



LABORATORY
OF THE
INLAND REVENUE DEPARTMENT
OTTAWA, CANADA.

BULLETIN No. 338

SAUSAGES

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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
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INLAND REVENUE DEPARTMENT
OTTAWA, CANADA.

BULLETIN No. 338

SAUSAGES

OTTAWA, 12 April, 1916.

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

Sir.—The present report deals with work done upon one hundred and forty-one (141) samples of sausages, mainly with intent to discover the character of these goods as found in Canada, but also to ascertain whether or not certain modes of treatment not permitted to manufacturers who work under government inspection are in use by sausage manufacturers whose establishments are not supervised by the inspectors of the Department of Agriculture. This has particular reference to the use of dyes, and preservatives.

It has not been considered necessary to make exhaustive analyses upon all the samples, and the work herein reported may be summarized as follows:—

| | |
|--------------------------------------|------------|
| Examined as to Moisture content..... | 60 samples |
| " " starch content..... | 80 " |
| " " dyes..... | 141 " |
| " " preservatives..... | 30 " |
| " " ash content..... | 20 " |
| " " protein content..... | 20 " |
| " " fat content..... | 20 " |
| " " bacterial..... | 9 " |

Sausages are defined as follows, by Order in Council of 14th October, 1910 (published as G. 931).

" 2. Sausage, sausage meat, is a comminuted meat from swine or neat " cattle or a mixture of such meats, either fresh, salted, pickled or smoked, with " added salt and spices and with or without the addition of edible animal fats, cereals, " blood and sugar, or subsequent smoking. It contains no larger amount of water than " the meats from which it is prepared contain when in their fresh condition, and not " more than ten per cent of its weight of cereals; and if it bears a name descriptive of " kind, composition or origin, it corresponds to such descriptive name. All animal " tissues used as containers, such as casings, stomachs, etc., are clean and sound and " impart to the contents no other substance than salt."

Moisture (Water) Content. This is required not to exceed the amount of moisture natural to the meats from which it is prepared. In this connection the following constants possess interest. They are taken from Leach "Food Inspection and Analysis", 2nd Edition, p. 213, et seq.

Beef as usually purchased.

| | Chuck. | Ribs. | Loin. | Rump. | Round. | |
|-----------|--------|-------|-------|-------|--------|--------|
| Lean... | 57.4 | 52.6 | 58.2 | 56.6 | 64.4 | |
| Medium... | 57.9 | 43.8 | 52.5 | 45.0 | 60.7 | Water. |
| Fat... | 53.3 | 39.6 | 49.2 | 36.2 | 54.0 | |

Pork as usually purchased.

| | Shoulder. | Loin. | Ham. | |
|---------|-----------|-------|------|--------|
| Lean... | 44.9 | 46.1 | 59.4 | |
| Fat... | — | 41.8 | 33.6 | Water. |

Of the total water present in sausages, it is generally accepted that the lean sausage meat contributes about 76 per cent the fatty tissue, from 3 to 8 per cent, and the starch or flour from 10 to 15 per cent (Allen Com. Org. Analysis, Vol. VIII, p. 361) Konig (Jusammensetzung, etc., p. 1460) quotes 48.24 p.c. water for the mean of many analyses of pork sausages.

The results of analysis in the case of the present collection, and so far as water is concerned, are as below:—

| | | |
|--|--------------------|-------------|
| Average for 10 samples from New Brunswick... | 48.3 | per cent. |
| " 10 " | Toronto... | 51.9 " |
| " 10 " | Hamilton... | 49.4 " |
| " 10 " | Alberta... | 43.9 " |
| " 10 " | Rocky Mountains... | 50.6 " |
| " 10 " | Vancouver... | 43.8 " |
| — | | |

Average for 60 samples..... 48.0 per cent.

Starch Content of Sausages. The standards above quoted require that starch shall not exceed 10 per cent. As a matter of fact, our analytical results show that much less than this amount is usually present.

In the case of 80 samples examined, 75 samples contain starch. The average starch content is 3.14 per cent. In greater detail, the results are:—

| | | |
|--------------------------------------|------|-----------|
| For 10 samples from New Brunswick... | 7.44 | per cent. |
| " 10 " Toronto... | 2.12 | " |
| " 9 " Hamilton... | 1.76 | " |
| " 10 " Manitoba... | 1.68 | " |
| " 10 " Saskatchewan... | 2.09 | " |
| " 7 " Alberta... | 3.89 | " |
| " 10 " Rocky Mountains... | 2.28 | " |
| " 9 " Vancouver... | 4.10 | " |
| Mean starch for 75 samples..... | 3.14 | " |

Dyes are present in 13 out of 141 samples examined. Dyed sausages were found as follows: in Montreal 5 samples; in Ottawa 4 samples; in Toronto, 2, and in Hamilton and Windsor, each, 1.

I beg to recommend publication of this report as Bulletin No. 338.

I have the honour to be, Sir,

Your obedient servant,

A. MCGILL,

Chief Analyst

| 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 NEW BRUNSWICK— | | | | | | | | |
| 1916. | | | | | | | | |
| Feis. 22. | Sausages..... | 66291 | John Hopkins, St. John, N.B. | 1½ lb. 24 | Vendor..... | | | |
| " 22. | " | 66292 | John Hopkins, St. John, N.B. | 1½ " 23 | " | | | |
| " 22. | " | 66293 | John Hopkins, St. John, N.B. | 1½ " 27 | " | | | |
| " 22. | " | 66294 | O'Neill Bros., St. John, N.B. | 3 " 48 | Vendors..... | | | |
| " 22. | " | 66295 | Thomas Dean, St. John, N.B. | 4 " 48 | Vendor..... | | | |
| " 22. | " | 66296 | G. F. Cunningham & Co., St. John, N.B. | 3 " 48 | " | | | |
| " 23. | " | 66297 | G. B. Taylor, St. John, N.B. | 1½ " 24 | " | | | |
| " 23. | " | 66298 | Slipp & Flewelling, St. John, N.B. | 1½ " 24 | Vendors..... | | | |
| " 23. | " | 66299 | Lilley & Co., St. John, N.B. | 1½ " 20 | " | | | |
| " 23. | " | 66300 | Lilley & Co., St. John, N.B. | 1½ " 15 | " | | | |
| DISTRICT OF OTTAWA— | | | | | | | | |
| 1915. | | | | | | | | |
| Dec. 9. | Sausages..... | 70567 | O. Leclair, Ottawa..... | 1½ " 25 | Vendor | | | |
| " 9. | " | 70564 | Alex. Daudelin, Ottawa..... | 1½ " 23 | " | | | |
| " 10. | " | 70565 | Louis Renaud, Ottawa..... | 1½ " 18 | " | | | |
| " 10. | " | 70566 | C. & J. Gougeon, Ottawa..... | 1½ " 19 | Vendors..... | | | |
| " 16. | " | 70594 | A. S. Moreland, Ottawa..... | 2 " 40 | McGregor's Ottawa | | | |
| " 16. | " | 70595 | Civil Service, Co-op. S. assoc., Ottawa..... | 1½ " 23 | Vendors..... | | | |
| " 20. | " | 70612 | J. S. Charbonneau, Ottawa..... | 1½ " 20 | Vendor | | | |
| " 20. | " | 70614 | John Cardiff, Ottawa..... | 1½ " 20 | Matthews-Blackwell Ltd., Ottawa | | | |
| " 21. | " | 70622 | Railway Stores, Ltd., Ottawa..... | 1½ " 20 | Vendors..... | | | |
| " 21. | " | 70623 | P. McKeown, Ottawa..... | 1½ " 19 | Vendor | | | |
| " 21. | " | 70624 | Chas. Glover, Ottawa..... | 1½ " 19 | " | | | |
| Oct. 12. | " | 70546 | The A. E. Rae Co., Ltd., Ottawa..... | 1½ " 23 | Vendors..... | | | |
| " 12. | " | 70547 | O. Leclair, Ottawa..... | 1½ " 25 | Vendor | | | |

SAUSAGES.

| Inspector's Report. (Is not an expression of opinion.) | Results of Analysis. | | | | | | Remarks and Opinion of the Chief Analyst | |
|---|----------------------|--------------|------------|---------------|----------------|-----------------------|--|--|
| | Moisture. | Starch. | | Aniline Dyes. | Preservatives. | Condition on Receipt. | | |
| | | Percent-age. | Nature of. | | | | | |
| JNO. C. FERGUSON, INSPECTOR. | | | | | | | No. of Sample. | |

| | | | | | | | |
|-----------------|-------|------|--------------------|-------|-------|-------|-------|
| Links..... | 44.76 | 11.8 | Maize. | None. | None. | Good. | 66291 |
| Bologna..... | 63.04 | 5.1 | " | " | " | " | 66292 |
| Frankfurter.... | 57.14 | 10.4 | " | " | " | " | 66293 |
| Links..... | 45.32 | 4.8 | " | " | " | " | 66294 |
| "..... | 44.94 | 8.1 | Wheat. | " | " | " | 66295 |
| Pork & Beef.... | 42.16 | 6.0 | Maize. | " | " | " | 66296 |
| "..... | 38.40 | 1.8 | " | " | " | " | 66297 |
| Strings..... | 36.02 | 4.9 | " | " | " | " | 66298 |
| "..... | 49.18 | 9.8 | " | " | " | " | 66299 |
| Bologna..... | 62.42 | 11.7 | Wheat, gelatinized | " | " | " | 66300 |

J. A. RICKY, INSPECTOR.

| | | | | | | | |
|--------------------|-------------------------------------|----------------------------------|---|----------|-------|-------|-----------|
| | | | | None. | | 70563 | |
| | | | | Present. | | 70564 | Coloured. |
| | | | | " | | 70565 | Coloured. |
| | | | | None. | | 70566 | |
| | | | | " | | 70594 | |
| | | | | " | | 70595 | |
| | | | | Present. | | 70611 | Coloured. |
| | | | | None. | | 70614 | |
| | | | | " | | 70622 | |
| | | | | Present. | | 70623 | Coloured. |
| | | | | None. | | 70624 | |
| Organoleptic test. | Organism per gram on agar at 20° C. | Gas producing organism per gram. | | | | | |
| Good. | 1,450,000 | 100,000 | " | | Fair. | 70546 | |
| Fair. | 4,700,000 | 1,000,000 | " | | Good. | 70547 | |

BULLETIN No. 338—SAUSAGES.

| 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 Opinion of the Chief Analyst. |
|---------------------|-------------------|----------------|-----------------------------|-----------|--------|---|---|----------------------|---|
| | | | | Quantity. | Cents. | | | | |
| | | | | | | | | Aniline Dyes. | No. of Sample |

DISTRICT OF KINGSTON—JAS. HOGAN, INSPECTOR.

| | | | | | | | | | | |
|-------|---------------|-------|----------------------------|---------|-----|------|------------------------------------|-----------|-----------|-------|
| 1915. | Sausages..... | 61086 | H. Waddington, Kingston .. | 1½ | lb. | 20 | Vendor..... | ..... | None..... | 61086 |
| " 21. | " | 61087 | A. Maclean, | " | 1½ | " 22 | " ..... | ..... | " ..... | 61087 |
| " 21. | " | 61088 | Wm. Davies, | " | 1½ | " 24 | " | Pork..... | " | 61088 |
| " 21. | " | 61089 | " | " | 1½ | " 15 | " ..... | ..... | " ..... | 61089 |
| " 21. | " | 61090 | A. Rawson, | " | 1½ | " 19 | " ..... | ..... | " ..... | 61090 |
| " 21. | " | 61091 | A. Hood, | " | 1½ | " 20 | " ..... | ..... | " ..... | 61091 |
| " 21. | " | 61092 | W. J. Nesbitt, | " | 1½ | " 23 | Swifts Co., Toronto. | ..... | " ..... | 61092 |
| " 21. | " | 61093 | W. G. Ainslie, | " | 1½ | " 23 | Harris Abattoir Co., Tor- onto. | ..... | " ..... | 61093 |
| " 21. | " | 61094 | Anderson Bros. | " | 1½ | " 40 | Vendor..... | Pork..... | " | 61094 |
| " 21. | " | 61095 | " | " | 1½ | " 30 | " | Beef..... | " | 61095 |

50

DISTRICT OF TORONTO—H. J. DAGER, INSPECTOR.

| | | | | | | | |
|--------|-----|-------|----|---|----|------|-----|
| " 21 . | " . | 61095 | 14 | " | 30 | Beef | " . |
| " 21 . | " . | 61095 | " | " | " | " | " |

DISTRICT OF TORONTO—H. J. DAGER, INSPECTOR.

| | | | | | | | | |
|----------|------------|-------|--|-------|----|-----------|-----------|-----------------|
| 1916. | | | | | | | | |
| Jan. 17. | Sausages . | 70179 | The Wm. Davies Co. Ltd., Toronto. | 2 lb. | 25 | Vendors . | None . | 70179 |
| " 17 . | " . | 70180 | Gunn's Ltd., Toronto . | 1½ " | 15 | " . | " . | 70180 |
| " 17 . | " . | 70181 | Brown Bros. " . | 1½ " | 23 | " . | " . | 70181 |
| " 17 . | " . | 70183 | The Harris Abattoir Co. Ltd. Toronto. | 1½ " | 24 | " . | " . | 70183 |
| " 17 . | " . | 70184 | Puddy Bros., Toronto . | 1½ " | 20 | " . | Present . | 70184 Coloured. |
| " 17 . | " . | 70185 | The T. Eaton Co., Ltd. Tor onto. | 1½ " | 26 | " . | " . | 70185 " |
| " 17 . | " . | 70186 | The Rob. Simpson Co. Ltd. Toronto. | 1½ " | 26 | " . | None . | 70186 |
| " 17 . | " . | 70187 | Rowntree & Son, Toronto . | 1½ " | 15 | " . | " . | 70187 |
| " 17 . | " . | 70188 | Geo. Coles, Barrie . | 1½ " | 25 | " . | " . | 70188 |
| " 19 . | " . | 70189 | F. Wiseman, Barrie . | 1½ " | 23 | " . | " . | 70189 |
| " 19 . | " . | 70190 | A. E. Lawe, " . | 1½ " | 24 | " . | " . | 70190 |

1079—5

| 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 TORONTO—

| | | | | | | | | |
|--------|----------------|-------|---|---------|----|-------------------|--|--|
| 1914. | | | | | | | | |
| Oct. 6 | Sausages . . . | 63121 | Harris Abattoir Co., Ltd., Toronto . . . | 1 lb | 10 | Vendors | | |
| " 6 | " . . . | 63122 | Wm. Davies Co., Ltd., Toronto . . . | 2 " " | 20 | " | | |
| " 6 | " . . . | 63123 | Fox Provision Co., 66 Front st. E., Toronto . . . | 66 1½ " | 18 | " | | |
| " 6 | " . . . | 63124 | Swift Canadian Co., Toronto . . . | 1½ " | 17 | " | | |
| " 6 | " . . . | 63125 | Matthews-Blackwell, Ltd., Toronto . . . | 1½ " | 15 | " | | |
| " 6 | " . . . | 63126 | Gunn's, Ltd., West Toronto . . . | 1½ " | 15 | " | | |
| " 6 | " . . . | 63127 | Wm. Davies Co., Ltd., West Toronto . . . | 1½ " | 26 | " | | |
| " 6 | " . . . | 63128 | Wm. Rowntree, West Toronto . . . | 1½ " | 19 | Vendor | | |
| " 7 | " . . . | 63129 | P. G. McDonald, Orillia . . . | 1¼ " | 17 | " | | |
| " 8 | " . . . | 63130 | A. E. Lowe Barrie . . . | 1½ " | 23 | " | | |

DISTRICT OF HAMILTON—

| | | | | | | | | |
|---------|----------------|-------|---------------------------------------|-------|----|---------------------------------------|--|--|
| Oct. 28 | Sausages . . . | 63166 | Fowler Canadian Co., Hamilton . . . | 1½ lb | 20 | Vendors | | |
| " 28 | " . . . | 63167 | Swanwith Bros., Hamilton . . . | 1½ " | 20 | " | | |
| " 20 | " . . . | 63168 | J. & A. McHardy, Ltd., Guelph . . . | 1 " " | 15 | " | | |
| " 20 | " . . . | 63169 | C. W. Barber, Guelph . . . | 1½ " | 29 | Vendor | | |
| " 20 | " . . . | 63170 | J. Burns, Brantford . . . | 1½ " | 23 | Matthews-Laing, Ltd., Brantford . . . | | |
| " 20 | " . . . | 63171 | Misurd Bros., Brantford . . . | 1½ " | 20 | Vendors | | |
| " 22 | " . . . | 63172 | Geo. Robin & Co., Dunnville . . . | 1½ " | 22 | Jno. Duff & Son, Hamilton . . . | | |
| " 23 | " . . . | 63173 | Park Riley, Welland . . . | 1½ " | 23 | Vendor | | |
| " 27 | " . . . | 63174 | Heney & Glackin, St. Catharines . . . | 1½ " | 29 | Mayer Bros., St. Catharines . . . | | |
| " 28 | " . . . | 63175 | W. J. Lord, Hamilton . . . | 1½ " | 20 | Vendor | | |

SAUSAGES.

s given
isher.

ONTON-

MILTON—

| Inspector's Report. (Is not an expression of opinion.) | Results of Analysis. | | | | | | | | | | Remarks and Opinion of the Chief Analyst. | |
|--|----------------------|------|---------|--------------------|-----------|-------|---------------------------------|-------|----------------|--|---|--|
| | Water. | Ash. | Protein | Fat by difference. | Starch. | | Sulphurous parts per 10,000, | Dyes. | No. of Sample. | | | |
| | | | | | Per cent. | Kind. | | | | | | |

H. J. DAGER, INSPECTOR.

| | p. c. | p. c. | p. c. | | | | | | | | |
|-------|-------|-------|-------|-------|------|--------------------|------|--------------|-------|--|--|
| ..... | 50·46 | 2·33 | 15·25 | 24·47 | 7·55 | maize .. | 1·8 | Ab- sent. | 63121 | | |
| ..... | 55·05 | 1·57 | 10·65 | 31·94 | 0·79 | wheat .. | 0·0 | " | 63122 | | |
| ..... | 43·18 | 2·53 | 8·85 | 45·16 | 0·34 | indefi- nite .. | 2·4 | " | 63123 | | |
| ..... | 60·56 | 1·70 | 11·50 | 22·64 | 3·66 | maize .. | 0·04 | " | 63124 | | |
| ..... | 58·70 | 1·64 | 9·75 | 27·53 | 2·38 | " .. | 7·4 | " | 63125 | | |
| ..... | 44·56 | 2·77 | 16·60 | 35·63 | 0·50 | indefi- nite .. | 0·2 | " | 63126 | | |
| ..... | 56·36 | 1·90 | 11·65 | 29·59 | 0·56 | maize .. | 0·0 | " | 63127 | | |
| ..... | 48·86 | 1·57 | 10·56 | 36·99 | 2·14 | indefi- nite .. | 0·55 | " | 63128 | | |
| ..... | 47·13 | 3·18 | 10·65 | 35·98 | 3·06 | maize .. | 0·27 | " | 63129 | | |
| ..... | 54·57 | 3·57 | 12·36 | 29·31 | 0·25 | " .. | 0·0 | " | 63130 | | |

H. J. DAGER, ACTING INSPECTOR.

| | | | | | | | | | | | |
|-------|-------|------|-------|-------|-------|--------------------|------|--------------|-------|--|--|
| ..... | 44·93 | 2·53 | 9·95 | 39·63 | 2·96 | maize .. | 0·6 | Ab- sent. | 63166 | | |
| ..... | 50·27 | 3·23 | 9·60 | 33·62 | 3·28 | indefi- nite .. | 5·6 | " | 63167 | | |
| ..... | 46·48 | 3·08 | 11·45 | 38·23 | 0·76 | " .. | 0·1 | " | 63168 | | |
| ..... | 53·28 | 2·10 | 15·45 | 27·49 | 1·68 | " .. | 0·14 | " | 63169 | | |
| ..... | 41·70 | 3·23 | 12·70 | 41·56 | 0·82 | maize .. | 0·62 | " | 63170 | | |
| ..... | 59·05 | 2·38 | 10·90 | 26·95 | 0·72 | indefi- nite .. | 0·2 | " | 63171 | | |
| ..... | 49·55 | 3·23 | 13·25 | 33·61 | 0·36 | maize .. | 0·31 | " | 63172 | | |
| ..... | 50·46 | 3·95 | 11·20 | 32·49 | 1·90 | indefi- nite .. | 3·05 | " | 63173 | | |
| ..... | 42·46 | 2·40 | 11·25 | 43·95 | ..... | spice .. | 0·70 | " | 63174 | | |
| ..... | 56·36 | 2·80 | 13·70 | 23·96 | 3·24 | indefi- nite .. | 0·70 | " | 63175 | | |

BULLETIN No. 337—SAUSAGES.

| 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. | Aniline Dyes. | No. of Sample. | Remarks and Opinion of the Chief Analyst. |
|---------------------|-------------------|----------------|-----------------------------|-------|---|---------------|---|----------------------|---------------|----------------|---|
| | | | | | Quantity. | Manufacturer. | | | | | |
| | | | | | | | | | | | |

DISTRICT OF HAMILTON—H. S. DAGER, ACTING INSPECTOR.

| | | | | | | | | | | | |
|----------|--------------|-------|---|--------|----|------------------------------------|--|--|---------------|-------|-----------|
| 1916. | | | | | | | | | | | |
| Jan. 11. | Sausages.... | 70168 | J. A. McRae & Son, Guelph. | 1½ lb. | 27 | Vendors..... | | | Present.... | 70168 | Coloured. |
| " 11. | " | 70169 | Guelph Co-operative Association, Guelph. | 1½ " | 27 | " | | | None.... | 70169 | |
| " 11. | " | 70170 | C. W. Barler, Guelph..... | 1½ " | 29 | Vendor..... | | | " | 70170 | |
| " 12. | " | 70171 | A. Vine, St. Catharines..... | 1½ " | 25 | " | | | " | 70171 | |
| " 12. | " | 70172 | The Wm. Devers Co., Ltd., St. Catharines. | 1½ " | 15 | Toronto..... | | | " | 70172 | |
| " 12. | " | 70173 | W. P. Bray, St. Catharines..... | 1½ " | 30 | Mayer Br o.s., St. Catharines..... | | | " | 70173 | |
| " 13. | " | 70174 | D. McKillop, Hamilton..... | 1½ " | 30 | J. M. Snider & Sons, Berlin..... | | | " | 70174 | |
| " 13. | " | 70175 | Gibbons & Yellowlers, Hamilton. | 1½ " | 24 | Vendors..... | | | " | 70175 | |
| " 13. | " | 70176 | F. W. Fearman Co., Ltd., Hamilton. | 1½ " | 15 | " | | | " | 70176 | |
| " 13. | " | 70177 | Armour & Co., Ltd., Hamilton. | 1½ " | 20 | " | | | Not received. | 70177 | |
| " 13. | " | 70178 | Duff-Stores Co., Ltd., Hamilton. | 1½ " | 20 | " | | | None.... | 70178 | |

| | | | | | | | | |
|-------|---------|--|------|----|---------|--|--|--|
| " 13. | " | ton. | | | | | | |
| " 13. | " | 70178 Duff-Stores Co., Ltd., Hamilton. | 1½ " | 20 | " | | | |

DISTRICT OF WINDSOR - JNO. TALBOT, INSPECTOR.

| | | | | | | | | | | |
|----------|-------------------|-------|--------------------------------|--------|----|---|-----------------|------------------|---------------|----------|
| Jan. 16. | Sausages. | 54514 | Teebles Market, London, Ont. | 1½ lb. | 15 | Mr. Morris, London, Ont Vendor | | | None. | 54514 |
| " 6. | " | 54515 | Jas. Johnson, London, Ont. | 1½ " " | 18 | | | | " | 54515 |
| " 6. | " | 54516 | Chas. Ellyatt, London, Ont. | 1½ " " | 20 | " | | | " | 54516 |
| " 6. | " | 54517 | F. J. Webb, London, Ont. . . | 1½ " " | 19 | " | | | " | 54517 |
| " 6. | " | 54518 | F. J. Jackson, London, Ont. | 1½ " " | 20 | " | | | " | 54518 |
| " 6. | " | 54519 | T. Hamlyn, London, Ont. . . | 1½ " " | 20 | " | | | " | 54519 |
| " 6. | " | 54520 | Ginsberg Bros., London, Ont. | 1½ " " | 20 | St. Thomas Packing Co., St. Thomas, Ont. Vendor | | | " | 54520 |
| " 6. | " | 54521 | F. L. Ross, London, Ont. . . | 1½ " " | 19 | | | Present. | 54521 | Coloured |
| " 6. | " | 54522 | C. B. Smith, London, Ont. . . | 1½ " " | 23 | A n d e r s o n Bros., Len don, Ont. Vendor. | Frankford . . . | None. | 54522 | |
| " 6. | " | 54523 | H. Millerson, London, Ont. . . | 1½ " " | 20 | | | " | 54523 | |

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

DISTRICT OF MONTREAL—

| | | | | | | | |
|---------|---------------------|-------|-----------------------------------|-----------|--------------------|--|--|
| 1915. | | | | | | | |
| Oct. 27 | Sausages, | 67471 | H. C. Ness, Montreal | 1½ lb. 30 | Vendor, | | |
| " 27 | " | 67472 | G. B. Dufort, " | 1½ " 15 | " | | |
| " 27 | " | 67473 | Masterman's Packing Co., Montreal | 1½ " 18 | Vendors, | | |
| " 27 | " | 67474 | G. McGarry & Co., Montreal | 1½ " 26 | " | | |
| " 27 | " | 67475 | Lamb's Market Ltd., Montreal | 1½ " 30 | " | | |
| " 27 | " | 67476 | Stamfords Market, Montreal | 1½ " 29 | " | | |
| " 27 | " | 67477 | T. A. Dionne, Montreal | 1½ " 29 | " | | |

DISTRICT OF MANITOBA—

| | | | | | | | |
|--------|---------------------|-------|-------------------------------------|-----------|--------------------|--|--|
| 1916. | | | | | | | |
| Feb. 1 | Sausages, | 72017 | W. J. Burchell, Brandon | 1½ lb. 25 | Vendor, | | |
| " 2 | " | 72018 | Central Meat Market, Brandon | 1½ " 25 | " | | |
| " 2 | " | 72019 | Joseph Donaldson, Brandon | 1½ " 25 | " | | |
| " 3 | " | 72020 | R. H. Dingle, & Son, Carberry, Man. | 1½ " 25 | Vendors, | | |
| " 4 | " | 72021 | Snow & Wighton, McGregor, Man. | 1½ " 25 | " | | |
| " 5 | " | 72022 | Burk & Andrich, Portage la Prairie | 1½ " 25 | " | | |
| " 5 | " | 72023 | R. M. Bonk, Portage la Prairie | 1½ " 25 | Vendor, | | |
| " 7 | " | 72024 | Lincoln Park Meat Market, Winnipeg | 1½ " 30 | " | | |
| " 7 | " | 72025 | H. Thompson, Winnipeg | 1½ " 30 | " | | |
| " 7 | " | 72026 | William Coates, " | 1½ " 25 | " | | |

DISTRICT OF SASKATCHEWAN—

| | | | | | | | |
|---------|---------------------|-------|--------------------------------|-----------|--------------------|--|--|
| Jan. 27 | Sausages, | 71537 | Western Meat Market, Moosejaw | 1½ lb. 20 | Vendors, | | |
| " 27 | " | 71538 | Central Meat Company, Moosejaw | 1½ " 30 | " | | |
| " 27 | " | 71539 | Alex Robertson, Moosejaw | 1½ " 30 | Vendor, | | |
| " 27 | " | 71540 | W. H. Roper, " | 1½ " 30 | " | | |

SAUSAGES.

| Inspector's Report. (Is not an expression of opinion.) | Results of Analysis. | | | | | | Remarks and Opinion of the Chief Analys. |
|---|----------------------|--------------------------------------|----------------------------------|---------|---------------|-------------|--|
| | Organoleptic test. | Organisms per gram on agar at 20° C. | Gas producing organism per gram. | Starch. | Aniline dyes. | Conditions. | |
| D. J. KEARNEY, INSPECTOR. | | | | p. c. | | | |

| | | | | | | |
|------------|------------|-----------|-----------|-----------|-------|-----------|
| Fair | 8,300,000 | 10,000 | None..... | Fair..... | 67471 | |
| " | 15,000,000 | 1,000,000 | Present.. | Bad .. | 67472 | Coloured. |
| " | 6,100,000 | 100,000 | " .. | Fair..... | 67473 | " |
| " | 22,000,000 | 1,000,000 | " .. | Bad .. | 67474 | " |
| " | 8,500,000 | 100,000 | " .. | Fair..... | 67475 | " |
| " | 7,500,000 | 10,000 | " .. | " .. | 67476 | " |
| " | 10,800,000 | None, | None.. | " .. | 67477 | |

J. B. COSGROVE, TEMP. INSPECTOR.

| | | | | | | |
|--|--|--|------|-----------|-------|--|
| | | | 0.71 | None..... | 72017 | |
| | | | 1.40 | " .. | 72018 | |
| | | | 1.02 | " .. | 72019 | |
| | | | 1.57 | " .. | 72020 | |
| | | | 1.29 | " .. | 72021 | |
| | | | 0.51 | " .. | 72022 | |
| | | | 2.70 | " .. | 72023 | |
| | | | 2.30 | " .. | 72024 | |
| | | | 1.18 | " .. | 72025 | |
| | | | 4.10 | " .. | 72026 | |

L. H. HALL, INSPECTOR.

| | | | | | | |
|-----------|--|--|------|-----------|-------|--|
| Beef..... | | | 2.11 | None..... | 71537 | |
| Pork..... | | | 1.80 | " .. | 71538 | |
| " | | | 0.94 | " .. | 71539 | |
| " | | | 2.58 | " .. | 71540 | |

BULLETIN No. 338—SAUSAGES.

Date of Collection.

Nature
of
Sample,
No. of Sample

Name and Address
of Vendor,

Quantity.
Cents.

Manufacturer.
Furnisher,

Pork.....
Beef and pork

Beef,
",
",
Beef and pork

0.67,
0.34,
0

Spine...
",
"

Almond 52801
52802
52803
52804

P. C.
1.37,
1.92,
4.06,
3.13,
0.67,
0.34,
0

No. 71541
71542
71543
71544
71545
71546

0,
0,
0,
0,
0,
0

Chief Analyst.

Remarks
and Opinion
of the
Chief Analyst.

DISTRICT OF SASKATCHEWAN—Continued.

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

| Feb. | 12 | Sausages. | 52801 P. Burns & Co., Edmonton | 1½ lb. | 15 Vendors | Mixture | 38.09 | 0.27 Spine.. | Almond 52801 |
|------|----|-----------|--------------------------------|--------|------------|------------------------------------|-------|--------------|--------------|
| " | 12 | 52802 | ton. | 1½ " | 30 | Pork | 42.20 | " | 52802 |
| " | 12 | 52803 | Imperial Meat Market | 1½ " | 25 | P. Burns & Co., E. Edmonton | 42.41 | 1.68 Wheat.. | 52803 |
| " | 12 | 52804 | Judsonstone Walker, Ltd. | 1½ " | 30 | Swift Canadian Co., Ltd., Edmonton | 25.04 | Spine... | 52804 |

| | | | | | | | | | | | | |
|---|----|---|---|------|----|-------------------------------------|---|-----------------|---|-------|---|-------|
| " | 12 | " | 52394 Johnstone Walker, Ltd., Edmonton. | 1½ " | 30 | Swift Canadian Co., Ltd., Edmonton. | " | PROKNEVOL 23/04 | " | Spice | " | 52394 |
|---|----|---|---|------|----|-------------------------------------|---|-----------------|---|-------|---|-------|

| | | | | | | | | | | | | |
|---|----|---|---|------|----|----------|---|--------------------------------|-------|-------------|---|-------|
| " | 12 | " | 52395 Model Market, Edmonton. | 1½ " | 25 | " | " | Pork. Superior Brand. | 49 04 | 2 74 Maize. | " | 52395 |
| " | 29 | " | 52396 Pepper & Co., Calgary. | 1½ " | 30 | Vendors. | " | Pork | 49 76 | 5 19 Wheat. | " | 52396 |
| " | 29 | " | 52397 P. Burns & Co., Calgary. | 1½ " | 20 | " | " | Beef and pork. Standard Brand. | 48 86 | 0 69 | " | 52397 |
| " | 29 | " | 52398 " " " | 1½ " | 30 | " | " | Pure pork. Shamrock Brand. | 37 68 | " Spice. | " | 52398 |
| " | 29 | " | 52399 Robt. Burns & Co., Ltd., Calgary. | 1½ " | 25 | " | " | Beef and pork | 53 31 | 5 40 Maize. | " | 52399 |
| " | 29 | " | 52400 Currie Bros., Calgary. | 1½ " | 25 | " | " | " | 52 28 | 11 09 | " | 52400 |

DISTRICT OF ROCKY MOUNTAINS—THOS. PARKER, INSPECTOR.

| | | | | | | | | | | | | |
|------|----|-----------|---------------------------------------|--------|----|--------------|---|----------------|-------|------------------|--------|-------|
| Jan. | 5 | Sausages. | 68135 P. Burns & Co., Nelson B.C. | 1½ lb. | 25 | Vendors. | " | " | 55 98 | 1 17 Wheat. | Absent | 68135 |
| " | 5 | " | 68136 " " " 1½ " | 40 | " | " | " | Cambridge..... | 49 30 | 1 65 | " | 68136 |
| " | 5 | " | 68137 G. G. Peters, Nelson, B.C. | 1½ " | 40 | Vendor | " | Pork | 43 64 | 3 85 Maize. | " | 68137 |
| " | 5 | " | 68138 " " " 1½ " | 25 | " | " | " | " | 49 12 | 3 99 | " | 68138 |
| " | 5 | " | 68139 Lucia Meat Co., Nelson, B.C. | 1½ " | 25 | Vendors. | " | " | 49 68 | 0 92 Maize. | " | 68139 |
| " | 7 | " | 68140 J. R. Walkley, Cranbrook, B.C. | 1½ " | 25 | Vendor | " | " | 59 58 | 7 35 | " | 68140 |
| " | 7 | " | 68141 P. Burns & Co., Cranbrook, B.C. | 1½ " | 25 | Vendors. | " | " | 51 46 | 1 01 Wheat. | " | 68141 |
| " | 17 | " | 68163 P. Burns & Co., Rossland, B.C. | 1½ " | 30 | " | " | " | 50 38 | 1 75 Maize. | " | 68163 |
| " | 17 | " | 68164 Rossland Market, Rossland, B.C. | 1½ " | 25 | " | " | " | 48 74 | 0 45 Indefinite. | " | 68164 |
| Feb. | 9 | " | 68182 F. Ceccant, Trail, B.C.. | 1½ " | 30 | Vendor | " | " | 48 18 | 1 20 Maize. | " | 68182 |

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

| | | | | | | | | | | | | |
|------|----|-----------|---|--------|----|----------|---|-----------------|-------|------------------|--------|-----------------------|
| Feb. | 21 | Sausages. | 55510 P. Burns & Co., Ltd., Vancouver, B.C. | 1½ lb. | 25 | Vendors. | " | " | 41 88 | 0 45 Indefinite. | Absent | 55510 |
| " | 21 | " | 55511 Old Country Sausage Co., Vancouver, B.C. | 1½ " | 40 | " | " | " | 37 42 | 5 98 Wheat. | " | 55511 |
| " | 21 | " | 55512 Vancouver Prince Rupert Meat Co., Ltd., Vancouver, B.C. | 1½ " | 20 | " | " | " | 42 80 | 6 49 Indefinite. | " | 55512 |
| " | 21 | " | 55513 " " " 1½ " | 40 | " | " | " | Tomato Flavour. | 39 60 | 0 65 Rice. | " | 55513 Tomato present. |

BULLETIN No. 338—SAUSAGES.

| 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 express- ion of opinion.) | Results of Analysis. | Remarks and Opinion of the Chief Analyst. |
|---------------------|-------------------------|----------------|--|-----------------|---|---|----------------------|--|
| | | | Cal. | Manufacturer. | Furnisher. | | | |
| 1916, Feb. 21 | Sausages. | 55514 | Slatter's Market, Van. | 14 lb. | P. Burns & Co., Ltd., Van. | ... .. | 16 c. 0 62 | Maine.. Absent 55514 |
| " 21 | " | 55515 | Fletcher Bros., Van. | 14 lb. | Swift, Canadian Co., Ltd., Van. | ... .. | 53 62 | 4 29 |
| " 21 | " | 55516 | British Pork Butchers, | 14 " | 20 Vendors..... | ... .. | 39 38 | 9 38 Wheat.. 55516 |
| " 21 | " | 55517 | Vancouver & Miller, Van. | 14 " | 25 " .. | ... .. | 46 82 | 8 77 Maine.. 55517 |
| " 21 | " | 55518 | Powell's Market, Van. | 14 " | 29 Ham, Market, Butcher, B.C. | ... .. | 44 78 | 6 77 " .. 55518 |
| " 22 | " | 55519 | Europe Sausage Factory, Vancouver, B.C. | 40 Vendors..... | 42 44 | Spices .. | 0 | 55519 |

DISTRICT OF VANCOUVER.—Continued.