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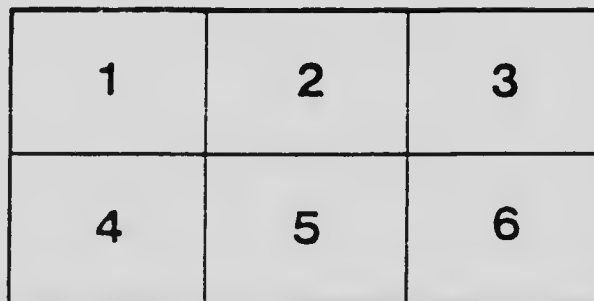
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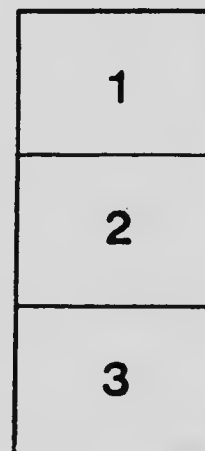
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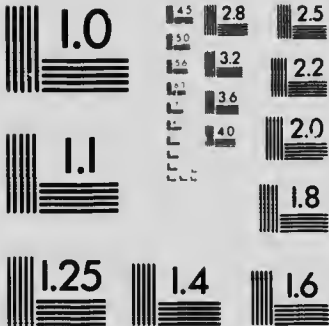
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LABORATORY
OF THE
INLAND REVENUE DEPARTMENT
OTTAWA, CANADA.

BULLETIN No. 326

MALT EXTRACTS.

CORRECTION.

Referring to Bulletin 308, page 14, sample No. 2728, the name of E. W. Gillet Co., Toronto, appears by mistake in the column headed "manufacturer."

J. B. Renaud & Cie., of Quebec, are the manufacturers.

A. MCGILL,
Chief Analyst.

00548703



NOTES AND COMMENTS.

Under this heading, as occasion arises, the Bulletins issued by this Department will contain, as an appendix, such comment as may seem necessary or advisable upon matters relating to the work of the Department in connection with the administration of the Adulteration Act, the Fertilizers Act, the Feeding Stuffs Act or the Proprietary Medicines Act.

It frequently happens that correspondents ask information regarding the above Acts, of such a nature that the matter in question possesses general interest, and comment upon it would prove acceptable and useful to others than the immediate questioner. In such cases the reply may find a place in these columns. For convenience of reference these notes will be numbered in series.

E. W.
urer."

lyst.

1917

LABORATORY
OF THE
INLAND REVENUE DEPARTMENT
OTTAWA, CANADA

BULLETIN No. 326.

MALT EXTRACTS.

OTTAWA, 21st February, 1916.

J. U. VINCENT, Esq.,

Deputy Minister of Inland Revenue.

SIR,—I beg to hand you a report upon one hundred and fifty-two (152) samples purchased as Malt Extracts by our various Inspectors.

Malt Extract is not defined by the British Pharmacopœia. The British Pharmacopœical Codex of 1911 does, however, define Malt Extract (*Extractum Malti*) as follows:—

“A brown-yellow or light amber-coloured, thick, viscid liquid, having a faint pleasant characteristic odour, a sweet, unmeluginous taste, and a distinct acid reaction. Its diastatic activity is destroyed at temperatures above 65°C Specific Gravity about 1.375. Soluble in all proportions in water, the solution being precipitated by strong alcohol. Malt Extract consists chiefly of maltose (50 per cent or more) and dextrin, with some dextrose, and should also contain a fair proportion of diastase.”

This account of the article may be regarded as descriptive rather than definitive.

Malt Extract is described to much the same effect, in the United States Pharmacopœia (Eighth revision, 1900). No constants as to density, diastatic value, sugar content, etc., are stated.

Liquid Extract of Malt; is not a pharmacopœial preparation. It is described in the B. P. Codex as prepared from Extract of Malt, alcohol and distilled water. 100 parts of the liquid extract contain about 7.5 parts of alcohol. The specific gravity should be about 1.2.

With regard to the action and uses of Malt Extract I quote the following from the B.P. Codex of 1911, p. 402.

“The medicinal value of malt extract depends upon the proportion of total solid nutritive carbohydrates it contains, and upon its diastatic action, the latter enabling it to convert the starchy constituents of food into soluble carbohydrates, chiefly maltose. But the diastase becomes inactive in an acid medium such as obtains in the stomach during digestion. The extract is given to children and adults for its nutritive properties. Many of the extracts on the market contain no diastase, the ferment having been destroyed during evaporation.”

Among other reasons for the present (the first) systematic inspection of Malt Extracts, was the question whether a number of preparations more or less closely resembling Malt Extract were to be regarded, for purposes of revenue, as Drugs or as Foods. Malt Extract is very frequently employed as a vehicle for the administration

of drugs, such as Cod Liver Oil, Phosphates, Quinine, etc., and, of course, in such combinations it must be classified as a drug. When used *per se*, its main, if not its only claim to medicinal properties, is based upon its containing active diastase. In its sugar content it must be regarded as a food.

Of one hundred and fifty-two (152) samples now reported, only sixteen (16) can be regarded as fulfilling in any satisfactory degree, the requirements of an Extract of Malt. These contain solids varying from about 70 to 80 per cent, and the solids in question are mainly malt sugar, dextrin and dextrose. The characteristic results of these sixteen (16) samples are summarized in the following table:—

TABLE A.
Malt Extracts.

No.	Solids.	Specific Gravity.	Diastatic Value.	Alcohol (Weight).
54053	71.30	1.330	0.7	6.10
52140	80.36	1.418	112.6	Nil.
54054	78.20	1.408	56.0	"
66051	77.80	1.295	56.0	"
56366	78.20	1.400	56.0	"
67327	81.00	1.423	90.0	"
63610	78.84	1.408	53.0	"
66745	81.60	1.427	111.0	"
52143	82.16	1.431	99.9	"
63611	73.70	1.317	15.0	3.85
52145	71.84	1.322	39.1	3.11
66741	70.80	1.321	54.8	3.25
61802	81.60	1.424	54.6	Nil.
55277	81.72	1.425	54.7	"
61838	81.96	1.429	13.4	"
66754	83.16	1.447	13.6	"

It should here be stated that five samples of medicated Malt Extracts, purchased in error by Mr. Inspector Behnd are not inserted in the above table. These bear numbers 56368 to 56772 inclusive.

Liquid Extract of Malt, is prepared as follows; under directions given in the B. P. Codex of 1911—(page 1180):—

Extract of Malt, by volume	67.50 parts.
Alcohol	7.50
Distilled water to make	100

The specific gravity should be about 1.2. Two alternative methods are given for preparation of Liquid Malt Extract. One from an aqueous infusion of malt, when the specific gravity of the resulting extract should be about 1.275, the other by percolation of the malt, in coarse powder, with alcohol diluted with three parts by volume of water, until the percolate weighs three-fourths the weight of the malt.

In order to obtain certain constants for Liquid Malt Extract, as given in the B. P. Codex, two samples were prepared in the laboratories, from samples of Malt Extract numbered 63610 and 67327.

No. 63610 is a Kepler Extract, made by the Burroughs, Wellcome Co.; has specific gravity 1.408; contains 78.84 per cent solids; has a diastatic value of 53 degrees Lintner, and is free from alcohol.

No. 67327 is also a Kepler Extract, manufactured by Burroughs, Wellcome Co. It has specific gravity 1.423, contains 81.00 p.c. total solids; has diastatic value 90 degrees Lintner and is free from alcohol.

The Liquid Extracts were prepared strictly according to the directions of the B.P. Codex as above and gave following results:—

	Liquid Extract of Malt from 63610. from 67327.	
	1'2600	1'2625
Specific gravity.....	1'2600	1'2625
Alcohol (volume p.c.).....	4'70	6'980
Specific gravity of extract de-alcoholized.....	1'282	1'2707
Extractive (calculated).....	52'2	54'7

An examination of the analytical results found for 128 samples purchased as Malt Extract or as Liquid Malt Extract and comprising all the samples of this collection, except 16 which are reported in Table A, shows that only three samples can be regarded as Liquid Malt Extracts, in the sense of the B. P. Codex. The three samples in question bear the numbers 66050, 63655 and 52144, and give the following results:—

TABLE B.

Liquid Malt Extract.

No.	Solids.	Specific Gravity.	Diastatic Value.	Alcohol (Weight).
66050	55'50	1'250	25'6	8'22
63655	58'51	1'245	20'0	9'43
52144	58'44	1'243	9'2	8'60
Samples Prepared in Laboratory from—				
63610	53'20	1'260	5'37
67327	54'70	1'263	5'57

The present report deals with 152 samples, which may be classified as follows:—

Genuine Extract of Malt	16 samples.
Genuine Liquid Extract of Malt	3 "
Medicated Extract of Malt	5 "
Beverages sold as Malt Extract	128 "
Total	152 samples.

Of the 128 samples which cannot be classed either as Malt Extract, or as Liquid Extract, the following may be said:—

1. They usually contain alcohol; the amount of which, stated as proof spirit, varies from about 4 per cent to about 12 per cent.
2. Extractive matter varies from about 5 to about 12 per cent—only 14 samples showing as much as 13 per cent.
3. Ordinary Ale (or beer) is required to contain at least 3·5 per cent solids, and an examination of published results (See I. R. Bulletin No. 52, 196 and 283) shows that the solids in Canadian made Ales, of good quality usually range from 4 to 6 per cent while alcohol (expressed as proof spirit) varies from about 7 to about 10 per cent.
4. None of these samples possess any diastatic value; consequently, in this respect, they do not differ from ordinary Beer or Ale.

In order to facilitate comparison between the so-called Malt Extracts of the class now under consideration, and ordinary Ales or Beers, the following table has been prepared.

TABLE C.

Brand.	Number Samples Examined.	Alcohol as 1° proof Spirit.	Solids.
1. Malt Nutritive..	5	2°94	15°67 tonic.
2. Dr. Kilborn's..	1	7°26	6°19 beer.
3. H. A. Brewery..	1	5°2	10°67 tonic.
4. Cremomalt..	2	10°88	2°64 beer.
5. Carling's..	20	7°09	6°14 beer.
6. Mallovin..	7	5°33	12°44 tonic.
7. Diamond..	1	7°49	6°93 beer.
8. Goshel..	3	2°68	12°74 tonic.
9. Hoffman..	1	9°18	5°25 beer.
10. Prima Tonic..	1	10°26	5°43 beer.
11. Blue Ribbon..	3	9°78	6°51 beer.
12. Malta Labattine..	1	10°81	5°48 beer.
13. Diastatic..	9	7°36	10°28 tonic.
14. M. Bole..	1	7°87	9°00 beer.
15. Miller's..	3	10°51	9°68 tonic.
16. Dow's..	3	8°00	11°57 tonic.
17. Oregon..	1	5°00	11°48 tonic.
18. O'Keefe's..	5	11°40	9°27 beer.
19. Pa'st..	16	7°66	11°19 tonic.
20. Salvador..	7	7°65	5°30 beer.
21. Dr. Charles..	1	5°98	10°12 tonic.
22. Hofman..	1	8°00	5°94 beer.
23. Schiltz..	3	7°93	9°11 beer.
24. Silver Springs..	3	8°42	4°76 beer.
25. Sleeman's Springs..	3	7°95	12°31 tonic.
26. Walker'sville..	2	11°62	6°39 beer.
27. Wyeth's..	36	4°81	12°83 tonic.

These samples apparently represent 27 different brands; and I have already pointed out that none of them meet requirements for Liquid Malt Extract, under which name most of them are sold.

In several cases it would appear that the manufacturer has sought to produce a beverage somewhat more nutritious than ordinary beer; while in most cases the article does not essentially differ from a strong ale.

If I draw the line between an ordinary commercial ale, and a special ale, claiming to be of nutritive qualities above ordinary ale, where may the line be drawn? This is, of course, a question which can only be acceptably answered after consultation with all parties interested in the matter.

I have ventured, to suggest that unless at least 10 per cent of nutritive solids remain in the product, it has no claim to be recognized as a special or tonic beverage. Many ordinary ales contain from 5 to 6 per cent of nutritive solids; and it would seem reasonable to require at least double of this amount to constitute a malt beverage, claiming any medicinal or tonic value.

On the above assumption, I find that 15 out of 27 brands named in Table C—should be sold as ale or beer; and should be placed on the market under the same conditions as ale or beer.

This conclusion has at present, no legal recognition, but I would respectfully ask for it the careful consideration of this department.

I would further suggest publication of this report as Bulletin No. 326.

I have the honour to be, Sir,

Your Obedient Servant,

A. MCGILL.

Chief Analyst.

BULLETIN No. 326—TABLE I, PART I.—MALT EXTRACTS.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cwt.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)	Remarks and Opinion of the Chief Analyst.
				Quantity.	Cents.	Manufacturer.	Furnisher.		

DISTRICT OF NOVA SCOTIA—R. J. WAUGH, INSPECTOR.

1913.	June 18	Malt Extract.	54051 National Drug and Chem. Co., Halifax.	3	bots.	55	Carling B. and M. Co., Mfrs. London, Ont.		
"	" 23	"	54052 John Tobin & Co., Halifax.	3	"	80	Pabst Brew. Co., Milwaukee.		
"	" 30	"	54053 B. F. Trask, Yarmouth.	1	bot.	1 00	Parke, Davis Co., Walkerville.		Malt Extract. Low diastatic values and somewhat low solids.
"	July 9	"	54054 Taylor Drug Co., wader.	1	2 1/2	Burrongs, W. & Co., London, Eng.			Malt Extract. Genuine.

DISTRICT OF PRINCE EDWARD ISLAND—WM. WEEKS, INSPECTOR.

May	7	Malt Extract.	60190 E. A. Foster, Charlottetown.	3	boes.	43	Reinhardt, Salvador Brewery Co., Toronto.		
"	" 7	"	" " " "	3	"	96	Pabst Brewery Co., Milwaukee.		
"	" 7	"	60192 C. D. Rankin, Charlottetown.	3	"	78	Carling B. and M. Co., London, Ont.		
"	" 10	"	60193 George E. Hughes, Charlottetown.	3	"	1 11	John Wych & Bros., Philadelphia.		

DISTRICT OF NEW BRUNSWICK—J. C. FERGUSON, INSPECTOR.

May 10	Malt Extract.	66046	National Drug and Chem. Co., St. John.	3	3	90	Patst, Milwaukee.		
" 13	"	66047	Gcneau & Sheehan, St. John.	3	"	1 03	Anheuser, Busch Brew. Assn., St. Louis.		
" 17	"	66048	National Drug and Chem. Co., St. John.	3	"	90	Carling Brew. Co., London, Ont.		
" 17	"	66049	"	3	"	1 03	Wyeth's		
" 25	"	66050	R. T. Mack, Fredericton.	3	"	2 25	Allen & Hanbury, Ltd., London, Eng.		
" 26	"	66051	C. A. McKee, Woodstock.	3	"	2 34	Burroughs, Wellcome Co., London, Eng.		
June 17	"	66052	C. O. Steeves, Moncton.	3	"	75	Lyman's, Ltd., Montreal.		
" 19	"	66053	National Drug and Chem. Co., St. John.	3	"	75	Silver Spring Brewery, Sherbrooke.		
									Malt Extract Liquid. Genuine.
									Malt Extract. Genuine.

DISTRICT OF QUEBEC CITY—F. X. W. E. BELAND, INSPECTOR.

April 20	Extract Malt.	56517	Elz. Turcotte, 74 Desfoies, Quebec.	3	3	75	Patst Brew. Co.		
" 20	"	56518	"	3	"	54	Silver Spring Brewery.		
" 21	"	56519	Myrant Poulnot, Quebec.	3	"	66	Miller & Co.	Laporte, Martin.	
" 21	"	56522	A. Grenier, 94 St. Jean, Quebec.	3	"	75	C. J. Oregan, Quebec.	Mfr.	
" 27	"	56522	Jos. Masson, 808 St. Valier, Quebec.	3	"	75	John Wyeth & Sons, Philadelphia.	L. E. Martel	
" 27	"	56523	"	3	"	75	Carling	National Drug	
" 26	"	56526	J. B. Giroux, 387 St. Joseph, Quebec.	3	"	3 00	Burroughs, Wellcome.	Mfr.	Malt Extract. Genuine.
" 26	"	56526	"	3	"	3 90	"	"	Medicated.
" 28	"	56529	"	3	"	3 00	"	"	"
" 28	"	56570	J. B. Giroux, 387 St. Joseph, Quebec.	3	"	2 70	Burroughs Wellcome Co.	Mfr.	Malt Extract. Medicated.
" 28	"	56571	"	3	"	2 70	"	"	"
" 28	"	56572	"	3	"	90	"	"	"

BULLETIN No 326—TABLE 1, PART 1.—MALT EXTRACTS.

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. (Is not an expression of opinion.)	Remarks and Opinion of the Chief Analyst.
				Quantity.	Cents.	Manufacturer.	Furnisher.		
DISTRICT OF QUEBEC PROVINCE—N. CADEUX, A. PELLETER, TEMPORARY INSPECTORS.									
1915.									
April 28	Extrait de Malt	273	J. N. Desjardins, St. Jérôme	3 bots.	1-11	John Wyeth & Bros., Montreal			
May 4	"	281	F. D. Hall, Ste. Agathe des Monts.	3 "	56	Carling			
" 4	"	287	Dr. Ed. Grignon, Ste Agathe des Monts.	3 "	78	Lynman's, Ltd.			
" 22	Malt Extract.	56457	Fraserville-Drug Co., Fraserville, ville.	3 "	75	Lynman's, Ltd., Montreal.			
" 22	"	54463	Ed. Cloutier, Fraserville	3 "	90	The Carling Co., London, Ont.			
June 1	"	56467	John Kaine, Fraserville	3 "	1-08	John Wyeth, Philadelphia.			
DISTRICT OF THREE RIVERS—DR. V. P. LAVALLEE, INSPECTOR.									
May 1	Malt Extract.	67952	Camille Barrett, Joliette	3 bots.	75	Wyeth Bros., Philadelphia; Lyman's, Montreal			
" 4	"	67959	J. T. Gaudet, Joliette	3 "	75	Davis & Lawrence			
" 5	"	67960	A. L. Boucher, Joliette	3 "	90	Pabst Brew. Co., Milwaukee; Lyman Knox, Montreal.			
" 6	"	67961	C. L. Rivest, Joliette	3 "	75	Lynman's Ltd., Montreal			
" 5	"	67962	J. O. Daviault, Berthierville	3 "	90	Wyeth Bros., Philadelphia; Lyman's, Montreal			

90 Wyeth Bros., Philadelphia-Lyman's, Montreal...

67962 J. O. Daviault, Berthierville 3 "

20	67986	L. P. Crojean, Joliette	3 "	75	"	"	"	"
"	67997	William Perreault, Joliette	3 "	75	"	"	"	"
"	68105	R. W. Williams, Three Rivers	3 "	90	Lyman's, Ltd., Montreal	"	"	"
"	68106	D. Carignan, Three Rivers	3 "	75	Wyeth Bros., Philadelphia	Lyman's, Montreal	"	"
June 1	68113	J. A. Boivert, Joliette	3 "	90	"	"	"	"

DISTRICT OF MONTREAL—D. J. KEARNEY, INSPECTOR

April 26	Malt Extract	67316	Dr. Miller, 1800 Masson St., Reservoir	3 bds.	78	National Breweries, Ltd.	"	Dow's
"	"	67317	J. E. Morin, 927 Mt. Royal Ave., E., Montreal	3 "	79	"	Nat. Drug Co.	Carling's
"	"	67318	N. Cleroux, 738 Mt. Royal Ave., E., Montreal	3 "	75	John Wyeth & Bros.	"	Wyeth's
"	"	67319	A. Lalonde, 586 Mt. Royal Ave., E., Montreal	3 "	78	Pabst Brewing Co.	"	Pabst
"	"	67320	Outremont Pharmacy, Bernard St., Outremont	1195 3 "	75	Lyman's, Ltd.	"	Lyman's
"	"	67321	Martineau's Drug Store, St. Denis St., Montreal	1068 3 "	75	Co. Medical- St. Charles	"	St Charles
"	"	67322	" " "	3 "	75	"	"	Hogan's
"	"	67323	J. H. Robert, 1185 St. Denis St., Montreal	3 "	78	Fred Miller Brew. Co.	"	Miller's
"	"	67324	P. R. Thomas, 381 Bleury St., Montreal	3 "	78	Reinhardt Salvador Brewing Co.	"	Hofbrau
"	"	67325	Fraser, Viger & Co., Montreal	3 "	90	Anheuser Bush	"	Malt Nutrine
"	"	67326	P. R. Thomas, 384 Bleury St., Montreal	3 "	1-11	O'Keefe's Brew. Co.	"	O'Keefe's
"	"	67327	Burroughs Wellcome Co., Bleury St., Montreal	384 3 "	1-30	Vendors	"	Kopler

DISTRICT OF EASTERN TOWNSHIPS—J. A. COSTIGAN, ACTING INSPECTOR

May 11	Malt Extract	58146	D. W. Stenson, Sherbrooke	3 bds.	1-05	Davis Lawrence Co., Montreal	"	Mahovin
"	"	58147	" " "	3 "	45	Silver Springs Brewery, Sherbrooke	"	Silver Spring

BULLETIN No. 326--TABLE I, PART I--MALT EXTRACTS.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Quantity.	Cost.	Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)	Remarks and Opinion of the Chief Analyst.
						Manufacturer.	Furnisher.		
DISTRICT OF EASTERN TOWNSHIP--Concluded.									
1915	May 11 Malt Extract..	58148	A. E. Dunberger, Sherbrooke,	3 bots.	1.45	John Wyeth Bros.....	Wyeth's.....		
"	"	58149	" " " " " "	3 "	75	Pabst Brew. Co., Milwaukee.	Pabst.....		
"	"	58150	B. N. Robinson, Coaticook.	3 "	78	Carling B. & M. Co., Montreal.	Carling's.....		
"	"	58151	E. C. Drolet, Coaticook.....	3 "	75	Lynman's Ltd., Montreal.	Diastasic.....		
"	"	58152	G. Richard, Sherbrooke.....	3 "	75	" " " " " "	Dow's.....		
"	"	58153	Pharmacie Viger, St. Bya centric.	3 "	75	Lynman's Ltd.....	" " " " " "		
DISTRICT OF VALLEYFIELD J. J. COSTIGAN, ACTING INSPECTOR.									
June 16	Malt Extract..	46972	Touffangeau & Champagne, Buckingham.	3 bots.	90	" " " " " "	Pabst.....		
"	"	46973	J. Duval " " " " " "	"	90	" " " " " "	Wyeth's.....		
"	"	57944	P. P. Sabourin, St. Johns....	"	78	" " " " " "	Maltovin.....		
"	"	57945	Wight & Co " " " " " "	"	75	" " " " " "	Dow's.....		
"	"	57947	Dr. Gauthier, Valleyfield.....	"	75	Independent Brew. Assn. Chicago.	Prima Tonic.....		

75	Independent Brew. Assn. Chicago.	Prima Tonic.....
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DISTRICT OF OTTAWA - J. A. RUCKEY, INSPECTOR.

April 21	Malt Extract.	63609	W. S. Robertson, Perth.....	3 bats.	86	John Wyeth Bros., Montreal.	Kepler.....	Malt Extract Genuine.
" 21	"	63610	" " " " " " " " " " " "	"	2	Burroughs Wellcome, Montreal.	Maltine.....	Malt Extract Diastatic value low, otherwise genuine.
" 2	"	63611	Fred. A. Girdwood " " " " " " " " " " " "	"	3	Maltine Mfg. Co., Toronto.	Hofbrau.....	
May 3	"	63644	Nat. Drug and Chem. Co., Ottawa.	"	34	Reinhardt Salvador Brew. Ltd., Toronto.		
" 3	"	63645	" " " " " " " " " " " "	"	33	Carling H. & M. Co., London.		
" 3	"	63646	" " " " " " " " " " " "	"	72	Patet Brew. Co., Milwaukee.		
" 3	"	63647	F. D. Aoust & Cie, Hull.	"	57	Fred. Miller Brew. Co., Milwaukee.	Malt Nutrine.....	
" 4	"	63654	E. J. Durocher, Ottawa.....	"	1 00	Abbeuer Busch Brew. Ass'n., St. Louis.		
" 4	"	63655	Stalker, Ottawa.....	"	1 89	Allen & Hanbury, Toronto.	Brynin Liquid Malt.	Malt Extract, liquid, genuine.

DISTRICT OF KINGSTON - JAMES HOGAN, INSPECTOR.

April 28	Malt Extract.	68046	C. P. Phouse, Kingston.	3 bats.	75	Carling, London.....		
" 28	"	68047	T. H. Sargent, Kingston.....	"	75	Patet Brew. Co., Milwaukee.		
" 28	"	68048	A. P. Chown, Kingston.....	"	1 05	John Wyeth Bros. Montreal.		
" 28	"	68049	Geo. A. Mahood, Kingston.	"	45	Reinhardt Salvador Brew. Ltd., Toronto.		
May 4	"	68050	D. G. Blecher, Belleville....	"	1 05	Davis & Lawrence Co., Montreal.		
" 5	"	68051	McDermid & Jury, Peterboro.	"	75	O'Keefe, Toronto.....		

DISTRICT OF TORONTO - H. J. DAUER, INSPECTOR.

May 12	Malt Extract.	67059	T. C. Nicholls, Uxbridge... ..	3 bats.	48	Reinhardt Salvador Brew. Ltd., Toronto.	Hofbrau.....	
" 12	"	67060	W. S. Short, Port Perry.....	"	90	Patet Brew. Co., Milwaukee.	Patet.....	
" 14	"	67062	F. M. Haffey, Orillia.....	"	78	Sleeman & Son, Guelph.		

BULLETIN No. 326—TABLE I, PART I.—MALT EXTRACTS.

Date of Collection.	Name 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. (Is not an expression of opinion.)	Remarks and Opinion of the Chief Analyst.
				Quantity.	Cents.	Manufacturer.	Furnisher.		
DISTRICT OF TORONTO—Continued.									
1915.									
May 15	Malt Extract.	67063	G. A. Ramsden, Midland.....	3 bots.	78	Carling B. & M. Co., London.			
" 19	"	67064	Geo. Marshall, 137 Wilton Ave., Toronto.	"	47	Walkerville Brew. Co., Ltd., Walkerville.			
" 19	"	67065	The J. A. Lunnun Drug Store, Jarvis & Queen, Toronto.	"	43	Berlin Loan Brewery, Berlin.		Dr. Kibbons...	
" 19	"	67066	F. S. Taylor, 292 Spadina Ave., Toronto.	"	78	O'Keefe Brew. Co., Toronto.		O'Keefe's.....	
" 20	"	67067	R. H. Thompson, 1470 Yonge St., Toronto.	"	78	Goebel Brew. Co., Detroit.		Diactic.....	
" 21	"	67068	A. J. McCall & Co., Queen and Church sts., Toronto.	"	78	Lynnian's Ltd., Montreal.		Lyman Bros. & Co., Ltd., Toronto.	
" 21	"	67077	The Robt. Simpson Co., Ltd. Yonge and Queen Sts., Toronto.	"	78				
DISTRICT OF HAMILTON—H. J. DAGGER, ACTING INSPECTOR.									
April 26	Malt Extract	66994	R. Phillips & Son, Fergus.	3 bots.	75	Carling B. & M. Co., London.			
" 29	"	66995	P. B. Moore, Paisley....	3 "	78		Unknown		False
" 30	"	66996	D. A. Cameron & Co., Owen Sound.	3 "	78		Nat. Drug & Chem. Co., Toronto.		Goebel.....

BULLETIN No. 326—TABLE I, PART I.—MALT EXTRACT.

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. (Is not an expression of opinion.)	Remarks and Opinion of the Chief Analyst.
				Quantity.	Cents.	Manufacturer.	Furnisher.		
DISTRICT OF SASKATCHEWAN—L. H. HALL, INSPECTOR.									
1915.									
April 27	Malt Extract.	66358	Rosney's Pharmacy, Swift Current.	3	1.20	John Wyeth & Bro., Philadelphia.	Nat. D. & C. Co.		
" 28	"	66361	C. H. Morrison, Gull Lake.	3	1.10	Carling B. & M. Co., London.			
May 1	"	66374	L. C. Gilmore, Moose Jaw.	3	1.06	Lyman's Ltd., Montreal.			
DISTRICT OF ALBERTA—A. W. R. MARKLEY, INSPECTOR.									
April 30	Malt Extract.	52140	G. H. Graydon, Edmonton.	3	3.00	Parker, Davis Co., Warkerville.			Malt Extract genuine.
" 30	"	52141	"	3	1.20	Palst, Milwaukee.			
" 30	"	52142	"	3	1.20	John Wyeth & Bro., Montreal.		Wyeth's	
" 30	"	52143	Findley Drug Co., Calgary.	3	2.25	Burrough Wellcome-Montreal.		Kepler.	Malt Extract genuine.
May 18	"	52144	McDermid Drug Co., Calgary.	3	1.50	Allen & Hanbury, London, Eng.		Byrn.	Malt Extract Liquid genuine.
" 18	"	52145	"	3	3.45	Maltine Mfg. Co., Toronto.		Maltine.	Malt Extract genuine.
" 21	"	52153	Nat. Drug & Chem. Co., Calgary.	3	55	Carling B. & M. Co., London.			
June 15	"	52183	P. W. McNabb, Brooks.	3	1.05	"		Carling's.	

June 15

52193 P. W. McNabb, Brooks, ... 3

London, ...

Carling's, ...

DISTRICT OF ROCKY MOUNTAINS, THOMAS PARKER, INSPECTOR.

April 26	Malt Extract.	61801	E. W. Hazewood, Trail, ... 3	1 05	Carling B. & M. Co., London, Ont.		
" 26	"	61802	" " " " " " 3	1 50	National Drug & Chemical Co., Vancouver		Malt Extract, genuine.
May 20	"	61819	Crabbrook Drug Co., Cranbrook, ... 3	1 00	Davis & Lawrence, Montreal.		
" 20	"	61823	Beattie Murphy Co., Cranbrook, ... 3	1 50	John Wyeth & Bros., Montreal.		
June 10	"	61838	W. Bews, Revelstoke, ... 3	3 10	Lozimer & Co., London, England.		Malt Extract. Diastatic value. Low, otherwise genuine.
" 10	"	61839	" " " " " " 3	1 10	J. A. Teysortsen & Co., Vancouver.		Cremo Malt.

DISTRICT OF VANCOUVER - E. J. MORGAN, INSPECTOR.

May 26	Malt Extract.	55276	H. Ryal, Columbia St., New Westminster, ... 3	1 00	Carling, London, ...		
" 27	"	55277	D. S. Curtis & Co., Columbia St., New Westminster, ... 3	1 00	National Drug & Chemical Co., Vancouver.		Malt Extract, genuine.
" 27	"	55278	McLennan's Drug Store, Columbia St., New Westminster, ... 3	1 00	Unknown		Sold as Cremo Malt.
" 27	"	55279	Owl Drug Co., Dunsmuir and Granville Sts., Vancouver, ... 3	1 06	John Wyeth & Bros., Montreal.		
" 27	"	55280	Georgia Pharmacy, George and Granville Sts., Vancouver, ... 3	1 06	Pabst Brewing Co., Milwaukee.		
" 27	"	55281	Hudson's Bay Co., Granville St., Vancouver, ... 3	75	John Schlitz Brewing Co., Milwaukee.		Schlitz's Malt Tonic.
" 28	"	55282	W. M. Harrison & Co., Ltd., Hastings St. W., Vancouver, ... 3	1 00	Davis & Lawrence Co., Montreal.		Maltosin.
" 28	"	55283	" " " " " " 3	1 00	Carl Hoffman, Hamburg, Germany		
" 28	"	55284	Woodworth Dept. Stores, Hastings St., Vancouver, ... 3	1 06	Anheuser Busch Brewing Assn., St. Louis.		Malt Mixture.

DISTRICT OF VICTORIA - D. O'SULLIVAN, INSPECTOR.

May 27	Malt Extract.	66712	Windser Grocery Co., 817 Govt. St., Victoria, ... 1 06		Pabst Brewing Co., Milwaukee.		Pabst, ...
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BULLETIN No. 326—TABLE I, PART I.—MALT EXTRACTS.

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. (Is not an expression of opinion.)	Remarks and Opinion of the Chief Analyst.
				Quantity.	Cents.	Manufacturer.	Furnisher.		
1915.									
June 11	Malt Extract.	66741	F. J. Williams, 613 Fort St., Victoria.	1	1	R. L. Gibson, Toronto.		Maltine	Malt Extract, genuine.
" 14	"	66745	Terry's Drug Store, 765 Fort St., Victoria.	1	"	75 Burroughs Wellcome London, Eng.		Kepler	Malt Extract, genuine.
" 14	"	66747	Hall & Co., 792 Yates St., Vancouver.	3	1 00	Carling B. & M. Co. London.			
" 15	"	66751	W. Jackson & Co., 1111 2 bats. Douglas St., Vancouver.	1	80	John Wyeth & Bros., Montreal.			
" 15	"	66753	John Cochran, 1309 Douglas St., Vancouver.	3	1 20	Anheuser Busch, St. Louis.			
" 15	"	66754	National Drug & Chemical Co., Victoria.	1	"	75 Holden & Co., Montreal.		Barlex	Malt Extract. Diastatic value. Low, otherwise genuine.
" 21	"	66758	H. O. Kirkham & Co., 741 3/4 Fort St., Victoria.	3	"	75 Julius Schlitz Brewing Co., Milwaukee.			

DISTRICT OF VICTORIA—Concluded.

BULLETIN No. 326—TABLE I, PART II—MALT EXTRACTS.

Name of Inspectoral District.	No. of Sample.	Results of Analysis.										Remarks and Opinion of the Chief Analyst.									
		Sp. gr. at 15°C.		Alcohol.		Proof Spirit.		Extract by weight.		Sp. gr. of Original Wort.			Extract (Original Wort).		Degree of Fermentation.	Reducing Sugar as Maltose.	Ash.	Phosphate, P ₂ O ₅ .	Preservatives.	Diastatic Value—Degrees Lintner.	No. of Sample.
		p. c.	d.	p. c.	d.	p. c.	d.	p. c.	d.	p. c.	d.		p. c.	d.							
Nova Scotia	54051	1.0280	1.408	4.26	7.47	7.33	1.0523	13.19	44.5	3.24	0.308	0.040	None.	None.	54051						
	54052	1.0383	3.66	4.58	8.03	11.23	1.0704	17.57	36.1	2.63	0.376	0.176	"	"	54052						
	54053	1.350	6.10	7.60	13.3	71.3				57.41	1.560	0.790	"	"	54053						
Prince Edward Island	54054	1.408				78.2				63.25	1.200	0.515			54054						
	60130	1.0204	4.06	5.08	8.90	6.90	1.0562	14.16	50.6	2.24	0.248	0.088	None.	None.	60130						
	60191	1.0349	3.59	4.49	7.87	11.50	1.0704	17.68	35.0	2.58	0.368	0.168	"	"	60191						
New Brunswick	60192	1.0179	3.30	4.14	7.25	6.06	1.0468	11.64	48.5	2.07	0.252	0.057	"	"	60192						
	60193	1.0526	2.54	3.19	5.38	14.28	1.0738	18.33	22.0	8.53	0.328	0.162	"	"	60193						
	66046	1.0362	3.92	4.90	8.59	10.80	1.0717	17.86	39.5	2.81	0.392	0.188	"	"	66046						
	66047	1.0599	1.59	2.00	3.50	15.40	1.0712	17.75	13.2	7.71	0.404	0.180	"	"	66047						
	66048	1.0195	3.16	3.96	6.93	6.34	1.0467	11.62	46.4	2.53	0.256	0.056	"	"	66048						
	66049	1.0475	2.16	2.70	4.74	12.92	1.0533	16.35	20.8	8.21	0.308	0.046	"	"	66049						
Quebec City	66050	1.250	8.22	10.2	17.9	55.50				57.76	0.880	0.376			66050						
	66051	1.385				77.80				62.98	1.500	0.740			66051						
	66052	1.0378	4.45	5.57	9.75	11.45	1.0775	19.12	40.0	8.35	0.316	0.102	Salicylic	None.	66052						
	66053	1.0153	3.41	4.27	7.49	5.23	1.0442	11.20	53.4	1.78	0.324	0.056	None.	None.	66053						
	56517	1.0375	3.45	4.32	7.58	19.93	1.0675	16.74	35.2	2.67	0.372	0.176	"	"	56517						
	56518	1.0106	4.10	5.14	9.00	4.53	1.0470	11.89	62.0	1.13	0.352	0.050	"	"	56518						
	56519	1.0271	5.10	6.37	11.16	9.05	1.0732	18.20	50.3	2.95	0.208	0.080	"	"	56519						
	56522	1.0395	3.65	4.66	8.00	11.48	1.0713	17.27	35.4	8.37	0.322	0.088	"	"	56522						
	56362	1.0449	2.36	2.98	5.19	19.19	1.0589	16.01	23.8	7.43	0.312	0.046	"	"	56362						
	56363	1.0185	3.31	4.16	7.29	6.21	1.0474	11.59	48.2	2.04	0.272	0.050	"	"	56363						
56366	1.400				78.20					63.54	1.250	0.376			56366						
56368	Kepler	Malt	Extract with	glycerol	phosphates										56368						
56369	"	"	"	"	"	"	"	"	"	"	"	"	"	"	56369						

BULLETIN No. 326—TABLE I, PART II—MALT EXTRACTS.

Name of Inspectoral District.	No. of Sample.	Results of Analysis.										Remarks and Opinion of the Chief Analyst.							
		Specimen at 50 C.		Alcohol.		Proof spirit.		Extract by weight.		Extract in Original Wort.			Degree of Fermentation.	Reducing Sugar in Maltose.	Ash.	Phosphate P ₂ O ₅ .	Proteins.	Diastatic Value.	No. of Sample.
		p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.								
Quebec City	56370	Kaiser	Malt	Extract with	Hypophosphites.	Sp. Gr. of Original Wort.	Degree of Fermentation.	Reducing Sugar in Maltose.	Ash.	Phosphate P ₂ O ₅ .	Proteins.	Diastatic Value.	No. of Sample.	56370	Malt Extract medicated.				
	56371	"	"	"	"	"	"	"	"	"	"	"	56371	"					
	56372	"	"	"	"	"	"	"	"	"	"	"	56372	"					
	281	"	"	"	"	"	"	"	"	"	"	"	281	"					
	56437	"	"	"	"	"	"	"	"	"	"	"	56437	"					
Quebec Province	56457	"	"	"	"	"	"	"	"	"	"	"	56457	"					
	56463	"	"	"	"	"	"	"	"	"	"	"	56463	"					
	56465	"	"	"	"	"	"	"	"	"	"	"	56465	"					
	56467	"	"	"	"	"	"	"	"	"	"	"	56467	"					
	67465	"	"	"	"	"	"	"	"	"	"	"	67465	"					
Three Rivers	67469	"	"	"	"	"	"	"	"	"	"	"	67469	"					
	67481	"	"	"	"	"	"	"	"	"	"	"	67481	"					
	67482	"	"	"	"	"	"	"	"	"	"	"	67482	"					
	67484	"	"	"	"	"	"	"	"	"	"	"	67484	"					
	67486	"	"	"	"	"	"	"	"	"	"	"	67486	"					
	67487	"	"	"	"	"	"	"	"	"	"	"	67487	"					
	67488	"	"	"	"	"	"	"	"	"	"	"	67488	"					
	67489	"	"	"	"	"	"	"	"	"	"	"	67489	"					
	67490	"	"	"	"	"	"	"	"	"	"	"	67490	"					
	67491	"	"	"	"	"	"	"	"	"	"	"	67491	"					
Montreal	68105	"	"	"	"	"	"	"	"	"	"	"	68105	"					
	68106	"	"	"	"	"	"	"	"	"	"	"	68106	"					
	68107	"	"	"	"	"	"	"	"	"	"	"	68107	"					
	68108	"	"	"	"	"	"	"	"	"	"	"	68108	"					
	68109	"	"	"	"	"	"	"	"	"	"	"	68109	"					
	68110	"	"	"	"	"	"	"	"	"	"	"	68110	"					
	68111	"	"	"	"	"	"	"	"	"	"	"	68111	"					
	68112	"	"	"	"	"	"	"	"	"	"	"	68112	"					
	68113	"	"	"	"	"	"	"	"	"	"	"	68113	"					
	68114	"	"	"	"	"	"	"	"	"	"	"	68114	"					

BULLETIN No. 326—TABLE I, PART II—MALT EXTRACTS.

Name of Inspectoral District.	Results of Analysis.												Remarks, and Opinion of the Chief Analyst.					
	No. of Sample.	Sp. gr. at 15° C.		Alcohol.		Proof Spirit.		Extract by weight.	Sp. gr. of Original Wort.	Extract in Original Wort.	Degree of Fermentation.	Reducing Sugar as maltose.		Ash.	Phosphates, P ₂ O ₅ .	Preservatives.	Diastatic Value Degrees Lintner.	No. of Sample.
		By weight.	By volume.	p. c.	p. c.	p. c.	p. c.											
Hamilton—Con.	67000	1.0208	3.41	4.27	7.49	6.93	1.0504	12.85									67000	
	67015	1.0182	4.06	5.08	8.90	6.32	1.0545	13.73									67015	
	67018	1.0134	2.17	2.72	4.76	11.94	1.0614	15.43									67018	
	54772	1.0179	5.75	7.17	12.57	6.99	1.0702	17.52									54772	
	54782	1.0483	9.39	8.00	5.25	13.24	1.0685	17.11									54782	
Windsor	54784	1.0483	9.39	8.00	5.25	13.24	1.0685	17.11									54784	
	54780	1.0483	9.39	8.00	5.25	13.24	1.0685	17.11									54780	
	54781	1.0164	3.41	4.27	10.81	5.48	1.0576	14.52									54781	
	54780	1.0126	4.94	6.17	10.81	4.71	1.0427	10.82									54780	
	54783	1.0121	3.47	4.34	13.11	5.87	1.0578	16.91									54783	
Manitoba	54795	1.0125	6.00	7.48	13.11	5.87	1.0578	16.91									54795	
	54796	1.0374	3.29	4.12	7.23	10.35	1.0663	16.57									54796	
	54613	1.0376	2.51	3.21	5.61	10.67	1.0594	14.59									54613	
	54619	1.0378	3.59	4.49	7.87	11.18	1.0696	17.38									54619	
	61291	1.0188	4.87	6.10	10.67	6.50	1.0611	15.38									61291	
	61292	1.0176	2.11	2.62	4.64	12.94	1.0651	16.27									61292	
	61293	1.0138	3.26	4.12	7.23	5.56	1.0651	16.27	1.16	0.21	0.060						61293	
	61294	1.0346	3.53	4.49	7.87	9.00	1.0651	16.27	7.65	0.27	0.067						61294	
	61295	1.0168	2.50	3.14	5.49	11.91	1.0641	16.05	8.56	0.38	0.168						61295	
	66358	1.0483	1.94	2.43	4.26	13.04	1.0641	16.05									66358	
Saskatchewan	66361	1.0202	2.78	3.49	6.10	1.0442	11.20										66361	
	66374	1.0349	2.44	3.07	5.37	1.0556	14.01										66374	
Alberta	52140	1.418	0.00	0.00	0.00	80.36	14.01	62.16	2.00	0.90	0.90						52140	
	52141	1.0374	3.69	4.5	7.9	11.24	14.01	2.57	0.37	0.14							52141	
	52142	1.0441	2.24	2.8	5.0	12.35	14.01	6.36	0.31	0.13	Sulphuric acid.						52142	
Malt Extract.	52143	1.431	0.00	0.00	0.00	82.16	14.01	61.20	1.52	0.62							52143	
	52144	1.2434	8.60	10.7	18.8	58.44	14.01	59.96	0.92	0.34							52144	
	52145	1.3216	3.11	3.9	6.8	71.84	14.01	57.40	1.20	0.48							52145	
52153	1.0173	3.38	4.2	7.4	5.81	14.01	1.70	0.25	0.06	Sulphuric acid.						52153		

