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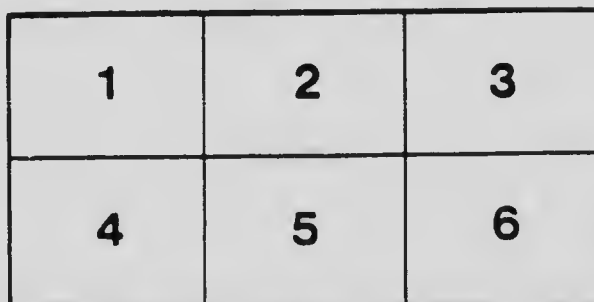
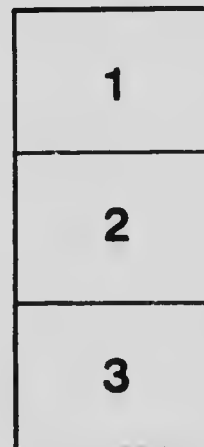
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O. H. M. S.

W. J. Gerald
Deputy Minister.

LABORATORY
OF THE
INLAND REVENUE DEPARTMENT
OTTAWA, CANADA

BULLETIN No. 193

LARD



LABORATORY
OF THE
INLAND REVENUE DEPARTMENT

OTTAWA, CANADA

BULLETIN No. 193

LARD

OTTAWA, December 3, 1909.

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

SIR,—I beg to hand you a report covering the results of examination of 70 samples purchased as *Lard*, throughout Canada, in September and October last.

Lard has on two former occasions been made the subject of Inspection by this department, viz.: in August and September of 1888 (See Bull. 7) and in December of 1907 and January of 1908 (See Bull. 147).

Referring to Bulletin 7, I find that the inspection of 1888 was consequent upon 'numerous prosecutions for selling adulterated lard which have, within the last twelve months, taken place in England.' The report in question deals with 109 samples, and 66 per cent. of these are found to be adulterated under the Act, by admixture with, and substitution of an inferior article. This inferior article is *Water* in 12 samples, and cotton seed oil, or stearin in 61 samples. Of this collection 38 samples were Canadian made, 60 samples were American made, and 11 samples were of unknown origin. All but one of the American lards contained cotton seed products, while only three Canadian lards were found to contain cotton seed oil. The late Chief Analyst remarks: 'There are to be found a few cases, from which it would seem that our manufacturers are beginning to imitate American practices.'

At the date of this report (1888) the use of cotton seed oil in lard manufacture was comparatively a new thing. The importance of inspectorial work under the Adulteration Act is well illustrated by the fact that, while 66 per cent of the samples examined in 1888 contained cotton seed oil without acknowledgment, subsequent inspections show that the sale of a cotton seed oil containing article, as lard, is now quite an exceptional occurrence. The intermixture of cotton seed oil continues, but the product is sold as a compound, and conforms to Section 24 (d) of the Act. The inspection of 140 samples in February, 1908, showed only two (2) to contain cotton seed oil, without acknowledgment of the fact.

The present report dealing with 70 samples, shows five (5) samples, sold as genuine, to contain cotton seed oil.

No objection on the ground of wholesomeness, can be taken to the admixture of cotton seed oil in factitious lards, or lard substitutes; but the sale of an article con-

taining cotton seed oil, as a genuine lard, constitutes adulteration under section 3 (a) (b) of the Act. Among samples now reported, eighteen give more or less distinct indications of cotton seed oil (Halphen test); but these are not sufficiently definite to justify the conclusion that there has been purposeful addition of the article. It is known that hogs which have been fed on cotton seed meal may yield a fat capable of reacting to the Halphen test; and imperfect cleaning of machinery which had been used in manufacturing a compound lard, might easily result in such slight admixture with cotton seed oil as is indicated by the reactions found.

Adulteration by the addition of water to lard, seems to be a thing of the past. In 1888, 11 per cent of the samples examined contained water in excess, the amount varying from 5.55 per cent to 24.47 per cent. One per cent of water in lard is a reasonable maximum allowance, so that the incorporation into lard of the large amounts found in 1888, was a palpable fraud, and required considerable skill in its execution. In 1908 we found one market sample (out of 140 examined) to contain 1.36 per cent of water, evidently by accident since other samples made by the same firm, gave only traces of water. The inspection of 70 samples now reported, shows only one sample to contain as much as 1.18 per cent water, which is barely above the limit quoted and recommended to be made legal.

The use of tallow in the manufacture of compound lards is believed to be not uncommon. The chemical and physical constants for beef and mutton tallow so closely approximate those for ordinary hog fat as to make it difficult for the analyst to assure himself of the presence of tallow. Among many methods of examination, that have been published during recent years, all of which methods have been studied in this laboratory, the most promising seems to be that described by Dr. J. A. Emery, of the U. S. Bureau of Animal Industry (Circ. 132). This depends upon the exact determination of the melting point of the stearins, crystallized out from an ether solution of the fats. The melting points referred to have been determined with great care by Mr. C. C. Forward, of this laboratory, and are inserted in the column headed 'Melting points of solid glycerides.' Although very suggestive in many instances, I do not regard the evidence afforded by them as sufficiently conclusive to justify positive deductions. The method is probably capable of greater refinements than it has yet received, and is being studied with a view to giving its results a greater degree of positiveness than is yet possible. A memorandum by Mr. Forward is appended, giving some results of such investigation as he has made. The conditions under which the solid glycerides are obtained in greatest purity, that is, as free as possible from oleins, are not easily secured. It may be that recrystallization of these would yield crystals having better defined melting points. The matter is being further investigated; and I trust that we may yet be able to obtain a working method that shall enable us to detect with certainty the presence of tallows.

I beg to recommend the publication of this report as Bulletin No. 193.

I have the honour to be, sir,

Your obedient servant,

A. MCGILL,
Chief Analyst.

Note.—Correspondence with vendors and manufacturers of lard, since writing the above, seems to justify the addition of a note calling to the attention of vendors the importance of the sale of an article for just what it is. It is quite clear that several retail dealers in lard, whose names appear in this Bulletin, purchased compound lards, plainly marked as such by the manufacturers, and purchased at about four cents per pound below the price of lard. These dealers surely knew that it was not lard which they bought, but compound lard, a substitute for the real article. Many of them sold the article to our inspectors stating it to be compound lard; but others sold it as *lard*, with no explanation. In this case the vendor is clearly responsible for selling an adulterated article, and is amenable to the penalties imposed by the Act.

The labelling of a factitious article as *Family Lard*, is not a statement of its compound character, and gives no warning of its sophistication to the purchaser.

MEMORANDUM.

The method of Emery (Circ. 132, Bureau Animal Industry, U. S. Department of Agriculture) for detection of tallow in lard consists in crystallizing the solid glycerides from the sample of fat by maintaining at a temperature of about 17.5° for 18 hours, a 20 per cent solution (weight volume) of the fat in ether; and the subsequent determination of the melting point of the crystals obtained after washing with cold ether and drying.

In applying this method to the present collection of market lards a number of difficulties were experienced. It was found in determining the melting point that an error due to variations in manipulation might amount to half a degree (centigrade); and that the error due to variations in the temperature of the crystallizing bath (between 15° and 20° C.) might amount to one degree. As the difference between the melting point of the crystals from pure lard and those from pure tallow is not over three and a half degrees, it is evident that the range of error must be greatly reduced in order to obtain conclusive results.

In further work a slight alteration was made in the melting point apparatus, viz., the substitution of sulphuric acid (1.3) for water in the inner compartment and also heating the bath more slowly. This was found to lessen the range of error to some extent, at the same time giving slightly higher results in all cases.

Sixteen samples of apparently pure lard (*i.e.*, lard having Iodine number 55.60, and Butyro-refractometer reading 50°-51° and containing no cotton seed oil) gave as a maximum melting point of glycerides 64.4°, a minimum of 63.5°, and an average of 64.0°. The following results were obtained with home rendered pure leaf lard and tallow:—

Pure leaf lard.....	63.9°
“ “ 4 per cent tallow	63.5°
“ “ 8 “ “	63.0°
“ “ 10 “ “	62.6°
“ “ 15 “ “	62.5°
Pure tallow.....	60.3°

Investigatory work is still in progress along the following lines. Maintaining the temperature constant to 0.2° C., during the 18 hours of crystallization at 17° or 18° C. whichever is found most satisfactory. Exact conditioning of the melting point determination with special reference to size of capillary tubes, initial temperature and time of heating and one or two modifications in the thermometer and bath used.

It is hoped that the total range of error on any sample of lard tested may be so reduced as to make it possible to detect with certainty an adulteration of less than 10 per cent tallow.

CHARLES C. FORWARD.

Date of Collection.	Nature of Sample.	Number of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.
				Quantity.	Cents.	
DISTRICT OF NOVA SCOTIA—						
1909.						
Oct. 6	Lard.	41836	C. S. Davis, Halifax, N.S. . . .	1½ lb.	26	Lange Packing Co., Montreal
" 6	"	41837	J. H. Emmett, Halifax, N.S. . . .	1½ "	27	Vendor.....
" 8	"	41838	DeWolfe & Lamont, Kentville, N.S.	1½ "	27	F. W. Fearman, Hamilton..
" 8	"	41839	John Riley, Windsor, N.S. . . .	1½ "	30	Swifts, Chicago
" 11	"	41840	The 2 Barkers Ltd., Amherst, N.S.	1½ "	27	Wm. Davies, Toronto.....
DISTRICT OF NEW BRUNSWICK—						
Sept. 9	Lard.	39573	Peters & Rice, St. John, N.B. 2	lbs.	34	F. W. Fearman, Hamilton. .
" 13	"	39574	Slipp & Flewelling, St. John, N.B.	1½ lb.	27	Vendors
" 22	"	39575	B. H. Smith & Sons, Woodstock, N.B.	1½ "	26	H. F. Randolph & Sons, Fredericton, N.B.
Oct. 5	"	39576	W. H. Culbert, Sussex, N.B. 1½	"	30	John P. Squire & Co., Boston Mass.
" 6	"	39577	The 2 Barkers Ltd., Moncton N.B.	½ "	26	The Wm. Davies Co. Ltd., Toronto.
DISTRICT OF QUEBEC—						
Sept. 8	Lard.	36642	Jos. A. Deschene, St. Ursule	1½ lb.	23	Chevalier Pouliot, Joliette..
" 8	"	36643	A. Plante, St. Léon.....	1½ "	24	Davis, Montreal.....
" 9	"	36644	W. Duhaime, St. Paulin	1½ "	23	" "
" 10	"	36645	Dordré Dho, St. Alexis . . .	1½ "	21	L. Chaput fils & Cie, Montreal.
" 10	"	36646	J. V. Milot, St. Alexis	1½ "	26	" " ..
DISTRICT OF ST. HYACINTHE—						
Sept. 15	Lard.	1239	J. W. Turcott, Drummondville.	1 lb..	18	The Laing Packing & Prov. Co. Ltd., Montreal.
" 15	"	1240	J. St. Pierre, Actonvale.....	1 "	14	(Gunn, Ltd., West Toronto..
" 16	"	1241	Alph. Bellard, Waterloo....	3 lbs..	45	Vendor
" 22	"	1242	D. M. Matheson, Lake Megantic.	3 "	55	The Whyte Packing Co., Stratford.
" 27	"	1243	R. G. Brodeur, St. Hyacinthe.	1 lb..	16	Laings Montreal.....

LARD.

Inspector's Report. (Is not an expression of opinion.)	RESULTS OF ANALYSIS.					Number of Sample.	Remarks and Opinion of the Chief Analyst.
	Water.	Iodine Number. (Hanus.)	Butyro Re- fractometer at 49° C.	Melting point of Solid Glycerides.	Halphen Reaction.		

R. J. WAUGH, INSPECTOR.

	p. c.						
.....	None...	65.9	51.7	.....	None.....	41836	Genuine.
Kettle rendered...	0.50	56.5	50.0	.....	.....	41837	"
Labeled Pure Lard.....	None...	62.9	51.0	.....	Light red.	41838	"
'Silver Leaf' Pure Brand.	"	66.7	51.5	64.4	None.....	41839	"
Labeled Pure	"	60.6	50.4	63.0	"	41840	"

J. C. FERGUSON, INSPECTOR.

Star Brand Pure.....	None...	60.4	50.9	64.0	None.....	39573	Genuine.
.....	"	55.4	49.5	63.7	"	39574	"
'Silver Leaf' Guaranteed Pure.	"	65.4	51.2	64.2	"	39575	"
Pure .....	.....	.....	.....	.....	.....	39576	Sample lost in transit. (Railway collision.)
"	None...	61.0	50.5	63.1	None.....	39577	Genuine.

E. BELAND, INSPECTOR.

.....	None...	65.9	51.4	.....	None.....	36642	Genuine.
.....	"	61.3	51.0	63.4	"	36643	"
.....	"	61.8	50.6	62.9	"	36644	"
.....	"	55.6	49.5	63.8	"	36645	"
.....	"	58.8	50.1	64.0	"	36646	"

J. C. ROULEAU, INSPECTOR.

Extra Pure Lard.....	0.13	62.4	50.9	64.2	Faint red.	1239	Genuine.
Box marked Gunn's Easifirst Shorten'g, Excels all others	None...	83.2	55.0	61.5	Deep red.	1240	Contains Cotton seed oil. Adulterated.
.....	"	58.4	50.1	62.2	None.....	1241	Genuine.
Labeled Pure Lard.	"	63.0	51.0	63.8	"	1242	"
Compound.....	"	93.4	56.7	61.6	Deep red.	1243	Contains Cotton seed oil. Sold as Com- pound.

Date of Collection.	Nature of Sample.	Number of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.
				Quantity.	Cents.	

DISTRICT OF MONTREAL

1909.							
Sept.	2	Lard.	40301	Wilfrid Bleau, 168 Plessis St. Montreal.	1½ lb.	22	Canada Packing Co., Montreal.
"	3	"	40302	T. A. Berube, 338 Colonial Ave., Montreal.	1½ "	24	" " "
"	3	"	40303	T. L. Hodgson, 385 Laval Ave., Montreal.	1½ "	27	Whyte Packing Co.
"	4	"	40304	P. Brunet, 697 Mount Royal Ave., Montreal.	1½ "	26	L. Chaput fils & Cie.
"	4	"	40305	A. Boyer, 230 Dufferin St., Montreal.	1½ "	26	Unknown.

DISTRICT OF OTTAWA—

Sept.	24	Lard.	42821	A. Sweet & Co., Winchester.	1½ lb.	27	The Geo. Matthews Co. Ltd., Hull.
"	28	"	42822	C. Carmichael, Spencerville.	1½ "	27	" " "
Oct.	5	"	42823	Miss Smith, Ottawa	1 "	17	Park Blackwell Co. Ltd., Toronto.
"	5	"	42824	Wall & Co., Ottawa	1½ "	27	Wight & Co., Toronto.
"	5	"	42825	The Geo. Matthews Co. Ltd., 96 Queen St., Ottawa.	1½ "	27	Vendors, Hull, P.Q.

DISTRICT OF KINGSTON—

Sept.	7	Lard.	42736	Anderson Bros., Kingston	1½ "	25	Vendors.
"	7	"	42737	J. Redden, Kingston	1½ "	25	Wm. Davies, Toronto.
"	7	"	42738	Wm. Davies, Kingston	1½ "	25	" " "
"	9	"	42739	Mason Co., Peterboro.	1½ "	25	Fowlers, Hamilton.
"	9	"	42740	Matthews Co., Peterboro.	1½ "	27	Matthews, Peterboro.

DISTRICT OF TORONTO—

Sept.	13	Lard	41382	E. H. Wilson & Co., Mark ham.	1½ lb.	24	The Wm. Ryan Co., Ltd., Toronto.
"	15	"	41383	J. C. Mossington, Orillia	1½ "	25	The Ingersoll Packing Co., Ingersoll.
"	16	"	41384	C. Beck Mfg. Co., Ltd.	1½ "	25	The Park Blackwell Co., Ltd., Toronto.
"	24	"	41385	A. S. Cain, Dundas	1½ "	25	F. W. Fearman Co., Ltd., Hamilton.
"	27	"	41386	P. D. Dunn, 1646 Queen St. West, Toronto.	1½ "	27	The Wm. Davies Co., Ltd., Toronto.

LARD.

Inspector's Report. (Is not an expression of opinion.)	RESULTS OF ANALYSIS.					Number of Sample.	Remarks and Opinion of the Chief Analyst.
	Water.	Iodine Number. (Hanus.)	Butyro Re- fractometer at 40° C.	Melting point of Solid Glycerides.	Halphen Reaction.		

J. J. COSTIGAN, INSPECTOR.

	p. c.						
Sold as Pure, Tub labelled Choice Family Lard.	0.52	85.2	55.4	.....	Deep red.	40301	Contains Cotton seed oil. Adulterated.
" " " "	None...	88.1	55.2	.....	" "	40302	" "
Labelled Pure Lard.....	"	61.3	51.2	64.4	None.....	40303	Genuine.
.....	"	63.3	51.1	.....	" .....	40304	"
Sold as Pure.....	"	57.8	50.2	63.9	"	40305	"

J. A. RICKEY, INSPECTOR.

Sample from Pail marked Pure Lard.	None...	55.3	50.0	62.0	None.....	42821	Genuine.
" " " "	"	56.2	50.0	63.2	Faint pink	42822	"
Labelled Choice Family Lard 'Silver Leaf.'	"	60.3	51.0	63.7	Pink. ...	42823	"
.....	"	61.9	51.0	64.4	None.....	42824	"
Sold as Pure Lard.....	"	56.9	50.0	61.7	Light pink	42825	"

JAS. HOGAN, INSPECTOR.

.....	0.12	53.5	50.0	63.8	None.....	42736	Genuine.
.....	0.26	58.6	50.6	64.1	"	42737	"
.....	None...	58.0	50.2	64.1	"	42738	"
.....	1.18	62.5	50.9	63.5	"	42739	Genuine; Water con- tent rather high.
.....	None...	56.1	49.8	63.9	"	42740	Genuine.

H. J. DAGER, INSPECTOR.

Labelled Pure Lard.	None...	64.5	51.4	63.8	Light red.	41382	Genuine.
'Beaver' Brand Pure Lard.	"	55.8	49.8	63.5	None.....	41383	"
Choice Family Lard.....	"	61.2	51.7	62.9	Pink.	41384	"
'Star' Brand Pure Lard.	"	59.0	50.8	63.0	"	41385	"
Pure Refined Lard.	"	60.4	50.7	64.4	None.....	41386	"

Date of Collection.	Nature of Sample.	Number of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.
				Quantity.	Cents.	
DISTRICT OF LONDON—						
1909.						
Sept. 20	Lard.....	30845	Mr. McHardy, Guelph.....	1½ "	26	J. & A. McHardy, Guelph..
" 22	"	30855	Hodgins & Bedgood, Blythe.	1½ "	26	A. M. Smith, London.....
" 22	"	30860	D. M. Gordon, Wingham..	1½ "	26	Ingersoll Packing Co., Ingersoll.
" 27	"	30865	Benson Bros., Guelph.	3 "	50	Fowlers & Co., Hamilton....
" 27	"	30866	Jackson & Son, Guelph	1½ "	25	White Packing Co., Stratford
DISTRICT OF WINDSOR—						
Oct. 11	Lard.....	42648	A. J. Clark & Co., London..	1½ "	Nil.	Park Blackwell Co., Toronto
" 11	"	42649	W. E. Humphries, London..	1½ "	27	Davies Co., Toronto.....
" 11	"	42650	Pinney Bros. & McIntosh, London.	1½ "	26	Ingersoll Packing Co., Ingersoll.
" 11	"	42651	J. Straitch, London.....	1½ "	27	Unknown
" 11	"	42652	Mrs. Geo. Armstrong, London	1½ "	27	Davies Co., Toronto.....
DISTRICT OF MANITOBA—						
Sept. 13	Lard	39811	S. Goddard, Winnipeg.....	1½ "	25	J. Y. Griffin & Co., Winnipeg
" 14	"	39812	W. B. Francis, Winnipeg....	1½ "	30	Gordon & Ironside, Winnipeg
" 14	"	39813	Moffet & Douglas, Winnipeg	1½ "	27	" " ..
" 21	"	39814	J. Bower & Co., Brandon....	1½ "	30	Gallagher, Holman & Lafrance, Winnipeg.
" 24	"	39815	W. A. Bartram, Winnipeg..	1½ "	30	Gordon & Ironside, Winnipeg
DISTRICT OF CALGARY—						
Sept. 14	Lard	35622	P. Burns & Co., Calgary....	1½ lb.	60	Vendors.....
" 14	"	35623	C. Wourull & Co., Calgary..	1½ "	50	J. Y. Griffin & Co., Calgary.
" 14	"	35624	Farmers Meat Market, Calgary.	1½ "	60	" " ..
" 15	"	35625	Dominion Meat Co. Ltd., Calgary.	1½ "	55	Vendors.....
" 15	"	35626	P. Burns & Co. Wholesale, Calgary.	1½ "	30	"

LARD.

Inspector's Report. (Is not an expression of opinion.)	RESULTS OF ANALYSIS.					Number of Sample.	Remarks and Opinion of the Chief Analyst.
	Water.	Iodine Number. (Hanus.)	Butyro Re- fractometer at 40° C.	Melting point of Solid Glycerides.	Halphen Reaction.		

T. KIDD, INSPECTOR.

	p.c.						
.....	None...	58.7	50.3	62.7	None....	30845	Genuine.
.....	" ...	61.8	51.0	64.6	"	30855	"
.....	" ...	57.8	50.1	64.3	"	30860	"
.....	" ...	61.2	50.7	64.1	"	30865	"
.....	" ...	57.6	50.0	63.7	"	30866	"

JNO. TALBOT, INSPECTOR.

Family Lard. This Lard withdrawn from sale by Mr. Clark.	0.22	54.4	50.2	63.3	Faint pink	42648	Genuine.
Davies Pure rendered Lard	None...	59.1	50.1	64.4	None.....	42649	"
Labelled Pure Lard with Beef Fat.	" ...	53.6	49.5	62.3	"	42650	"
.....	" ...	56.8	49.9	64.4	"	42651	"
Pure Lard	" ...	59.4	50.	64.2	"	42652	"

A. C. LARIVIERE, INSPECTOR.

.....	None...	64.8	51.4	61.7	Light red.	39811	Genuine.
.....	0.16	62.6	50.9	62.0	Pink.....	39812	"
.....	0.12	61.4	50.9	62.5	"	39813	"
.....	None...	61.4	50.9	63.8	"	39814	"
.....	" ...	59.6	50.5	61.6	"	39815	"

R. W. FLETCHER, INSPECTOR.

.....	0.12	64.2	51.1	64.2	None.....	35622	Genuine.
.....	None...	68.1	52.0	62.1	Deep red..	35623	Contains Cotton seed oil. Adulterated.
.....	" ...	64.8	51.3	64.0	None.....	35624	Genuine.
.....	0.14	63.2	51.0	64.4	"	35625	"
.....	0.14	63.5	51.0	64.6	"	35626	"

Date of Collectio.	Nature of Sample.	Number of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.
				Quantity.	Cents.	

DISTRICT OF VANCOUVER—

1909.						
Sept. 22	Lard.	37763	P. Burns & Co., Vancouver..	1½ lb..	30	Frye Bruhn Co., Seattle.....
" 22	"	37734	B. C. Market Co., Vancouver	1½ " .	30	Vendors.....
" 22	"	37765	P. Burns & Co., Vancouver..	1½ " .	40	P. Burns & Co., Calgary
" 22	"	37766	Avenue Meat Market, Van- couver.	1½ " .	30	J. Y. Griffin, Vancouver....
" 23	"	37767	London Meat Market, Van- couver.	1½ " .	25	Vendors.....

DISTRICT OF VICTORIA—

Oct. 14	Lard.	41569	Windsor Grocery Co., Vic- toria, B.C.	1½ lb..	20	J. Y. Griffin & Co., Victoria
" 15	"	41570	Saunders Grocery Co. Ltd., Victoria, B.C.	1½ " .	50	J. Y. Griffin & Co., Winni- peg & Edmonton.
" 15	"	41571	Wm. B. Hall, Victoria, B.C.	1½ " .	30	The Frye Bruhn Co., Seattle, Wash.
" 15	"	41572	Dixie H. Ross & Co., Victoria, B.C.	1½ " .	40	" " .
" 15	"	41573	J. Renouf, Victoria, B.C....	1½ " .	25	J. Y. Griffin & Co., Victoria.
	Pure Leaf Lard.		Steam rendered from Kidney fat only	.....	.....	.....

LARD.

Inspector's Report. (Is not an expression of opinion.)	RESULTS OF ANALYSIS.					Number of Sample.	Remarks and Opinion of the Chief Analyst.
	Water.	Iodine Number. (Hanus.)	Butyro Re- fractometer at 40° C.	Melting point of Solid Glycerides.	Halphen Reaction.		

J. F. POWER, INSPECTOR.

	p. c.						
'Wild Rose' Brand Label- led Pure.	None...	65.3	51.2	64.2	Faint pink	37763	Genuine.
Guaranteed Absolutely Pure.	" ...	68.3	51.9	64.4	"	37764	"
'Shamrock' Brand.	" ...	66.2	51.2	64.4	None.....	37765	"
.....	" ...	79.1		61.2	Deep red..	37766	Contains Cotton seed oil. Adulterated.
.....	" ...	59.8	50.5	61.9	None.....	37767	Genuine.

D. O'SULLIVAN, INSPECTOR.

Labelled Pure Lard.....	None...	65.4	51.4	64.1	None.....	41569	Genuine.
Labelled 'Griffins' Pure Lard.	0.12	65.4	51.2	64.5	"	41570	"
'Wild Rose' Pure Lard..	None...	67.5	51.5	64.5	Light pink	41571	"
Labelled Pure Lard..	" ...	67.1	51.6	63.6	Light red.	41572	"
" "	" ...	64.7	51.2	62.7	None.....	41573	"
.....	None...	52.0	49.0	63.9	None.		

