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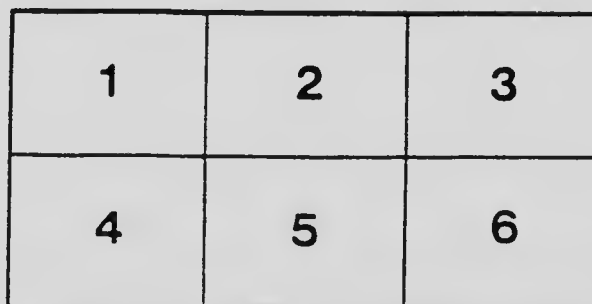
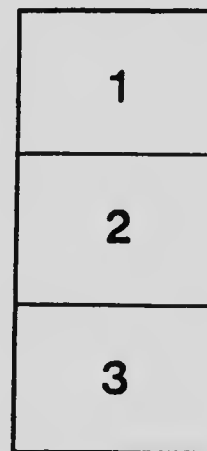
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LABORATORY
OF THE
INLAND REVENUE DEPARTMENT
OTTAWA, CANADA

BULLETIN No. 333

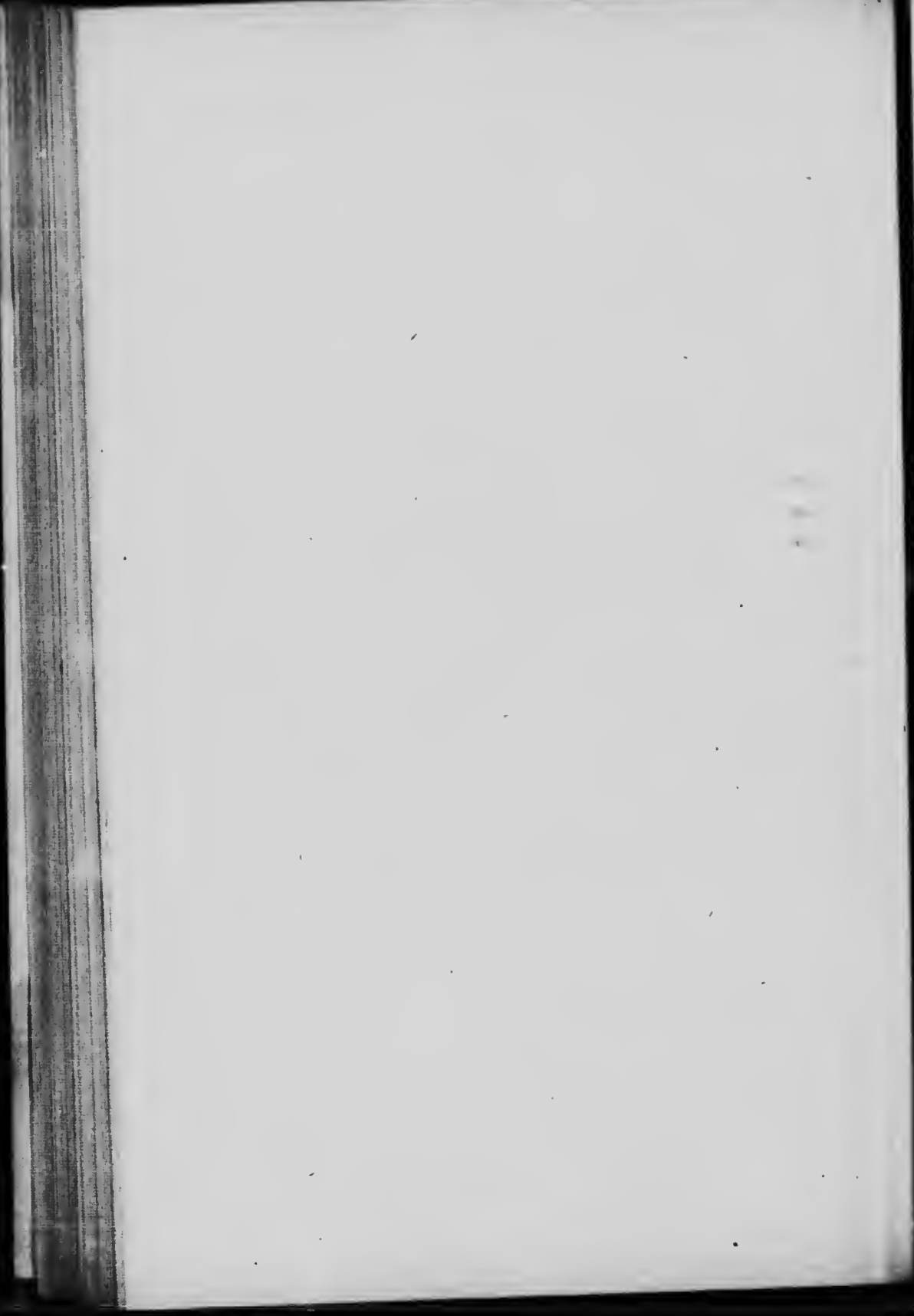
FORMALIN

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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.



LABORATORY
OF THE
INLAND REVENUE DEPARTMENT
OTTAWA, CANADA

BULLETIN No. 333

FORMALIN

OTTAWA; January 21, 1916.

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

Sia,—Solution of Formaldehyde (Liquor Formaldehydi) of the British Pharmacopœia is defined as an aqueous solution of Formaldehyde, containing in 100 millilitres (cubic centimetres) not less than 36 and not more than 38 grammes of formaldehyde. This is a quantitative statement of weight in volume.

Squires' Companion to the Pharmacopœia adds: "The commercial article *Formol* or *Formalin* is stated to be a 40 per cent solution. Since the specific gravity of this solution is about 1.080, it follows that a weight in volume solution of 36 per cent formaldehyde would represent only 33.3 per cent by weight in 100 parts by weight.

Manufacturers claim that they furnish a 40 per cent solution weight in volume; that is, a solution of 40 parts formaldehyde by weight in 40 parts of Formalin by volume. This is equivalent to a weight in weight percentage of about 37.

Formalin is largely used as a disinfectant, for all the purposes of this class of articles; but is perhaps chiefly in demand for treatment of seed grain.

The present report deals with sixty-eight (68) samples, purchased in October and November last, in consequence of complaints received by this department (L. 134431). Examination shows all of the samples to be genuine if regarded as Liquor Formaldehydi of the Pharmacopœia.

If regarded as 40 per cent solutions (weight in volume) of formaldehyde—said to be the commercial Formalin—four (4) samples are found to be slightly below requirements. Since, however, *Formalin* has no legal status under the Adulteration Act, I am unable to declare adulteration in these cases. The report, as a whole, shows that commercial Formalin, as sold in Canada, is of very good quality.

I beg to recommend publication of this report as Bulletin No. 323.

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

A. MCGILL,
Chief Analyst.

BULLETIN No. 333—FORMALIN.

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.)	Results of Analysis.		No. of Sample.	Remarks and Opinion of the Chief Analyst.
			Name and Address of Vendor.	Name and Address of Vendor.			Formaldehyde by Weight.	Formaldehyde in Volume.					
1915.	Formalin.	67271	J. A. Harte, 148 Notre-Dame-St., West, Montreal.	Lyman-Knox Co.	12 ozs.	75	Lyman-Knox Co.	.....		p. c.	40.3	67271	Meets legal requirements.
"	"	67272	Leduc's Drug Store, Chateaubien Square, Montreal.	Unknown.	12 "	69	Unknown.	.....		p. c.	43.1	67272	"
"	"	67273	A. LeBeau, 465 St. James Square, Montreal.	Lymans Ltd.	9 "	75	Lymans Ltd.	.....		p. c.	38.6	67273	"
"	"	67274	National Drug & Chemical Co., Montreal.	Vendor.	12 "	36	Vendor.	.....		p. c.	41.3	67274	"
"	"	67275	Chas. E. Frosat & Co., Montreal.	"	3bots.	100	"	.....		p. c.	40.9	67275	"
"	"	67276	Chapman-Dart Co., Montreal.	Unknown.	12 ozs.	50	Unknown.	.....		p. c.	28.4	67276	"
"	"	67277	Parker-Davis & Co., Montreal.	Vendors.	12 "	40	Vendors.	.....		p. c.	40.4	67277	"
"	"	67278	Lyman-Knox & Co., Montreal.	"	12 "	27	"	.....		p. c.	39.2	67278	"
"	"	67279	J. A. D. Gadbout, 54 Craig St., West, Montreal.	Lymans Ltd.	12 "	50	Lymans Ltd.	.....		p. c.	36.0	67279	"
"	"	67280	Pharmacie Robert, Craig & St., Lawrence St., Montreal.	National Drug & Chemical Co.	12 "	75	National Drug & Chemical Co.	.....		p. c.	37.2	67280	"

DISTRICT OF MONTREAL—D. J. KEARNEY, INSPECTOR.

DISTRICT OF TORONTO—H. J. DAGER, INSPECTOR

Oct.	1	Formalin	69955	T. J. Watson, Stayner	1 lb.	30		National Drug & Chemical Co. of Canada.		37.6	41.3	69955	Meets Legal Requirements.
"	13	"	69956	Jury & Gregory, Collingwood.	1 "	50		Drug Trading Co., Toronto.		35.4	42.2	69956	"
"	13	"	69957	Dr. E. L. Connolly, Collingwood.	1 "	50		"		36.4	40.0	69957	"
"	14	"	69958	H. J. Robertson, Barrie	1 "	50		National Drug & Chemical Co. of Canada.		36.8	40.5	69958	"
"	14	"	69959	Geo. Monkman, Barrie	1 "	40	Standard Chemical Co., Ltd., Toronto		37.2	40.9	69959	"	
"	15	"	69960	A. E. Patterson, Allandale	1 "	40	"		34.2	31.7	69960	Slightly below accepted formalin strength.	
"	19	"	69961	W. J. McGuire, Allandale	1 "	50	Unknown		37.8	41.6	69961	Meets Legal Requirements.	
"	20	"	69962	Dr. P. A. McDonald, Penetang	1 "	35		E. G. West & Co., Toronto.		37.6	41.3	69962	"
"	21	"	69963	H. S. McCartney, Midland	1 "	35		National Drug & Chemical Co., Ltd., Hamilton.		37.6	41.3	69963	"
"	21	"	69964	J. S. Fraleigh, Midland	1 "	35	The Standard Chemical Co., Ltd., Toronto.		38.0	41.8	69964	"	

DISTRICT OF HAMILTON—J. J. COSTIGAN, ACTING INSPECTOR

Oct.	2	Formalin	58436	V. E. Christlaw, St. James St. N., Hamilton, Ont.	1 lb.	75	HL K. Wampole Co., Ltd.		"Formalid"	35.8	39.4	58436	Meets legal requirements.
"	2	"	58437 <th>Porter's Drug Store, 244 St. James St. N., Hamilton, Ont.</th> <td>1 "</td> <td>35</td> <td></td> <td></td> <td></td> <td>40.4</td> <td>44.4</td> <td>58437</td> <td>"</td>	Porter's Drug Store, 244 St. James St. N., Hamilton, Ont.	1 "	35				40.4	44.4	58437	"
"	2	"	58438 <th>James M. Walker, St. Paul St., St. Catharines, Ont.</th> <td>1 "</td> <td>50</td> <td>Standard Chem. Co., Ltd.</td> <td></td> <td></td> <td>36.6</td> <td>40.3</td> <td>58438</td> <td>"</td>	James M. Walker, St. Paul St., St. Catharines, Ont.	1 "	50	Standard Chem. Co., Ltd.			36.6	40.3	58438	"
"	4	"	58439 <th>F. W. Jeff, King St., St. Catharines, Ont.</th> <td>1 "</td> <td>50</td> <td>N. D. and Chem. Co., Ltd.</td> <td></td> <td></td> <td>38.0</td> <td>41.8</td> <td>58439</td> <td>"</td>	F. W. Jeff, King St., St. Catharines, Ont.	1 "	50	N. D. and Chem. Co., Ltd.			38.0	41.8	58439	"
"	4	"	58440 <th>Abbas & McCallum, Queen St. E., St. Catharines, Ont.</th> <td>1 "</td> <td>50</td> <td>H. K. Wampole Co., Ltd.</td> <td></td> <td></td> <td>38.6</td> <td>42.4</td> <td>58440</td> <td>"</td>	Abbas & McCallum, Queen St. E., St. Catharines, Ont.	1 "	50	H. K. Wampole Co., Ltd.			38.6	42.4	58440	"
"	4	"	58441 <th>Cecil A. G. Cameron, Colborne St., Brantford, Ont.</th> <td>1 "</td> <td>50</td> <td>Nat. Drug and Chem. Co., Ltd., Hamilton.</td> <td></td> <td></td> <td>39.0</td> <td>42.9</td> <td>58441</td> <td>"</td>	Cecil A. G. Cameron, Colborne St., Brantford, Ont.	1 "	50	Nat. Drug and Chem. Co., Ltd., Hamilton.			39.0	42.9	58441	"
"	4	"	58442 <th>Gordon Brandon, D'Amico St., Brantford, Ont.</th> <td>1 "</td> <td>50</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>58442</td> <td>"</td>	Gordon Brandon, D'Amico St., Brantford, Ont.	1 "	50						58442	"

BULLETIN No. 333—FORMALIN.

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.)	Results of Analysis.		No. of Sample.	Remarks and Opinion of the Chief Analyst.
				Quantity.	Cents.	Manufacturer.	Furnisher.		Formaldehyde by Weight.	Formaldehyde in Volume.		

DISTRICT OF HAMILTON—J. B. COSTIGAN, ACTING INSPECTOR—Concluded.

1915.												
Oct.	4	Formalin.	58443 A. W. Smiley, Market St., Brantford, Ont.	1 lb.	40						58443	Meets legal require- ments.
"	4	"	58444 S. Tapscott & Co., 24 Mar- ket St., Brantford, Ont.	1 "	50	Nat. Drug and Chem. Co., Ltd.					58444	"
"	4	"	58445 T. George Bohs, Colborne St., Brantford, Ont.	1 "	50						58445	"

DISTRICT OF MANITOBA—J. B. COSGROVE, TEMPORARY INSPECTOR.

Oct.	5	Formalin.	61416 McLellan Pharmacy, Sel- kirk Ave. and McKenzie, Winnipeg.	1 1/4 lb.	60						61416	Slightly below ac- cepted formalin strength.
"	5	"	61417 H. D. Campbell, 988 Main St., Winnipeg.	1 1/4 "	60						61417	Meets legal require- ments.
"	6	"	61418 J. K. Brown, 308 Nairn Ave., Elmwood, Wingi- peg.	1 "	35						61418	"
"	6	"	61419 Kildonan Pharmacy, 2061 Hespler Ave., Winnipeg.	"	50						61419	"
"	6	"	61420 Louis A. Rice, 1695 1/2 Fort- age Ave., Winnipeg.	12 oz.	40						61420	"
"	6	"	61421 Ralph Magee, 1849 1/2 Port- age Ave., Winnipeg.	lb.	40						61421	Slightly below ac- cepted formalin strength.

61421 Slightly below accepted formalin strength.

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61421

7	61422	A. T. Brookings, 116 Osborne St., Fort Rouge, Winnipeg.	60	Unknown	35-75	39-3	61422	Meets legal requirements.
7	61423	H. L. Brown, 175 Osborne St., Fort Rouge, Winnipeg.	75	Martin Bole & Wynn Co., Winnipeg.	36-93	40-6	61423	"
7	61424	W. B. Davis, 217 Nassau St., Fort Rouge, Winnipeg.	50	Nat. Drug Co., Winnipeg.	38-14	39-7	61424	"
7	61425	Pyntz Co., Westminster Ave., Winnipeg.	45	B. & Wynn Co.	36-13	39-7	61425	"

DISTRICT OF SASKATCHEWAN—L. H. HALL, INSPECTOR.

Oct.	8	Formalin.	66437	Moosejaw Drug and Stationery, Moosejaw.	20	Standard Chem. Co., Winnipeg.	36-91	66437	Meets legal requirements.
"	8	"	66438	F. Mariatt, Moosejaw.	23	"	39-10	66438	"
"	8	"	66439	H. A. Davidson, Moosejaw.	25	"	36-46	66439	"
"	8	"	66440	E. L. Colling, Moosejaw.	25	"	36-96	66440	"

DISTRICT OF ALBERTA—A. W. R. MARKLEY, INSPECTOR.

Nov.	16	Formalin.	52271	E. M. Cawker, Medicine Hat.	50	Standard Chem. Iron and Lumber Co., Toronto.	36-8	52271	Meets legal requirements.
"	16	"	52272	G. P. Souch, Medicine Hat.	3	Standard Chem. Co., Winnipeg.	36-5	52272	"
"	17	"	52273	Alberta Drug and Stationery Co., Lethbridge.	3	J. D. Higginbotham & Co., Lethbridge.	37-0	52273	"
"	17	"	52274	Kenny & All in Co., Ltd., Lethbridge.	3	Nat. Drug and Chem. Co., Calgary.	36-8	52274	"
"	18	"	52275	J. D. Higginbotham & Co., Ltd., Lethbridge.	3	Standard Chem. Iron and Lumber Co., Winnipeg.	37-3	52275	"
"	18	"	52276	T. H. McCready, Lethbridge.	3	"	36-7	52276	"
"	19	"	52277	Jas. Findlay Drug Co., Ltd., Calgary.	45	Nat. Drug and Chem. Co., Calgary.	37-7	52277	"

BULLETIN No. 333—FORMALIN.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.		No. of Sample.	Remarks and Opinion of the Chief Analyst.
			Quantity.	Cost.	Manufacturer.	Furnisher.		Formaldehyde by Weight.	Formaldehyde in Volume.		

DISTRICT OF ALBERTA—A. W. MARKLEY, INSPECTOR—Concluded.

1915.	Nov. 19	Formalin.	52278	MacFarlane Drug Stores, 3 bots. Calgary.	45	Standard Chem. Iron and Lumber Co., Winnipeg.	.....	36.6	40.2	52278	Meets legal requirements.
	" 19	"	52279	McDermid Drug Co., Ltd., 3 " Calgary.	35	"	.....	37.3	41.0	52279	"
	" 19	"	52280	Oliver Bros., Ltd., 3 " Calgary	35	Nat. Drug and Chem. Co., Winnipeg.	.....	37.0	40.7	52280	"

DISTRICT OF ROCKY MOUNTAINS—THOS. PARKER, INSPECTOR.

Oct. 18	Formalin.	61887	Fort George Drug Co., 1 lb. Prince George.	75	H. K. Wainpole Co., Perth, Ont.	.....	37.6	41.3	61887	Meets legal requirements.
Nov. 16	"	61894	A. F. Rankine Merritt, 1 " B. C.	65	Nat. Drug and Chem. Co., Vancouver.	.....	35.9	39.4	61894	"
Dec. 6	"	68104	Woodland & Quinn, Grand Forks	65	Nat. Drug and Chem. Co., Vancouver.	.....	34.9	38.3	68104	Slightly below accepted formalin strength.
" 6	"	68105	The Mann Drug Co., Grand Forks.	65	Nat. Drug and Chem. Co., Vancouver.	.....	35.9	39.4	68105	Meets legal requirements.

BULLETIN No. 333 FORMALIN.

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.)	Results of Analysis		Remarks and Opinions of the Chief Analyst.	
				Quantity.	Cents.	Manufacturer.	Furnisher.		Formaldehyde by Weight.	Formaldehyde Weight in Volume.		No. of Sample.
1915.												
Oct. 30	Formalin..	55386	Marrett & Reid, 157 Hastings St., West, Vanc., B.C.	1 lb.	75	J. A. Teepoorten, Ltd., Vanc.	J. A. Teepoorten, Ltd., Vanc.	.....	36.2	39.8	55386	Meets legal requirements.
" 30	"	55387	Woodward Dept. Stores, Ltd., Vanc., B.C.	1 "	50	Standard Iron and Lumber Co., Montreal.	"	.....	36.2	39.8	55387	"
Nov. 1	"	55388	Owl Drug Co., Ltd., Granville and Dunsmuir Sts., Vanc., B.C.	1 "	50	"	"	.....	36.5	40.1	55388	"
" 1	"	55389	Barns Drug Co., Ltd., 732 Granville St., Vanc., B.C.	1 "	75	"	"	.....	36.0	39.6	55389	"
" 1	"	55390	W. M. Harrison & Co., Ltd., Granville and Robson Sts., Vanc., B.C.	1 "	75	Standard Iron and Lumber Co., Montreal.	"	.....	36.8	40.4	55390	"
" 1	"	55391	Campbell's Ltd., Hastings and Granville Sts., Vanc., B.C.	1 "	75	"	"	.....	38.1	41.9	55391	"
" 2	"	55392	Woods Pharmacy, 601 Hastings St., Vanc., B.C.	1 "	50	"	"	.....	37.5	41.2	55392	"
" 2	"	55393	D. S. Curtis & Co., 659 Columbia St., New Westminster, B.C.	1 "	75	Unknown.....	"	.....	37.0	40.7	55393	"
" 2	"	55394	F. T. Hill, 628 Columbia St., New Westminster, B.C.	1 "	50	"	"	.....	36.5	40.1	55394	"
" 2	"	55396	C. S. Davis, 42 Sixth St., New Westminster.	1 "	50	Standard Iron and Lumber Co., Montreal.	"	.....	36.2	39.8	55396	"

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

