by the manufacturing chemists in and about Hanover.

It is claimed by some of the manufacturers of acetic acid, that the number of plants in Germany producing this product have increased to such an extent that the profitable sales of each manufacturer are limited by freight rates to a very small territory, and that the supply is much greater than the demand. Other manufacturers state that if the cost and life of the portion of the plant devoted to this by-product were taken into consideration, the present market price would be found to be less than the cost of production.

*Packing.*—The form of package used in Germany is a glass carboy, containing from 50 to 60 kilograms (110 to 132 pounds).

*Price.*—The present quotations are as follows, per 100 kilograms (220.46 pounds): 98 to 100 per cent glacial chemically pure, 56 to 60 marks (\$13.32 to \$14.28); 80 per cent chemically pure, 46 marks (\$10.94); 50 per cent chemically pure, 27 marks (\$6.42); technical quality, doubly rectified and free from metals, 24 marks (\$5.71).

These prices are for the goods f. o. b. at works, and do not include the packing charges.

JAY WHITE, *Consul*.

HANOVER, *July 14, 1900.*

#### PLAUE.

*Price.*—The ruling price for acetic acid is as follows, per 100 kilograms (220.46 pounds): Diluted, \$5.71; concentrated, \$7.14; first concentrated, \$8.56; pure concentrated, \$8.81; first pure concentrated, \$10.23.

*Imports.*—There is no record of importation of acetic acid into the Kingdom of Saxony, and I am told that they produce in the factories established at Glauchau, Chemnitz, and Gossnitz all that is required. The local demand is for the diluted form.

THOS. WILLING PETERS, *Consul*.

PLAUE, *June 14, 1900.*

#### GIBRALTAR.

Acetic acid is hardly ever used here, since no special establishments for chemical purposes exist in Gibraltar—it being needed only for pharmaceutical requirements, which are of very little importance.

Whatever is imported is through the various dispensaries, which obtain their supplies from the principal druggists abroad.

HORATIO I. SPRAGUE, *Consul*.

GIBRALTAR, *April 3, 1900.*

#### GREECE.

*Consumption.*—There are no statistics from which I can learn the exact amount consumed, but the annual consumption of acetic acid in this consular district amounts to but very little.

*Price.*—The local price varies from 50 to 130 francs, gold, (\$9.70 to \$25.25) per 100 kilograms (220.46 pounds); 90 francs (\$17.47) may be taken as the ruling price.

*Imports.*—It is imported from Germany, and only in the liquid form.

DANIEL E. MCGINLEY, *Consul*.

ATHENS, *June 7, 1900.*

## ITALY.

*Manufacture and consumption.*—There are several large manufactories of acetic acid in Italy—at S. Maria del Tare, Bagnasco, Cogeleto, Barletta, Maccagne, Bevisa, etc., the two latter in this district, Bevisa being a suburb of Milan, which supply the local demand.

*Imports.*—Formerly a large quantity of acetate of lime was imported for the manufacture of acetic acid, but this has decreased on account of local manufacture. One of the largest firms informs me that not long since it imported from America a quantity of acetate of lime out of which to make acetic acid, but as it cost 26.50 lire per quintal at Milan (\$5.11 per 220.46 pounds) it was too expensive, and the manager did not import again.

In 1897 there were 11,415 quintals (1,141.5 tons) of acetate of lime imported into Italy, at the valuation of 20 lire per quintal (\$38.60 per ton); in 1898 there were 7,413 quintals (741.3 tons) at same valuation, and in 1899 there were 7,355 quintals (735.5 tons) at the valuation of 22 lire per quintal (\$42.46 per ton). So it can be seen that there has been quite a decrease in the past three years in the importation of acetate of lime for the manufacture of acetic acid. The importation of acetic acid into Italy for the past three years has been as follows:

Description.	1899.		1898.		1897.	
	Tons.	Value.	Tons.	Value.	Tons.	Value.
Acetic acid (impure) .....	167.7	\$9,062.50	69.3	\$3,744.97	96.6	\$5,593.14
Acetic liquid containing of pure acid—						
(1) 10 per cent or less .....	2.4	83.37	1.5	52.11	1.5	57.90
(2) More than 10 per cent and less than 50 per cent .....	2.5	193.00	2.8	216.16	7.7	87.85
(3) 50 per cent or more .....	34.8	5,373.12	44.8	6,917.12	48.2	8,372.34
Acetic acid (crystallized) .....	.3	69.48	1.7	393.72	2.1	486.36

The countries whence imported are France, Germany, Austria-Hungary, and Great Britain, in the order named. A comparatively small amount comes from all the other countries.

*Duty.*—The duty on the above is as follows:

Description.	Per quintal (220.46 pounds).		Per ton.
	Lire.	Dollars.	Dollars.
Acetic acid <i>a</i> (impure) .....	1	0.193	1.93
Acetic liquid containing of pure acid, including common vinegar—			
(1) 10 per cent or less .....	15	2.89	28.95
(2) More than 10 per cent and less than 50 per cent .....	90	17.37	173.70
(3) 50 per cent or more .....	180	34.74	347.40
Acetic acid (crystallized) .....	200	38.60	386.00

*a* According to treaties with Austria-Hungary and Germany all acid is classed as impure, even if as clear as water, that contains substances with odors arising from distilling wood, and an acidity of less than 50 per cent calculated in pure acetic acid.

There is also a duty on kegs and demijohns. The duty on kegs, whether old or new, with wooden hoops, is 20 centesimi (4 cents) per hectoliter (2,838 bushels), and the duty on kegs with iron bands is 30 centesimi (6 cents) per hectoliter; the duty on demijohns is 6 lire (\$1.15) per quintal (220.46 pounds). By treaties with Germany and Austria-Hungary, the above duty of 6 lire includes demijohns covered with straw.

*Exports.*—The exportation of acetic acid from Italy for the past three years has been as follows:

Description.	1899.		1898.		1897.	
	Tons.	Value.	Tons.	Value.	Tons.	Value.
Acetic acid (Impure) .....	6.4	\$346.85				
Acetic liquid containing of pure acid—						
(1) 10 per cent or less .....	26	903.24	85.5	\$3,970.27	114	\$4,400.40
(2) More than 10 per cent and less than 50 per cent .....	6.2	478.64	2.3	177.56	13.2	\$1,146.42

The custom-house statistics show no exportation of crystallized acetic acid, neither of acetic liquid containing more than 50 per cent of pure acetic acid nor of acetate of lime for the manufacture of acetic acid, for the past three years, at least.

*Price.*—The value of a quintal (220.46 pounds) of impure acetic acid, for 1899 and 1898, was 28 lire (\$5.40), as against 30 lire (\$5.79) for 1897; the value of a quintal (220.46 pounds) of acetic liquid containing 10 per cent or less of pure acid, for 1899 and 1898, was 18 lire (\$3.47), as against 20 lire (\$3.86) in 1897; the value of a quintal (220.46 pounds) of acetic liquid containing more than 10 per cent and less than 50 per cent of pure acid was, in 1898 and 1899, 40 lire (\$7.72), as against 45 lire (\$8.68) in 1897, and the value of a quintal of acetic liquid containing more than 50 per cent of pure acid was 80 lire (\$15.44) in 1899 and 1898, as against 90 lire (\$17.37) in 1897.

WM. JARVIS, *Consul.*

MILAN, April 18, 1900.

#### CASTELLAMARE.

*Consumption.*—The consumption of acetic acid in this consular district is very limited.

*Price.*—The price is 2.80 lire per kilogram (54 cents per 2.2046 pounds).

*Imports.*—It is made here—not imported.

*Form demanded.*—The form demanded is liquid.

JOSEPH E. HAYDEN, *Consul.*

CASTELLAMARE, May 26, 1900.

## FLORENCE.

*Consumption.*—The consumption of acetic acid in Tuscany is estimated at 50 tons per annum, of which amount one-fifth is used in Florence and its dependencies. Thirty tons are used for art purposes, and 20 tons are consumed in the pure state.

*Price.*—Dark colored, for the arts, \$2.40 per quintal (220.46 pounds); white colored, for the arts, \$6.14 per quintal; pure glacial, for preparations, \$52 per quintal.

*Imports.*—Very little acetic acid is imported, there being important manufactories in Italy.

*Form in demand.*—The local demand is for the acid in liquid form, which is shipped in demijohns or casks.

American exporters might place themselves in direct communication with Messrs. Cesare, Pegna & Figli, Florence, Italy.

EDWARD C. CRAMER, *Consul*.

FLORENCE, April 16, 1900.

## GENOA.

Little or nothing can be learned on this subject in Genoa. Parties who have been consulted in the matter, prominent business men, of course, know scarcely anything of the use of acetic acid in this consular district.

One firm suggests that the article is brought here from Havre, another, that it comes from Turin, but no one is willing to positively assert where it is purchased and the price paid for the stuff.

The conclusion reached, after considerable inquiry, is that but little acetic acid is used in this district, or else those who do use it have reason for not discussing this part of their business with any one.

JAMES FLETCHER, *Consul*.

GENOA, May 7, 1900.

## LEGHORN.

*Consumption.*—The consumption of acetic acid in Leghorn and its immediate vicinity is insignificant. I have been able to secure what I consider reliable information only as to its use here, although I attempted to procure such as would embrace as much of Tuscany as possible.

*Price.*—Two qualities are used here, known locally as “acido acetico puro” and “impuro.” The former is used entirely for medicinal purposes and in the manufacture of vinegar. Prices are based entirely on its percentage of purity or strength. One quality, 98 per cent pure,

known as "Glaciale," varies from 310 to 320 lire the quintal (\$59.83 to \$61.76 per 220.46 pounds); that of from 48 to 50 per cent pure ranges in price from 155 to 165 lire the quintal (\$29.91 to \$31.84 per 220.46 pounds). An addition of 10 lire (\$1.93) must be made to these prices for the local octroi duty.

*Imports.*—Nearly if not quite all is imported from Germany, but the consumption of both the so-called pure and impure will not exceed 300 kilograms (661 pounds) each per year.

*Form in demand.*—The pure is shipped in demijohns, the impure in barrels, the price of the latter varying from 35 to 40 lire the quintal; its strength rarely exceeds 30 to 40 per cent.

JAS. A. SMITH, *Consul.*

LEGHORN, *July 3, 1900.*

#### MESSINA.

There is no demand whatsoever here for acetic acid, but the unrefined product, pyrolignic acid, is used to some extent by printing works. It is all produced in Italy, and costs, free on the wharf, Messina, 35 lire per 100 kilos (\$6.35 per 220 pounds).

CHAS. M. CAUGHY, *Consul.*

MESSINA, *April 7, 1900.*

#### VENICE.

*Consumption.*—Acetic acid is consumed in small quantity at this port, and is chiefly of Italian manufacture, Germany being the only country that exports to Venice. There is no manufactory of the acid in this consular district, the native product being brought from Piedmont and Liguria.

*Form demanded.*—The local demand is for acetic acid, liquid, of two strengths—40 to 42 per cent and 98 to 99 per cent.

*Price.*—The wholesale price of the former is 32 lire the quintal (\$5.76 for 220.46 pounds); that of the latter is 300 lire the quintal (\$54 for 220.46 pounds).

H. ABERT JOHNSON, *Consul.*

VENICE, *May 31, 1900.*

#### MALTA.

Acetic acid is not unknown here but its importation is extremely limited, being practically confined to drug stores. There are no arts or industries here employing this article.

The vinegar imported for table and other uses is, principally, of Sicilian origin, and is made from very common wine. A small quantity made from English malt and French wine is imported in bottles. The bulk of the vinegar used and consumed here is obtained locally. In making the local vinegar very primitive methods are employed, such vinegar being subject to variation in quality. Its chief merit lies in its cheapness. If brought to the notice of likely users, and should the price laid down here not prove to be too prohibitive, it is not unlikely that acetic acid may find a small market in these islands. The form in demand is in bottles.

J. E. Mortimer & Co., Junior Army and Navy Stores, Vassallo & Co., Lipton's branch, and Azzopardi & Co., are among the prominent grocery houses located in this, the principal city of the island of Malta.

JOHN H. GROUT, *Consul*.

VALETTA, *April 25, 1900.*

## NETHERLANDS.

### AMSTERDAM.

*Imports.*—The importation of acetic acid, for consumption, at Amsterdam during the calendar year 1899 amounted to—

	Liters.
100 to 500 degrees .....	79,414
Over 500 degrees .....	22,117
Total .....	101,531

The amount of imports for transit, if any, is not stated by the customs authorities.

*Duty.*—The duty on the product is: Water-free acetic acid, under 100°, 1.2 cents per liter; of 100°, 1½ cents per liter; over 100° (according to the strength of the acid), highest duty levied on same, \$14.84 per hectoliter (26.417 gallons).

*Price.*—The ruling price is 24 marks per 100 kilograms (\$5.71 per 220.46 pounds), c. i. f., Amsterdam.

*Whence imported.*—Acetic acid is imported from Germany, with the exception of 200 liters imported from England.

*Form in demand.*—The form for local demand is principally 30 per cent water-free acetic acid and crystallized acetic acid. Acetic acid is imported here in demijohns covered with wicker, weighing from 60 to 70 kilograms (132 to 154 pounds).

FRANK D. HILL, *Consul*.

AMSTERDAM, *April 5, 1900.*

## ROTTERDAM.

*Manufacture.*—There are, as far as I have been able to ascertain, no statistics of any kind in the Netherlands stating the imports, exports, and consumption of acetic acid. The collector of customs at Rotterdam, to whom I applied for information on the subject, informed me that no special records were kept of the imports of the article, as it comes under the head of vinegar, being considered a material out of which vinegar can be made, and that he was, therefore, not in a position to state the quantity imported.

A firm of Rotterdam manufacturers, Messrs. Kortman & Schulte, informed me that they had a couple of years ago started the manufacture of the article from acetate imported from the United States, with a view to supplying the domestic demand. The article had not been manufactured in the Netherlands before, and is at present not manufactured for the trade. When the local internal-revenue officers discovered that acetic acid was manufactured, they considered it the same as the manufacture of vinegar, which manufacture must take place under Government supervision, the spirits vinegar is made out of being subject to internal revenue (accise), and took the proper steps to stop the unlicensed manufacture. The matter was brought before the courts, and it was decided that acetic acid and vinegar should be classed as one and the same article, as vinegar can be made from acetic acid, and that therefore acetic acid could only be manufactured on the same conditions as vinegar. Under these circumstances, the manufacturers did not care to continue the manufacture of the article and stopped it.

*Imports.*—Acetic acid is now imported from Germany, England, and Belgium. The best, for the use of chemists and druggists, is said to come from Germany. A Rotterdam dealer estimates the imports of pure acetic acid of 80 per cent strength into the Netherlands to be between 100,000 and 150,000 pounds per annum.

*Consumption.*—Large quantities of acetic acid are consumed by manufacturers of colored woolen and cotton goods, laundries, dyeing works, chemists, and grocers. The manufacturers of vinegar strenuously disclaim the using of acetic acid in the manufacture of vinegar, but many people seem to be under the impression that they use considerable of it. The grocers are also said to dilute the acid with water and sell it for vinegar. It is claimed that a good deal of so-called wine vinegar sold here contains only about 5 per cent of actual wine vinegar, while a good deal of the beer vinegar contains only 3 per cent of the actual beer vinegar, the other parts being acetic acid diluted in water.

In the province of Overijssel, where the majority of factories of colored cottons, and in North Brabant, where most of the factories of

colored woolen goods are situated, probably most of the acetic acid imported is consumed. I say probably, because a clause in the Dutch tariff laws grants freedom of duty for natrium acetate and calcium acetate, which are considered unfit for the manufacture of vinegar, or which are mixed with other material according to special prescriptions. I have been informed that some manufacturers of textiles import such acetates and extract from it themselves the material they use, under the supervision of government internal-revenue officers. But in regard to the consumption of acetate or the importation of the different kinds, no one could furnish figures.

One firm of manufacturers of woolen goods at Tilburg, North Brabant, Messrs. A. Goyarts & Sons, informed me that in 1899 they had used about 1,200 pounds of the acid, all of which they had purchased, and another firm of the same city, Messrs. Van Spaendonck & Sons, estimate the consumption of acetic acid at Tilburg at about 5,000 gallons per annum.

*Price.*—Messrs. Kortman & Schulte, who formerly manufactured the acetic acid, informed me that they used to sell it to the wholesale dealers at the rate of 32 cents per kilogram (2.2046 pounds) of 100 per cent; and the last lot they sold, of 80 per cent strength, brought them 24.8 cents per kilogram.

Messrs. Havelaar & Bos state that they import acetic acid of a strength of 50 per cent in carboys containing 50 kilograms (110 pounds), for which they pay \$3.40 per carboy, delivered at Rotterdam.

Mr. William De Braal, an importer who makes a specialty of the article, states that he pays for the pure acetic acid from \$12.72 to \$13.20 per 220 pounds, and that the duty he has to pay on the same amounts to about 12 cents per kilogram (2.2046 pounds).

*Duty.*—The import duty on acetic acid is quoted in the Netherlands tariff as follows:

Vinegar, under which wood acid and vinegar acid, crystallized or liquid, are classed, of a strength of less than 100 grams water-free vinegar acid per liter, \$1.20 per 100 liters (105.67 quarts); of a strength of 100 grams water-free vinegar acid per liter, \$1.40 per 100 liters; of greater strength, the duty is proportionately higher.

Vinegar natrium acetate, water-free, \$10.24 per 100 kilograms (220.46 pounds); containing water, \$6.16 per 100 kilograms, or 220 pounds.

Vinegar calcium acetate, water-free, \$10.64 per 100 kilograms; containing water, \$9.52 per 100 kilograms.

*Opening for American acid.*—It would seem, the acetate being principally produced in the United States, and the manufacture of acetic acid not being carried on in the Netherlands, that it would pay American manufacturers to export the acid to this country. It is curious, however, that while the gentlemen who formerly manufactured the article are of the opinion that there is a great deal of demand for acetic acid in the Netherlands, some prominent importers state that

they consider the Netherlands of little importance as a market for acetic acid. They, however, did not give the reasons on which they based the statement, and like all other persons interested, furnished me with little or no tangible information.

In shipping acetic acid from the United States, say in jars of about 100 pounds, care should be taken that the jars are well packed in boxes with sawdust or straw to prevent breakage. The jars imported from Germany generally have baskets around them, but this might, in the opinion of persons here, not be sufficient for being carried across the Atlantic.

Principal importers of chemicals at Rotterdam are: Havelaar & Bos, Willem de Braal, Catz Brothers, Wed. H. Flaes & Son, J. H. Jansen & Co., Oudshoorn & Van der Held, J. H. Rooster & Son, C. & C. J. Pluygers, Schilperoort, Van Ypen & Co.

American manufacturers of acetic acid might address these firms direct in regard to the exportation of American acetic acid to the Netherlands.

S. LISTOE, *Consul*.

ROTTERDAM, *May 22, 1900.*

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## PORTUGAL.

### THE AZORES.

Owing to the law prohibiting the importation of acetic acid for all purposes except medicinal, the amount received at this port is small, and receives no separate classification, which makes it impossible for me to give the amount correctly. Most of it is received through the wholesale house in Lisbon and the balance through England.

GEO. H. PICKERELL, *Consul*.

ST. MICHAELS, *May 10, 1900.*

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## RUSSIA.

### ODESSA.

*Consumption.*—The bulk of acetic acid, especially of that which is used in the various manufactures of the central or industrial parts of Russia, is produced in Russia, and principally from the distillation of wood.

Here at Odessa, and in the south of Russia in general, where industries are as yet far less developed, there is much less demand for it, and it is said to be exclusively supplied by Russian factories.

*Price.*—The merchandise is of three qualities, containing 70, 80, and 97 per cent of acetic acid, respectively, and the price at Odessa in

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the wholesale market of these three qualities is 9.8, 10.5, and 14.5 cents per pound avoirdupois, net.

*Packing.*—The acid is contained in glass flasks which hold 44 pounds. No extra charge is made for the flasks or packing, the price of the merchandise comprising it all.

When smaller flasks are required, the value of flask and packing is taken into account, or the price is slightly raised to cover it.

*Duty.*—The production of acetic acid, and even of high quality, may be described as a perfectly regularly established industry in Russia, with which foreign firms would have great difficulty in competing, since besides all costs of transport, etc., their merchandise would first of all have to bear the high customs duty of 4 rubles gold per pood (\$3.10 per 36 pounds).

H. F. RUNGE,  
*Vice and Acting Consul.*

ODESRA, *April 19, 1900.*

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#### RIGA.

*Protection.*—Russia possesses a great number of factories for the production of acetic acid.

*Price.*—The price of the product is very low, varying according to quality from \$5.70 to \$10.83 per 100 pounds.

*Form in demand.*—The article is always demanded in liquid form and is, according to the greater or lesser purity, kept in glass carboys or wooden barrels.

NAT. BORNHOLDT, *Consul.*

RIGA, *April 12, 1900.*

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#### ST. PETERSBURG.

*Consumption.*—I regret that I have been unable to obtain any reliable estimate of the consumption of acetic acid at this port, but dealers state that large quantities are sold here.

*Prices.*—Prices according to strength, viz: 80°, \$3.90 per pood (36 pounds); 96°, \$5.65 per pood; 98°, \$5 per pood.

*Form in demand.*—It is manufactured at Sosnovitz, Russia, near the Austrian frontier and is brought here in liquid form.

W. R. HOLLOWAY, *Consul-General.*

ST. PETERSBURG, *April 17, 1900.*

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#### VLADIVOSTOCK.

*Consumption.*—Very little acetic acid is consumed.

*Prices.*—For the small quantity imported the ruling price is 62½ cents per kilo (2.2046 pounds).

*Imports.*—The entire importation comes from Hamburg.

*Form in demand.*—The local demand is for the liquid form.

RICHARD T. GREENER,

*Commercial Agent.*

VLADIVOSTOCK, June 26, 1900.

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## SPAIN.

### BARCELONA.

*Consumption.*—The consumption of acetic acid in the province of Catalonia is calculated roughly at about 300 tons per annum. This figure includes pure acetic acid used in the preparation of vinegar and that used for industrial purposes.

The chief consumption is of 30 to 80 per cent, which is used in dyeing silks and in cotton printing, etc.

*Price.*—The present prices here are per 100 kilograms (220.46 pounds), 40 per cent, 70 pesetas (\$10.50); 35 per cent, 60 pesetas (\$9); 30 per cent, 50 pesetas (\$7.50).

The pure acetic acid of 98 to 100 per cent is imported from Germany, and is received in demijohns containing about 130 to 150 pounds. Its present price is about \$16.15 per 100 kilograms, c. i. f., Barcelona.

*Duty.*—Industrial acetic acid is now made here, and foreign competition is all but impossible, owing to the duty of 50 pesetas (\$7.50) per 100 kilograms (220.46 pounds) now charged, according to the tariff of December 26, 1899.

JULIUS G. LAY, *Consul-General.*

BARCELONA, April 9, 1900.

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### CORUNNA.

*Consumption.*—Estimated yearly consumption of acetic acid in this district, 5,000 kilograms (11,023 pounds).

*Price.*—The cost of 100 kilograms (220.46) of acetic acid, delivered in Corunna, is as follows: Cost price, 110 francs; freight, 50 francs; plus exchange, 30 per cent, equal to 228 pesetas; customs duty, including glass cover, 50 pesetas; port charges, 5 pesetas; octroi, 56 pesetas; war tax, 2.80 pesetas; total 331.80 pesetas.<sup>1</sup>

*Retail price.*—From 4 to 4.50 pesetas per kilogram (2.2046 pounds).

*Whence imported.*—Hamburg and Dresden.

*Packing.*—In demijohns of 60 kilograms (132 pounds) and in large bottles of 5 kilograms (11 pounds).

JULIO HARMONY, *Consul.*

CORUNNA, April 5, 1900.

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<sup>1</sup>The Consul-General at Barcelona estimates the peseta at 15 cents.

## MALAGA.

*Consumption.*—The consumption in this city is very large, a conservative estimate being about 200 tons annually.

*Whence imported.*—Acetic acid is imported from Germany in demi-johns of 20 kilograms (44 pounds) net, 25 kilos (55 pounds) gross, having double covers.

*Price.*—The prices f. o. b. are 88 to 90 shillings (\$21.41 to \$21.90) per 100 kilograms (220.46 pounds).

R. M. BARTLEMAN, *Consul.*

MALAGA, *April 3, 1900.*

## VALENCIA.

*Consumption.*—A small trade, which shows no tendency to expansion, is done in acetic acid at Valencia. It is mostly employed in hide dressing and the manufacture of artificial vinegar. That the consumption does not increase here locally is attributed to excessive production and consequent cheapening of inferior wines. These, finding no outlet, are frequently converted into vinegar, which can be sold at a lower price than that produced artificially by the aid of acetic acid.

In proof that the demand is limited, I may mention that the leading firm of druggists here laid in a stock of 1,200 pounds of acetic acid more than twelve months ago and they have still more than 60 per cent of it unsold.

*Form in demand.*—It is imported (from Germany) in carboys of 65 to 80 kilograms (143 to 176 pounds), and the higher grades, 80° to 98°, are the most appreciated, consumers preferring to reduce the strength of the article themselves, according to their own individual requirements.

*Price.*—The current price is 104 to 130 pesetas (about \$14.59 to \$18.57) per 100 kilograms (220.46 pounds), cost and freight, Valencia.

HORACE LEE WASHINGTON, *Consul.*

VALENCIA, *April 6, 1900.*

## SWEDEN AND NORWAY.

## BERGEN.

*Consumption.*—The consumption of acetic acid in this consular district amounts to between 3,000 and 4,000 gallons per year.

*Price.*—The price, c. i. f. Bergen, is at present 40 cents a gallon.

*Whence imported.*—Acetic acid (strength 80 per cent) is mostly imported from Sweden.

I have conferred with Messrs. Scetersdal & Son, vinegar manufacturers of this city, and they will be pleased to receive a sample bottle, say about 16 ounces, and quotations from the manufacturer in the United States.

VICTOR E. NELSON, *Consul*.

BERGEN, *June 15, 1900.*

### CHRISTIANIA.

*Consumption.*—The home production of acetic acid is quite insignificant in Norway and the methods primitive. The salts and other ingredients for its manufacture are principally imported from Germany. The article is, as far as I can ascertain, chiefly used for making vinegar and to some extent for chemical purposes. Very little is used in medicine.

*Imports.*—The import of the article was, according to the official statistics in the year 1898, as follows:

1. Of strength above 10 per cent, 44,897 kilograms, valued at 15,700 kroner, or 35 ore (9.38 cents) per kilogram (2.2046 pounds).
2. Vinegar in casks, less than 10 per cent in strength, 111,725 kilograms, valued at 27,900 kroner, or 25 ore (6.7 cents) per kilogram.
3. Vinegar in demijohns, strength not stated, 5,182 kilograms (or liters), valued at 2,100 kroner, or 40 ore (9.52 cents) per kilogram.

*Whence imported.*—The principal source of import is Germany.

*Duty.*—The import duty, according to the tariff tables of the country, which I quote verbatim in translation, is as follows:

#### *Vinegar and acetic acid.*

1. In casks:
  - a. When the strength does not exceed 10 per cent, 5 ore (1.34 cents) per kilogram (2.2046 pounds).
  - b. When the strength does exceed 10 per cent, 10 ore (2.68 cents) per kilogram.

Tare for 1a and 1b for casks 16 per cent.
2. In demijohns or jars, strength not considered, 20 ore (5.36 cents) per liter.

It will readily be seen that these rates favor the strongest or most concentrated acid, and it is quite probable that the American product would find a market over here.

*Opening for American acid.*—I believe the proper way for its introduction would be to enter into correspondence with, and ultimately furnish samples and prices of the acid to, vinegar factories and some of the principal wholesale grocery houses in the different towns of the country. For use of the New York chemical house which has requested this investigation to be made, I attach hereto a list of names and addresses of vinegar manufacturers and of some of the principal wholesale dealers, which may be of service.

*Form in demand.*—The article is demanded in much the same form as in the United States.

HENRY BORDEWICH, *Consul.*

CHRISTIANIA, *April 18, 1900.*

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*Vinegar manufacturers.*

S. Amundsen & Co., Grandsen 4, Christiania.  
H. B. Christiansen, Kalmeyer Gd. 17, Christiania.  
Chr. a. Edikebryggeri, Grandsen 19, Christiania.  
Chr. a. Edikkefabrik, Prinsens Gd. 6, Christiania.  
Lilleborg fabriker, Kongens Gd. 2, Christiania.

*Wholesale grocers.*

Otto Chr. Bøhme & Co., Dronningens Gd. 18, Christiania.  
Ellef Børresen, Jernbanegd 6, Christiania.  
Harald Ohlsen & Co., Skippergd. 17, Christiania.  
Westberg & Schjaerwe, Dronningens Gd. 24, Christiania.  
Brødr. Hiorth, Skippergd. 9, Christiania.  
Petersen & Luhnenschloss, Dronningens Gd. 13, Christiania.  
O. Bjørnseth & Co., Bergen.  
B. Friele og Sønner, Bergen.  
Joh. P. Johnsen, Christianssand.  
Chr. S. Johnsen, Christianssand.  
Rolf Johnsen, Trondhjem.  
Jacob Larsen, Trondhjem.  
Lundgrens Enke, Trondhjem.

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GOTHENBURG.

*Production.*—The latest official reports of Sweden I have been able to obtain cover the years 1897 and 1898.

The statistics mention acetic acid and vinegar under one heading and the export of these articles seems to exceed the import.

Number of factories, 14; number of workmen employed, 101; value of acetic acid and vinegar produced in 1897, \$120,472.

The factories are located in different parts of the country, whereof the following places may be mentioned: Stockholm, Karlshamn, Persstorp, Gothenburg, Malmö, Helsingborg, Ystad, Eslöf, Östersund, Linköping, Upsala, Umeå, and Sundsvall.

The Industrial Register of Sweden for the year 1899 mentions 18 vinegar factories, several of which also manufacture acetic acid for technical purposes, wood alcohol, turpentine, pitch, oil, etc.

*Imports.*—The imports and exports in 1898 were as follows:

*Imports.*

Whence imported.	Quantity.	Value.
	<i>Pounds.</i>	
France.....	62,798	\$1,919.69
Great Britain.....	6,135	188.94
Denmark.....	3,305	103.98
Germany.....	2,418	93.00
Spain.....	254	7.77
The Netherlands.....	44	1.34
Total import.....	74,954	2,314.72

*Exports.*

Whither exported.	Quantity.	Value.
	<i>Pounds.</i>	
Norway.....	74,288	\$2,262.46
Great Britain.....	35,812	1,234.41
Denmark.....	36,019	1,094.78
Germany.....	11,856	433.62
Total export.....	157,975	5,025.27

*Swedish customs districts into which acetic acid and vinegar were imported, 1898.*

Customs districts.	Quantity imported
	<i>Pounds.</i>
Stockholm.....	38,199
Gothenburg.....	29,802
Malinö.....	1,601
Helsingborg.....	772
Upsala.....	924
Söderhamn.....	24
Norrköping.....	714
Linköping.....	172
Visby.....	44
Karlskrona.....	205
Kristianstad.....	588
Lund.....	291
Varberg.....	410
Total accounted for in this table.....	73,746

*Price.*—According to information received, acetic acid is not now imported for technical purposes, because of the expense, including duty. Factories use acid of 50 per cent strength, and also of 75 per cent to be diluted. It is claimed that such acid is sold at 35 ore (9.38 cents) and 60 ore (16.08 cents), respectively, per kilogram (2.2046 lbs). This is less than the import duty would amount to.

The drug stores import some chemically pure acetic acid (glacial), principally from Hamburg, Germany. The wholesale price for such acid of 99 to 100 per cent strength is 63 marks per 100 kilograms (\$15 per 220.46 pounds). The wholesale price here, duty paid, is about 180 kroner (\$48.24) per 100 kilos.

*Duty.*—The Swedish import duty is as follows:

Vinegar and acetic acid, all kinds, in barrels: Up to 10 per cent strength, per kilo, 10 ore (12.68 cents). For each per cent higher strength the duty is increased by 1 ore (.0026 cent) per kilogram. Imported in carboys or bottles, independent of strength, per kilogram 1 kroner (26.8 cents).

ROBERT S. S. BERGH, *Consul.*

GOTHENSBURG, *April 24, 1900.*

## SWITZERLAND.

*Imports.*—The largest portion of the acetic acid received by Switzerland comes from three sources, and the total import during 1899 amounted to 286,688 francs (\$55,330.78). Here are the figures:

Whence imported.	Gross Weight.		Value.	
	Quintals.	Francs.		
Belgium .....	5,250	162,750	\$31,410.75	
Germany .....	3,521	109,151	21,066.14	
Austria .....	430	13,330	2,572.69	
France .....	42	1,302	251.29	
Italy .....	5	155	29.91	
Total .....	9,248	286,688	55,330.78	

*Price.*—The average importation price paid was 31 francs (\$5.98) per quintal (220.46 pounds), and bottles were charged extra. No raw acetic acid is produced in this country.

*Packing.*—The acid is shipped in carboys containing from 10 to 60 liters each.

*Swiss custom-houses.*—The Swiss tariff regulations provide that acetic acid and vinegar can only be entered at one of the following boundary custom-houses: Buchs; Romanshorn; Schaffhausen Railroad Depot; Basel, Bad. Railroad Depot; Basel, Central Railroad Depot; Pruntrut; Locle; Verrieres; Vallorbes Railroad Depot; Geneva Railroad Depot; Luino; Chiasso Railroad Depot, and Castasegna.

*Duty.*—Vinegars of double strength and vinegar spirits containing up to and including 12 per cent of acetic acid, shipped in barrels, must pay a duty of 10 francs (\$1.93) per quintal, gross weight. The Swiss rectifier seems to do a little business with France in this line.

Vinegars of all kinds, in bottles, stone jugs, etc., containing more than 12 per cent of acetic acid and not exceeding 50 pounds gross weight, pay a duty of 30 francs (\$5.79) per quintal, gross weight.

ADOLPH L. FRANKENTHAL,  
*Consul.*

BERNE, *April 26, 1900.*

## BASEL.

*Consumption.*—The Swiss official statistical publications report the importation for consumption of from 9,000 to 12,000 quintals (approximately 250,000 gallons) annually of acetic and pyroligneous or wood acid. This acid is in a raw condition and is designated in the tariff as an article having an "empyreumatic odor;" and it is subject to an entrance duty of only 20 cents per quintal of 220 pounds.

The amount consumed in Basel is estimated by the largest importers at about 40,000 gallons a year.

There is no production of the raw material in this district.

*Price.*—The official statistics report the average price of the acetic and other acids mentioned at 21 francs (\$4.05) per quintal (220.46 pounds), which would be equivalent to about 16 cents a gallon.

The acetic acid imported into this district, free in Basel, in glass carboys, is now worth 42 francs per quintal, or about 32 cents a gallon.

The lower price given in the official tables is no doubt accounted for in part by the fact that it is based on customs returns, and that in the Swiss tariff the weight of merchandise on which duties are computed embraces not only the goods but the inclosing cases or vessels.

*Whence imported.*—Germany is by far the most important source of supply, furnishing about three-fourths of the acetic acid used in Switzerland. Belgium and France send smaller quantities; but for local consumption France is the leading producer.

*Form in demand.*—For this part of the country, there is required raw acetic acid of 70 per cent strength inclosed in glass jars.

It is imported for further reduction and manipulation by local chemical factories, and is afterwards sold to the great dyeing establishments for use in their business. A smaller quantity is used by wholesale druggists, who reduce it to a strength of about 4 per cent, in which form it is known and used as salad vinegar. Imported in this latter form, the duty is 40 francs (\$7.72) per quintal (220.46 pounds).

GEO. GIFFORD, *Consul.*

BASEL, April 9, 1900.

## GENEVA.

*Imports.*—The total quantity of acetic acid imported annually into Switzerland is about 1,000 tons.

*Price.*—This comes in the form of a crude pyroligneous acid, of which the ruling price is 25 francs (\$4.82) per 100 kilograms (220.46 pounds).

*Whence imported.*—About half the entire quantity imported comes directly from Germany. The remainder comes through houses in

Belgium, and it is believed here that those houses get it directly from the United States.

*Form in demand.*—The demand in this consular district is for crude pyroligneous acid, of which about 10 tons are distilled in Switzerland, and converted into 80 per cent pure acetic spirit.

BENJ. H. RIDGELY, *Consul.*

GENEVA, *April 12, 1900.*

## THE UNITED KINGDOM.

### BELFAST.

*Consumption.*—The consumption of acetic acid at Belfast is very limited. There were only about 50 tons imported during the year 1899, and this came principally from Liverpool, London, and Glasgow. It is used mostly for manufacturers' purposes, i. e. color printing, etc., and is put up in casks of 40 gallons.

*Price.*—There has been very little, if any, fluctuation in the price of acetic acid the past year. The quality testing 40 per cent would be about \$50 per ton. Of the finer quality used for making vinegar, that testing 33 per cent, made from soda, commands about \$62.50 per ton, and the same quality made from lime about \$45 per ton.

WILLIAM W. TOUVELLE,

*Consul.*

BELFAST, *April 30, 1900.*

### BRADFORD.

*Consumption.*—The demand for acetic acid in this district is gradually increasing. There is a larger consumption at the present time than has heretofore been known, which arises from the fact that the article is being utilized for a much greater variety of purposes. In addition to the usual pharmaceutical uses to which it is put, it is largely employed in the dyeing industry and in pickle manufacturing, as well as for other dietary purposes.

*Price.*—The ruling price of the acid, such as is used for industrial purposes, is about £14 (\$68.13) per ton at makers' works in the United Kingdom. This, generally speaking, contains about 60 per cent actual acetic acid, is water white and free from tarry matter. Weaker strengths are worth about £11 (\$53.53) per ton for 40 per cent and £7 (\$34.06) per ton for 25 per cent, delivered. Chemically pure acid is quoted at warehouse, wharf, or station, London, as follows, per cwt. (112 pounds): 99 per cent, glacial, \$8.26; 90 per cent, \$7.53; 80 per cent, \$6.80; 33 per cent, \$3.65. In glass carboys of 132 pounds net, inclusive, special terms for larger contracts.

*Whence imported.*—It is imported into this country from Belgium, Sweden, Germany, and France. A fair quantity is also distilled in this and the adjoining county of Lancashire.

ERASTUS S. DAY, *Consul*.

BRADFORD, May 2, 1900.

#### CORK.

*Consumption.*—It is impossible to ascertain the consumption of acetic acid at this place.

*Price.*—The price of glacial acetic acid in the market for 98 per cent strength is about \$155.72 per ton, in carboys, and about \$145 per ton, in casks, extra.

*Whence imported.*—The bulk of it comes into the country in casks, and is imported principally from Holland.

DANIEL SWINEY, *Consul*.

CORK (QUEENSTOWN), IRELAND, April 7, 1900.

#### DUBLIN.

*Consumption.*—It is impossible to give any accurate estimate of the consumption of acetic acid at the port of Dublin. Reports disagree as to the amount used, some large dealers in chemicals reporting almost no sales, while others state that they sell a moderate amount. The jobbers and retailers report that a considerable amount is used for manufacturing and domestic purposes, such as the making of liniments, mineral waters, fruit cordials and extracts, in place of citric acid, in baths, and as a remedy for gout and rheumatism. It is intimated that a large amount is used in curing bacon and pork products and by tobacco manufacturers. Since the passage of the pure-food acts, the consumption of acetic acid has greatly decreased.

*Price.*—The ruling price is quoted at \$5.11 per cwt. (112 pounds), B. P. strength. A large jobber quotes ordinary acetic acid of commerce at \$6.57 per cwt.; best English, 70 per cent pure, at from \$7.80 to \$8.75 per cwt., and glacial at from \$9.73 to \$11.20 per cwt.

*Whence imported.*—The acid used here is made in England. The Germans tried to introduce their acid, but without success, as the quality was so inferior that the difference in price would not compensate for it. The larger users buy directly from the manufacturers, and no figures of the amount sold can be ascertained.

*Form in demand.*—The acid is supplied wholesale and to large consumers in barrels. There is also a proprietary article put up in London in pint bottles, and sold wholesale at \$2.55 per dozen and retail at 30 cents per bottle.

JOSHUA WILBOUR, *Consul*.

DUBLIN, April 20, 1900.

## DUNDEE.

*Consumption.*—There are probably not 1,000 gallons of acetic acid consumed in Dundee in the course of a year. Locally it is chiefly used, when diluted with water, as vinegar. It is also applied as a preservative in the manufacture of fruit essences and cordials, and as a therapeutic it finds considerable sale for rubbing pains. These, however, are the only uses to which acetic acid is put here, and, as will be seen, the consumption is necessarily very limited.

JOHN C. HIGGINS, *Consul.*

DUNDEE, SCOTLAND, *May 3, 1900.*

## DUNFERMLINE.

*Consumption.*—Acetic acid is used in a crude state in the manufacture of acetates, such as acetate of soda, acetate of potash, acetate of ammonia, etc. In a half refined form it is used in almost every woolen mill for dyeing alizarines. In a refined state it is employed in making white wine vinegar, sold by grocers, and for pickling purposes.

*Price.*—For dyeing it is almost entirely sold 25 per cent strength, or a specific gravity of 1.044, at a cost to purchasers of about \$29.20 per ton, f. o. b.

The crude costs less and the refined liquid comparatively more.

The glacial quality solid at 50° F., pure acetic acid, for medicinal purposes, is worth 40 to 44 cents per pound.

*Whence imported.*—The source of supply of acetic acid is now chiefly the United States, whence it is shipped in the form of acetate of lime and distilled off. Some acetate of lime is obtained in Scotland by the destructive distillation of wood. The Paisley manufacturers, I am informed, make it by burning the wood from which the bobbins used by the thread people are drilled.

*Form in demand.*—There is no special local demand here for acetic acid, as it is consumed only in the ordinary forms and quantities as retailed by druggists, and in the form of vinegar as sold by grocers.

J. N. McCUNN, *Consul.*

DUNFERMLINE, *May 15, 1900.*

## EDINBURGH.

*Consumption.*—There is no great demand for acetic acid either in Edinburgh or in Leith. I am unable to furnish an estimate of the quantity used. The greater portion is brought from England. So far as I can ascertain, no acetic acid is manufactured in the east of

Scotland, but there are several firms in Edinburgh and Leith which deal in it.

*Price.*—The article is put upon the market in so many different strengths that it is extremely difficult to give definite prices, but \$3.65 per cwt. (112 pounds) is about an average figure for the best quality of acid of 33 per cent hydrogen acetate strength ("ordinary strong" acid). The glacial acid containing 99 per cent hydrogen acetate ranges in price from \$7.30 to \$9.73 per cwt. Vinegar and "diluted acetic acid," containing about  $4\frac{1}{2}$  per cent hydrogen acetate, sell at from 36 cents to 60 cents per cwt.

*Form in demand.*—In this locality the acid is principally bought in the form of vinegar and "diluted acetic acid" by sauce makers and others. The manager of a Leith firm, which uses acetic acid in the manufacture of raspberry vinegar, etc., informs me that it is supplied to them "at 40° gravity, or four times the strength of ordinary standard malt vinegar." The firm pays \$3.89 per cwt. for this acid.

In the tweed manufacturing district of Scotland, of which Galashiels is the center, acetic acid is used at the wool dyeworks to precipitate the lime in the water for dyeing and also as a mordant. The acid is of a cheap grade and all of Scottish manufacture. It is generally supplied at 40 per cent hydrogen acetate strength. This is the strongest used. It is also used at a 25 per cent and a 30 per cent strength. The quantity and strength of the acid for precipitating the lime depend upon the quantity of lime in the water. The current price of the 40 per cent acid at Galashiels is \$2.85 per cwt. It is estimated that on a basis of 40 per cent hydrogen acetate strength, from 100 to 120 tons of acid are used per annum in the 36 dyeworks in connection with the tweed-making industry in the south of Scotland.

For the information of the manufacturers of acetic acid, whose inquiries are answered in the foregoing report, I beg to quote the following from a letter received by me from Mr. Stalker, consular agent at Galashiels:

Mr. Watson (of Messrs. James Watson & Co., drysalters and commission agents, Galashiels) says it would never pay a man to come round here and sell, owing to the comparatively small quantity used, but if the object of your inquiry is to find a market for the acid, Mr. Watson would be glad to correspond with the party on whose behalf you may be making the inquiries, and endeavor to come to some arrangement to sell the acid. He says all the acid used is made by the Cartvale Chemical Company, Paisley.

A firm in Leith dealing in acetic acid is Craig & Rose.

RUFUS FLEMING, *Consul.*

EDINBURGH, SCOTLAND, *April 20, 1900.*

## LIVERPOOL.

*Consumption.*—As there are no particulars published of the extent of the consumption of acetic acid in the Liverpool consular district, I am unable to give the information. There is only one company, so far as I can learn, that manufactures acetic acid in this consular district, and from them I learn that the quantity used is small.

*Price.*—The present price of acetic acid, 70 per cent, packed in glass carboys in ironbound modern cases, containing 132 pounds net of acid, is \$11.67 per case, less  $2\frac{1}{2}$  per cent free on board, Liverpool. The price quoted for acetic acid, 25 per cent, is \$1.76 per cwt. (112 pounds); for 40 per cent \$2.43 per cwt.

*Whence imported.*—Acetic acid is imported here from Germany and Belgium, but in decreasing quantities, so it is stated.

*Form in demand.*—The demand here is for various strengths, from 25 per cent upward.

JAMES BOYLE, *Consul.*

LIVERPOOL, *April 12, 1900.*

## LONDON.

*Prices.*—I transmit herein the current ruling prices in regard to acetic acid. This information has been obtained with the assistance of Mr. Lathrop, our consul at Bristol, who desires me to add that he is indebted to Messrs. W. Caudery & Co., chemical brokers, for this information.

WM. M. OSBORNE,  
*Consul-General.*

LONDON, *August 22, 1900.*

*London current quotations, August, 1900, per ton of 2,240 pounds.*

25 per cent chemically pure.....	£8. 15	\$42. 58
30 per cent chemically pure.....	14. 00	68. 13
33 per cent chemically pure.....	14. 15	71. 78
60 per cent chemically pure.....	22. 15	110. 71
70 per cent chemically pure.....	25. 15	125. 31
80 per cent chemically pure.....	28. 10	138. 69
90 per cent chemically pure.....	31. 00	150. 86
Glacial (98 to 100 per cent).....	34. 00	165. 46

All less  $2\frac{1}{2}$  per cent discount. Glass carboys of 152 pounds each, net inclusive. Delivered, London; beyond, railroad freights paid by buyer.

## MANCHESTER.

I have obtained the following information from Messrs. J. Woolley Sons & Co., Limited, and Messrs. D. Thom Domeier & Co., Limited, both of Manchester:

From Messrs. J. Woolley Sons & Co., Limited:

*Prices.*—The ruling prices are as follows, per ton, less  $2\frac{1}{2}$  per cent free London—  
*London:* 30 per cent, £13 10d. (\$65.69); 33 per cent, £14 5d. (\$69.35); 60 per cent, £23 5d. (\$113.14); 70 per cent, £26 10d. (\$128.95); 80 per cent, £29 15d. (\$144.77); 90 per cent, £33 (\$160.59); 99–100 per cent £36 5d. (\$176.41).

*Whence imported.*—A large quantity comes from Germany. It is also produced in England.

*Form demanded.*—It comes in glass carboys, also in casks, but the former are preferable.

From Messrs. D. Thom Domeier & Co., Ltd.

We duly received your favor of the 28th ultimo, inquiring for particulars re acetic acid for the United States Department of State. Much as we should have liked to have given you the information, we regret to say that the inquiry covers such a great field that it is practically impossible to give you data of a correct nature which can be of any practical use. The acetic-acid industry has assumed very large proportions, and it is manufactured on a large scale on the Continent of Europe, Germany and Sweden being well to the front.

*Price.*—The acid is dealt in commercially in all strengths, ranging from 28 per cent up to 100 per cent. Of course the price varies with the percentage, and from this you will see, quite apart from the constant fluctuations which are going on, how impossible it is to give you its ruling price; but, as a general idea, the value ranges from about £13 (\$63.26) per ton for the 28 per cent strength, to about £37 (\$180.06) per ton for the 100 per cent strength.

*Consumption.*—The uses to which acetic acid is put are varied. It is largely consumed in the arts and textile trades generally, and of course there is a very heavy demand for the manufacture of vinegar. From this you will see how impossible it is to state in what form it is locally demanded.

WILLIAM F. GRINNELL, *Consul.*

MANCHESTER, *May 10, 1900.*

## NEWCASTLE-ON-TYNE.

*Consumption.*—I can not procure returns showing the consumption of acetic acid in the Newcastle district.

*Price.*—The present market price is quoted at—25 per cent, \$1.76 per cwt. (112 pounds), and 40 per cent, \$2.43 per cwt.

*Whence imported.*—As far as I can learn, there is no foreign importation of acetic acid into this district, it being all bought from home manufacturers, of whom the following is a list:

## ACETIC ACID MANUFACTURES OF THE UNITED KINGDOM.

Adams, Salford.	Lewis, Pontardawe.
Aldred, Sheffield.	Lister & Biggs, London.
Beaufoy, London.	Morris, Amanford.
Benny, Denny, Scotland.	North, Leeds.
Boulton, London.	Pickles, Manchester.
Bourke, Cardiff.	Pontihel Co., Hereford.
Cartvale Co., Paisley.	Preston, Bury.
Champion, London.	Singleton, Birmingham.
Condys' Works, London.	Smith, Worksop.
Coupe, Chorley.	United Alkali Co., Ltd., Liverpool.
Coutts, Manchester.	Wallace, London.
Garthwaite, Dewsbury.	Whitehead, Manchester.
Globe Co., Widnes.	Wilson, Berwick.
Hadfield Bowens, Gorton.	Wilson, Todmorton.
Hirst, Leeds.	Winder, Birmingham.
Johnson, London.	

*Form in demand.*—Acetic acid is used in this district principally for medicinal purposes, and is usually bought for that purpose; 33 per cent of hydrogen acetate.

HORACE W. METCALF, *Consul.*

NEWCASTLE-ON-TYNE, *May 2, 1900.*

## NOTTINGHAM.

*Consumption.*—Owing to the various methods of purchase and the indisposition of consumers to furnish detailed information, there is difficulty in arriving at the amount of acetic acid consumed in this district—Nottinghamshire, Derbyshire, and Leicestershire. By far the largest amount is used by dyers. Inasmuch as each firm generally buys direct from its favorite manufacturer or through a London agent, there is no method of ascertaining the exact quantity consumed. Approximately, however, and according to the judgment of the best authorities, the amounts used annually are as follows: Nottinghamshire, 40 or 50 tons; Derbyshire, 20 tons; Leicestershire, 15 tons.

*Prices.*—The manager of one of the principal dye and bleach works (Mr. Pentecost, of Thos. Adams & Co., Ltd.), states that the usual commercial acid is purchased in strengths of 30, 40, and 80 per cent, and in casks or carboys, according to quality. Current prices he quotes as follows: For the 30 per cent strength, 10s. (\$2.43) per cwt. (112 pounds); for the 80 per cent, 24s. (\$5.84) per cwt., with the usual trade discount of 2½ per cent. The leading agents he names are Rob-

inson, of Clayton, Manchester; Forth & Son, of Northgate, New Basford; W. Burton & Son, of Bethnal Green, London. The 30 and 40 per cent acid is delivered in casks, the 80 per cent in carboys. Other consumers stated practically the same facts. One firm (Stokes & Sewell, dyers), quoted 80 per cent acid at 3d. (6 cents) per pound by carboy, and 40 per cent at 12s. 9d. (\$3.10) per cwt. in casks holding each about 6 cwt. (672 pounds). A 33 per cent strength is quoted by a Leicester firm at 15s. (\$3.65), it being stated that the quotation for the same article last September was 11s. 6d. (\$2.80), present prices being firm, with a prospect of some increase.

*Whence imported.*—The glacial acid, of about 90 per cent strength, in solid form, is used principally by wholesale and retail chemists for medicinal purposes. Of the glacial product a large proportion seems to come from Germany, but the German product of lower quality seems to be in disfavor. One local wholesale house (Benj. North & Co.) thought that a considerable quantity of German acid must be used, stating that the 33 per cent quality could be laid down here for about 10s. (\$2.43), while the same strength in English acid was held at 18s. (\$4.38), with  $2\frac{1}{2}$  per cent per month discount. The consumers, however, all seem to use English acid, claiming for it a superior quality. One firm (Stokes & Sewell) said:

Our experience with known German acetic acid has been with the glacial product. The price now we are not able to quote. We have an objection to this product on account of waste, due to its solidifying even in normal temperatures, and often through expansion or contraction breaking the glass carboys.

S. C. McFARLAND, *Consul.*

NOTTINGHAM, *May 2, 1900.*

#### PLYMOUTH.

*Consumption.*—As nearly all of the acetic acid imported into this district is shipped by rail, and as there is no record kept by the railway companies as to the quantities received at Plymouth, it is impossible to ascertain the exact amount consumed. But by careful and extended inquiry among the chemists, merchants, and manufacturers, I find that it is brought here in considerable quantities. It is purchased wholly from English manufacturers, and principally from Messrs. Beaufoy & Co., South Lambeth, London. There is locally a strong partiality for the English product, and, notwithstanding the strenuous efforts of many German chemical firms to introduce their acetic acid, no other than the English has so far found a market in Devon and Cornwall.

*Price.*—The price of acetic acid varies according to the kind, purity, and amount purchased. The ruling price at wholesale for the general commercial acetic acid, which is 33 per cent pure, is for small quan-

ties 7 cents per pound, and for quantities of 1 ton or over, 3 cents per pound. Glacial acetic acid, which is 98 per cent pure, is 10d. (20 cents) per pound.

*Form in demand.*—Acetic acid is demanded locally for use in pickling establishments and dye works.

JOS. G. STEPHENS, *Consul.*

PLYMOUTH, *April 3, 1900.*

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#### SHEFFIELD.

*Consumption.*—The consumption of acetic acid in this city is estimated at 1 ton per month.

*Price.*—The ruling price is as follows: For 80 per cent pure acetic acid, £28 10s. (\$138.69) per ton of 224 gallons, and for 33 per cent pure acetic acid, £17 (\$82.73) per ton delivered.

*Whence imported.*—The pure acetic acid is imported from Germany, and the diluted is made in Croydon, Droylesden near Manchester, Dewsbury, Paisley, Bonny Bridge (Sterling), and Glasgow.

*Form in demand.*—It is demanded locally chiefly in the form of cheap pickling vinegar. The 80 per cent acetic acid is usually sold in carboys and the 33 per cent in 40-gallon casks and hogsheads. It may be stated that acetic acid is also used in the manufacture of acetate of ammonia for medicines, and in the analysis of steel.

JAMES JOHNSTON, *Consul.*

SHEFFIELD, *May 7, 1900.*

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#### TUNSTALL.

*Consumption.*—Acetic acid is not used to any great extent in this district, and I am unable to learn of the manufacture of any article or commodity wherein it is used.

*Price.*—It is retailed here at 4½ pence (9 cents) per pound.

*Whence imported.*—It is obtained by the chemists here from the manufactories in the Birmingham and Liverpool consular districts.

*Form in demand.*—It is in most demand here in the pure standard form—i. e., 99 per cent pure.

WM. HARRISON BRADLEY, *Consul.*

TUNSTALL, *April 26, 1900.*

## AMERICA.

### DOMINION OF CANADA.

In regard to the consumption of acetic acid in the Dominion of Canada, I have to report that it is very difficult to state the quantity used, but competent authorities estimate it at the minimum of 10,000 gallons.

The ruling price for 80 per cent proof is 20 cents per pound. Puriss specific gravity 1,064, 41½ cents per pound. Pure specific gravity, 1,055, 52½ cents per pound.

That used in Canada is nearly all manufactured at Toronto and Woodstock. Only a little chemically pure acid is imported for analytical purposes.

The form used is mostly 33 per cent; sometimes 90 and 80 per cent, and rarely, for certain manufacturing purposes, 30 per cent.

The customs returns show the imports of acetic acid in excess of proof for the year ended June 30, 1899, as follows:

Whence Imported.	Gallons.	Value.	Duty collected.
United States.....	465	\$251.00	\$437.87
Great Britain.....	18	36.00	10.92
France.....	60	212.00	83.26
Germany.....	1,374	1,290.00	1,916.92
<b>Total.....</b>	<b>1,917</b>	<b>1,789.00</b>	<b>2,448.97</b>
<b>Imported into the Provinces:</b>			
Ontario.....	454	567.00	489.41
Quebec.....	1,009	945.00	1,490.98
Nova Scotia.....	44	11.00	24.20
New Brunswick.....	57	46.00	66.82
Manitoba.....	158	82.00	222.78
British Columbia.....	195	140.00	154.78
<b>Total.....</b>	<b>1,917</b>	<b>1,789.00</b>	<b>2,448.97</b>

*Imports of acetic acid, crude, of any strength, not exceeding 30 per cent.*

Whence imported.	Gallons.	Value.	Duty collected.
United States.....	10,693	\$250.00	\$62.50
Great Britain.....	626	356.00	67.31
<b>Total.....</b>	<b>11,319</b>	<b>606.00</b>	<b>129.81</b>
<b>Imported into the Provinces:</b>			
Ontario.....	11,246	588.00	125.31
Nova Scotia.....	18	7.00	1.75
New Brunswick.....	55	11.00	2.75
<b>Total.....</b>	<b>11,319</b>	<b>606.00</b>	<b>129.81</b>

*Imports of acetic acid, not exceeding proof strength.*

Whence imported.	Gallons.	Value.	Duty collected.
United States.....	32	\$9.00	\$4.80
Great Britain.....	400	74.00	56.47
Belgium.....	62	70.00	9.30
Total.....	494	163.00	70.57
Imported into the Provinces:			
Ontario.....	2	1.00	.80
Quebec.....	62	70.00	9.30
Nova Scotia.....	26	9.00	3.67
New Brunswick.....	404	83.00	57.30
Total.....	494	163.00	70.57

JOHN L. BITTINGER, *Consul-General.*

MONTREAL, *April 19, 1900.*

**DUTY.**—The Dominion customs tariff classifies acetic acid as follows: Not exceeding proof strength, 15 cents per gallon; in excess of proof, 15 cents per gallon, and 2 cents for each degree above proof. Crude, of any strength not exceeding 30°, 28 per cent ad valorem.—John G. Foster, Consul-General, Halifax.

### BRITISH COLUMBIA.

**Consumption.**—The consumption of acetic acid in Victoria has increased largely. There is a large vinegar factory, also pickling factories, which use great quantities. Considerable is sent up to the northern mining districts, and also to the west coast of Vancouver Island. Last year the consumption here reached 3,000 gallons. This year already 2,000 gallons have been used, and it is expected the year's consumption will reach 4,000 gallons.

**Whence imported.**—The acetic acid used in Victoria comes almost entirely from factories located in eastern Canada—at Montreal and Toronto. During 1899 a small quantity was imported from the United States—85 gallons in all—60 and 66 per cent strength, the gross value of which was \$64. During 1900, 91 gallons have been imported from the United States—80 per cent—of the gross value of \$110. The tariff imposed by the Canadian customs law on acetic acid, and the way in which it is construed, is practically prohibitory. The tariff is 15 cents per gallon and 2 cents per pound per degree above proof, 6 per cent being held as the basis, making the duty assessed equal the first price of acetic acid, and the total cost of the same when bought in Canada. No acetic acid was imported from any foreign country, save from the United States.

**Price.**—The ruling price varies according to the market from 22 to 28 cents per pound, or \$2.50 to \$3 per gallon. Dealers dislike to

quote the exact figures, and the prices named are probably the retail ones.

*Form demanded.*—Consumers say that they are requiring this year stronger acetic acid than ever before, experience showing that the strongest produces the best results. None of the purchases made this year were under 70 per cent, and ranged generally from 80 to 95 per cent.

ABRAHAM E. SMITH, *Consul.*

VICTORIA, *May 11, 1900.*

## MANITOBA.

*Consumption.*—Acetic acid is used quite extensively in the district, principally in the manufacture of vinegar, but it is all imported, none being produced or manufactured for commercial purposes in the district.

*Duty.*—There is a specific impost duty levied by the Dominion government of 15 cents per gallon upon acetic acid and vinegar of any strength not exceeding proof, and of 2 cents per gallon for each degree of strength in excess of proof. The crude acid of any strength not exceeding 30 per cent is subject to an impost duty of 25 per cent ad valorem. Proof strength is held by the customs act to be 6 per cent of absolute acid.

*Whence imported.*—The principal supply comes from Great Britain. In order to economize in freight charges it is generally imported in the form known as "glacial," B. P. 99 per cent pure. It is largely entered at the eastern ports of Canada and supplied to the trade in this district at about 28 cents per pound at wholesale. Small quantities of the acid in other forms come into the district from the United States, but the amount is insignificant. In the fiscal year ended June 30, 1899, there was imported into the district direct from the United States (exclusive of what may have been entered at the port of Fort William, Ontario), 158 gallons testing 63° above proof, valued for customs purposes at \$82, on which a duty of \$222.78 was collected.

*Preferential duties.*—The Canadian customs duties above set out are subject to a preferential reduction in favor of Great Britain of 25 per cent, soon to be increased to 33½ per cent. This of course operates seriously to the disadvantage of American dealers.

W. H. H. GRAHAM, *Consul.*

WINNIPEG, *March 27, 1900.*

## NEW BRUNSWICK.

## MONCTON.

There is not a single vinegar factory or other concern which would use acetic acid in a large quantity in this consular district. The only firm employing it is the Givan steam laundry here, which uses about 1 barrel (419 pounds) annually. In 1898 they imported it from Boston and paid  $2\frac{1}{2}$  cents per pound. In 1899 the same firm received a barrel from Montreal, though the price was  $3\frac{1}{2}$  cents per pound crude, and 5 cents per pound refined.

The druggists keep it in stock on a small scale. They receive it from St. John, Halifax, or Montreal, and sell it at 18 cents per pound. I have been informed that the refined acetic acid at 5 cents per pound is as good in every particular as that at 18 cents per pound sold by druggists.

GUSTAVE BEUTELSPACHER, *Commercial Agent*.

MONCTON, *March 27, 1900.*

## ST. JOHN.

*Consumption.*—Acetic acid was imported into this port for year ended June 30, 1899, as follows: From United States, 35 gallons, value, \$39; from Germany, 53 gallons, value, \$67.

*Price.*—Wholesale price, diluted, 15 cents per pound;<sup>1</sup> glacial, 40 cents per pound.

On account of the high duty, there is not much imported into this district.

IRA B. MYERS, *Consul*.

ST. JOHN, *March 26, 1900.*

## ST. STEPHEN.

Only 12 gallons have been imported into St. Stephen during the past nine months. This came from the United States.

CHARLES A. MCCULLOUGH, *Consul*.

ST. STEPHEN, *April 7, 1900.*

## WOODSTOCK.

*Consumption.*—The consumption of acetic acid is limited, with the exception of that used by woolen mills, to the manufacture of vinegar, and for that purpose but little is employed.

<sup>1</sup> See footnote, page 8.

*Whence imported.*—United States and England. Some, I am informed, is made in the Dominion.

*Form demanded.*—That known as commercial is commonly used for vinegar, but woolen mills buy a higher grade.

In connection with the above, I might say the Carleton Woolen Company recently bought some in the United States that was invoiced at about  $27\frac{1}{2}$  cents per gallon,  $18^{\circ}$  above proof, on which the duty amounted to 51 cents per gallon, computed at 15 cents per gallon, and 2 cents for each degree above proof.

I inclose herewith a letter from the customs department that may add to the information.

FRANK C. DENISON, *Consul*.

WOODSTOCK, April 3, 1900.

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CUSTOMS DEPARTMENT, CANADA,  
Ottawa, March 30, 1900.

CARLETON WOOLEN CO., LIMITED,  
Woodstock, N. B.

GENTLEMEN: I have the honor to acknowledge receipt of your letter of the 27th instant, and in reply beg to state that there is no provision in the tariff for the admission of acetic acid at a rate of 25 per cent for the use of dyers, printers, etc., but item No. 142 provided for a duty of 25 per cent on acid, acetic acid, crude, and pyroligneous, crude, of any strength not exceeding 30 per cent.

I have the honor to be, etc.,

F. G. BONNET,  
*Acting Commissioner*.

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## NEWFOUNDLAND.

*Consumption.*—The consumption in this colony last year of pure acetic acid was 160 gallons and of impure (pyroligneous) 100 gallons.

*Cost.*—The cost price of pure is 51 cents and of impure 30 cents per gallon.

*Whence imported.*—Pure and impure acetic acid used in this market all comes from England. Locally, the demand is for small quantities.

*Duty.*—The duty on acetic acid is  $33\frac{1}{3}$  per cent. The pure retails for \$1.60 and impure \$1.50 per gallon.

MARTIN J. CARTER, *Consul*.

ST. JOHNS, May 1, 1900.

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## NOVA SCOTIA.

*Consumption.*—During the year ended June 30, 1899, only 88 gallons of acetic acid were entered for consumption in the Province of Nova Scotia. I am informed that the most of the acetic acid con-

sumed in this Province is manufactured in Montreal. As purchased, it is usually of about 80° strength, and is reduced as required.

*Price.*—Acetic acid is used here chiefly in making vinegar and for dyeing. The usual price is from 20 to 25 cents per pound for the 80° strength acid, wholesale.

JOHN J. FOSTER, *Consul-General*.

HALIFAX, *May 15, 1900.*

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## ONTARIO.

### AMHERSTBURG.

*Consumption.*—There is but little acetic acid used in this district.

*Whence imported.*—The acid used here is bought in Montreal.

*Price.*—What is called fort, or strong, costs 12 cents per pound at wholesale.

*Form demanded.*—It is used only in liquid form.

CHESTER W. MARTIN, *Consul*.

AMHERSTBURG, *March 22, 1900.*

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### HAMILTON.

*Consumption.*—The annual consumption of acetic acid at this port is estimated by leading dealers at 2 tons.

*Price.*—The price quoted to-day is 25 cents per gallon of 90 per cent.

*Whence imported.*—This acid was formerly imported from the United States, and recently from Germany, but under a tariff of 15 cents per gallon not exceeding the strength of proof and 2 cents per gallon for each degree in excess of the strength of proof, Canadian producers now control this market.

*Form demanded.*—The form demanded here is liquid, put up in demijohns.

JAMES M. SHEPARD, *Consul*.

HAMILTON, *March 22, 1900.*

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### KINGSTON.

*Consumption.*—The consumption of acetic acid in this district is very limited; perhaps 1,500 pounds of 95 per cent acid for the year.

*Whence imported.*—There is very little now imported, owing to the high tariff thereon. Previous to 1895, considerable quantities were imported from Germany; it is now manufactured in Canada.

*Price.*—The price runs from 7 to 24 cents per pound with the strength from 30 to 95 per cent.

*Form in demand.*—The lower strength is put up in barrels; the higher in glass demijohns, containing about 45 pounds each.

M. H. TWITCHELL, *Consul.*

KINGSTON, CANADA, *March 23, 1900.*

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#### LONDON.

*Consumption.*—Formerly, most of the acetic acid used in the Dominion was imported from Germany, but of recent years almost the entire supply has been manufactured in Canada. Two concerns are engaged in its manufacture, viz, the Standard Chemical Company, of Toronto, and the Canada Paint Company, of Montreal. I am therefore unable to approximate the amount consumed, but believe it is used to quite an extent.

*Price.*—The ruling prices are: For glacial acetic acid, 40 cents per pound, to the trade; ordinary 33 per cent acid, 12 cents.

*Form in demand.*—It is supplied to the trade in a form diluted from the glacial, about 80 per cent strength, and is shipped in barrels.

HENRY S. CULVER, *Consul.*

LONDON, *April 10, 1900.*

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#### ORILLIA.

*Consumption.*—The consumption of acetic acid is quite general here, in that all retail druggists have it in stock and use from 10 to 50 pounds per annum of the commercial acetic acid.

*Price.*—It sells at 10 cents per pound in bottles, wholesale, and retails at from 25 to 35 cents per pound.

There is a patent preparation called aceticura, manufactured in London, and sold here quite extensively. This retails at \$1 per bottle.

*Whence imported.*—The commercial acid is obtained in Toronto, where it is manufactured by nearly all wholesale druggists.

*Form in demand.*—The demand is for the commercial liquid form, or for the patent aceticura.

E. A. WAKEFIELD, *Commercial Agent.*

ORILLIA, *May 23, 1890.*

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#### STRATFORD.

Inasmuch as acetic acid is principally used for the manufacture of imitation cider vinegar, and Canada being a country where apples are plentiful, most of the vinegar consumed is made from cider. Therefore,

but very little acetic acid is utilized here. All that is used is imported from the United States. The ruling price is from 10 to 12 cents a pound.

A. G. SEYFERT, *Consul*.

STRATFORD, *March 25, 1900.*

## PRINCE EDWARD ISLAND.

*Consumption.*—Acetic acid is imported principally by the druggists and sold by them to be diluted and used as vinegar.

*Price.*—The druggists usually purchase it in the form of glacial acetic acid, containing nearly 99 per cent of real acetic acid, for which they pay about 45 cents per pound, but it is sometimes imported diluted—with specific gravity 10.44, costing 15 cents per pound in car-boy lots. This latter strength is diluted by about seven times its volume of water and used as vinegar.

*Whence imported.*—The acid, owing to the very high tariff, is not imported into this Province, but bought from Canadian wholesale druggists.

DELMAR J. VAIL, *Consul*.

CHARLOTTETOWN, *March 24, 1900.*

## QUEBEC.

### COATICOOK.

*Consumption and price.*—Only about 50 gallons of the pure acid is consumed in Coaticook annually, and this is bought in Montreal, where it is manufactured. The dealers pay 40 cents per pint for it, and sell it mostly to the farmers, for the purpose of making vinegar, for 60 cents per pint. The woolen and cotton factories, however, located here use about 1,500 pounds of diluted acetic acid for dyeing purposes, which costs them about 3 cents per pound. They get it from Detroit, Mich., and elsewhere in the United States. There is no duty on it for dyeing purposes. There is a duty on pure acetic acid of 2 cents per pound. The demand for same is increasing.

J. H. JOHNSON, *Consul*.

COATICOOK, *March 29, 1900.*

## QUEBEC.

The custom officials here report but one shipment of acetic acid during the past year, amounting to only \$5 in value, and that from the United States.

WM. W. HENRY, *Consul*.

QUEBEC, *March 27, 1900.*

## SHERBROOKE.

Acetic acid is not used in large quantities in this district; probably 50 gallons per year would cover the consumption in this city. Its ruling price is from 25 to 30 cents per pound. It is said to be imported from France, and is bought by the local dealers in Montreal.

The local demand is for a liquid solution of about 33 per cent acid.

PAUL LANG, *Consul*.

SHERBROOKE, *March 28, 1900.*

## MEXICO.

*Consumption.*—Acid (acetic, nitrico, oxalico, and virotenoso) was imported into the Republic of Mexico for the fiscal year of 1898-99 to a total of 140,261 kilograms (314,926 pounds), of a value, in gold, of \$17,806.

*Price.*—The ruling price is about 70 cents (silver) per kilogram (2.2046 pounds), wholesale.

*Whence imported.*—It is all imported from Germany, and is received in glass jars of 5 kilograms (11 pounds) each, which is the most satisfactory form.

ANDREW D. BARLOW, *Consul-General*.

CITY OF MEXICO, *March 30, 1900.*

## CIUDAD PORFIRIO DIAZ.

The quantity of acetic acid annually used in my district is so small as to be comparatively nothing.

The largest druggist here informs me that he sells only about 1 gallon a year.

CHAS. P. SNYDER, *Consul*.

CIUDAD PORFIRIO DIAZ, *April 30, 1900.*

## MATAMOROS.

*Consumption.*—Acetic acid is imported into this section of Mexico either in barrels or demijohns. As there is little demand for it in the arts, it is used almost exclusively in the manufacture of vinegar. On account of its reduction for this purpose, it is technically known as the "No. 8" in trade. It is sold by the pound, and its price until quite recently averaged about 30 cents. The scarcity at present, however, has advanced the price to 50 cents.

P. MERRILL GRIFFITH, *Consul*.

## MAZATLAN.

*Consumption.*—The consumption of acetic acid at Mazatlan is about 4,500 pounds annually.

*Price.*—The ruling price for the best quality is about 37 cents per pound in United States coin.

*Whence imported.*—It is imported here from England, Germany, and France.

The freight rates from the United States by rail and steamer make it impossible to import from that country.

It is imported in flasks of about 40 pounds each, packed two in a box.

LOUIS KAISER, *Consul.*

MAZATLAN, *April 2, 1900.*

## MONTEREY.

The annual consumption of acetic acid in this city is about 600 to 650 kilograms (1,323 to 1,433 pounds), the major portion of which is imported from Germany in barrels of a capacity of about 150 kilograms (330.69 pounds) each. The average price of acetic acid delivered in Monterey is from \$60 to \$70 per 100 kilograms (220.46 pounds).

PHILIP C. HANNA,  
*Consul-General.*

MONTEREY, *April 26, 1900.*

## VERA CRUZ.

*Consumption.*—Acetic acid is imported through this port to the amount of about 70 tons a year, of which, however, only about 7 tons remain in this city for local consumption.

*Whence imported.*—Nearly the whole is imported from Hamburg.

*Price.*—Its cost, laid down in warehouses, after freight, duty, etc., are paid, is about 40 cents, silver, per kilo (2.2046 pounds). Hence any other country that wants to get this trade would have to be in a position to deliver acetic acid at the port of Vera Cruz, cost, freight, and insurance included, for 15 or 16 cents, United States currency, per kilo, in order to successfully compete with the present importing country.

*Form in demand.*—In this locality acetic acid is demanded in liquid form of 50 per cent strength, in glass pots of 5 liters each, 10 glass pots in a wooden box.

WM. W. CANADA, *Consul.*

VERA CRUZ, *April 15, 1900.*

## COSTA RICA.

*Consumption.*—Very little acetic acid comes into Costa Rica. I give below the figures for the years 1894, 1895, and 1896, since which latter year no statistics have yet been published.

Whence imported.	1894.	1895.	1896.	Total.
	<i>Kilos.</i>	<i>Kilos.</i>	<i>Kilos.</i>	<i>Kilos.</i>
Great Britain .....	30	.....	122	122
France .....	300	.....	437	737
Germany .....	65	.....	.....	65
Italy .....	.....	24	35	59
United States .....	.....	.....	.....	.....
Total kilos .....	395	24	594	1,013
Total pounds .....	871	53	1,309	2,233

In 1897, 134 kilograms (295 pounds) were imported from the United States. After consulting the leading importer here, I am satisfied that the importations for the two years 1898 and 1899 did not exceed 400 kilograms (880 pounds).

*Price and duty.*—The acid is imported in the concentrated form. The duties at the custom-house are 11 cents per kilogram, at present exchange rates about  $4\frac{1}{2}$  cents American gold. It retails for about 65 cents American gold per pound.

*Vinegar.*—Most of the vinegar used in the country is imported. There are no vinegar works in the country, but the country people sometimes make a very inferior sort of vinegar. The quantity made in the country is so small that it may be practically disregarded.

Below are given the figures regarding importation of vinegar for the years 1894, 1895, and 1896:

Whence imported.	1894.	1895.	1896.	Totals.
	<i>Kilos.</i>	<i>Kilos.</i>	<i>Kilos.</i>	<i>Kilos.</i>
Great Britain .....	123	42	169	334
France .....	1,153	1,434	404	2,991
Germany .....	16,366	21,475	31,906	69,747
Spain .....	290	.....	708	998
Belgium .....	46	.....	.....	46
United States .....	4,175	4,588	2,669	11,432
Italy .....	.....	.....	256	256
Colombia .....	1,611	.....	.....	1,611
South America .....	.....	.....	29	29
Total kilos .....	23,764	27,539	36,141	87,444
Total pounds .....	52,400	60,723	79,690	192,813

JOHN C. CALDWELL, *Consul.*

SAN JOSÉ, May 4, 1900.

## GUATEMALA.

There is scarcely any demand for acetic acid in this market.  
The only form in which it arrives is as vinegar, of which there was but 282 gallons imported in 1899.

JAMES C. McNALLY,  
*Consul-General.*

GUATEMALA, *April 27, 1900.*

## SALVADOR.

The consumption in Salvador, per annum, amounts to 400 pounds.  
Ruling price, \$1 silver per pound. It is imported from Germany, and sold in flasks of 16 ounces.

JOHN JENKINS, *Consul.*

SAN SALVADOR, *May 1, 1900.*

## WEST INDIES.

## BRITISH WEST INDIES.

## BAHAMAS.

There is very little acetic acid imported into this colony, and none is made here. Its only use is in the preparation of the prescriptions of druggists. About 8 or 10 gallons cover the annual importation.

It all comes from the United States, and will continue to do so.

THOS. J. McLAIN, *Consul.*

NASSAU, N. P., *March 27, 1900.*

## JAMAICA.

*Consumption.*—The annual importation of the article into this market is about 300 gallons.

*Price.*—Its ruling price in England is 20s. (\$4.86) per cwt. (112 pounds) plus 25 per cent for this market.

*Whence imported.*—It is all imported from England.

*Form in demand.*—It is demanded locally diluted in the form of vinegar, commercial (1 to 7).

ETHELBERT WATTS, *Consul.*

KINGSTON, *April 11, 1900.*

## DUTCH WEST INDIES.

The imports of acetic acid into this colony are very small, and there are no statistics by which to determine the exact amount. It comes almost wholly from Germany and France. That from Germany costs 1.05 marks (25 cents) per demijohn of  $2\frac{1}{2}$  gallons, and is sold at 50 cents a gallon, in smaller quantities at considerably more.

The French acid costs 2.75 francs (53 cents) per eight liters (8.4 quarts) in demijohns, and is sold for 3 florins (\$1.20) per demijohn. It is greatly diluted, and is often nearer water than vinegar when it comes on the table. Most families purchase only the value of a cent or two at a time.

ELIAS H. CHENEY, *Consul*.

CURAÇAO, *May 5, 1900.*

## BRAZIL.

Two or three years ago considerable acetic acid came to Bahia, where it was used in making the cheaper grades of vinegar, but during the past year there has been very little of it entered, because the State government passed a law imposing a very heavy fine upon anyone caught manufacturing acetic acid vinegar or using the acid to adulterate the real article.

At present there is very little of the acid in the market, and there is seldom a call for it at the wholesale drug houses. The local price is now 76 cents per kilo (2.2046 pounds).

THOMAS FURNISS, *Consul*.

BAHIA, *June 9, 1900.*

## PERNAMBUCO.

*Consumption.*—There is very little consumption of acetic acid here.

*Price.*—The price varies according to rate of exchange, but is generally from 30 to 40 cents per kilo (2.2046 pounds).

*Whence imported.*—It is imported from England, France, and Germany, that from Germany being the cheapest.

*Form in demand.*—It is used here in liquid form and comes in earthenware jars.

E. N. GUNSALUS, *Consul*.

PERNAMBUCO, *May 1, 1900.*

## BRITISH GUIANA.

*Consumption.*—Acetic acid was imported into this port during 1899 as follows:

Glacial acetic acid: From the United Kingdom, 26 gallons.

Vinegar containing less than 10 per cent of acetic acid, in gallons: From United Kingdom, 7,941; British West Indies, 120; Holland, 383; United States, 1,520.

Vinegar containing 10 per cent and more of acetic acid: From United Kingdom, 91 gallons.

*Price.*—The glacial form is shipped in carboys and half-gallon bottles. The price, which is variable, will average 10 cents per pound; it retails at 40 to 72 cents per pound. Having very limited medicinal uses, it is diluted and sold to consumers as white wine vinegar for pickling purposes, at 20 cents per quart.

Vinegar comes in  $3\frac{1}{2}$  to 5 gallon demijohns and in 25-gallon casks. The kind mostly used by consumers contains less than 10 per cent of acetic acid and costs in England 24 cents per gallon. It retails here at 12 cents per quart.

*Whence imported.*—Although coming from England, it is manufactured chiefly in Germany.

*Freight.*—Freight from England, 30 to 35 cents for demijohns and \$1.44 for 25-gallon casks.

*Duty.*—The duty on acetic acid containing 66 per cent and upward of the real acid is 12 cents per pound. Containing less than 66 per cent and more than 10 per cent of the real acid, per gallon, 60 cents. Acetic acid vinegar and substitutes for vinegar containing less than 10 per cent of the real acid, per gallon, 10 cents.

GEO. H. MOULTON, *Consul.*

DEMERARA, *April 30, 1900.*

## CHILE.

## ANTOFAGASTA.

*Consumption.*—The consumption of acetic acid in this consular district is small. In 1899, 700 pounds would be a liberal estimate for quantity imported.

*Price.*—It is sold by the druggists for 44 cents, United States gold, per kilo (2.2046 pounds).

It is imported in flasks of 5 kilos (11 pounds each), and is usually brought from Hamburg.

Some small lots come from Valparaiso, bought from the large importers of that city.

C. C. GREEN, *Consul.*

ANTOFAGASTA, *May 12, 1900.*

## VALPARAISO.

*Consumption.*—The consumption of acetic acid in this country is limited to the use made of it in drug stores, and, to a small extent, in the preparation of vinegar for household purposes. The entire consumption does not exceed 1,500 kilos (3,300 pounds) per annum of acetic acid, at 80 per cent, and 50 kilos (110 pounds) per annum, crystallized.

*Price.*—Prices for the 80 per cent, 1.50 pesos, per kilo (55 cents per 2.2046 pounds), and 3 pesos (\$1.09) per kilo crystallized.

*Whence imported.*—It is imported here exclusively from Germany, the 80 per cent in demijohns of 20 kilos (44 pounds) each, or carboys of 60 kilos (132 pounds), and the crystallized in small cork-stopped bottles, in which forms it is locally demanded.

JOHN F. CAPLES, *Consul.*

VALPARAISO, May 8, 1900.

## COLOMBIA.

## BARRANQUILLA.

*Consumption.*—It is impossible to state the quantity of acetic acid imported here, as it is generally introduced under such general heads as drugs, medicines, chemicals, etc. I am satisfied, however, that the importations are very light, as the demand is limited.

Most of the vinegar consumed in this section of Colombia is of local manufacture, and is made principally from miel (cane molasses) or from panela (cane sugar). Such vinegar as is offered in the market here is of about 45° specific gravity.

It is sold here by the local manufacturer at 66 centavos, Colombian paper, which, at the present rate of exchange, is equal to 4.15 cents United States gold per gallon.

Another class of vinegar used is made from bananas, but it is not so satisfactory as the vinegar made from cane products. During the year ended June 30, 1899, vinegar was imported here as follows: From Germany, 12 packages, weighing 181 kilos.

*Price.*—Prices of acetic acid, per kilogram (2.2046 pounds), are as follows, free on board at French and German ports:

	Cents.
French, glacial crystallized:	
100 per cent .....	23
90 per cent .....	21
50 per cent .....	12.5
Germany, glacial crystallized:	
100 per cent .....	21.4
90 per cent .....	19
50 per cent .....	9.7

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Most of the acetic acid imported comes from France or Germany, and, as a rule, is imported in 5 and 10 pound bottles. It is retailed as follows, per pound: Glacial crystallized, 100 per cent, 6 paper pesos (37½ cents United States gold); 90 per cent, 4 paper pesos (25 cents United States gold); 50 per cent, 2.40 paper pesos (15 cents United States gold).

*Duties.*—Acetic acid belongs in the sixth class, and pays a duty of 30 centavos, plus 20 per cent, plus 25 per cent, or 45 centavos (2.8 cents United States gold) per kilo (2.2046 pounds).

Vinegar belongs in fourth class, and pays a duty of 5 centavos plus 20 per cent plus 25 per cent, or 7½ centavos (about one-half a cent United States gold) per kilo.

*Freight.*—Ocean freight rates from European and American ports to Savanilla are as follows, per ton of 2,2046 pounds:

From Southampton, 15 to 25 shillings (\$3.65 to \$6.09); from Hamburg, 30 to 35 shillings \$7.30 to \$9.51); from Havre, 47½ francs (\$9.16); from Genoa, 27½ francs (\$5.30); from Barcelona, 35 pesetas (\$6.95); from New York, Atlas Line, 12 cents gold per cubic foot on general merchandise. Dealers here tell me that little acetic acid is imported from the United States, for the reason that European prices are much lower.

In conclusion, I give herewith the names of a number of importers of acetic acid and of manufacturers of vinegar at this port, as follows:

*Importers of acetic acid.*

Isaac Salas.	Manuel S. Manotas.
Oscar A. Noguera.	Antonio Pasos P.
Joaquin Vives P.	José Maria J. Sojo.

*Manufacturers of vinegar.*

Lazaro Maria Herrera.	Arturo Lopez Olier.
Ferran Hermanos.	Salcedo, Martinez & Co.

W. IRVIN SHAW, *Consul.*

BARRANQUILLA, *May 10, 1900.*

CARTAGENA.

*Consumption.*—Acetic acid imported into Cartagena in 1898: From England, 1,424 pounds; Germany, 1,386 pounds; United States, 383 pounds; France, 75 pounds.

*Price.*—It has been impossible for me to ascertain the prices, as the custom-house statistics do not detail the values of the articles imported.

AUG. T. HANABERGH,  
*Vice and Acting Consul.*

CARTAGENA, *April 10, 1900.*

## COLON.

On April 26, 1898, the "Farmacia International," of this place, imported from Paris, France, one 5-gallon cask of acetic acid, of which half remains to be sold. In view of this fact, which shows the exceedingly small demand, there can be written from this place nothing of interest in regard to the State Department's inquiry.

WILLIAM W. COBBS, *Consul*.

COLON, *April 9, 1900.*

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## ECUADOR.

The consumption of acetic acid in this Republic is not worthy of consideration. From what I can learn, the importations do not reach the value of \$100 per annum.

PERRY M. DE LEON,  
*Consul-General*.

GUAYAQUIL, *May 4, 1900.*

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## PARAGUAY.

Very little acetic acid is used in Paraguay; not enough to be worthy of mention; and what is introduced is consumed for making vinegar.

JOHN N. RUFFIN, *Consul*.

ASUNCION, *June 7, 1900.*

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## URUGUAY.

The customs value placed upon imports of acetic acid shows an annual average of \$2,800 for the past several years, and Belgium, Germany, and England furnish about all of it. It is imported in bottles, highly concentrated, and pays a duty of  $57\frac{1}{2}$  on the custom valuation of 80 cents per kilo. But a small amount is imported in crystals, and it may be said that the sure and speedy freight accommodations from German and English ports, including better rates, make this market next to "impossible" for the American product.

ALBERT W. SWALM, *Consul*.

MONTEVIDEO, *April 21, 1900.*

## AFRICA.

### CANARY ISLANDS.

*Consumption.*—The consumption of acetic acid in the Canaries is very small, hardly worth mentioning.

*Prices.*—There is no quotation of prices, as the acid is only sold by a few drug stores.

*Whence imported.*—It is imported from England, France, and Germany.

The acid enters in pint bottles. I do not think it would pay to import it from the United States.

*Duties.*—There are no customs duties on acetic acid in these islands.  
SOLOMON BERLINER, *Consul.*

TENERIFFE, *April 9, 1900.*

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## EGYPT.

*Consumption.*—The custom house statistics do not classify acetic acid, so that the total annual import can not be ascertained.

*Prices.*—A Hamburg firm quotes acetic acid, glacial, 100 per cent, in boxes of 50 kilograms (110 pounds), 67.50 marks per 100 kilograms (\$16.06 per 220 pounds); very pure, 50 per cent, 36.50 marks per 100 kilograms (\$8.69 per 220 pounds).

An English firm quotes, for not less than 10 pounds, glacial at 10d (20 cents), and very pure at 4d (8 cents) per pound.

*Whence imported.*—Acetic acid is imported principally from Hamburg, Germany.

The relatively lower price named by the German firm sufficiently explains the fact that the importation of this chemical is chiefly from that country.

*Form in demand.*—Locally, the demand is principally for the white variety, for use in preparing vinegar.

WILLIAM DELANY HUNTER,  
*Vice Consul-General.*

CAIRO, *June 12, 1900.*

## MADAGASCAR.

I am informed by the customs authorities that the importation of acetic acid into Madagascar is prohibited.

M. W. GIBBS, *Consul*.

TAMATAVE, *May 15, 1900.*

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## MADEIRA.

*Consumption.*—The consumption of acetic acid is insignificant at Madeira; it is not employed in local industries or manufactures.

*Price.*—Ruling prices are about \$6 per cwt. for the best commercial form, or 20 cents per pound for the glacial kind.

*Whence imported.*—The acid consumed in this island is imported from Great Britain.

*Form in demand.*—In liquid form in drug stores, and in the glacial state for photography.

T. C. JONES, *Consul*.

FUNCHAL, *April, 1900.*

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## MOROCCO.

*Consumption.*—About 5,000 liters (1,296 gallons) of acetic acid were brought to Tangier during the past year. The whole quantity was imported from Germany.

*Price.*—Its ruling price was about 40 cents, Spanish (7.72 cents United States), per liter (1.05 quarts).

*Form in demand.*—The demand for it in Morocco is as extract or essence of vinegar.

S. R. GUNNERE, *Consul-General*.

TANGIER, *April 14, 1900.*

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## ST. HELENA.

After careful inquiry of the only two chemists on this island, I find that the importation from Great Britain is of infinitesimal quantity, as there is really little or no use for it, owing to the fact that there are no manufacturing chemists resident in St. Helena. Consequently I am unable to encourage the introduction of even the smallest parcel from the United States.

ROBERT P. POOLEY, *Consul*.

ST. HELENA, *April 26, 1900.*

## SIERRA LEONE.

There is absolutely no demand for acetic acid in this consular district.

There was none imported into this colony during the year 1898 nor earlier, as far as I have been able to ascertain—hence I am unable to give prices, etc.

There are no large pharmaceutical manufacturing establishments here to require quantities of concentrated drugs of this class.

JOHN T. WILLIAMS, *Consul*.

SIERRA LEONE, *June 2, 1900.*

## SOUTH AFRICA (BRITISH).

*Whence imported.*—The imports of acetic acid into all of South Africa, except through ports of Portuguese territory, for 1899, were as follows: Cape Colony: United Kingdom, 3,694 gallons; Germany, 2,847 gallons; Holland, 272 gallons; Belgium, 649 gallons; total into Cape Colony, 7,462 gallons. The imports into the colony of Natal in 1899 amounted to 813 gallons.

*Duty.*—The duty for both Cape Colony and the Colony of Natal is 3s. (72 cents) per gallon.

*Form in demand.*—Acetic acid comes in stone jars wickered, then crated in lime or whiting. It does not require such careful crating as other and stronger acids. Acetic acid is used, diluted, in place of vinegar, as it contains the same acid, namely, pyroligneous.

*Price.*—The ruling wholesale price c. i. f. Cape Town will average 8d. (16 cents) per pound in fortified and 1s. 6d. (36 cents) in glacial strength.

J. G. STOWE, *Consul-General*.

CAPE TOWN, *May 8, 1900.*

## TUNIS.

Acetic acid can hardly be said to be consumed here, and no commercial price can be fixed upon it as yet. It can only be had in insignificant quantities in medicine shops.

ALFRED CHAPÉLIÉ, *Consul*.

TUNIS, *April 4, 1900.*

ASIA.  
BRITISH INDIA.

BOMBAY.

I have made inquiries of leading merchants and importers, the chamber of commerce (which could give no information), and the collector of the port for information respecting acetic acid, with the result of the inclosed letters.

WILLIAM T. FEE, *Consul*.

BOMBAY, *June 2, 1900.*

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*Messrs. Phillips & Co., chemists, to Consul Fee.*

Acetic acid is usually imported as glacial acid, and commands about 1 rupee per pound in the local market. From this glacial acid, the various other commercial forms are usually prepared. We can not tell you the quantity imported; this you may learn from H. M. customs. Nor do we know for what purposes it is chiefly used, but we believe it is used largely in dyeing and such arts. It is a component of liquor ammoniæ acetatis, or "mindererus spirit," which is largely used in febrile affections, and consequently is in great demand in India.

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*Messrs. Kemp & Co., chemists, to Consul Fee.*

We have made careful inquiries regarding importation of acetic acid into this port and find that—

1. The amount imported is, roughly, 500 jars, about twice a year.
2. Price about 7 rupees<sup>1</sup> per jar.
3. Imported from England and Germany. We import a fair quantity ourselves from England.
4. Generally sold in 28-pound jars.

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*The collector of customs to Consul Fee.*

REPORTER GENERAL'S DEPARTMENT,  
*Bombay, June 16, 1900.*

With reference to your letter dated the 16th ultimo, I have the honor to inform you that acetic acid is not registered separately for the purpose of the trade returns in the statistical department at this custom-house. It is entered undistinguished under the head "Chemicals, other sorts," and as the trade under that head is a large one, and as hundreds of bills of entry will have to be examined to ascertain any possible imports, I request you will be good enough to depute a clerk of your own to the statistical office here to do the work. Bills of entry will be made over to him for examination and every other assistance afforded to enable him to find out the information.

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<sup>1</sup> The value of the rupee is estimated at 32.4 cents.

## CALCUTTA.

*Whence imported.*—Acetic acid is not specifically mentioned in the Calcutta customs returns, but is included under the head of "Chemicals, other sorts." Neither is it mentioned in the Annual Report of the Trade and Commerce of British India, so it is impossible to state the quantity imported.

I am informed, however, by one of the leading drug firms here that large quantities of acetic acid are imported and used in India. They import all they use in their laboratory from England, but the larger proportion of the imports come from Germany.

It is imported in hogsheads, in liquid form, and the ruling price in England is 20s. (\$4.86) per hogshead.

The following-named drug firms in Calcutta might be corresponded with regarding the business: Messrs. R. Scott Thompson & Co., Limited, Bathgate & Co., Smith Stanistreet & Co., Butto Kristo Paul & Co.

R. F. PATTERSON,  
*Consul-General.*

CALCUTTA, *May 2, 1900.*

## CHINA.

## HANKAU.

*Consumption.*—Not more than 200 pounds of acetic acid are used in this district annually.

*Price.*—It retails for 25 and 30 cents per pound for the common quality, and 45 cents (gold) for glacial acetic acid.

*Whence imported.*—It is used only by photographers and in the egg-albumen factory. The English receive their supply from England, and the French from Germany.

*Form demanded.*—It is generally used here in the liquid form or in solution.

L. S. WILCOX, *Consul.*

HANKAU, *May 24, 1900.*

## HONGKONG.

The consumption of acetic acid in this colony is almost nil, so small, indeed, that there is no demand for it, and no price could be obtained as a quotation.

ROUNSEVELLE WILDMAN,  
*Consul-General.*

HONGKONG, *August 25, 1900.*

## SHANGHAI.

So little acetic acid is brought into this port that the customs does not take separate account of it, and I have no means of finding out, therefore, how much is imported. The amount must be infinitesimal.

JOHN GOODNOW,  
*Consul-General.*

SHANGHAI, *May 9, 1900.*

## DUTCH INDIA.

*Consumption.*—I can not ascertain the quantity of acetic acid imported or consumed in this consular district.

I have applied to the customs authorities and to the two Government druggists; the former can not give any figures as to the importation of acids, these being entered as medicines, and the latter have informed me that they are unable to furnish figures regarding consumption.

*Price.*—Acetic acid is used in different forms, and the wholesale prices are, per kilogram (2.2046 pounds), glacial, 40 cents; glacial, packed in 10 kilo bottles, 38 cents; aceticum, 15 cents; dilute, 8 cents. It is also prepared here as vinegar essence, in bottles containing 1 kilo, 80 per cent essence, and sold at 40 cents per kilo. Prices for imported acid do not include bottles or packing.

*Whence imported.*—Acetic acid is imported principally from Germany.

*Form in demand.*—The acetic acid imported, to suit the local demand, is packed in bottles, and the qualities noted are the kinds mostly required.

B. S. RAIRDEN,  
*Vice-Consul, in charge.*

BATAVIA, *May 16, 1900.*

## JAPAN.

## HIOGO.

The Japanese people make acetic acid from rice, and it is said that no other kind is used in Japan except by the foreign element at the ports.

Being manufactured from a product which is so cheap in Japan, it is questionable whether the acetic acid made in this country could be easily displaced by that made in the United States, after the latter had paid transportation and been subject to the Japanese statutory tariff of 10 per cent.

SAMUEL S. LYON, *Consul.*

HIOGO, *May 31, 1900.*

## NAGASAKI.

There is very little of the acid used in my district. I am unable to learn that there has been any importation from foreign countries, and I can not find it on sale in Japanese or foreign shops at this port in quantities worth mentioning. There does not seem to be any demand for the article.

CHARLES B. HARRIS, *Consul*.

NAGASAKI, *May 11, 1900.*

## YOKOHAMA.

*Whence imported.*—The imports of this article at Yokohama during 1899 amounted to 252,535 pounds, valued at \$23,218, principally from Germany, and put up in demijohns holding from 20 to 30 kilograms (44 to 36 pounds) each.

*Price.*—The present market price is 22 to 24 cents per kilogram (2,2046 pounds).

*Form in demand.*—The qualities sold vary from 95 per cent to 98 per cent in grade. There is said to be a fair demand for the article above 96 per cent in grade.

Intending exporters can obtain further details by correspondence with the China and Japan Trading Company (Chemical Department) No. 32 Burling Slip, New York City.

JOHN McLEAN,  
*Vice-Consul-General.*

YOKOHAMA, *June 12, 1900.*

## KOREA.

The customs returns of Korea show no specific entries concerning its importation. Acids and chemicals are recorded together under a single head and appear among the imports of but one port, Chemulpo, and only of the following values: \$1,062, \$204, \$615, and \$730, for the years 1896, 1897, 1898, and 1899 respectively.

HORACE N. ALLEN,  
*Consul-General.*

SEOUL, *May 2, 1900.*

## PERSIA.

*Consumption.*—The consumption of acetic acid within the limits of the Persian Empire is of very small extent. The native doctors are but imperfectly acquainted with its properties, and foreign physicians

prescribe it but rarely. It is chiefly used in Teheran for making vinegar, serving the same purpose as less pure articles made by the natives.

The coasumption in the city of Teheran is about five gallons annually, and this is probably nearly half the quantity consumed in Persia.

*Price.*—The price in Teheran averages about \$1 a quart; but in towns nearer the Persian gulf and the Caspian sea, it is somewhat cheaper.

*Whence imported.*—It is imported for the Teheran market chiefly from London, Paris, and Berlin, and in a liquid state.

HERBERT W. BOWEN,  
*Consul-General.*

TEHERAN, *May 10, 1900.*

### SIAM.

*Consumption.*—About 100 pounds of acetic acid are used in Siam yearly, for therapeutical purposes only. There is no demand whatever for the commercial acid.

*Price.*—The price paid for the pure acid is about 10 cents a pound.

*Whence imported.*—It is supplied from England generally.

HAMILTON KING, *Consul-General.*

BANGKOK, *May 28, 1900.*

### STRAITS SETTLEMENTS.

*Consumption.*—Acetic acid is very little used here; principally for photographic use.

*Price.*—The average price is 35 cents, Mexican (17 cents gold) per pound, retail.

*Whence imported.*—Principally from England. Vinegar for pickling purposes is imported mainly from China.

*Form in demand.*—In its pure state, and supplied as required, generally in 1 and 2 ounce bottles.

R. A. MOSELEY, JR.,  
*Consul-General.*

SINGAPORE, *May 1, 1900.*

### TURKEY IN ASIA.

#### BEIRUT.

*Consumption.*—The consumption of acetic acid is very limited in this district. The annual quantity imported into Beirut may be estimated on an average at 1,320 pounds. This article is used for medical purposes as well as for vinegar.

*Whence imported.*—The acetic acid imported into the Syrian market comes, as a rule, from Germany.

*Form in demand.*—Two grades of acetic acid are generally imported into this market, viz: one grade containing 50 per cent of the 50° acid, and the other 100 per cent. The form in which this article is preferably demanded in this locality is the concentrated one, in which the acid equals 100 per cent.

G. BIE RAVNDAL, *Consul.*

BEIRUT, *April 23, 1900.*

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#### ERZEROUM.

*Consumption.*—The consumption of acetic acid in Erzeroum amounts to \$100 a year.

*Price.*—Its ruling price is 66 cents a pound.

*Whence imported.*—It is imported from France, Germany, and Austria.

*Form in demand.*—Liquid, usually packed in bottles.

LEO BERGHOLZ,  
*Consul.*

ERZEROUM, *April 25, 1900.*

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#### PALESTINE.

The people of this country know nothing about acetic acid and, consequently, make no use of it. Its use is confined to the foreign population. Nearly all that is imported is bought up by the Jews for the purpose of making vinegar. The drug stores require only a very small quantity. It is brought sometimes from France, but chiefly from Frankfort, Germany, and less than 300 pounds are imported annually. The cost of getting it here is 20 or 25 cents a pound, and it sells for 30 cents a pound.

SELAH MERRILL, *Consul.*

JERUSALEM, *April 10, 1900.*

# AUSTRALASIA.

## NEW SOUTH WALES.

### NEWCASTLE.

*Consumption.*—The amount of acetic acid consumed at this port, or even in this district, can not be ascertained because it passes the customs with “drugs and chemicals” and also because a large amount reaches this district through Sydney. The total quantity imported into this colony in 1899 was 30,133 gallons, valued at \$22,887.

Whence imported.	Quantity.	Value.
Australasia:	<i>Gallons.</i>	
Victoria.....	208	\$384.45
Queensland.....	13	9.73
South Australia.....	493	764.04
New Zealand.....	40	180.06
United Kingdom.....	2,057	1,790.87
France.....	33	97.33
Germany.....	27,289	19,660.67
Total.....	30,133	22,887.15

*Price.*—The last quantity imported here was 99 per cent glacial and cost 15 cents per pound. It was of German manufacture. The English manufactured acid costs about 1 cent per pound more.

The usual form in which acetic acid is received here is in carboys, containing from 45 to 142 pounds each, surrounded with wicker work.

F. W. GODING, *Consul.*

NEWCASTLE, *June 15, 1900.*

### SYDNEY.

*Consumption and price.*—The imports of acetic acid into the colony of New South Wales for the year 1898—last published statistics—were 20,847 gallons, valued at £3,455 (\$16,814). The total value divided by the amount, with about 25 per cent added, will be approximately the “ruling price.” It is worth about \$220 per ton of 2,240 pounds.

*Whence imported.*—The product is imported from United Kingdom and Germany—about three to one from the latter country.

The chief local demand is for the 5-gallon "demijohns" (carboys), woven in a sort of basket, packed in straw, and protected from breakage by a case or crate.

GEO. W. BELL, *Consul*.

SYDNEY, *May 18, 1900.*

## NEW ZEALAND.

*Imports.*—The imports of acetic acid into this colony during the year 1899 amounted to 293,275 pounds, and the value was \$15,713.98. These imports consisted entirely of what is known as "glacial" acetic acid.

Whence imported:	Pounds.
United Kingdom.....	78,628
Victoria.....	18,070
New South Wales.....	123,323
Germany.....	71,709
Belgium.....	1,440
United States.....	105
Total.....	293,275

*Duty.*—The rate of duty on acetic acid containing not more than 30 per cent of acidity is  $1\frac{1}{2}$  pence (3 cents) the pound. In every 10 per cent of acidity, or fraction thereof,  $\frac{1}{2}$  penny (1 cent) per pound additional. Glacial acetic acid (to be confined to the glacial acetic acid of the British Pharmacopœia, containing nearly 99 per cent of real acid, and when cooled remaining crystalline until the temperature rises above 60° F.), is taxed 20 per cent ad valorem, and from 99 per cent of acetic acid 1 per cent ad valorem plus 20 per cent.

*Price.*—The present wholesale price for glacial acetic acid in Auckland is 23 cents and 24 cents per pound for the 30° of real acid; an extra cent per pound is added for every 10° or a fraction thereof.

*Consumption.*—A large proportion of the acetic acid imported into New Zealand is used for making vinegar.

FRANK DILLINGHAM, *Consul*.

AUCKLAND, *July 1, 1900.*

## TASMANIA.

*Consumption.*—The import of acetic acid in 1899 was about 8,000 gallons.

*Price.*—The import cost price is rather under 12 cents per pound, duty paid. Duty is (1s.) 24 cents per gallon, not exceeding 6 per cent of absolute acid, and 1 cent for each additional 1 per cent of acid.

*Whence imported.*—Imports are mainly from New South Wales and Victoria, where it is manufactured.

*Form in demand.*—It is imported in bulk and also under 6 per cent.

A. G. WEBSTER, *Consul.*

HOBART, *May 8, 1900.*

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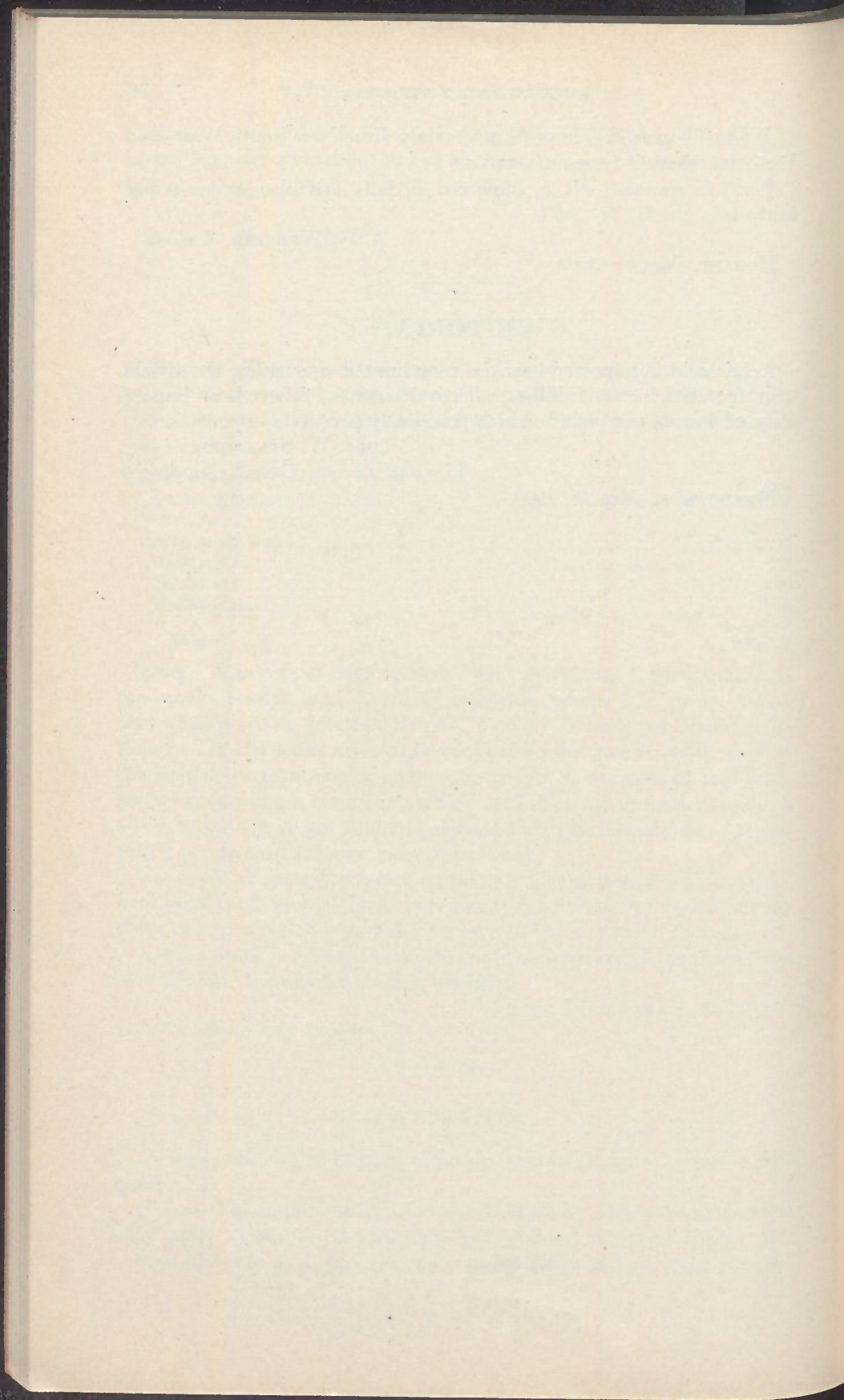
### VICTORIA.

Acetic acid is imported here in very limited quantities, the article manufactured locally fulfilling all requirements. There is an import duty of 6 cents per pound, which practically prohibits importation.

THOS. W. STANFORD,

*Vice and Deputy Consul-General.*

MELBOURNE, *May 18, 1900.*



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[1, consumption; 2, price; 3, whence imported; 4, form demanded locally; 5, duty; 6, miscellaneous;  
7, vinegar.]

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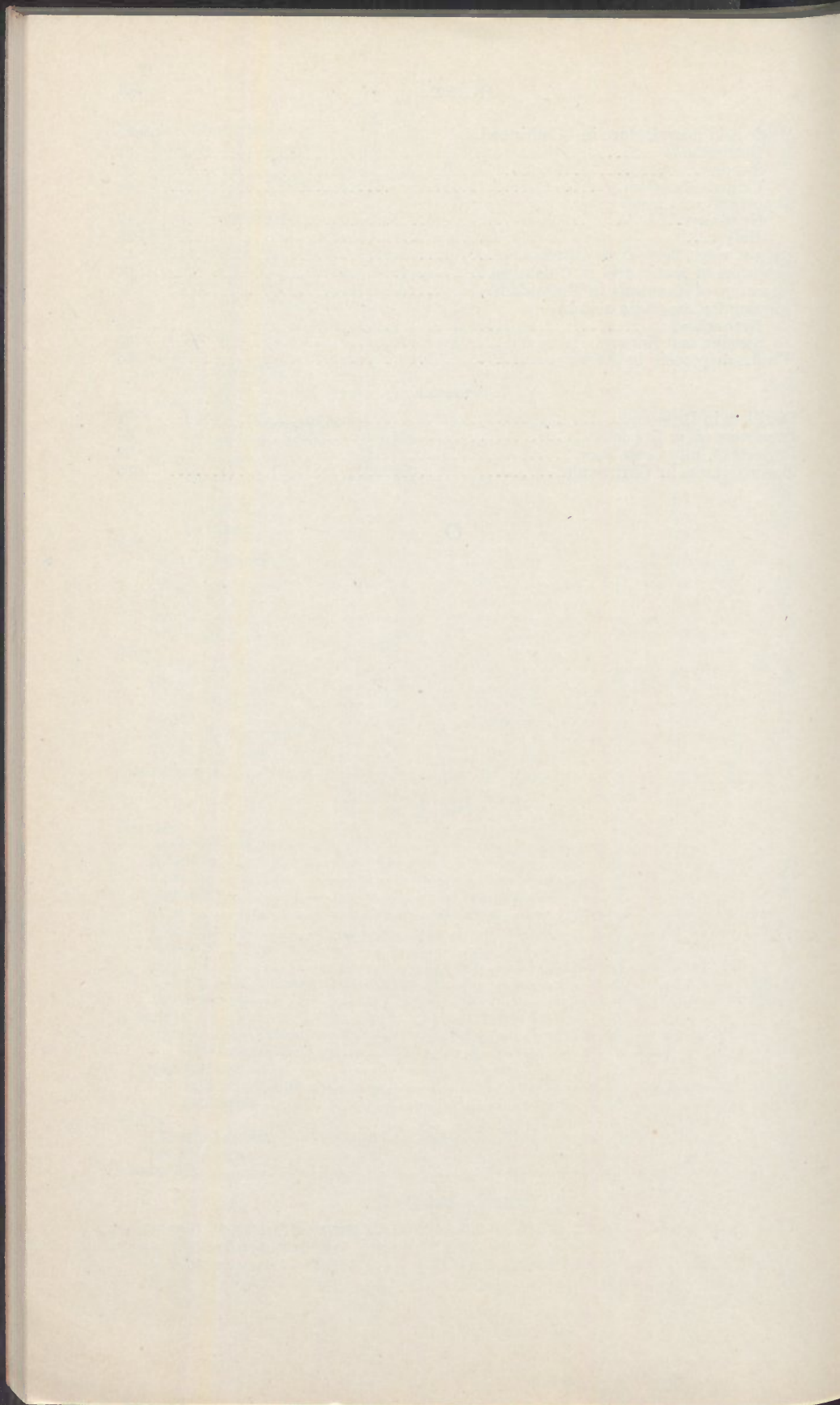
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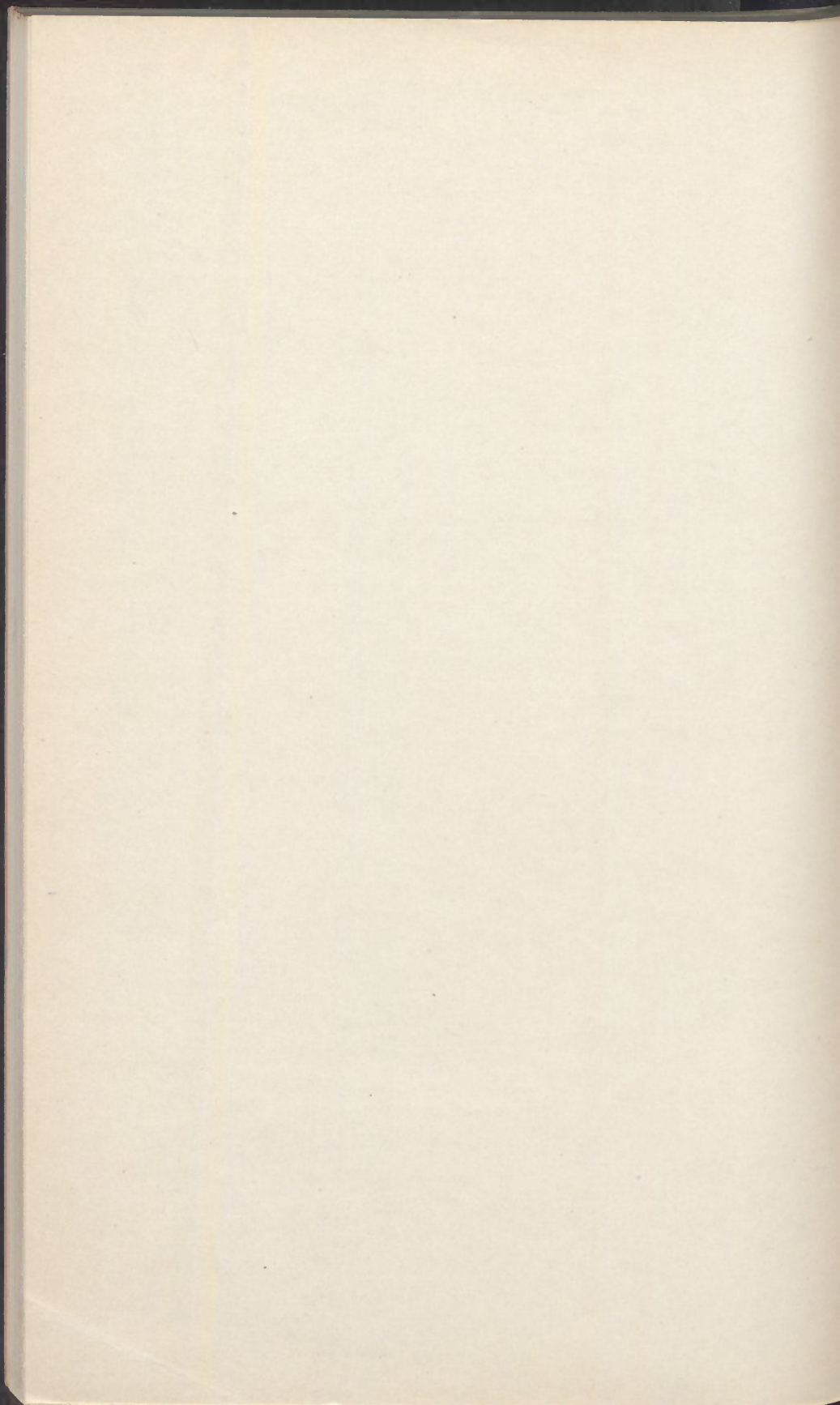
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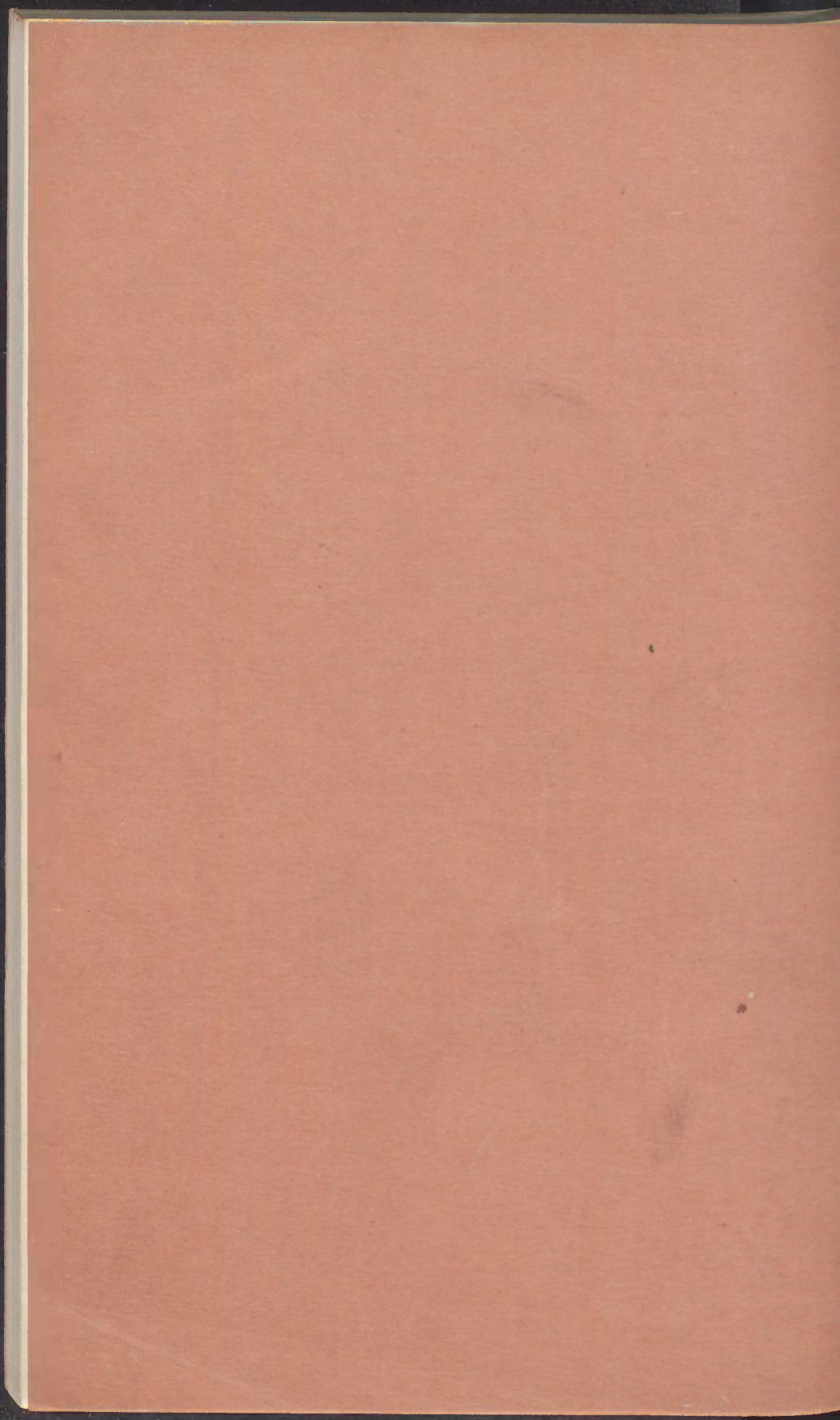
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