

O. H. M. S.

*W. J. Gerald*  
Deputy Minister.

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LABORATORY  
OF THE  
INLAND REVENUE DEPARTMENT  
OTTAWA, CANADA.

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BULLETIN No. 160  
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NATIVE WINES.

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BULLETIN No. 160

NATIVE WINES

OTTAWA, September 1, 1908.

W. J. GERALD, Esq.,  
Deputy Minister of Inland Revenue.

SIR,—I have the honour to report herewith upon 101 samples of Native Wine collected during February, March and April of the present year. These were obtained in 14 of the Inspectoral Districts of Canada (none from Prince Edward Island), and may be taken to fairly represent Native Wine as sold in Canada.

The only other systematic examination of wines by this Department is reported in Bulletin 38, of June 1894. On that occasion 124 samples were analyzed; but this number included many imported wines. Only 36 samples are of acknowledged Canadian manufacture. In his introduction to the Bulletin in question, the late Chief Analyst says:—"In the present report it is proposed to make a first contribution towards a better understanding of the subject, and to endeavour to point out how far the various wines sold in Canada have been fortified, or made from added sugar."

The results of analysis shew that, with three doubtful exceptions, all of the samples of Canadian wines examined in 1894, were made from sugared must. This conclusion was reached by assuming a maximum of 20 per cent. natural sugar in grape must, and the production of 50 per cent. (weight) of alcohol from the fermentation of sugar. By far the larger number of these wines contained from 5 to 12 per cent. of unfermented sugar, while the alcohol was usually present to about 10 to 12 per cent. (22 to 26 per cent. proof spirit). The popular taste seems to demand a sweet wine, because some 6 or 7 samples occur in which the residual sugar is less than 0.5 per cent., proving that dry wines can be produced in Canada, if desired.

The most difficult and expensive part of wine production is the cellar treatment. Other fermentations than the alcoholic are prone to take place, and acidity results. To check these undesirable fermentations alcohol is sometimes added, and the wine is impaired as regards bouquet, and other qualities. Salicylic acid, or other preservative may be used to check fermentation, without addition of alcohol. In any case, the production of those esters, and other bye-products of the natural fermentation of sugar, whose presence gives character and value to the best wines, is hindered, and the resultant beverage while not necessarily unwholesome, as a wine, is of low quality.

The present report (See Table I) indicates that, if judged by the same standard used in Bulletin 38, all the samples examined this year are made from wine must to 5888—1½

which sugar has been added; three samples being excepted. These are Nos. 27975 and 27976 made by la Cie Vinicole, St. Joseph of St. Hyacinthe, and 31576, by E. Bourget of Montreal.

Only six (6) samples contain less than 0.5 per cent. of residual sugar; the great majority of the samples showing from about 8 to 15 per cent. of dextrose. It would appear that to produce a wine such as public taste demands, sugar in considerable quantity must be added to the grape juice.

As pointed out in Bulletin 38, the French law of 1889 defines wine as solely the product of the fermentation of fresh grape juice. Any additions to the juice must correspond to distinctive names in the product, which may be sold as "Sugar Wine," &c. We have no Canadian Standards in the matter of wines; but it may be well to note the definitions made legal in the United States in 1906.

1. Wine is the product made by the normal alcoholic fermentation of the juice of sound, ripe grapes, and the usual cellar treatment, and contains not less than seven (7) nor more than sixteen (16) per cent. of alcohol, by volume (12.30 to 28.00 per cent. proof spirit) and, in one hundred (100) cubic centimeters (20° C.), not more than one-tenth (0.1) gram of sodium chloride nor more than two-tenths (0.2) gram of potassium sulphate; and for red wine not more than fourteen hundredths (0.14) gram, and for white wine not more than twelve hundredths (0.12) gram of volatile acids produced by fermentation and calculated as acetic acid. *Red wine* is wine containing the red colouring matter of the skins of grapes. *White wine* is wine made from white grapes or the expressed fresh juice of other grapes.

2. *Dry wine* is wine in which the fermentation of the sugars is practically complete and which contains, in one hundred cubic centimeters (20° C.), less than one (1) gram of sugars and for dry red wine not less than sixteen hundredths (0.16) gram of grape ash and not less than one and six-tenths (1.6) grams of sugar-free grape solids, and for dry white wine not less than thirteen hundredths (0.13) gram of grape ash and not less than one and four-tenths (1.4) grams of sugar-free grape solids.

3. *Fortified dry wine* is dry wine to which brandy has been added, but which conforms in all other particulars to the standard of dry wine.

4. *Sweet wine* is wine in which the alcoholic fermentation has been arrested, and which contains, in one hundred (100) cubic centimeters (20° C.), not less than one (1) gram of sugars, and for sweet red wine not less than sixteen hundredths (0.16) gram of grape ash, and for sweet white wine not less than thirteen hundredths (0.13) gram of grape ash.

5. *Fortified sweet wine* is sweet wine to which wine spirits have been added. By act of Congress, "sweet wine" used for making fortified sweet wine and "wine spirits" used for such fortification are defined as follows (sec. 43, Act of October 1, 1890, 26 Stat., 567, as amended by section 68, Act of August 27, 1894, 28 Stat., 509, and further amended by Act of Congress approved June 7, 1906): "That the wine spirits mentioned in section 32 of this act is the product resulting from the distillation of fermented grape juice to which water may have been added prior to, during, or after fermentation and economical distillation thereof, and shall be held to include the products from grapes or their residues, commonly known as grape brandy; and the pure sweet wine, which may be fortified free of tax, as provided in said section, is fermented grape juice only, and shall contain no other substance whatever introduced before, at the time of, or after fermentation, except as herein expressly provided; and such sweet wine shall contain not less than four per centum of saccharine matter, which saccharine strength may be determined by testing with Balling's saccharometer or must scale, such sweet wine, after the evaporation of the spirits contained therein, and restoring the sample tested to original volume by addition of water: *Provided*, That the addition of pure boiled or condensed grape must or pure crystallized cane or beet sugar or pure anhydrous sugar to the pure grape juice aforesaid, or the fermented product of such grape juice aforesaid, or the fermented product of such grape juice prior to the fortification provided by this Act for the sole purpose of perfecting sweet wine according to commercial standard, or

the addition of water in such quantities only as may be necessary in the mechanical operation of grape conveyors, crushers, and pipes leading to fermenting tanks, shall not be excluded by the definition of pure sweet wine aforesaid: *Provided however*, That the cane or beet sugar, or pure anhydrous sugar, or water, so used shall not in either case be in excess of ten (10) per centum of the weight of the wine to be fortified under this Act; *And provided further*, That the addition of water herein authorized shall be under such regulations and limitations as the Commissioner of Internal Revenue, with the approval of the Secretary of the Treasury, may from time to time prescribe; but in no case shall such wines to which water has been added be eligible for fortification under the provisions of this Act where the same, after fermentation and before fortification, have an alcoholic strength of less than five per centum of their volume".

6. *Sparkling wine*, is wine in which the after part of the fermentation is completed in the bottle, the sediment being disgorged and its place supplied by wine or sugar liquor, and which contains, in one hundred (100) cubic centimeters (20° C.), not less than twelve hundredths (0.12) gram of grape ash.

7. *Modified wine, ameliorated wine, corrected wine*, is the product made by the alcoholic fermentation, with the usual cellar treatment, of a mixture of the juice of sound, ripe grapes with sugar (sucrose); or a syrup containing not less than sixty-five (65) per cent. of sugar (sucrose), and in quantity not more than enough to raise the alcoholic strength after fermentation, to eleven (11) per cent. by volume.

8. *Raisin wine*, is the product made by the alcoholic fermentation of an infusion of dried or evaporated grapes, or of a mixture of such infusion or of raisins with grape juice.

It is apparent from the above that the term "Wine" may be legally applied to a very great variety of products of grape fermentation. Nor is it an easy matter to classify these wines in such a way as to obtain any useful results. Perhaps the most obvious division would be into Red Wines and White Wines. Nearly all the subordinate characters which Red Wines possess are duplicated in the White Wines.

Wines (red or white) may further be divided into *Dry Wines*, or those in which the fermentation of sugar is carried to completeness, or nearly so, and *Sweet Wines*, in which sugar above about one per cent. (1 p. c.) remains as such. It is to this last class that most of the native wines, now reported, belong.

Chambers makes the following classification of Wines:—

1. Strong Dry Wines.—E.g. Sherry, Port, Madeira, Johannisberg.
2. " Sweet " — " Johannisberg Tokay, Malaga, Sweet Sherry, Sweet Champagne, Sweet Madeira, &c.
3. Aromatic Wines.—Rhine Wines, Moselle, Capri, Chablis, Sauterne, White Burgundy, &c.
4. Acid Wines.—Containing excess of acid.
5. Sparkling Wines.—Champagne, Sparkling Moselle, &c.
6. Perfect Wines, or those which contain no specially prominent ingredient, E.g. High grade Clarets, Bordeaux, Burgundies, Chambertin, &c.
7. Rough Wines.—Containing excess of tannin.

However it might be possible to arrange the wines of the world's produce into such closely defined groups, when an attempt is made to do this for our own native wines, quite insurmountable difficulties are met.

*König* (Chemie der Nahrungs und Genussmittel, Bd II, 1282) says:—"A very large number of kinds of wine exist; we may almost say that there are so many different kinds of wine as there are different kinds of grapes, and different grape-growing countries. Even the wine from the same region differs in different vineyards. One may however, divide the greater number of wines into three classes: I. Ordinary Table Wines; II. Dessert or Sweet Wines; III. Sparkling Wines; although it must be remembered that many wines form a transition from one class to the next".

Definition necessarily implies limitation, or approximate agreement with type. Port Wine, for example, is not necessarily the product of a certain region of Spain; although it may be justly argued that a port wine, of other than Spanish origin, should be distinctively labelled to show the place of production. Apart from this consideration, it may be asked, what are the essential characters of port wine?

*König* (l.c. 1310) quotes, as the mean of many analyses of Port Wine, the following:—

Specific gravity.....	1·0088	
Alcohol.....	16·18	(= 34·8 p.c. - (proof spirit))
Extract.....	8·25	
Sugar.....	6·04	
Non-Sugars.....	2·21	
Total Acidity.....	0·42	(as tartaric acid)
Volatile ".....	0·085	(as acetic acid)
Fixed ".....	0·335	(as tartaric ")

England and America afford the largest markets for Port Wine, and it is evident that some attempt to approximate to the port type governs the production of wine in Canada. That a very uncertain and vague conception of what constitutes this type is held by some of our wine makers, appears from a study of Table II, of this report. The 31 samples embraced in this table, were all sold under the name "Canadian Port" or "Native Port".

It will be seen that they vary in specific gravity from 1·0002 to 1·0762.

Alcohol (proof spirit).....	16·42	to 38·18
Extractive.....	2·65	to 24·29
Sugar.....	1·59	to 19·00
Non-Sugars.....	0·41	to 3·83
Total Acidity.....	0·525	to 1·035
Volatile ".....	0·066	to 0·473
Fixed ".....	0·345	to 0·645

For purposes of comparison I have introduced into Table II certain results of the analysis of genuine Port wines. Even the port wines of Portugal itself, differ considerably among themselves, not alone in different years, but from different localities. Yet it will be seen that there is a general resemblance among them, in regard to their alcohol content, their residual sugar, their acidity, and otherwise. It is quite apparent that the extreme diversity illustrated by our Canadian so-called port wines, as tabulated, implies a lack of care in manufacture, or a regrettable ignorance of what constitutes this type of wine.

The high sugar content of most of these samples causes them to resemble Tokay or Malaga. *König* gives the mean sugar for a large number of samples of Tokay as 9·01 per cent. with variation from about 2 to over 20 per cent. For 40 samples of Malaga wine, the mean sugar found was 18·32 per cent. the mean alcohol being 12·60 per cent. (= 27·3 proof spirit).

As already pointed out, I cannot see any valid objection to the use of terms such as port, sherry, claret, tokay, &c., by Canadian manufacturers, when it is distinctly recognized that the terms in question are employed to designate certain types or species of wine; and proper care is taken to make it clear that the brand offered is a Canadian product, believed to approximate more or less closely to the type of wine denominated port, claret, &c., as the case may be. The words Native, or Canadian, or the place of production, should always be distinctly printed on the label. It is very satisfactory to see that some of our wine makers have adopted special and distinctive names for the brands which they place on the market. This is an example which may well be followed by every manufacturer who feels confidence in his ability to produce a wine of such quality as to merit confidence from the public.

A highly objectionable practice indulged in by certain wine merchants, is the false labelling of native wines. The use of labels bearing the names of foreign makers, and places (presumably of production) is apparently nothing else than fraud. Sample No. 31577 is labelled *Fine Old Port, Manuel Borez, Oporto*.

The only preservatives found in these wines are salicylic acid (in 29 samples) and sulphurous acid, or a sulphite in two samples.

This report cannot be taken as exhaustive for the subject with which it deals. The ash of wine, and its mineral constituents are matters of importance, as also the determination of glycerine and other secondary products of fermentation. Other important work necessitated the omission of these estimations; and the report must be regarded merely as a further contribution to the study of Canadian wines.

I beg to recommend its publication as Bulletin No. 160.

I have the honour to be, Sir,  
Your obedient servant,

A. MCGILL,  
*Chief Analyst.*

TABLE I.—NATIVE WINE

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report.
				Quantity.	Cents.		
1908.							

## DISTRICT OF NOVA SCOTIA—

Feb. 17	Native Wine	33624	Dillon Bros., Halifax, N.S.	3	bots. 38	Niagara Falls Wine Co., Niagara Falls, Ont.	Sold as Canadian Port.
" 17	"	33625	Jas. Scott & Co., Halifax, N.S.	3	" 40	T. Bright & Son, Niagara Falls, Ont.	" " "
" 17	"	33626	T. F. Courtney & Co., Halifax, N.S.	3	" 60	J. S. Hamilton, Brantford, Ont.	" " "
" 17	"	33627	Kelley & Glassey, Halifax, N.S.	3	" 60	T. G. Bright & Co., Niagara Falls, Ont.	" " "
" 17	"	33628	G. R. Ramey & Co., Halifax, N.S.	3	" 40	Niagara Falls Wine Co., Niagara Falls, Ont.	" " "
" 17	"	33629	A. Monaghan & Co., Halifax, N.S.	3	" 50	Stamford Park Wine Co., Niagara Falls, Ont.	" " "

## DISTRICT OF NEW BRUNSWICK—

Feb. 14	Native Wine	29655	R. Sullivan & Co., Dock St., St. John, N.B.	2	bots. 2 25	The Stamford Park Wine Factory, Stamford, Ont.	Brands, King Edward, Diana.
" 15	"	29656	Foster & Co., Union St., St. John, N.B.	3	" 1 50	Pelee Island Wine & Vineyards, Co., Brantford and Pelee Island.	St. Augustine brand.
" 15	"	29657	Thos. H. Haley, Charlotte St., St. John, N.B.	3	" 1 50	T. G. Bright & Co., (Niagara Falls Wine Co.)	Labelled, Niagara Falls Wine, Concord. Bottled by Thos. H. Haley, St. John, N.B.
" 17	"	29658	M. & T. McGuire, Water St., St. John, N.B.	3	" 1 50	The Ont. Grape Growing & Wine Mfg. Co., Harnsdale, St. Catherines, Ont.	Bottled from bulk by Vendor.
" 18	"	29659	William L. Williams, Prince William St., St. John, N.B.	3	" 1 80	The Niagara Falls Wine Co., T. G. Bright & Co. Props., Toronto.	Bottled by Niagara Falls Wine Co., Niagara Falls, Ont. Catawba.
Mar. 7	"	29660	Hunt & McDonald, Fredericton, N.B.	3	" 1 80	The Ont. Grape Growing & Wine Mfg. Co., St. Catherines, Ont.	Labelled Claret, The Ont. Grape Growing & Wine Mfg. St. Catherines, Ont.



## RESULTS OF ANALYSIS.

Alcohol, p.c.	Weight.	Vol.	Proof Spirit.	Specific gravity of		Total Solids.	Residual Sugar— Dextrose.	Non-sugar Solids.	Total as		Original sugar Solids.	Salicylic Acid.	Remarks and Opinion of the Chief Analyst.
				Sample.	Distillate.				Tartaric.	Acetic.			
p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	
11 08 13 71 24 03 1 0334 0 9827 11 65 9 35 2 30 0 562 0 435 0 102 31 51													Sold as Canadian Port.
9 36 11 61 30 36 1 0424 0 9830 13 21 9 94 3 27 1 012 0 615 0 318 28 66													" "
11 25 13 90 24 36 1 0439 0 9825 12 94 10 62 2 32 0 615 0 345 0 216 33 08													Labelled St. Augustine, but sold as Canadian Port.
11 77 14 56 25 51 1 0330 0 9818 11 10 9 72 1 47 0 630 0 459 0 317 33 36													Sold as Canadian Port.
17 75 21 79 35 18 1 0169 0 9744 7 121 3 94 3 19 0 675 0 540 0 108 39 43													" "
11 31 13 99 24 52 1 0257 0 9824 9 01 7 86 1 15 0 630 0 480 0 120 30 48													" "

## J. C. FERGUSON, INSPECTOR.

11 23 13 90 25 36 1 0540 0 9825 16 55 16 02 0 53 0 548 0 450 0 678 38 48													
11 31 13 99 24 52 1 0425 0 9824 13 56 12 86 0 70 0 690 0 345 0 132 35 48													
11 77 14 56 25 51 1 0274 0 9818 8 89 8 52 0 57 0 694 0 450 0 120 32 06													
9 86 12 22 21 42 1 0534 0 9843 17 27 16 34 0 94 0 630 0 480 0 120 36 05													
11 31 13 21 25 36 1 0250 0 9811 9 57 8 96 0 67 0 675 0 435 0 152 31 52													
9 43 11 70 30 50 1 0143 0 9840 5 50 5 18 0 58 0 645 0 465 0 144 23 98													

TABLE I—NATIVE WINE

Date of Collection	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report.
				Quantity.	Cents.		
1908.							
DISTRICT OF QUEBEC—							
Feb. 11	Fine Old Port Wine.	26386	Joseph Prevost, Montmagny.	3 bots.	75	Vinicole, St. Hyacinthe.	
" 11	Fine Old Sherry Wine.	26387	" " "	3 " 1 00	1 00	" " "	
" 11	Fine Old Port Wine.	26388	" " "	3 " 1 00	1 00	" " "	
" 11	Ginger Wine.	26389	" " "	3 " 1 00	1 00	" " "	
" 18	Vin Oporto...	26400	A. Toussaint & Cie, Quebec.	4 " 1 00	1 00	Vendors.	
" 18	Vin Messe St. Nazaire.	26401	" " "	4 " 84	84	" " "	
" 18	Claret National.	26402	" " "	4 " 50	50	" " "	
DISTRICT OF ST. HYACINTHE—							
Feb. 13	Native Wine (Red).	27968	J. N. Turcotte, Drummondville.	3 bots.	60	A. Toussaint & Cie, Quebec.	Barrel marked Chateau Richer Wine Co., Quebec. Port X. A. Toussaint & Cie, Fabricant.
" 13	Native Wine.	27969	B. Talbot, Stanfield.	3 " "	75	Niagara Falls Wine Co., Niagara Falls, Ont.	
" 14	" "	27970	J. H. A. Talbot, Arthabaskaville.	3 " "	75	" " "	
" 18	" "	27971	L. H. Oliver, Sherbrooke.	3 " "	60	T. G. Bright & Co., Toronto.	
" 19	" "	27972	A. Trudeau, Coaticook.	3 " 1 05	1 05	D. McManamy & Co., Sherbrooke.	
" 21	" "	27973	Nap. Lepine, Magog.	3 " "	50	St. David's Wine Growers, Toronto, Ont.	From vessel marked "Port."
" 25	Native Wine (Blanc).	27975	La Cie Vinicole, St. Joseph de St. Hyacinthe.	3 " "	25	Vendors.	
" 25	Native Wine (Claret).	27976	" " "	3 " "	25	" " "	
" 25	Native Wine (Port).	27977	" " "	3 " "	25	" " "	*
" 25	Native Wine.	27978	Louis Cote, Cavignac Co., Bagot.	3 jars.	free	Vendor	
" 25	Native Wine (Blanc).	27979	Noel Perotti, St. Hughes Co.	3 bots.	50	" " "	
" 25	Native Wine (Red).	27980	" " "	3 " "	60	" " "	

\* Both bottles broken in carriage.

## —BULLETIN No. 160.

RESULTS OF ANALYSIS.														Remarks and Opinion of the Chief Analyst.
Alcohol, p. c.			Specific gravity of Sample.	Specific gravity of Distillate.	Total Solids.	Residual Sugar— Dextrose.	Non-sugar Solids.	Acidity.			Original sugar Solids.	Salicylic Acid.		
Weight.	Vol.	Proof Spirit.						Total as Tartaric.	Fixed as Tartaric.	Volatile as Acetic.				
p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	

## E. BELAND, INSPECTOR.

10.69	13.24	23.21	1.0214	0.9832	8.90	5.07	3.83	0.630	0.420	0.168	26.45	Present.	Labelled "Fine Old Port Wine."
11.46	14.18	24.85	0.9952	0.9822	2.55	0.58	1.97	0.802	0.312	0.392	23.50	.....	
9.21	11.44	20.04	1.0002	0.9852	2.65	1.59	1.06	0.600	0.375	0.180	20.01	.....	Sold as Fine Old Port Wine.
6.78	8.45	14.81	1.0032	0.9887	25.22	5.66	19.56	0.150	0.090	0.048	19.22	.....	Ginger Wine.
10.77	13.34	23.37	1.0376	0.9831	12.08	11.34	0.74	0.622	0.540	0.066	32.88	.....	Labelled "Oporto", A. Toussaint et Cie.
12.46	15.40	26.99	0.9955	0.9869	3.00	0.57	2.43	1.050	0.975	0.060	25.49	.....	
10.69	13.24	23.21	0.9915	0.9832	1.61	0.20	1.41	0.735	0.337	0.319	21.58	.....	

## J. C. ROULEAU, INSPECTOR.

10.77	13.34	23.37	1.0473	0.9831	14.66	13.65	1.01	0.630	0.357	0.218	35.19	.....	Barrel marked "Port X."
12.54	15.49	27.15	1.0215	0.9808	8.46	7.31	1.15	0.547	0.450	0.078	32.39	.....	
12.23	15.12	26.49	1.0283	0.9812	9.85	8.89	0.96	0.615	0.336	0.223	33.35	.....	
11.15	13.81	24.19	1.0263	0.9826	8.17	6.68	1.49	0.600	0.525	0.060	28.98	.....	
12.00	14.84	26.00	1.0282	0.9815	8.88	7.75	1.13	0.533	0.458	0.060	31.75	.....	
7.80	9.70	17.00	1.0747	0.9873	17.38	16.66	0.72	0.660	0.435	0.180	32.26	.....	From a vessel marked "Port."
7.07	8.80	15.42	0.9968	0.9883	1.51	0.09	1.42	0.503	0.212	0.233	14.23	.....	
7.47	9.29	16.28	0.9972	0.9877	1.92	0.17	1.75	0.975	0.272	0.562	15.11	.....	
12.85	15.86	27.81	1.0182	0.9804	7.17	5.63	1.54	0.712	0.488	0.270	31.33	.....	Not received.
11.23	13.90	24.36	1.0158	0.9825	7.18	5.98	1.20	0.502	0.375	0.102	28.44	.....	
10.85	13.43	23.54	1.0102	0.9830	6.52	5.33	1.19	0.712	0.570	0.114	27.03	.....	

TABLE I.—NATIVE WINE

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report.
				Quantity.	Cents.		
1908,							

## DISTRICT OF MONTREAL—

Mar. 3	Native Wine.	31574	G. Morin, 333 Mount Royal ave., Montreal.	3 bts.	60	Vendor	Labelled, Muscatel de France, 1898.
" 3	"	31575	" " " "	3 "	60	"	Labelled, Oporto de France, 1898.
" 12	"	31576	E. Bourget, 331 Mount Royal ave., Montreal.	3 "	50	"	Labelled, Chateau Ramsay.
" 12	"	31577	" " " "	3 "	1 00	"	Labelled, Fine Old Port. Manuel Borez. Oporto.
Feb. 17	"	32583	Beauvais Lalonde & Co., 482 St. James St., Montreal.	3 "	75	Niagara Wine Co.	Bottled by Vendor and labelled, Canadian Wine, made from carefully selected hand picked grapes.
" 17	"	32584	Joseph Landry, 683 St. James Street, Montreal.	3 "	75	Godwin, Maloney & Lawrence, Montreal.	Bottled by vendor, and labelled, Pure Canadian Grape Wine.
" 20	"	32585	A. Sabourin, 387 Ontario East, Montreal.	3 "	75	Girardot Wine Co., Ltd., Sandwich, Ont.	Labelled, Native Port.
" 12	"	32586	Alphonse Lefavre, 337 Ontario East, Montreal.	3 "	90	Vendor	Labelled, Vin de Raisin du Canada, Chateau St. Denis Brand.
" 19	"	32587	" " " "	3 "	90	"	Labelled, Vin de Raisin du Canada.
" 25	"	32588	U. Brunet, St. Ann de Bellevue, P.Q.	3 "	75	Laporte, Martin & Cie.	
" 25	"	32596	J. L. Desaulniers, 492 St. Lawrence B., Montreal.	3 "	75	Vendor	Bottled and labelled by Vendor.

## DISTRICT OF OTTAWA

Feb. 12	Native Wine.	34132	L. H. Major & Bro., Ottawa.	3 bts.	1 80	J. S. Hamilton & Co., Brantford.	Labelled Pelee Island Wine and Vineyards Co., St. Augustine Reg. at Ottawa.
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## —BULLETIN No. 160.

RESULTS OF ANALYSIS.														Remarks and Opinion of the Chief Analyst.											
Alcohol, p.c.			Specific gravity of Sample.	Specific gravity of Distillate.	Total Solids.	Residual Sugar— Dextrose.	Non-sugar Solids.	Acidity.			Original sugar Solids.	Salicylic Acid.													
Weight.	Vol.	Proof Spirit.						Total as Tartaric.	Fixed as Tartaric.	Volatile as Acetic.															
p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.														
J. J. COSTIGAN, INSPECTOR.																									
14	18	17	48	30	64	1	0639	0	9787	4	69	2	51	2	18	0	592	0	345	0	126	30	87	.....	Contains sulphites, 30, =0 0204 p.c.
10	08	12	49	21	89	1	0342	0	9840	10	95	8	52	2	43	0	562	0	420	0	114	28	68	.....	Labelled, "Oporto de France, 1898, G. Morin."
7	67	9	04	16	71	0	9965	0	9874	1	67	0	31	1	36	0	600	0	187	0	330	15	65	Present.	
12	46	15	40	26	99	1	0125	0	9809	7	03	6	30	0	73	0	623	0	433	0	152	31	22	.....	Labelled, "Fine Old Port." Manuel Borez, Oporto.
11	23	13	90	24	36	1	0311	0	9825	10	65	9	33	1	32	0	607	0	362	0	196	31	79	.....	
11	46	14	18	24	85	1	0279	0	9822	10	21	8	31	1	90	0	697	0	252	0	382	31	23	.....	
8	93	11	08	19	42	1	0519	0	9856	15	10	12	88	2	22	1	635	0	443	0	473	31	74	.....	Labelled, "Native Fort." Girardot Wine Co.
9	64	11	96	20	96	0	9923	0	9846	1	84	0	08	1	76	0	667	0	382	0	228	19	36	.....	Raisin wine.
8	57	10	05	18	65	1	0665	0	9861	3	34	3	06	0	28	0	660	0	305	0	300	20	20	.....	"
12	38	15	30	26	82	1	0194	0	9810	8	20	6	41	1	79	0	630	0	300	0	264	31	17	.....	
7	80	9	70	17	00	1	0723	0	9872	18	95	11	42	7	53	0	892	0	423	0	375	27	02	.....	
—J. A. RICKEY, INSPECTOR.																									
10	92	13	52	23	70	1	0272	0	9829	9	24	8	08	1	16	0	745	0	430	0	252	29	92	.....	

TABLE I—NATIVE WINE

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report.
				Quantity.	Cents.		
1908.							
DISTRICT OF OTTAWA							
Feb. 13	Native Wine.	34133	The Ottawa Wine Vaults, Ottawa.	3	75	St. David's Wine Growers Co., Toronto.	Vendor said sample was from a bbl. Marked Toronto S. native 271 labelled superior port.
" 14	"	34134	Wall & Co., Ottawa.	3	75	Bright & Co., Toronto	Labeled native wine.
" 15	"	34135	H. Bigras, Ottawa.	3	75	Niagara Falls Wine Co.	.....
" 20	"	34136	McDermott & McCarthy, Prescott.	3	1 80	St. David's Wine Growers Co.	.....
" 21	"	34137	Jos. Lavigne, Ottawa.	3	75	Ottawa Wine Vaults, Ottawa.	Bottled by Vendor from bbl. Vendor said sample was manufactured by St. David's Wine Growers Co., Toronto.
DISTRICT OF KINGSTON							
Feb. 11	Native Wine.	33078	G. Thompson, Princess St., Kingston	3 bots.	1 50	St. David's Wine Growers Co., Toronto.	.....
" 11	"	33079	A. Tyo, Princess St., Kingston.	3	1 50	" "	.....
" 11	"	33080	B. Lawlor, Wellington St., Kingston.	3	1 50	St. Augustine, Brantford & Pelee Island, Ont.	.....
" 12	"	33081	Wesley Bullen, Front St., Belleville.	3	1 25	" "	.....
" 12	"	33082	J. Hunter, Ontario St., Port Hope.	3	1 20	T. G. Bright, Toronto	.....
" 13	"	33083	T. J. R. Mitchell, Hunter St., Peterboro'.	3	1 50	Vendor	.....
DISTRICT OF TORONTO							
Feb. 24	Native Wine.	35050	Adam Valentine Bro., Hamilton.	3 bots.	75	Balfour & McLaren, Hamilton.	Labeled native wine.
" 26	"	35051	The Ontario Grape Growing Mfg. Co., St. Catharines.	3	1 50	Vendors	Labeled Golden Diana.
" 26	"	35052	E. G. Brown, St. John's West.	3	75	Vendor	.....
" 28	"	35054	Stamford Park Wine Co., Stamford.	3	75	Vendors	Labeled native port wine.

## —BULLETIN No. 160.

RESULTS OF ANALYSIS.														Remarks and Opinion of the Chief Analyst.
Alcohol, p.c.			Specific gravity of Samples.	Specific gravity of Distillate.	Total Solids.	Residual Sugar— Dextrose.	Non-sugar Solids.	Acidity.			Original sugar Solids.	Salicylic Acid.		
Weight.	Vol.	Proof Spirit.						Total as Tartaric.	Fixed as Tartaric.	Volatile as Acetic.				
p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.		
—J. A. RICKEY, INSPECTOR— <i>Concluded</i>														
7.53	9.37	16.42	1.0749	0.9876	19.88	18.61	1.27	0.712	0.468	0.195	33.67	.....	Brl. labeled "Superior Port."	
11.46	14.18	24.85	1.0504	0.9822	12.81	11.29	1.52	0.698	0.510	0.126	34.21			
12.23	15.12	26.49	1.0246	0.9812	9.90	8.94	0.96	0.645	0.364	0.225	33.40			
8.07	10.63	17.58	1.0715	0.9868	18.40	17.57	0.83	0.728	0.380	0.279	33.71	.....	Labeled "Port"—St. David's Co., Toronto.	
7.53	9.37	16.42	1.0754	0.9876	19.27	18.00	1.27	0.720	0.396	0.259	33.06	Doubtful		
—J. HOGAN, INSPECTOR.														
8.71	10.82	18.96	1.0618	0.9809	17.60	16.58	1.02	0.787	0.645	0.114	34.00	Present.	Labeled "Port"—St. David's Wine Co.	
8.36	10.38	18.20	1.0722	0.9864	18.33	16.15	2.18	0.675	0.487	0.150	32.87			
7.53	9.37	16.42	1.0607	0.9876	15.76	13.94	2.82	0.997	0.547	0.360	29.00			
12.08	14.93	26.17	1.0370	0.9814	12.74	11.34	1.40	0.690	0.465	0.180	35.50			
13.54	16.70	29.27	1.0119	0.9795	7.26	5.88	1.38	0.562	0.540	0.018	32.96	.....	Contains sulphites—SO <sub>2</sub> = 0.0075 p.c.	
11.77	14.56	25.51	1.0464	0.9818	14.37	13.30	1.07	0.562	0.420	0.114	36.84			
H. J. DAGER, INSPECTOR.														
12.15	15.02	26.33	1.0167	0.9813	7.91	5.55	2.26	0.960	0.877	0.066	29.85			
10.38	12.87	22.55	1.0462	0.9836	13.48	12.81	0.67	0.697	0.562	0.108	33.57	Present.		
12.54	15.49	27.15	1.0324	0.9808	12.20	10.61	1.59	0.653	0.255	0.319	35.69			
10.69	13.24	23.21	1.0314	0.9892	10.96	9.38	1.58	0.765	0.503	0.210	30.76	Present.	Labeled "Native Port" Wine.	

TABLE I—NATIVE WINE

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report.
				Quantity.	Cents.		
1908.							
DISTRICT OF TORONTO							
Feb. 28	Native Wine.	35055	Niagara Falls Wine Co., Niagara Falls South.	3 "	75 "		Labeled 'Diamond' T. G. Bright & Co.
Mar. 4	"	35056	J. W. Lee & Co., Toronto.	3 "	60 "		
" 5	"	35057	R. L. Haskins, Hamilton.	3 "	60	Vendor	
" 5	"	35058	Jas. Osborne & Sons, Hamilton.	3 "	1 20	Haskins Wine Co.	Purchased in bulk and bottled by Vendor
" 5	"	35059	Haskins Wine Co., Hamilton.	3 "	75	Vendors	Labeled native port
" 6	"	35060	John Mather, Toronto.	3 "	75	A. J. Bright & Co., Niagara Falls.	Labeled pure Canadian grape wine bottled by Vendor
" 6	"	35061	D. G. Stewart & Co., Toronto.	3 "	1 30	Pelee Island Wine and Vine Yards Co., Ltd.	Bottled by manufacturers.
DISTRICT OF LONDON							
Feb. 13	Native Wine.	30467	Thomas Quirk, Stratford.	3 pts.	50	Haskin Wine Co.	
" 13	"	30471	Walsh Bros., Stratford.			T. G. Bright & Co., Niagara Falls.	
" 14	"	30475	William Dawson, Seaforth.	1 bot.	50	J. S. Hamilton, President, Pelee Island Assoc. Co., Brantford.	
" 21	"	30478	C. H. Pugh, Clinton, Ont.	1 1/4 qt.	60	Joseph Ratinbury, Clinton.	
" 25	"	30483	Fred Sharp, St. Marys.	1 bot.	35	Niagara Wine Co., Niagara Falls.	
" 29	"	30492	Asson Ringler, Listowell.	1 qt.	56	St. Davids Wine Co.	
DISTRICT OF WINDSOR—							
Feb. 18	Native Wine.	34504	John A. Campbell.	3 qts.	1 50	N. Guindon, Sandwich.	
" 19	"	34509	F. A. Robert, Chatham.	3 bots.	1 50	Stamford Park Wine Co.	
" 19	"	34510	Taylor & McKay, Chatham.	3 "	1 50	Haskins & Co., Hamilton.	
Mar. 11	"	34521	Ed. Shea, Chatham.	3 "	75	Stamford Park Wine Co., Niagara Falls.	
" 11	"	34522	Hockin Bros., Chatham.	3 "	1 20	J. S. Hamilton, Pelee Island.	
April 9	"	34524	J. H. Price, St. Thomas.	3 "	1 50	Niagara Falls Wine Co., (T. J. Bright & Co.)	



## —BULLETIN 160.

RESULTS OF ANALYSIS.														Remarks and Opinion of the Chief Analyst.
Alcohol, p. c.			Specific gravity of Sample,	Specific gravity of Distillate,	Total Solids,	Residual Sugar— De-tross.	Non-sugar Solids,	Acidity.			Original sugar Solids,	Salicylic Acid.		
Weight.	Vol.	Proof Spirit.						Total as Tartaric.	Fixed as Tartaric.	Volatile as Acetic.				
p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	
—H. J. DAGER, INSPECTOR—Concluded.														
12 38	15 30	26 82	1 0406	0 9810	13 52	11 76	1 76	0 675	0 398	0 222	36 52			
10 15	12 58	22 06	1 0495	0 9839	14 61	13 41	1 20	0 728	0 373	0 284	33 71	Present.	Labeled "Port"—St. David's Co., Toronto.	
9 43	11 70	20 50	1 0385	0 9849	12 34	11 18	1 16	0 660	0 315	0 276	36 04			
8 79	10 91	19 11	1 0627	0 9858	17 00	16 59	0 41	0 525	0 360	0 126	34 17	Present.	Labeled "Extra Quality" "Finest Native Port." Labeled "Native Port The Haskins Wine Co. Hamilton.	
7 73	9 62	16 86	1 0140	0 9873	7 74	6 51	1 23	0 682	0 368	0 252	21 97	.....		
12 31	15 21	26 66	1 0291	0 9811	10 18	8 87	1 31	0 525	0 575	0 156	33 49			
11 85	14 65	25 67	1 0341	0 9817	11 38	10 26	1 12	0 705	0 372	0 266	33 96			
T. KIDD, INSPECTOR.														
10 00	12 40	21 73	1 0386	0 9841	11 36	10 76	0 60	0 487	0 375	0 090	30 76	Present.		
11 54	14 27	25 01	1 0321	0 9821	11 43	8 74	1 69	0 562	0 435	0 102	31 82	.....		
10 77	13 34	23 37	1 0426	0 9831	13 58	11 37	2 21	0 592	0 412	0 144	32 91	.....	Labeled "St. August- tine".	
12 38	15 30	26 82	1 0360	0 9810	11 70	8 49	3 21	0 562	0 461	0 081	33 25	.....		
11 62	14 37	25 18	1 0337	0 9820	11 63	9 52	2 13	0 525	0 450	0 060	32 76	.....		
7 60	9 45	16 57	1 0756	0 9875	20 41	17 74	2 67	1 026	0 457	0 375	32 94	Present.		
J. TALBOT, INSPECTOR.														
8 57	10 65	18 65	1 0656	0 9861	17 77	15 92	1 85	0 900	0 525	0 300	33 06	.....		
9 93	12 31	21 57	1 0359	0 9842	11 70	10 11	1 50	0 833	0 357	0 381	29 97	Present.	Labeled "Fine Old Native Port".	
12 23	15 12	26 49	1 0251	0 9812	8 97	7 27	1 70	0 652	0 465	0 150	31 73	.....	Labeled "Fine Old Port".	
10 69	13 24	23 31	1 0324	0 9832	11 16	9 69	1 47	0 607	0 435	0 138	31 67	Present.		
10 77	13 34	23 37	1 0460	0 9831	14 31	13 43	0 88	0 525	0 450	0 060	34 97	.....		
11 85	14 65	25 67	1 0400	0 9817	13 08	11 13	1 95	0 810	0 480	0 264	34 83	.....	Labeled "Fine Old Port Wine".	

TABLE I—NATIVE VINE

Date of Collection.	Nature of Sample.	No. of Samples.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report.
				Quantity.	Cents.		
1908.							
DISTRICT OF MANITOBA—							
Feb. 13	Native Wine.	25888	The Geo. Lindsay Co., Winnipeg, Man.	3 bots.	1 50	The Stamford Park Wine Co., Niagara Falls, Ont.	
" 13	"	25889	The Glasgow Liquor House (Ripstein & Co.) 706 Main St., Winnipeg, Man.	3 "	1 65	Not given.	
" 13	"	25890	T. D. Cavanagh, Winnipeg, Man.	3 "	1 05	J. W. Lee, Toronto, Ont.	
" 14	"	25891	The City Liquor Store, Graham & Kidd, 314 McDermott St., Winnipeg, Man.	3 "	1 50	Not given.	
" 14	"	25892	Paul Sala, Winnipeg, Man.	3 "	1 20	T. J. Bright, Niagara Falls, Ont.	Sold as native wine labelled Port.
" 14	"	25893	J. Fisher, 250 Main St., Winnipeg, M.	3 "	1 35	St Davids Wine Growers Co., 60 Atlantic Ave., To- ronto, Ont.	
DISTRICT OF CALGARY—							
Feb. 25	Native Wine.	28907	Moodie Liquor Co., Calgary.	3 pts.	30	Stamford Park Wine Co., Niagara Falls, Ont.	
" 25	"	28908	J. Diamond, Calgary	3 "	30	St. David Wine Grow- ers Co., Toronto, Ont.	
" 25	"	28909	Great West Liquor Co., Ltd., Calgary.	3 "	30	J. W. Lee & Co., Toronto, Ont.	
" 25	"	28910	Hudson Bay Co., Calgary.	3 "	30	T. G. Bright & Co., Niagara Falls, Ont.	
" 28	"	28911	J. E. Houson, Medi- cine Hat.	3 "	30	" " " "	
" 28	"	28912	H. E. Whiffin, Medi- cine Hat.	3 "	30	Not known.	
DISTRICT OF VANCOUVER—							
Feb. 19	Native Wine.	34238	Gold Seal Liquor Co., Pender and Van- couver.	3 pts.	60	J. W. Lee & Co., Toronto.	St. Elmo Brand..
" 19	"	34239	Benwell, Peart & Co., Cambie St., Van- couver.	3 "	75	St. David Wine Co., Toronto.	S. Port Brand....
" 19	"	34240	W. Urquhart, Cor- dova St., Van- couver.	3 "	50	Niagara Falls Wine Co.	

## —BULLETIN No. 160.

RESULTS OF ANALYSIS.														Remarks and Opinion of the Chief Analyst.
Alcohol, p.c.		Proof Spirit.	Specific gravity of Sample.	Specific gravity of Distillate.	Total Solids.	Residual Sugar— Dextrose.	Non-sugar Solids.	Acidity.			Original sugar Solids.	Salicylic Acid.		
Weight.	Vol.							Total as Tartaric.	Fixed as Tannic.	Volatile as Acetic.				
p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	
A. C. LARIVIERE, INSPECTOR.														
12 23	15 12	26 49	1 0212	0 9812	8 36	7 53	0 83	0 780	0 540	0 192	31 99	Present.		
9 50	11 79	20 65	1 0437	0 9848	12 68	11 71	0 97	0 825	0 483	0 273	30 71	"		
7 80	9 70	17 00	1 0742	0 9872	19 55	18 81	0 74	0 657	0 430	0 174	34 41	"		
9 57	11 87	20 81	1 0425	0 9847	13 65	12 19	0 86	0 720	0 690	0 024	31 33	"		
11 46	14 18	24 85	1 0324	0 9822	9 72	9 05	0 67	0 533	0 384	0 119	31 97	.....	Labelled "Port".	
7 40	9 21	16 14	1 0923	0 9878	21 28	20 88	0 40	0 650	0 425	0 188	35 68	Present.		
R. W. FLETCHER, INSPECTOR.														
11 46	14 18	24 85	1 0254	0 9822	10 34	7 64	2 70	0 607	0 517	0 072	30 56	Present.		
8 57	10 65	18 65	1 0647	0 9861	18 23	15 09	3 14	0 787	0 480	0 246	32 23	"		
7 40	9 21	16 14	1 0733	0 9878	20 13	16 38	3 75	0 731	0 397	0 267	31 18	"		
7 13	8 88	15 56	1 0300	0 9882	13 36	10 29	3 07	0 607	0 480	0 102	24 55	.....		
11 08	13 71	24 03	1 0283	0 9827	10 50	6 93	3 57	0 727	0 592	0 108	29 69	.....		
8 43	10 47	18 35	1 0596	0 9863	17 35	14 32	3 03	0 802	0 385	0 237	27 26	Present.		
J. F. POWER, INSPECTOR.														
8 50	10 56	18 50	1 0675	0 9862	19 00	13 18	3 82	0 885	0 480	0 324	32 18	Present.		
8 57	10 65	18 65	1 0560	0 9861	17 88	14 59	3 38	0 810	0 450	0 288	31 64	"	Brand "S. Port."	
12 46	15 40	26 99	1 0255	0 9809	9 90	7 87	2 03	0 863	0 467	0 317	32 79	.....		

TABLE 1—NATIVE WINE

Date of Collection.	Nature of Sample.	No. of Samples.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report.
				Quantity.	Cents.		
1608.							

## DISTRICT OF VANCOUVER—

Feb. 19	Native Wine.	34241	F. E. Hoss Co., Westminster Ave., Vancouver.	3	"	50 Pelee Island Wine & Vintage Co.	.....
" 20	"	34242	Hudson Bay Co., Water St., Vancouver.	3	"	50 Niagara Falls Wine Co.	.....
" 20	"	34243	Pitter & Leiser, Water St. Vancouver.	3	"	30 T. G. Bright & Co., Niagara.	.....

## DISTRICT OF VICTORIA—

Feb. 20	Native Wine.	34849	Saunders Grocery Co., Ltd., Victoria, B.C.	3	qts. 1 00	J. S. Hamilton & Co., Brantford, Ont.	Bottled on premises of Vendor.
" 21	"	34850	West End Grocery Co., Ltd., Victoria, B.C.	3	" 1 05	" " "	" " "
" 21	"	34851	Fred Carne, Victoria, B.C.	3	" 1 00	St. David's Wine Growers, Toronto, Ont.	" " "
" 22	"	34860	Dixie H. Ross & Co., Ltd., Victoria, B.C.	3	" 1 00	G. Bright & Co., Niagara Falls.	" " "
" 22	"	34861	Fell & Co., Ltd., Victoria, B.C.	3	" 1 00	J. S. Hamilton, Brantford, Ont.	" " "
" 22	"	34862	Windsor Grocery Co., Victoria, B.C.	3	" 1 05	Lawrance A. Wilson & Co., Ltd., Montreal, Que.	" " "

## —BULLETIN No. 160.

RESULTS OF ANALYSIS.														Remarks and Opinion of the Chief Analyst.
Alcohol, p. e.			Specific gravity of Sample.	Specific gravity of Distillate.	Total Solids.	Residual Sugar— Dextrose.	Non-sugar Solids.	Acidity.			Original sugar Solids.	Salicylic Acid.		
Weight.	Vol.	Proof Spirit.						Total as Tartaric.	Fixed as Tartaric.	Volatile as Acetic.				
p. e.	p. e.	p. e.	p. e.	p. e.	p. e.	p. e.	p. e.	p. e.	p. e.	p. e.	p. e.	p. e.		
J. F. POWER, INSPECTOR— <i>Concluded.</i>														
8·93	11·08	19·42	1·0555	0·9856	15·51	8·85	6·66	0·690	0·393	0·238	26·71	.....		
10·08	12·49	21·89	1·0525	0·9840	15·49	12·24	3·25	0·592	0·375	0·174	32·40	Present.		
11·69	14·46	25·34	1·0317	0·9819	11·10	9·87	1·23	0·735	0·504	0·185	33·25	.....		
D. O. SULLIVAN, INSPECTOR.														
9·57	11·87	20·81	1·0501	0·9847	14·01	13·02	0·96	0·660	0·405	0·204	32·16	.....	Labelled "Native Port."	
12·54	15·49	27·15	1·0430	0·9808	14·36	12·90	1·46	0·525	0·375	0·120	37·98	.....	Labelled "Pure Native Port."	
7·60	9·45	16·57	1·0762	0·9875	20·51	19·00	1·51	0·750	0·398	0·282	34·20	Present.	Labelled "Native Port."	
12·23	15·12	26·49	1·0308	0·9812	10·41	8·69	1·72	0·637	0·495	0·114	33·15	.....	" "	
9·71	12·05	21·11	1·0496	0·9845	14·06	12·42	2·54	0·690	0·427	0·186	31·84	Present.		
12·46	15·40	26·99	1·0466	0·9809	14·10	12·88	1·22	0·765	0·471	0·235	37·80	"	Labelled "Niagara Port Wine."	

TABLE II—NATIVE WINES, SOLD AS "PORT"—BULLETIN No. 160.

Departmental Number.	RESULTS OF ANALYSIS.													Remarks, and Opinion of the Chief Analyst.
	Alcohol, p. c.			Specific gravity of Sample.	Specific gravity of Distillate.	Total Solids.	Residual Sugar—Dextrose.	Non-sugar Solids.	Acidity.			Original sugar Solids.	Salicylic Acid.	
	Weight.	Volume.	Proof Spirit.						Total as Tartaric.	Fixed as Tartaric.	Volatile as Acetic.			
				p. c.	p. c.	p. c.	p. c.	p. c.				p. c.		
33624	11.08	13.71	24.63	1.0334	0.9827	11.65	9.35	2.30	0.562	0.435	0.162	31.51		
33625	9.36	11.61	20.35	1.0424	0.9350	13.21	9.94	3.27	1.012	0.615	0.318	28.66	Present.	
33626 (St. Augustine).	11.23	13.99	24.36	1.0389	0.9825	12.94	10.62	2.32	0.615	0.345	0.216	33.08		
33627	11.77	14.56	25.51	1.0330	0.9818	11.19	9.72	1.47	0.690	0.459	0.317	33.26		
33628	17.75	21.79	38.18	1.0109	0.9744	7.12	3.94	3.18	0.675	0.549	0.168	39.44		
33629	11.31	13.99	24.52	1.0257	0.9824	9.01	7.86	1.15	0.630	0.480	0.120	30.48	Present.	
36386 Labelled	10.69	13.24	23.21	1.0214	0.9832	8.90	5.07	3.83	0.650	0.420	0.168	26.45		
56388	9.21	11.44	20.04	1.0602	0.9852	2.65	1.59	1.06	0.600	0.375	0.180	20.01		
26400 Labelled	10.77	13.34	23.37	1.0376	0.9831	12.08	11.34	0.74	0.622	0.540	0.066	32.88		
27968	10.77	13.34	23.37	1.0473	0.9831	14.66	13.65	1.01	0.630	0.357	0.218	35.19		
27973	7.89	9.70	17.69	1.0747	0.9872	17.38	16.66	0.72	0.699	0.435	0.180	32.26		
31575 Labelled	10.08	12.49	21.89	1.0342	0.9849	10.65	8.52	2.43	0.562	0.420	0.114	28.68		
31577	12.46	15.40	26.59	1.0125	0.9869	7.03	6.59	0.73	0.623	0.433	0.152	31.22		
32585 "	8.93	11.08	19.42	1.0519	0.9856	15.10	12.88	2.22	1.035	0.448	0.473	30.74		
34133	7.53	9.37	16.42	1.0749	0.9876	19.88	18.61	1.27	0.712	0.468	0.195	33.67		
34136 Labelled	8.07	10.03	17.58	1.0715	0.9868	18.40	17.57	0.83	0.728	0.380	0.279	33.71	Present.	
35078	8.71	10.82	18.96	1.0618	0.9859	17.60	16.58	1.02	0.787	0.645	0.114	34.00	Present.	
35054 "	10.69	13.24	23.21	1.0314	0.9832	10.96	9.38	1.58	0.765	0.503	0.210	30.76		
35056 "	10.15	12.58	22.96	1.0485	0.9839	14.61	13.41	1.20	0.728	0.373	0.284	33.71	"	
35058 "	8.79	10.91	19.11	1.0627	0.9838	17.00	16.59	0.41	0.525	0.390	0.126	34.17	"	
35059 "	7.93	9.62	16.86	1.0149	0.9873	7.74	6.51	1.23	0.682	0.363	0.252	31.97	Present.	
34509 "	9.93	12.31	21.57	1.0359	0.9842	11.70	10.11	1.59	0.833	0.357	0.381	29.97	Present.	
34510 "	12.23	15.12	26.49	1.0251	0.9812	8.97	7.27	1.70	0.652	0.465	0.150	31.73	Present.	
34524	11.85	14.65	25.67	1.0400	0.9817	13.08	11.13	1.95	0.810	0.480	0.264	34.83		
25892 "	11.46	14.18	24.85	1.0324	0.9822	9.72	9.05	0.67	0.533	0.384	0.119	31.97		
34239	8.57	10.65	18.65	1.0660	0.9861	17.88	14.50	3.38	0.810	0.450	0.288	31.64	Present.	
34849 Labelled	9.57	11.87	20.81	1.0501	0.9847	14.01	13.02	0.99	0.660	0.465	0.264	32.16		
34850 "	12.54	15.49	27.15	1.0430	0.9808	14.36	12.90	1.46	0.525	0.375	0.120	37.98	Present.	

34850 " .....	12.54	15.49	27.15	1.0430	0.9808	14.36	12.90	1.46	0.525	0.375	0.129	37.98	Present.
34851 " .....	7.60	9.45	16.57	1.0762	0.9875	20.51	19.00	1.51	0.750	0.398	0.282	34.20	.....
34860 " .....	12.23	15.12	26.49	1.0308	0.9812	10.41	8.69	1.75	0.637	0.495	0.114	33.15	.....
34862 " .....	12.46	15.40	26.99	1.0466	0.9899	14.10	12.88	1.22	0.765	0.471	0.235	37.80	Present.
Maximum .....	17.75	21.79	38.18	1.0762	0.9744	24.29	19.00	3.83	1.035	0.645	0.473	39.44	.....
Minimum .....	7.53	9.37	16.42	1.0002	0.9876	2.65	1.59	0.41	0.525	0.345	0.066	20.01	.....
Spanish Port.....	17.13	21.07	36.90	1.0047	0.9746	7.294	5.260	2.034	0.427	0.285	0.114	39.52	.....
Cheap Port—Portugal.	16.48	26.24	35.47	1.0039	0.9754	6.727	4.220	2.507	0.414	0.268	0.119	37.18	.....
Port Wine.....	16.18	19.89	34.85	1.0088	0.9764	8.250	6.040	2.210	0.420	0.335	0.085	38.40	.....

Thudichum & Dupré—  
 "Treatise on Wine"—  
 Macmillan & Co., 1872.  
 op. cit.  
 Mean of 15 analyses.  
 König, "Chemie der  
 Menschlichen Nahrungs-  
 und Genussmittel",  
 Band I, p. 1322.