



LABORATORY
OF THE
INLAND REVENUE DEPARTMENT

OTTAWA, CANADA

BULLETIN No. 361

PREPARED MUSTARD

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.

A. MCGILL,
Chief Analyst.

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INLAND REVENUE DEPARTMENT
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BULLETIN No. 361

PREPARED MUSTARD

OTTAWA, January 19, 1917.

J. U. VINCENT, Esq., K.C.,
Deputy Minister of Inland Revenue.

SIR,—I beg to hand you a report upon 124 samples of so-called Prepared Mustard purchased by our inspectors during the period April to July of last year.

This inspection was ordered consequent upon representations made to the Department to the effect that adulteration of the article was largely practised by manufacturers who use starch, turmeric and pepper instead of mustard.

It must be noted here that standards for the article known as Prepared Mustard have not been legalized in Canada. We have found it impossible, up to the present, to define Mustard itself; due to conflicting evidence as regards charlock or so-called wild mustard. It is expected that standards regarding Mustard will shortly be submitted by your advisory Board.

Prepared Mustard clearly implies the presence of Mustard. What else it may imply, is not so clear.

The name Mustard indicates that this spice was used originally as a condiment by mixing the seeds with unfermented wine (*Latin, Mustum*) and so-called *German Mustard* is to this day prepared with Rhine wine, or tarragon, vinegar, spices, etc., while *French Mustard* is prepared with salt, vinegar, spices, etc. (*Webster's dictionary*). It is quite apparent that so-called Prepared Mustard is merely a condiment, ready for use, and having Mustard as its most characteristic component. There are probably as many formulas for the preparation of the article, as there are manufacturers of it.

It would, of course, be possible to forbid the use of certain substances in the manufacture of prepared mustard; or even to legalize a fixed formula for the article. Unless,

however, the forbidden articles were shown to be unwholesome, or added for purposes of fraud, such interference with trade, would, in my opinion, be entirely foreign to the intention of the Adulteration Act. So long as only sound materials of a wholesome kind are employed; and mustard is used as the chief ingredient, I think that a free hand should be given to manufacturers. Competition, and the discrimination of the public, must decide the question of superiority.

As in the case of all foods, it must be understood that no false claims appear on the label. It would seem reasonable to expect an honourable rivalry among manufacturers for the production of the most satisfactory condiment, having mustard as a base; the crux of the claim being not so much that the article is prepared mustard, as that it is Brown's, Jones' or Robertson's prepared mustard.

Tentative Standards, published as Circular 19, June 26, 1906, by the Department of Agriculture, Washington, define *Prepared Mustard* as follows:—

"Prepared mustard, German mustard, French mustard, mustard paste, is a paste composed of a mixture of ground mustard seed or mustard flour with salt spices and vinegar, and calculated free from water, fat and salt, contains not more than 24 per cent of carbohydrates calculated as starch, determined according to the official methods; not more than 12 per cent of crude fibre nor less than 35 per cent of protein, derived solely from the materials named."

The total proteids of mustard flour may be taken as about 30 per cent. (Allen Org. Analysis, 4th edition, vii, 107). Based on this figure, the above requirements for Prepared Mustard demand that the whole of the dry material of prepared mustard free from fat and salt, shall consist of mustard flour, or equivalent protein containing spice, thus excluding starch altogether. It is therefore difficult to see why any mention of carbohydrates is made.

I am not aware of any decisions by the Courts which establish the validity of the above standard. A case is reported (U.S.A. Notice of Judgment, No. 1552) in which misbranding was alleged because wild mustard (charlock) was substituted for the usual product, and turmeric was present without declaration on the label. A verdict of not guilty was rendered.

The question of recognizing charlock as a condimental mustard cannot be considered here. It will be discussed in our next report upon mustard.

An interesting paper by Barnard & Bishop, dealing with Prepared Mustard was read before the American Association of Food, Dairy and Drug Officials at Seattle in 1912. Of 32 samples analysed 17 failed to meet the requirements of the above suggested standard, 10 contained excess carbohydrates, 2 an excess of crude fibre, and 4 samples were too low in protein.

The authors suggest a minimum of 15 per cent solids, exclusive of salt, as a desirable additional requirement, thus preventing "infinite dilution" of the article. It seems to me undesirable that our standards should take into account any constants regarding which the ordinary consumer is as well informed, and as competent to judge, as the analyst, and it is open to question whether this is not the case with the degree of dilution of a prepared mustard.

Forty-four samples herein reported have been examined in such a way as to enable me to state the percentage of solids, other than salt and fat. These show as follows:—

No.	Solids (less salt and fat).	Starch.	Difference (mustard).	Salt.	Fat.	Carbohydrates p.c. on solids, less salt and fat.
54294	23.58	12.60	10.98	0.23	0.79	53.4
69495	23.23	11.86	11.37	0.30	1.05	50.3
†69445	18.85	10.93	7.92	0.56	3.59	58.0
71869	11.85	2.32	9.53	2.67	3.76	19.5
*69441	18.04	9.80	8.24	1.33	1.28	54.2
52457	8.88	1.61	7.27	2.74	0.92	18.1
71579	8.06	1.61	6.45	2.72	1.64	19.9
71842	8.86	2.25	6.61	1.74	2.10	25.4
69493	8.71	2.07	6.64	3.21	1.16	23.8
69492	8.58	2.23	6.35	3.40	1.10	25.9
73222	8.44	1.81	6.63	1.61	1.61	21.4
69443	7.09	1.61	5.48	2.46	1.65	22.7
52460	15.37	7.03	8.34	2.31	1.94	45.7
52459	14.36	7.18	7.18	2.26	4.00	50.0
71841	14.33	2.81	11.52	2.97	5.66	19.6
54292	14.37	2.82	11.55	1.52	7.39	19.6
73225	13.79	2.70	11.09	2.50	6.66	19.5
69491	13.12	2.61	10.51	2.27	6.59	19.8
52461	13.89	3.20	10.69	2.72	7.34	23.0
69494	13.55	2.49	11.06	1.42	1.23	18.3
52458	12.96	2.36	10.60	3.42	6.22	18.2
4974	12.60	4.55	8.05	1.75	2.17	36.1
71840	11.00	2.24	8.76	3.16	3.74	20.3
56741	12.17	3.65	8.51	1.68	3.66	30.0
56743	11.86	3.85	8.01	1.85	4.00	32.4
54295	11.89	2.81	9.08	1.68	4.95	23.6
54291	10.77	2.20	8.48	1.01	1.74	21.3
54293	10.38	2.39	7.99	0.69	2.69	23.0
71571	10.70	2.32	8.38	0.82	3.26	21.6
73225	9.05	0.24	8.81	1.47	1.60	2.6
73223	10.28	2.29	7.99	1.42	2.12	22.2
73224	9.81	2.00	7.81	1.94	2.42	20.3
4969	9.49	2.44	7.05	0.77	1.90	25.7
69444	10.84	2.43	8.41	0.98	1.42	22.4
71592	10.77	2.67	8.10	2.35	2.72	24.7
4960	9.81	2.23	7.58	2.86	3.26	22.7
69442	5.55	2.04	3.51	2.27	0.58	36.7
71838	9.33	1.94	7.39	2.15	1.26	20.7
71574	7.59	1.49	6.10	0.65	1.06	19.6
71591	8.48	1.91	6.57	2.12	3.22	22.5
56745	8.61	1.89	6.72	1.80	2.12	21.9
56744	7.97	1.89	6.08	2.20	1.88	23.7
4978	7.80	2.01	5.79	1.82	2.19	25.7
56742	10.86	3.31	7.55	1.80	3.49	30.4

† Sold as mustard cream. * Sold as salad dressing.

Examination of the above shows that manufacturers differ among themselves as to composition of a satisfactory prepared mustard. No harmful ingredients have been found in any of these samples; and I have no doubt that, as in the case of condimentary sauces, some preparations appeal to one section of the public, and some to another. An article which finds no favour with the public, will cease to be manufactured. Within the limits above named the public must judge for itself among the many varieties of Prepared Mustard offered.

Except by insisting that preparations advertised as containing mustard shall actually contain this article I do not see that any regulations or restrictions governing the matter can be justified.

I beg to recommend publication of this report as Bulletin No. 361.

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

A. MCGILL,
Chief Analyst.

BULLETIN No. 361—

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.	
				Quantity.	Cents.	Manufacturer.	Furni-her.

DISTRICT OF NOVA SCOTIA—R. J. WAUGH,

1916.							
July 7	Prepared Mustard.	54291	Zwicker & Co., Lunenburg, N.S.	3 jars.	60	W. H. Schwartz & Son, Halifax.	Mfrs.....
" 7	"	54292	J. S. Bessinger, Lunenburg, N.S.	3 "	45	H. J. Heinz, Leamington, Ont.	"
" 8	"	54293	H. S. Hall, Bridgewater, N.S.	3 "	36	Gorman, Eckert Co., Toronto, Ont.	"
" 8	"	54294	O. Fancey, Bridgewater, N.S.	3 "	36	Les Bros., Simcoe, Ont.	Bauld Bros., Ltd., Halifax, N.S.
" 8	"	54295	C. K. Manning, Bridgewater, N.S.	3 "	18	G. E. Barbour & Co., St. John, N.B.	Mfrs.....
May 25	"	73222	D. C. McKay, New Glasgow, N.S.	3 pkgs	30	McLaren's Imperial Cheese Co., Ltd., Toronto, Ont.	R. McGregor & Sons, New Glasgow.
" 26	"	73223	John A. McKenzie, Stellarton, N.S.	3 "	45	Herron, Leblanc, Ltd., Montreal.	Mfrs.....
" 26	"	73224	Munro Bros., Stellarton, N.S.	3 "	30	" " "	"
" 26	"	73225	" " "	3 "	45	Gorman, Eckert Co., London, Ont.	"
" 26	"	73226	J. S. Jenkins, New Glasgow, N.S.	3 "	45	H. J. Heinz Co., Pittsburg, U.S.A.	John Tobin & Co., Halifax, N.S.

DISTRICT OF PRINCE EDWARD ISLAND—

June 14	Prepared Mustard.	69491	R. T. Holman, Ltd., Summerside, P.E.I.	3 jars.	45	H. J. Heinz Co., Pittsburg, Pa.	.....
" 20	"	69492	J. McQua'ie, Charlottetown, P.E.I.	3 "	30	McLaren's Imperial Cheese Co., Ltd., Toronto, Ont.	.....
" 22	"	69493	J. P. Duffy, Charlottetown, P.E.I.	3 "	30	" " "	.....
" 22	"	69494	Kelly, Taylor & Co., Charlottetown, P.E.I.	3 "	45	White Swan S. and Co., Ltd., Toronto.	.....
" 22	"	69495	Beer & Goff, Charlottetown, P.E.I.	3 "	45	Les Bros., Simcoe, Ont.	.....

DISTRICT OF NEW BRUNSWICK—

May 3	Prepared Mustard.	69441	H. W. Cole, Ltd., St. John, N.B.	3 jars.	30	McLaren's Imperial Cheese Co., Ltd., Toronto, Ont.	.....
" 4	"	69442	E. M. Rowley, St. John, N.B.	3 "	30	Dearborn & Co., St. John, N.B.	.....
" 25	"	69443	G. T. Wheelpley, Fredericton, N.B.	3 "	60	McLaren's Imperial Cheese Co., Ltd., Toronto, Ont.	.....
" 29	Compound..	69444	Thomas Mulherrin, Grand Falls, N.B.	3 pkgs	30	Stickney & Poor Spice Co., Boston, Mass	.....
June 7	Mustard Cream.	69445	Reed Co., Ltd., Moncton, N.B.	3 jars.	25	The T. A. Lytle Co., Ltd., Toronto.	.....

PREPARED MUSTARD

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.								No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Total Solids.	Total Ash.	Salt Na Cl	Acidity as Acetic Acid.	Fat.	Starch by Acid Com- version.	Protein N x 6.25.	Nature of Dye.		

INSPECTOR; W. A. PETIPAS, TEMPORARY INSPECTOR.

.....	13.42	1.86	1.01	3.24	1.64	2.29	4.25	Tur- meric.	.....	54291
.....	23.28	2.82	1.52	3.37	7.33	2.82	6.30	.....	.....	54292
.....	13.26	0.92	0.09	2.55	2.69	2.39	3.41	Tur- meric.	.....	54293
.....	24.60	1.06	0.23	3.56	0.79	12.60	2.93	Yellow.	Label states col- our added.	54294
.....	17.92	2.04	1.08	3.96	4.95	2.81	4.95	Tur- meric.	.....	54295
.....	11.65	2.14	1.61	2.68	1.01	1.81	2.58	"	.....	73222
.....	13.82	2.28	1.42	3.04	2.12	2.29	3.06	"	.....	73223
.....	14.25	2.71	1.94	2.42	2.42	2.00	3.15	"	.....	73224
.....	12.12	2.18	1.47	2.62	1.60	0.24	2.28	"	.....	73225
.....	22.95	3.77	2.50	3.56	6.66	2.70	5.56	.....	.....	73226

JOHN C. FERGUSON, ACTING INSPECTOR.

.....	21.98	3.72	2.27	3.79	6.59	2.61	5.34	.....	.....	69491
.....	13.08	4.04	3.40	2.88	1.10	2.23	2.71	Tur- meric.	.....	69492
.....	13.18	4.00	3.21	2.80	1.16	2.07	2.45	"	.....	69493
.....	16.10	2.50	1.42	3.07	1.23	2.49	4.68	"	.....	69494
.....	24.58	1.32	0.30	4.09	1.05	11.86	3.55	Yellow.	Label states col- our added.	69495

JOHN C. FERGUSON, INSPECTOR.

.....	20.65	1.99	1.33	2.47	1.28	9.80	2.14	Tur- meric.	.....	69441
.....	8.50	2.76	2.27	2.78	0.58	2.04	1.27	"	.....	69442
Imperial Brand.	10.20	2.94	2.46	2.42	0.65	1.61	1.49	"	.....	69443
Sold as a com- pound.	13.24	1.82	0.98	3.08	1.42	2.43	3.94	"	Label states col- oured with tur- meric.	69444
.....	23.00	1.20	0.56	4.03	3.59	10.93	2.80	Yellow.	Label states col- our added.	69445

Sold as mustard
cream.

BULLETIN No. 361—

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.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF QUEBEC CITY—

1916.							
May 15	Moutarde . .	56741	E. Larcher, 2 Ave Tourangeau, Quebec.	3 paq.	15	Louis Letourneau...	Unknown
" 15	" . .	56742	H. Blondeau, 1225 St. Valier, Quebec.	3 "	15	Unknown	"
" 16	" . .	56743	J. N. Rondeau, 6 Lachevrotiere, Québec.	3 "	15	Quebec Preserving..	"
" 16	" . .	56744	" " "	3 "	30	J. B. Renaud	"
" 16	" . .	56745	" " "	3 "	30	St. Lawrence Vin-aigre.	"

DISTRICT OF QUEBEC PROVINCE—J. E. AUDET, O. BROCHU

May 25	Moutarde . .	5331	A. Laverter, Breakeyville, Lévis.	3 paq.	30	Carrier Fils, Lévis..	.....
" 27	" . .	5342	F. E. Moore, St. Bernard, Dorchester.	3 "	36	Scott's, Dorchester..	.....
" 28	" . .	5346	J. E. Sayne, St. Maxime, Scott.	3 "	15	" . . . . .	.....
" 20	" . .	5350	Jos. Dussault, St. Hénédine.	3 "	30	J. B. Renaud, Québec.	.....
" 22	" . .	5352	J. Blais, St. Isidore	3 "	36	Scott's, Dorchester..	.....
April 27	" . .	4307	Alf. Jacques, St. Philémon.	3 jars.	30	Quebec Preserving..	.....
" 27	" . .	4311	F. Barnabé, St. Philémon	3 "	60	" . . . . .	.....
" 28	" . .	4315	J. Tanguay, St. Magloire	3 "	35	Herminegilde Paré, Québec.	.....
" 28	" . .	4319	J. Ménard, St. Magloire . .	3 "	45	Henri J. Gas, Montréal.	.....
" 28	" . .	4321	J. A. Brochu, St. Magloire	3 "	30	Québec Preserving Co.	.....
" 26	Moutarde Préparé.	306	A. Beauchamp, St. Jérôme	3 "	30	Herron Leblanc, Ltd., Montréal.	.....
May 25	" . .	5719	Philias Charbonneau, Pied Mont.	3 "	35	J. V. Boudrias . . . . .	.....
" 25	" . .	5720	Felix Boisseau, Pied Mont	3 "	30	.....	.....
" 10	Moutarde . .	72260	V. P. Richard, Berthier . .	3 "	30	Herron Leblanc, Montréal.	.....
" 12	" . .	72264	A. Prevost, St. Francois . .	3 "	30	.....	Québec Preserving Co.
" 17	" . .	72270	D. Fradette, N. D. Rosaire	3 "	15	McLaren's, Toronto.	.....

PREPARED MUSTARD.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.								No. of Sample.	Remarks and Opinion of the Chief Analyst.	
	Total Solids.	Total Ash.	Salt Na Cl	Acidity as Acetic Acid.	Fat.	Starch by Acid Conversion.	Protein N x 6.25.	Nature of Dye.			Microscopical Examination.
F. X. W. E. BELAND, INSPECTOR											
.....	17 51	2 83	1 68	2 17	3 66	3 66	3 24	Turmeric.	.....	56741	
.....	16 15	2 79	1 80	2 16	3 49	3 31	3 50	"	.....	56742	
.....	17 71	2 95	1 85	2 41	4 00	3 85	3 53	"	.....	56743	
.....	12 05	3 09	2 20	2 24	1 88	1 89	2 61	"	.....	56744	
.....	12 53	2 75	1 80	2 19	2 12	1 89	2 61	"	.....	56745	

N. CADIEUX, T. GENDREAU, A. PELLETIER, TEMPORARY INSPECTORS.

					Starch			
.....	14 34	2 32		2 35	1 31	.....	Mustard, starch, turmeric and spices.	5331
.....	22 04	3 42		1 94	1 22	.....	"	5342
.....	17 80	2 94		3 24	7 35	.....	"	5346
.....	14 00	3 02		2 14	.....	.....	Mustard and spices.	5350
.....	20 56	2 52		3 20	4 17	.....	Mustard, turmeric, starch and spices.	5352
.....	20 00	2 80		2 65	3 40	.....	"	4307
.....	16 04	2 90		2 75	2 23	.....	"	4311
.....	17 94	2 88		2 65	2 77	.....	"	4315
.....	12 30	3 74		2 64	.....	.....	Mustard and spices.	4319
.....	20 68	3 18		2 24	3 18	.....	Mustard, turmeric, starch and spices.	4321
.....	13 32	2 10		3 00	.....	.....	Mustard and spices.	396
.....	16 74	3 50		3 21	.....	.....	"	5719
.....	13 90	2 26		3 96	4 72	.....	Mustard, maize, starch, turmeric, spices and annatto dye	5720
.....	17 12	4 72		2 04	.....	.....	Mustard, turmeric and spices.	72260
.....	18 96	3 14		2 40	2 11	.....	Mustard, starch, turmeric and spices.	72264
.....	15 16	3 12		3 36	.....	.....	Mustard, turmeric and spices.	72270

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.	
				Quantity.	Cents.	Manufacturer.	Furnisher.
DISTRICT OF QUEBEC PROVINCE—							
1916.							
May 18	Moutarde...	72272	A. Collin, N.D. Rosaire...	3 jars.	18	.....	A. Carrier & Fils, Lévis.
April 27	Mustard...	4960	S. M. Adams, Metapedia.	3 "	75	Dearborn & Co., Ltd., St. John, N. B.	.....
May 1	"	4969	John P. Legrand, Paspebiac.	3 "	21	Herron Leblanc, Montreal.	.....
" 1	"	4974	Le Boutillier Bros. Co., New Carlisle.	3 "	21	Whitehead & Turner, Quebec.	.....
" 2	"	4978	J. B. Bufold, Bonaventure.	3 "	36	S. H. Ewing & Son, Montreal.	.....
" 2	"	4980	H. N. Maguire, Bonaventure.	3 "	75	H. J. Heinz, Leamington, Ont.	.....
DISTRICT OF THREE RIVERS—							
April 24	Prepared Mustard	69284	Omer S-guin, St. Paul l'Ermite.	3 bots.	30	J. V. Boudrias, Montreal.	.....
" 25	Mustard	69285	Louis Pauze, L'Assomption.	3 bx's.	45	Keen's, London.....	Chaput Fils, Montreal.
" 24	"	69286	A. C. Duff, Charlemagne.	3 "	30	Breault Gill Co., Montreal.	.....
" 26	"	69287	Ed. Laurion, L'Epiphanie.	3 "	30	McLaren's, Toronto.	Laporte Martin, Montreal.
" 26	"	69288	Louis Provost, L'Epiphanie.	3 "	45	Heinz, Leamington.	.....
DISTRICT OF EASTERN TOWNSHIPS—							
April 27	Moutarde prép.	4091	Joseph Fagnan, Victoriaville, P.Q.	3 pkts.	45	J. Boudrias, Montreal.	.....
" 27	"	4092	Jean Timernaus, Victoriaville, P.Q.	3 "	54	Excelsior Mustard Mills, New York.	.....
" 27	"	4094	Gédeon Girouard, Victoriaville, P.Q.	3 "	30	Lariviere Frère, Montreal.	.....
" 28	"	4095	Paul Thebault, Victoriaville, P.Q.	3 "	45	" "	.....
May 1	"	4079	Thiriault & Gacaille, Sherbrooke, P.Q.	3 "	35	Herron Leblanc, Montreal.	.....
" 2	Prepared Mustard.	67875	J. E. Guilmette, Danville, P.Q.	3 jars.	15	J. A. Simard Cie, Montreal.	.....
" 2	"	67876	Lafrance & fils, Danville, P.Q.	3 "	30	J. V. Boudrias, Ltd., Montreal.	.....
" 3	"	67877	W. B. Murray, East Sherbrooke, P.Q.	3 "	15	Sapho Mfg. Co.....	.....
" 3	"	67878	" " "	3 "	30	S. H. Ewing & Sons, Montreal.	.....
" 3	"	67879	Bray Bros., Wellington st., Sherbrooke.	3 "	30	McLaren Co.....	.....

PREPARED MUSTARD.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.								No. of Sample.	Remarks and Opinion of the Chief Analyst.	
	Total Solids.	Total Ash.	Salt Na Cl.	Acidity as Acetic Acid.	F. as.	Starch.	Protein N x 6.25.	Nature of Dye.			Microscopical Examination.
<i>Concluded.</i>											
.....	18.68	2.28	.....	3.12	.....	3.40	.....	.....	.....	Mustard, turmeric, starch and spices.	72272
.....	15.93	3.77	2.86	2.49	3.26	2.23	4.24	Turneric.	.....	.....	4960
.....	12.16	1.58	0.77	2.37	1.90	2.44	2.45	"	.....	.....	4969
.....	16.52	2.78	1.75	3.12	2.17	4.55	*	"	.....	.....	4974
.....	11.81	2.59	1.82	2.30	2.19	2.01	2.41	"	.....	.....	4978
.....	19.34	2.60	1.75	3.40	.....	4.40	.....	.....	.....	Mustard Dressing.	4980

DR. V. P. LAVALLEE, INSPECTOR.

.....	16.28	3.32	.....	2.24	.....	Starch	.....	.....	.....	Mustard, Turmeric and spices.	69284
.....	Keen's Mustard.				.....	.....	.....	.....	.....	Mustard and approximately 10% wheat, starch (sold as compound.)	69285
.....	11.46	3.40	.....	3.57	.....	1.79	.....	.....	.....	Mustard, Starch, Turmeric and Spices.	69286
.....	11.86	3.40	.....	2.65	.....	.....	.....	.....	.....	Mustard, Turmeric and Spices.	69287
.....	22.50	3.20	.....	4.08	.....	.....	.....	.....	.....	Mustard & Spices	69288

E. BLONDIN, TEMPORARY INSPECTOR, J. J. COSTIGAN, ACTING INSPECTOR.

.....	15.12	3.20	.....	3.26	.....	.....	.....	.....	.....	Mustard, Turmeric and Spices.	4001
.....	13.00	3.30	.....	3.20	.....	0.59	.....	.....	.....	Starch Traces, Mustard, Turmeric and Spices.	4092
.....	9.20	2.94	.....	2.75	.....	.....	.....	.....	.....	Mustard, Turmeric and Spices.	4094
.....	Destroyed in transit.				.....	.....	.....	.....	.....	.....	4095
.....	13.94	2.96	.....	1.94	.....	.....	.....	.....	.....	Mustard & Spices	4079
.....	11.00	3.20	.....	4.20	.....	0.59	.....	.....	.....	Mustard, Turmeric, Starch Traces and Spices.	67875
.....	14.70	3.32	.....	2.14	.....	.....	.....	.....	.....	Mustard, Turmeric and Spices.	67876
.....	14.08	2.54	.....	2.76	.....	.....	.....	.....	.....	"	67877
.....	13.20	2.60	.....	3.24	.....	.....	.....	.....	.....	"	67878
.....	14.82	3.70	.....	2.24	.....	.....	.....	.....	.....	"	67879

* Sample insufficient for determining Protein. † Starch by acid conversion.

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.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF MONTREAL—

1916.							
May	16	Prepared Mustard.	67226	D. Beazeau, 5597 Sherbrooke St. W., N.-D. de Grace.	3 jars.	30	S. H. Ewing & Sons.
"	16	"	67227	Albert Marshall, 5398 Sherbrooke St. W., N.-D. de Grace.	3 "	60	Heinz
"	16	"	67228	A. Lamontagne, 5278 Sherbrooke St. W., N.-D. de Grace.	3 "	45	McLaren's
"	16	"	67229	T. Coggins, 5041 Sherbrooke St. W., N.-D. de Grace.	3 "	30	Herron, Leblanc, Ltd.
"	17	"	67230	Henri Jonas & Co., 173 St Paul St. W., Montreal.	3 "	25	Vendors

DISTRICT OF VALLEYFIELD—

May	9	Prepared Mustard	67734	J. Bellefeuille, Hawkesbury.	3 jars.	36	J. V. Boudrias, Montreal.
"	9	"	67736	E. Belisle, Hawkesbury.	3 "	30	Lea Bros., Simcoe.
"	18	"	67737	N. G. A. Pouliot, Chamby Basin.	3 "	30	Herron, Leblanc, Ltd.
"	18	"	67738	W. Z. Besette, Picheliou.	3 "	45	
"	19	"	67739	John Snaill, Huntingdon.	3 "	30	F. F. Dalley Co., Ltd.
"	19	"	67740	A. Riel, Huntingdon.	3 "	30	Baker, Burgess Co., Boston.

DISTRICT OF OTTAWA—

April	27	Prepared Mustard.	73137	E. Empey, Cumberland and Murray Sts., Ottawa.	3 jars.	15	McLaren's Imperial Cheese Co., Ltd., Toronto.	S. J. Major
"	27	"	73138	" " "	3 "	15	Herron, Leblanc, Ltd., Montreal.	
"	27	"	73139	" " "	3 bots.	45	Excelsior Mustard Mills, New York.	
"	27	"	73140	H. and E. Trudel, 175 King Edward Ave., Ottawa.	3 jars.	15	Amer. Pure Food, Montreal.	Larivière Frère, Montreal.
May	8	"	73195	A. S. Moreland, Bank St., Ottawa.	3 "	30	Lea Bros., Simcoe.	

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PREPARED MUSTARD.

Inspector's Report (Is not an expression of opinion.)	Results of Analysis.					No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Total Solids.	Total Ash.	Acidity as Acetic Acid.	Starch.	Microscopical Examination.		

D. J. KEARNEY, INSPECTOR.

.....	14.26	2.46	2.78	.....	Mustard, turmeric and spices.	67226
.....	23.52	3.92	4.80	.....	Mustard and spices.	67227
.....	12.54	2.34	3.72	.....	" turmeric and spices.	67228
.....	16.00	2.60	3.24	0.64	Mustard, turmeric, starch traces and spices.	67229
.....	10.52	1.52	2.76	.....	Mustard, turmeric and spices.	67230

J. J. COSTIGAN, ACTING INSPECTOR.

.....	16.70	2.38	3.16	.....	Mustard, turmeric and spices.	67734
Salad Cream Mustard.	26.00	1.20	4.56	4.86	Mustard, starch, spices and an aniline dye.	67736
.....	15.84	2.34	3.24	.....	Mustard, turmeric and spices.	67737
Imported.....	12.08	4.60	3.57	7.35	Mustard, starch and spices.	67738
.....	19.50	3.20	3.46	7.78	" turmeric, starch and spices.	67739
.....	16.04	2.90	3.36	2.95	Mustard, starch, turmeric spices and adinatto.	67740

J. A. RICKEY, INSPECTOR.

McLaren's Imperial.	13.52	2.60	2.44	.....	Mustard, turmeric and spices.	73137
Herron French Mustard.	15.72	2.32	4.32	.....	" " ..	73138
.....	12.36	2.84	3.84	0.60	Mustard, turmeric, starch traces and spices.	73139
Superior French Mustard.	8.40	1.46	3.36	0.17	" " ..	73140
.....	26.60	1.08	3.16	4.95	Mustard, starch, spices and an aniline dye.	73195

Sold as Mustard Salad Cream.

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.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF KINGSTON—

1916.							
May 2	Prepared Mustard.	73156	John M. Gordon, Montreal st., Kingston.	3 jars.	30	Lea Bros., Simcoe.....	
" 3	" ..	73165	R. Elvins, Belleville	3 "	30	" ..	
" 3	" ..	73168	A. J. McCroen, Belleville.	3 "	.....	Gorman, Eckert Co., London, Ont.	
" 4	" ..	73189	T. C. Yonge, Peterboro..	3 "	30	T. Kinnear Co., Peterboro.	
" 5	" ..	73191	C. A. Curran, Peterboro..	3 "	15	McLaren Imperial Cheese Co., Ltd., Toronto.	

DISTRICT OF TORONTO—

May 8	Prepared Mustard.	72811	T. H. Coffin, 96 Denison ave., Toronto.	3 bots.	15	McLaren's Imperial Cheese Co., Toronto.	
" 9	" ..	72812	Barry Bros., 850 Carlaw ave., Toronto.	3 jars.	15	A. Beavers, Mount Dennis.	
" 9	" ..	72813	C. L. Stone, 107 Eaton ave., Toronto.	3 bots.	15	Royal Mills, Toronto.	
" 10	" ..	72814	L. Scop, 163 McCaul st., Toronto.	3 "	15	The Turner Co., Ltd., Toronto.	
" 11	" ..	72831	M. E. Carey, Aurora....	3 "	15	T. Kinnear & Co., Toronto.	
" 31	Mustard....	72874	The Robt Simpson Co., Ltd., Queen and Yonge sts., Toronto.	1 lb.	23	.....	Unknown

DISTRICT OF HAMILTON—

May 18	Prepared Mustard.	72855	A. L. Lawrence, 204 St. Paul st., St. Catharines	3 pks.	15	Gorman, Eckert Co., London.	
" 23	" ..	72856	J. Burns Estate, 32 Dalhousie st., Brantford.	3 jars.	15	McLaren's, Ltd., Hamilton.	
" 25	" ..	72857	John Walker, Paris.....	3 bots.	30	I. X. L. Spice and Coffee Mills, London.	
" 26	" ..	72858	John Ritchie, 10 West Main St., Galt.	3 pks.	30	White Swan S. and Co., Ltd., Toronto.	
" 26	" ..	72859	John Welker, 159 King st., E. Berlin.	3 "	15	The T. A. Lytle Co., Ltd., Toronto.	

PREPARED MUSTARD.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.					No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Total Solids.	Total Ash.	Acidity as Acetic Acid.	Starch.	Microscopical Examination.		

J. A. RICKEY, ACTING INSPECTOR.

Contains colour and Sodium Benzoate.	22.80	1.56	4.32	5.08	Mustard, starch, spices and an aniline dye.	73156	Sold as Mustard Salad Cream.
.....	27.50	1.10	3.16	2.86	" "	73165	"
.....	19.68	3.14	3.06	.....	Mustard, turmeric and spices.	73168	
Crown Brand.	15.72	3.18	3.24	.....	Mustard, turmeric, spices and an aniline dye.	73189	
.....	17.04	3.60	2.65	.....	Mustard, turmeric and spices.	73191	

H. J. DAGER, INSPECTOR.

.....	10.36	3.68	3.36	.....	Mustard, turmeric and spices.	72811	
.....	34.80	1.40	1.80	22.50	Mustard, turmeric, wheat and maize, starch and spices.	72812	
.....	10.48	3.38	3.60	2.24	Mustard, turmeric, traces starch and spices.	72813	
.....	17.14	2.36	2.85	.....	Mustard, turmeric and spices.	72814	
Crown Brand.	13.90	2.92	2.75	.....	Mustard, turmeric and spices and aniline dye.	72821	
.....	Mustard.	.....	.....	.....	.....	72874	

H. J. DAGER, ACTING INSPECTOR.

.....	18.50	4.42	3.60	.....	Mustard, turmeric and spices.	72855	
.....	16.60	2.80	3.06	.....	" "	72856	
.....	14.00	0.66	3.36	.....	" "	72857	
.....	12.32	1.32	2.40	.....	" "	72858	
Sterling Brand	18.14	2.04	2.64	8.67	" and an aniline dye.	72859	

BULLETIN No. 361—

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

DISTRICT OF WINDSOR—

1916.							
May 17	Prepared Mustard.	64960	Chas. George, Glencoe...	3 pkgs	30	Lea Bros., Simcoe...	
" 17	"	64964	J. E. Roome, Glencoe...	3 jars	30	.....	Arch. Smith & Co., London.
" 17	"	64966	Geo. Precious, Glencoe...	3 bots.	30	L. X. L. Spice & Coffee Co., London	.....
" 17	"	64967	A. P. Smith, Chatham...	3 jars.	15	Gorman Eckert Co., London.	.....
" 19	"	64982	McCallum & McDougall, Wallaceburg.	3 bots.	25	" "	.....

DISTRICT OF MANITOBA—

May 18	Prepared Mustard.	71838	S. J. Staples & Son, Carman.	3 bots.	30	Dyson Co., Winnipeg.	.....
" 22	"	71839	Western Cash Grocery, 1168 Portage ave., Winnipeg.	3 "	45	T. A. Lytle Co., Toronto.	.....
" 23	"	71840	T. R. Hard-n, Portage ave. and Styles st., Winnipeg.	3 "	30	T. R. French Co., Rochester, N. Y.	.....
" 25	"	71841	T. Brown, Sturgeon Creek	3 "	30	Gold Standard Co., Winnipeg.	.....
" 25	"	71842	Alex. McRae, Kirkfield, P. O.	3 "	30	McLaren Imperial Cheese Co., Toronto	.....

DISTRICT OF SASKATCHEWAN—

April 26	Prepared Mustard.	71571	J. A. Schmidt, Tugaska...	3 pkgs	30	Gorman Eckert Co., London.	A. MacDonald Cc., Moose Jaw
" 26	"	71574	A. D. Munro, Tugaska...	3 "	30	Dyson Co., Winnipeg	Cameron & Heap Co., Regina.
" 27	"	71579	F. T. Marks, Elbow.....	3 "	30	McLaren's Imperial Cheese Co., Toronto	Campbell, Wilson & Strath-dee, Regina.
May 18	"	71592	S. D. McMicken, Moose Jaw.	3 "	45	Gold Standard Mfg. Co., Winnipeg.	Codville Co., Moose Jaw.
" 18	"	71594	McDonald Crawford Co., Moose Jaw.	3 "	25	White Star Mfg. Co., Winnipeg.	Manufacturer...

PREPARED MUSTARD.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.								No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Total Solids.	Total Ash.	Salt Na C.	Acidity as Acetic Acid.	Fat.	Starch.	Protein N x 6.25.	Nature of Dye.			Microscopical Examination.

JOHN TALBOT, INSPECTOR.

.....	25.20	1.32	.....	4.80	.....	6.37	.....	.....	Mustard, starch and an aniline dye.	64960
.....	26.94	3.18	.....	2.96	.....	.....	.....	.....	Mustard, turmeric and spices.	64964
Sweet heart Brand.	14.50	1.68	.....	3.72	.....	.....	.....	.....	" "	64966
.....	16.50	2.16	.....	3.00	.....	.....	.....	.....	" "	64967
.....	19.20	2.96	.....	2.52	.....	.....	.....	.....	" "	64982

J. B. COSGROVE, INSPECTOR.

.....	12.74	3.04	2.15	3.17	1.26	1.94	3.16	Starch by Acid Conversion.	Turmeric.	71838
.....	18.28	3.86	2.67	3.36	3.76	2.32	4.99	.....	"	71839
.....	17.90	4.62	3.16	2.90	3.74	2.24	4.51	.....	"	71840
.....	22.93	4.60	2.97	3.34	5.66	2.81	7.18	.....	.....	71841
.....	12.70	2.88	1.74	2.94	2.10	2.25	3.54	.....	Turmeric.	71842

L. H. HALL, INSPECTOR.

.....	14.78	1.86	0.82	2.40	3.26	2.32	4.29	.....	Turmeric.	71571
Red Cross Brand.	9.30	1.34	0.65	2.95	1.06	1.49	2.27	.....	"	71574
.....	12.42	3.34	2.72	2.72	1.64	1.61	2.53	.....	"	71579
Gold Standard Brand.	15.84	3.54	2.35	2.86	2.72	2.67	3.63	.....	"	71592
White Star Brand.	13.82	3.32	2.12	2.59	3.22	1.91	3.81	.....	"	71594

BULLETIN No. 361-

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.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF ALBERTA-

1916.							
May 29	Prepared Mustard.	52457	Henesey & Wilson, Okotoks.	3 jars.	30	McLaren Imperial Cheese Co., Toronto.	
" 29	"	52458	F. A. Hughes, Okotoks.	3 bots.	45	Libby, McNeill, Libby, Chicago.	
" 30	"	52459	Geo. W. Buck, High River.	3 "	30	Dumas & Frère, Marseilles, France.	F. F. Dalley Co., Hamilton.
" 31	"	52460	Sibbett & Hallett, Nanton.	3 "	45	" " " "	" " " "
June 13	"	52461	Jenkins & Co., Calgary East.	3 jars.	60	H. J. Heinz Co.	

DISTRICT OF ROCKY MOUNTAINS-

May 5	Mustard....	68220	Creston Mercantile Co., Creston.	3 pkgs	45	The W. H. Malkin Co., Vancouver.	
" 5	"	68225	S. A. Speers, Creston	3 "	60	J. and J. Coleman, London, Eng.	
" 12	"	68231	P. Sacco, Cranbrook	3 tins.	60	Keen's London.	
" 12	"	68232	Frank Provenzano, Cranbrook.	3 "	45	W. A. Jameson Coffee Co., Victoria.	
June 6	" (Prepared).	68242	C. W. Webster, Kaslo	3 bots.	45	The Dyson Co., Winnipeg.	

DISTRICT OF VANCOUVER-

June 9	Prepared Mustard.	55596	S. Goranson, 328 Hastings St. E., Vancouver.	3 jars.	45	White Star Mfg. Co., Winnipeg.	
" 9	"	55597	Larsen's Grocery, 321 Hastings St. E., Vancouver.	3 "	30	F. F. Dalley Co., Ltd., Hamilton.	
" 9	"	55598	H. Newell, 575 Hastings St. E., Vancouver.	3 "	45	H. J. Heinz Co., Leamington, Ont.	
" 9	"	55599	Filion, Ltd., 204 Carroll St., Vancouver.	3 "	30	McLaren's Imperial Cheese Co., Toronto.	
" 9	"	55600	Vancouver Pickle Co., 22 Water St., Vancouver.	3 "	45	Pacific Pickle and Vinegar Works, San Francisco.	

PREPARED MUSTARD.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.								No. of Sample.	Remarks and Opinion of the Chief Analyst
	Total Solids.	Total Ash.	Salt Na Cl.	Acidity as Acetic Acid.	Fat.	Starch by Acid Conversion.	Protein N x 6.25.	Nature of Dye.			Microscopical Examination.

A. W. R. MARKLEY, INSPECTOR.

.....	12.54	3.42	2.74	3.36	0.92	1.61	2.40	Turmeric.	Mustard tissues.	52457
.....	22.60	4.80	3.42	2.56	6.22	2.36	5.73	.....	" ..	52458
.....	20.62	3.16	2.26	2.10	4.00	7.18	3.93	Turmeric.	Mustard tissues and wheat starch.	52459
.....	19.62	2.94	2.31	1.84	1.94	7.03	3.45	"	" ..	52466
.....	24.04	4.00	2.72	3.36	7.34	3.20	6.11	.....	Mustard tissues.	52461

THOS. PARKER, INSPECTOR.

.....	Is not Prepared Mustard								68220	
.....	"	"	"	"	"	"	"	"	68225	
.....	"	"	"	"	"	"	"	"	68231	
.....	"	"	"	"	"	"	"	"	68252	
.....	13.92	3.06	1.88	2.63	2.44	1.63	Crude fibre.	Mustard, hulls, turmeric and spice.	68242

E. J. MORAN, INSPECTOR.

.....	17.22	2.68	1.75	3.42	.....	1.92	2.31	.....	Mustard, turmeric and spice starch.	55596
.....	25.32	3.52	2.50	2.03	.....	9.41	1.40	.....	Mustard, turmeric and maize starch.	55597
.....	23.48	3.16	2.01	3.37	.....	2.66	2.80	.....	Mustard and spice starch.	55598
.....	12.00	3.82	3.07	2.93	.....	2.12	1.40	.....	Mustard, turmeric, cayenne and spice.	55609
Label states, coloured with turmeric and contains 0.001% Benzozate soda.	22.20	2.66	1.45	3.89	.....	2.44	1.21	.....	Mustard, turmeric and spice.	55690