

Kentucky Agricultural Experiment Station.

KENTUCKY
AGRICULTURAL EXPERIMENT STATION

OF THE

STATE COLLEGE OF KENTUCKY.

BULLETIN NO. 86.

INSPECTION AND ANALYSES OF FOODS.

LEXINGTON, KENTUCKY,

Jan. 1, 1900.

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Address of the Station,

LEXINGTON, KENTUCKY.

BULLETIN NO. 86.

***Inspection and Analyses
of Foods.***

Chapter 52, "An Act Regulating the Sale and Manufacture of Food," was passed by the General Assembly of the Commonwealth of Kentucky during the session of 1898. This act became operative June 13, 1898, and immediately thereafter this Station issued and sent to all grocers, confectioners, millers, and other dealers in food products in the State, who were rated "K" and above in Dun's Agency, the following circular of information regarding the above act, and enclosed also a copy of the act.

**AGRICULTURAL EXPERIMENT STATION OF THE STATE
COLLEGE OF KENTUCKY.**

Circular of Information Regarding the Kentucky Pure Food Law.

The Legislature of Kentucky at its late session passed an act entitled "An Act Regulating the Manufacture and Sale of Food." The act went into effect June 13, 1898. Under this law, any person manufacturing, or selling, or exposing for sale any article of food, or any article which goes into the composition of food, as pure or unadulterated which is adulterated or misbranded, is subject to a fine not to exceed \$500, or not more than one year imprisonment.

The terms "adulterated" and "misbranded" are clearly defined in the law, a copy of which is sent herewith. So many inquiries, however, have been made in regard to labelling different articles of food so as to comply with the law that it has been thought best to present herewith a few provisional definitions of terms for the purpose of illustration.

ANTISEPTICS.

Salicylic acid, benzoic acid, boracic acid, or any of their compounds, or any other antiseptic or objectionable preservative must not be used in catsup, mince meat, canned meats or fish, canned vegetables, or any article of food, unless the presence of such antiseptic is plainly indicated on the label.

BAKING POWDER.

Baking powders are known as cream of tartar, phosphate, alum-phosphate, alum baking powders, etc., depending upon the acid substance used to liberate the carbonic acid in the soda bicarbonate contained in every baking powder. As some of these acid materials are considered more or less injurious to health, and as some are much cheaper than others, it is necessary, in order to comply with the law, to designate the kind of baking powder on the label, as cream of tartar baking powder, phosphate baking powder, phosphate-alum baking powder or alum baking powder.

BUTTER.

Butter should contain at least 80 per cent. of pure milk fats. Butter made by the use of "black pepsin" or other substance, in order to incorporate large quantities of water and casein is adulterated.

Where other fats or oils are substituted, in part or whole, for milk fats in butter, such article can not be sold as "Butter," or "Creamery," or "Dairy Butter," or any combination of words embracing the word "Butter," but must be classed as "Oleomargarine" or "Butterine" and so plainly labelled.

BUTTERINE OR OLEOMARGARINE.

Butterine or oleomargarine, or kindred compounds can only be manufactured and sold in this State when put up in "such package and manner as will advise the customer of its real character, free from coloration or ingredient that causes it to look like butter."

CHEESE.

Cheese not made wholly from milk or cream, salt, and harmless coloring matter, is considered adulterated, and must be sold as "Filled Cheese" or the name and amount of the adulterant must be made part of the label. Cheese made from milk from which part of the cream or fat has been taken, must be so labelled as to indicate the amount of cream or fat taken from the milk of which it was made. Cheese containing less than 10 per cent. of fat must be labelled "Skim milk cheese."

COFFEE.

Any article offered as coffee which contains any substitute for the coffee bean in any proportion is considered adulterated, and can not be offered for sale unless the quantity and kind of such substitute is given as part of the label.

CANDY.

The use of harmful coloring matters or other ingredients, and the admixture of terra alba, kaolin, or other mineral substances to give weight and volume to the mass, are adulterations. Where glucose is substituted in part or whole for cane sugar its presence must be indicated on the label.

CIDER.

Cider is the unfermented juice of the apple. Any substitute for apple juice, or any antiseptic added constitutes an adulteration and such adulterated cider can not be offered for sale, unless the name of the adulterant is made a part of the label.

FLOUR.

Flour is commercially known as the fine and bolted meal of the wheat grain, and for the purpose of this law is so defined. When mixed with the product of any grain except wheat it is adulterated and can not be offered for sale unless the kind and amount of the admixture is made part of the label.

Buckwheat flour or rye flour must be derived wholly from the grains designated in the name, and any admixture of other flours or materials constitutes an adulteration, and can not be offered for sale unless the kind and amount of such admixture is made part of the label.

FRUIT JELLIES, FRUIT BUTTERS, PRESERVES, CANNED FRUITS, FRUIT CONSERVES, CONFECTIONS, FRUIT JUICES AND SYRUPS, ETC.

Fruit jellies, fruit butters, preserves, canned fruits, fruit conserves, confections, fruit juices and syrups, etc., must consist of the fruit specified in the label, preserved only with cane sugar (sucrose), and must not contain artificial flavors, coloring matters or antiseptics. If such articles contain any substitute for the fruit, or any inferior material to make up bulk or weight, any glucose or other substitute for sugar, any artificial flavor or color, any starch or animal gelatine, any salicylic acid or other antiseptic, or any substance not naturally occurring in such fruits, except spices or other wholesome, natural flavoring materials, they are adulterated, and can not be offered for sale unless the presence of all such substances is clearly indicated by the label.

HONEY.

Honey is the nectar of flowers, and other saccharine exudations of plants, gathered by bees. Honey made by feeding bees glucose, sugar, invert sugar, or other saccharine substance, is not pure honey. Adding sugar, invert sugar or glucose to honey constitutes an adulteration, and such adulterated honeys can not be sold, unless the quantity and name of the adulterant is made part of the label.

LARD.

Lard is the fat of swine, the fat being melted and separated from the flesh. Adding beef fat or stearine, cotton seed oil, or other substitute for swine fat constitutes an adulteration, and such adulterated lard can not be sold unless the quantity and name of the adulterant is made part of the label.

MILK.

Milk should contain at least 12 per cent. of total solids and 3 per cent. of fat. Milk containing less than these proportions will be considered adulterated, unless labelled or offered as "skim milk," or milk below standard. The addition of antiseptics or preservatives is an adulteration.

MOLASSES AND SYRUPS.

All molasses and syrups are assumed to be made from the juice of cane, or other sugar producing plant, or the sap of the maple tree, and any syrup or molasses containing starch-sugar, glucose, or corn syrup is considered adulterated unless the label indicates the presence of the same.

OLIVE OIL.

Olive oil is the expressed oil of the olive. The substitution of other oils or fats for olive oil, either in part or whole constitutes an adulteration, and such adulterated oil can not be offered for sale unless amount and kind of the adulterant is shown clearly on the label.

SPICES, MUSTARD, PEPPER, ETC.

Spices, mustard, pepper, etc., must not contain any foreign substances or coloring matter introduced to dilute or cheapen the article, and any such admixture constitutes an adulteration and can not be sold unless its kind and amount are indicated on the label.

TEA.

Tea consists of the dried leaves of the true tea plant, without addition of artificial coloring matter, or filler, or extraction of any essential properties, and any article offered as tea which does not conform to this definition is considered adulterated and can not be offered for sale, unless its true composition is given as part of the label.

VINEGAR.

Standard vinegar is a vinegar made from the juice of the apple, containing not less than 1½ per cent. of apple solids and 4 per cent. acetic acid. All vinegars labelled "apple," "cider," or "orchard" vinegars are assumed under the law to be standard vinegars. Vinegars not made of the juice of the apple must be labelled truly of what

they are made, as "malt vinegar," "distilled vinegar," or "wine vinegar." Otherwise, they are to be considered adulterated. If artificial coloring matter is used, this must be stated on each and every label. Vinegars to which other acids than acetic acid have been added are adulterated.

Vinegars containing less than 4 per cent. absolute acetic acid may be sold, provided the percentage of acetic acid is made part of the label.

M. A. SCOVELL,

Director Kentucky Agricultural Experiment Station,

June 21, 1898.

Lexington, Ky.

**Number and Kind of Samples Collected and Analyzed,
and Where Obtained.**

The work of collecting and analyzing samples was not begun until about two months later, in order to let all interested have time to comply with the provisions of the law. During the remainder of 1898 the Station collected and analyzed 239 samples, finding 123 samples to be adulterated under the provisions of the law, and in 116 samples no adulterations were found.

During the year 1899, 488 samples were collected and analyzed, 167 being found adulterated, and in 321 no adulterations were found.

Classing these samples, the Station has collected and analyzed from the time the law went into effect to December 31st, 1899, samples as follows:

**Kind and Number of Samples Collected from June 13, 1898
to December 31, 1899.**

ARTICLE SAMPLED.	Not Found		Total.
	Adulterated.	Adulterated	
Baking powder	11	45	56
Butter	118	29	147
Canned goods	6	..	6
Catsups, pickles, etc.	12	45	57
Coffee	2	1	3
Corn starch	1	..	1
Flour (wheat)	20	..	20
Jellies, preserves, etc.	5	18	23
Lard	29	11	40
Milk (sweet and buttermilk) ..	115	35	150
Milk color	1	..	1
Mincemeat .....	..	7	7
Oleomargarine	2	16	18
Olive oil	1	1	2
Pepper, spices, etc.	3	11	14
Sweet cider and grape juice ..	..	3	3
Soda (cooking soda)	3	..	3
Syrups, honey and sugar	41	9	50
Vinegar	67	59	126
Total	437	290	727

Dr. A. M. Peter and myself have had general oversight of the chemical analysis of these samples, assisted by W. H. Scherffius, W. A. Beatty and J. V. Reed. Dr. J. H. Kastle analyzed the baking powders and most of the lards and some of the catsups. Dr. Chase Palmer, of Louisville, analyzed most of the samples collected in

Louisville. Prof. H. Garman has had charge of the microscopical work. Mr. W. H. Scherffius collected most of the samples. Mr. T. G. Dunlap collected most of the samples in Louisville.

These samples were collected from the different places in the State as is shown in the following table:

Number of Samples Obtained at Different Places in the State
from June 13, 1898 to December 31, 1899.

WHERE OBTAINED.	Not Found		Total.
	Adulterated.	Adulterated.	
Bowling Green	2	3	5
Covington	27	7	34
Danville	7	4	11
Frankfort	11	7	18
Fulton	2	3	5
Georgetown	14	7	21
Guthrie	1	2	3
Harrodsburg	1	..	1
Hopkinsville	4	5	9
Lexington	124	54	178
Louisville	171	140	311
Lynnville .....	..	2	2
Mayfield	9	5	14
Murray	6	3	9
Newport	9	3	12
Nicholasville	3	2	5
Paducah	8	11	19
Paris	10	5	15
Princeton	1	4	5
Richmond	5	6	11
Russellville .....	..	4	4
Somerset	4	5	9
South Carrollton	1	..	1
Trenton .....	..	1	1
Versailles	7	4	11
Winchester	10	3	13
Total	437	290	727

The Station has reported 97 adulterated samples of food to Hon. Frank Parsons, Prosecuting Attorney at Louisville, asking him to bring the same before the grand jury; 37 to Hon. John R. Allen, Prosecuting Attorney at Lexington; 7 to Hon. D. A. Glenn, Prosecuting Attorney at Covington; and 3 to Hon. J. P. Newman, Prosecuting Attorney at Newport.

As no provision is made in the law to pay the traveling expenses of witnesses, both before the grand juries and the courts, and as such fees were not allowed by the State, and, as the provisions of the law now are, it would be necessary for both the inspector, or the party who bought the samples, and the chemist who analyzed the samples to appear as witnesses, both before the grand jury and the trial court, and, as is often the case, the trial might be post-

poned from time to time, it has been deemed impossible to report to the grand juries some cases that would otherwise have been reported. Especially has this been true of samples taken at a distance from Lexington. In some instances the work of sampling and analyzing has been but recently done. These cases are now being reported to the prosecuting attorneys.

Following will be found the analyses of all samples of food collected, grouped in tables under appropriate headings:

ALUM AND ALUM-PHOSPHATE

Station No.	Name Taken from Label	Where Obtained	Date of Collection	From Whom Obtained
4626	Cameo	Bowling Green .	Sept. 7, 1898.....	Robinson & Jones
4639	Mascot	"	"	Jones & Co.
6182	Good Luck	Frankfort	Nov. 28, 1899	Mrs. Jas. O'Donnell
6183	Capital City	"	"	M. L. Ellwanger
6184	Sauer's Old Dominion ..	"	"	Howard & Noonan
6185	Silver Star	"	"	T. Britewell
4628	Delicatessen	Fulton	Aug. 30, 1898	Henry Collins
6177	I. C. (one cent)	Georgetown	Nov. 27, 1899	Wolf & Co.
6179	Calumet	"	"	John S. Gaines & Co.
6181	Old Time	"	"	John S. Gaines & Co.
4630	Eddy	Guthrie	Sept. 25, 1898 ...	Mimms & Martin
4634	Hawkins' Bouquet	Hopkinsville ...	Sept. 3, 1898	J. R. Hawkins
4635	Jack Frost	"	"	A. M. Wallis
4636	Crystal Pearl	"	"	Diuguid & Wells
4788	Delicatessen	Lexington	Oct. 19, 1898	W. B. Chasteen
4789	Delicatessen	"	Oct. 21, 1898	W. M. Gully
5018	Good Luck	"	Dec. 7, 1898	J. T. Honaker
5680	American Beauty	"	July 20, 1899	Jones & Terry
4640	Cotton Belt	Louisville	Sept. 7, 1898	H. K. Greeley
4641	Cameo	"	"	"
4642	Crescent	"	"	"
4643	Gold Medal	"	"	"
4644	Our Flag	"	Sept. —, 1898 ...	N. Wile & Co.
4645	Bon Bon	"	"	"
4646	American	"	"	L. Hugelmeyer
4647	Ballard's Obelisk	"	"	Grom Bros.
4648	Grom Bros.' Own Make.	"	"	E. H. Jenne
4649	Model	"	"	"
4662	Queen Flake	"	"	"
4669	American	"	"	"
4670	Veteran	"	"	"
4627	Blue Label	Lynnville	Aug. 29, 1898	M. L. Wilson
4562	Big Pound. Big Dime...	Mayfield	Aug. 24, 1898	C. Wallis
4563	Carter Bros.' Lily	"	"	Carter Bros.
4567	Perfect	Paducah	Aug. 22, 1898	J. E. Potter
4568	Forbes' Ten-Cent	"	Aug. 23, 1898	Mrs. J. Seamon
4570	Kenton	"	Aug. 22, 1898	J. E. Potter
6186	Bon Bon	Paris	Nov. 29, 1899	Lavin & Connell
6187	Aunt Jemima's	"	"	"
6188	Pure Food	"	"	J. F. Prather
4637	Rose	Princeton	Sept. 2, 1898	A. Cash & Bros.
4638	Comet	"	"	"
6191	Quick Cream	Richmond	Dec. 9, 1899	E. Deatherage & Co.
6189	Eddy's Reliable	Winchester	Dec. 2, 1899	J. M. Lockmane
6190	Crescent	"	"	"

BAKING POWDERS.

Manufacturer as taken from label or stated by retailer.	Alum or Sulphate of Alumina	Phosphate	Cream of Tartar	Carbonic Acid Gas		Starch Per Cent	Remarks.
				Available	Total		
Cameo B. Powder Co., Chicago...	Found	Found	None	8.3	10.4	35.9	Phosphoric acid, 5.9 per cent. Phosphoric acid, 5.7 per cent.
Sou. Mfg. Co., Richmond, Va.....	Found	Found	None	6.	9.2	39.2	
M. L. Ellwanger, Frankfort, Ky..	Found	None	None	.....	.....	.....
E. F. Saurer Co., Richmond, Va..	Found	Found	None	.....	.....	.....
Canby, Ach & Canby	Found	Found	None	.....	.....	.....
Cr. Tartar B. Pow. Co., N. Y.....	Found	None	None	8.	10.5	34.1	Label indicates cr. tartar powder.
Jaques Mfg. Co., Chicago	Found	Found	None	.....	.....	.....
Calumet B. Powder Co., Chicago.	Found	Found	None	.....	.....	.....
Stewart Henly Co., Cincinnati...	Found	None	None	.....	.....	.....
Eddy & Eddy, St. Louis	Found	Found	None	7.4	9.	27.2	Phosphoric acid, 5.5 per cent.
J. R. Hawkins, Hopkinsville, Ky.	Found	None	None	8.7	9.6	41.2	
Bain & Chapman Mfg. Co., St. L.	Found	Found	None	7.5	10.7	20.5	Phosphoric Acid, 8.6 per cent. Phosphoric acid, 6.1 per cent.
Evansville Chem. Wks.	Found	Found	None	6.6	10.8	34.4	
Cr. Tartar B. Powder Co., N. Y..	Found	None	None	9.2	11.8	27.6	See 4628. See 4628.
Cr. Tartar B. Powder Co., N. Y..	Found	None	None	10.	12.3	28.1	
Southern Mfg. Co., Richmond, Va.	Found	None	None	14.8	16.2	29.7	
Gt. Southern Mfg. Co., Louisville	Found	None	None	.....	.....	.....	Stamped on label "This powder contains C. T. S. Bic. Soda E.A.+St. Terra alba, 27.7 per cent.
Diamond B. Pow. Co., St. Louis.	Found	Trace	None	10.1	11.	10.8	
Cameo B. Powder Co., Chicago...	Found	Found	None	.....	.....	.....
A. Holmes, Jeffersonville, Ind. ...	Found	None	None	11.3	12.8	31.7	
H. K. Greeley, Louisville	Found	Found	None	9.6	11.8	30.	Phosphoric acid, 5.4 per cent. Ammonia found.
M. Kahn & Co., Louisville	Found	None	None	8.5	8.9	29.3	
J. C. Grant Chem. Co., Chicago..	Found	None	None	8.7	9.2	43.7	
E. Ottenheimer & Son, Louisville.	Found	None	None	9.1	10.1	33.3	Ammonia found. Ammonia found.
Ballard & Ballard Co., Louisville	Found	None	None	10.4	10.8	40.6	
Grom Bros., Louisville	Found	None	None	10.4	10.7	39.8	
E. Ottenheimer & Son, Louisville.	Found	None	None	9.7	10.7	35.8	Ammonia found. Phosphoric acid, 4.4 per cent.
Northrop, Robertson & Carrier, Lansing, Mich.	Found	Found	None	5.8	8.8	41.1	
E. Ottenheimer & Son, Louisville.	Found	None	None	.....	.....	.....	Ammonia found. Phosphoric acid, 6.4 per cent.
E. Ottenheimer & Son, Louisville.	Found	Found	None	7.9	10.3	32.2	
Paducah Vinegar Works	Found	None	None	7.8	8.2	48.4	
Pure Food Co., St. Louis	Found	None	None	6.2	8.7	20.6	
Carter Bros., Mayfield, Ky.	Found	None	None	8.4	9.6	45.6	
Perfect Baking Powder Co.	Found	Found	None	8.2	9.8	30.1	Phosphoric acid, 6.71 per cent. Phosphoric acid, 7.6 per cent. Phosphoric acid, 6.1 per cent.
Forbes Bros. & Co., St. Louis....	Found	Found	None	3.6	6.2	29.7	
Potter Parlin Co., N. Y.	Found	Found	None	2.6	4.6	32.4	
Grant Chem Co., Chicago	Found	None	None	.....	.....	.....
Howell Mfg. Co., Cincinnati ...	Found	Found	None	.....	.....	.....
Fred Parker, Chicago	Found	Found	None	.....	.....	.....
Bain & Chapman Mfg. Co., St. L.	Found	None	None	9.6	9.8	39.2	Ammonia found.
D. G. Evans & Co., St. Louis ...	Found	None	None	9.2	9.5	39.7	
T. S. Mfg. Co., Chattanooga	Found	Found	None	.....	.....	.....
Eddy & Eddy, St. Louis	Found	Found	None	.....	.....	.....
Royal Ponciana Co. Louisville....	Found	Found	None	.....	.....	.....

CREAM OF TARTAR

Station No.	Name Taken from Label	Where Obtained	Date of Collection	From Whom Obtained
4629	Royal	Lexington	Sept. 7, 1898	C. J. Burdell
6176	Powdered Buttermilk ..	Bowling Green ..	Nov. 27, 1899	Wolf & Co.
6178	Cleveland's Superior ...	Georgetown	"	Wolf & Co.
6180	Royal	"	"	John S. Gaines & Co.
4663	Dr. Price's Cream	Louisville	Sept. —, 1898 ...	Mammoth Grocery Co.
4664	Orana	"	"	McCulloch & Jenne
4668	Powdered Buttermilk ..	"	"	E. H. Jenne
4931	E. H. Jenne's	Nicholasville ...	Nov. 12, 1898	H. H. Lowery
4632	American Beauty Cr. Tr.	Paducah	Aug. 22, 1898	J. E. Potter
4633	Dr. Price's Cream	"	"	J. E. Potter
4665	Royal	Somerset	Sept. 24, 1898 ...	Ogden & Son
4665	Monarch Pure Cr. Tartar	"	"	"

*A good cream tartar baking powder and should be so labeled. The amount of proteine found shows that there could not be more than 3 1/2% dried buttermilk present and even so it would be an inert powder, without any action on the bread.

ADULTERATED

Station No.	Where Obtained	Date of Collection	From Whom Obtained	Make or Brand marked on package or stated by retailer
4859	Covington	Oct. 29, 1898	G. Murphy	An Ohio Creamery
4863	"	"	W. J. Drew	Dairy
5228	"	Feb. 25, 1899	F. W. Bellmer	Country
4781	Lexington	Oct. 17, 1898	S. K. Cozine	Sweet Table
4784	"	Oct. 19, 1898	S. K. Cozine	Creamery
4785	"	"	W. W. Gill	"
4786	"	"	W. W. Williamson	"
4787	"	"	J. C. Cravens	"
4790	"	Oct. 21, 1898	W. M. Gulley	"
4870	"	Nov. 3, 1898	A. E. Shields	"
4884	"	Nov. 5, 1898	Bluegrass Grocery Co.	"
5007	"	Dec 14, 1898	Shouse & Looney	Country
5206	"	Feb. 4, 1899	Bluegrass Grocery Co.	Creamery
6095	"	Dec. 6, 1899	J. C. Cravens	"
4701	Louisville	Sept. 9, 1898	Grom Bros.	Country
4703	"	"	D. M. Clark	"
4812	"	Oct. 22, 1898	D. M. Clark	"
4814	"	"	Maraman Bros.	"
4815	"	"	Bessie Bowen	Creamery
4817	"	"	R. G. Wells	Cooking
4819	"	"	Bishop's Creamery	Country
4826	"	"	J. Schrodtt	"
4827	"	"	William T. Gaupin	"
4828	"	"	William T. Gaupin	"
4829	"	"	Hall Bros.	Creamery
5532	"	Jan. 27, 1899	H. Niemeier	Pure
5535	"	"	Watkins' Grocery	Country
5537	"	"	Wolf & Sons	"
5539	"	Jan. 28, 1899	T. J. Wathen	Creamery

BAKING POWDERS.

Manufacturer as taken from label or stated by retailer.	Alum or Sulphate of Alumina	Phosphate	Cream of Tartar	Carbonic Acid Gas		Starch Per Cent	Remarks.
				Available	Total		
Royal Baking Powder Co., N. Y.	None	None	Found	11.2	12.1	18.4	Analyzed for comparison.
Powd. B. M. B. P. Co., Louisville	None	None	Found	8.3	9.5	15.9	Proteine, 0.9%:* misbranded.
Cleveland Baking Pow. Co., N. Y.	None	None	Found	.....	.....	.....	Properly labeled.
Royal Baking Pow. Co., N. Y.....	None	None	Found	.....	.....	.....	Should be labeled Cr. Tr. B. Pow.
Price Baking Pow. Co., Chicago..	None	None	Found	.....	.....	.....	Should be labeled Cr. Tr. B. Pow.
Mammoth Gro. Co., Louisville ...	None	None	Found	11.1	12.7	10.2	Properly labeled
Powd. B. M. B. P. Co., Louisville..	None	None	Found	.....	.....	.....	*Misbranded.
E. H. Jenne	None	None	Found	11.2	12.6	8.5	Sold in bulk.
E. W. Gillett, London, Chicago....	None	None	Found	8.5	8.6	36.9	Properly labeled.
Price Baking Pow. Co., Chicago..	None	None	Found	10.9	11.5	17.5	Should be labeled Cr. Tr. B. Pow.
Royal Baking Pow. Co., N. Y.....	None	None	Found	8.5	10.9	14.5	Should be labeled Cr. Tr. B. Pow.
Reid Murdoch & Co., Chicago....	None	None	Found	9.2	9.2	15.4	Properly labeled.

BUTTER.

Retail Price per pound	Reichert Number	Valenta Test (Degrees C)	Color	Remarks
\$0 18	3.3	90	Annatto	Oleomargarine. Not so marked.
18	3.3	89	Coal-tar dye...	" Stamped on slip of paper.
22	3.1	91	Annatto	" Not so marked.
15	1.5	.....	Azo-dye	" Stamped on sack.
15	3.2	.....	" .....	" " " "
15	.....	92	"	" " " "
20	.....	92	"	" " " "
20	.....	91	"	" " " "
20	.....	92	Coal-tar dye...	" " " "
20	.....	89	Azo-dye	" " " "
20	.....	91	Annatto	" " " "
20	2.7	89	Azo-dye	" " " "
20	4.2	90	"	" Not so marked.
20	.....	91	"	" " " "
25	9.0	.....	" .....	" " " "
15	4.5	.....	Trace	About two-thirds oleomargarine.
20	4.2	87	Coal-tar dye ..	Oleomargarine. Not so marked.
25	3.3	92	"	" Stamped on tray.
20	3.0	91	Azo-dye	" " " "
20	2.5	94	"	" Not so marked.
15	4.0	94	Coal-tar dye ..	" " " "
15	3.7	89	Azo-dye	" " " "
20	.....	90	Coal-tar dye...	" " " "
15	.....	89	Azo-dye	" Stamped on tray.
20	.....	93	"	" " " "
.....	23.4	68	Coal-tar dye ..	" " " "
.....	23.6	76	"	" " " "
.....	23.5	47	"	" " " "
.....	19.3	72	Azo-dye	" " " "

[No. 215.6.
Fehner No. 90.8; Iodine No. 38.3; Koettstorfer.
Fehner No. 93.0.
Fehner No. 91.0.
Fehner No. 91.7.]

BUTTER NOT FOUND

Station No.	Where Obtained	Date of Collection	From Whom Obtained	Make or Brand as marked on package or stated by retailer
4857	Covington	Oct. 29, 1898	Geo. C. Goode	Creamery
4858	"	"	Geo. C. Goode	Country
4860	"	"	R. Hamilton Grocery Co.	"
4861	"	"	J. W. McCool	"
4862	"	"	R. Hartley	"
4864	"	"	Steffen Bros.	Creamery
4865	"	"	Steffen Bros.	Country
4866	"	"	Chas. Hand	"
4867	"	"	R. Hamilton Grocery Co.	"
4868	"	"	Geo. W. Hill & Co.	Creamery
4869	"	"	Geo. W. Hill & Co.	Country
5227	"	Feb. 24, 1899	Jno. Dalheim	"
5229	"	Feb. 25, 1899	Chas. Hand	Elgin Creamery
5230	"	"	J. H. Voss & Bro.	Country
5231	"	Feb. 24, 1899	Bullock & Johnson	"
5232	"	Feb. 25, 1899	Geo. W. Hill & Co.	"
5233	"	"	Hocks & Williams	"
5234	"	Feb. 24, 1899	J. Taylor	"
6109	Danville	Dec. 11, 1899	R. Foley	"
6110	"	"	Durham & Cecil	"
6111	"	"	W. B. Holms	Country
6072	Frankfort	Nov. 28, 1899	Mrs. Jas. O'Donnell	"
6073	"	"	M. Ellwanger	"
6074	"	"	Howard & Noonan	"
6075	"	"	N. F. Richardson	"
6076	"	"	Duvall & Rogers	Creamery
6027	"	"	Z. J. Montgomery	Country
6065	Georgetown	Nov. 27, 1899	Wolf & Co.	"
6066	"	"	Jno. S. Gaines & Co.	"
6067	"	"	Jas. W. Thacker	"
6068	"	"	K. Stone	"
6069	"	"	Bluegrass Grocery Co.	"
6070	"	"	J. J. Thomason	"
6071	"	"	J. J. Caden	"
5504	Harrodsburg	May 11, 1899	Mrs. E. H. Gaither	Little Buttercup, Elgin Creamery
4574	Lexington	Aug. 31, 1898	John Hutchison	Dairy
4811	"	Oct. 22, 1898	Bayless Fruit Co.	Country
4871	"	Nov. 3, 1898	Shouse & Looney	"
4883	"	Nov. 3, 1898	Mr. Featherston	"
5008	"	Dec. 15, 1898	J. T. Honaker	"
5009	"	"	W. H. May	"
5010	"	"	J. Laughlin	"
5011	"	"	E. Buchignani	"
5012	"	"	H. M. Sousley	"
5040	"	"	Mrs. Duvall	"
5055	"	Dec. 29, 1898	Wm. Shields	"
5056	"	"	Wm. Shields	"
5237	"	"	Ky. Agr. Expt. Station	Made at the Station
4546	"	"	Ky. Agr. Expt. Station	"
.....	"	"	Ky. Agr. Expt. Station	"
.....	"	"	H. M. Griffing	Creamery
5176	"	Feb. 3, 1899	W. S. Griffiee	Country
5202	"	Feb. 4, 1899	Mrs. M. C. Lavery	"
5203	"	"	M. Smith	"
5204	"	"	T. N. Arthur	"
5205	"	"	Geo. Harris	"
5475	"	April 21, 1899	John Hutchison	Creamery
6087	"	Dec. 4, 1899	Warren Bros.	Country
6093	"	Dec. 6, 1899	G. H. Harris	"
6094	"	"	H. K. Greeley	Creamery (Armour)
4698	Louisville	Sept. 7, 1898	Ragland's Mod. Creamery	Creamery (Own-make)
4699	"	Sept. —, 1898	Straus' Preston st. Market	Creamery, Elgin
4700	"	Sept. —, 1898	A. Button & Son	Fox River Creamery
4702	"	Sept. 8, 1898	Swift Bros.	Country
4704	"	Sept. 9, 1898	Small Gro., Jefferson & 1st	"
4705	"	"	Carmichael & Moore	Creamery
4813	"	Oct. 22, 1898	W. P. Grigsby	"
4816	"	"	Bishop's Creamery	"
4818	"	"	D. H. Ewing & Sons	"
4820	"	"	D. H. Ewing & Sons	"
4821	"	"	D. H. Ewing & Sons	"

TO BE ADULTERATED.

Retail Price per pound	Riechert Number	Valenta Test (Degrees C)	Color	Remarks
\$0 27	28.4	42	Azo-dye	
20	.....	40	Natural	
22	.....	38	Annatto	
20	.....	35	Coal-tar dye ..	
22	.....	40	"	
25	27.4	50	"	
27	.....	39	"	
20	26.1	47	Natural	
16	.....	35	"	
20	.....	36	"	
25	.....	38	Coal-tar dye ..	
20	.....	42	Natural	
20	.....	40	"	
25	.....	38	Azo-dye	
20	.....	38	Natural	
25	27.1	43	Azo-dye	
25	.....	37	Natural	
25	.....	35	"	
20	.....	36	Annatto	
20	.....	47	Natural	
20	.....	44	"	
20	.....	48	Natural	
20	.....	42	"	
20	.....	37	"	
20	.....	46	"	
15	.....	48	"	
20	.....	35	Azo-dye	
20	.....	40	Annatto	
20	26.6	36	"	
20	.....	35	Natural	
15	.....	34	"	
12 1/2	24.2	52	None	
15	.....	40	Annatto	
20	.....	42	"	
.....	.....	40	.....
.....	28.3	.....	Azo-dye	
.....	29.5	37	Coal-tar dye ..	
25	.....	37	Annatto	
.....	31.3	30	Azo-dye	
20	.....	37	Natural	
25	.....	33	"	
25	.....	39	"	
25	.....	43	"	
23	.....	37	"	
.....	.....	41	"	
.....	.....	43	"	
.....	.....	32	"	
.....	.....	40	"	
25	29.7	.....	"	Genuine Jersey butter, for comparison.
25	.....	38	"	" " " " "
25	30.4	37	"	" " " " "
25	.....	41	Annatto	
25	.....	37	"	
15	27.5	44	Natural	
15	.....	41	"	
20	.....	41	"	
.....	.....	39	"	
.....	.....	39	Annatto	
25	.....	39	Coal-tar dye ..	
25	.....	41	Annatto	
20	26.3	.....	Azo-dye	
25	27.6	.....	"
25	26.5	.....	"
25	28.5	.....	"
17 1/2	28.7	.....	Natural	
.....	28.6	.....	"
30	28.0	40	Coal-tar dye ..	
25	28.0	40	"	
25	30.0	39	"	
25	29.1	45	Azo-dye	
25	26.4	49	"	

BUTTER NOT FOUND

Station No.	Where Obtained	Date of Collection	From Whom Obtained	Make or Brand as marked on package or stated by retailer
4822	Louisville ...	Oct. 22, 1898	W. A. Hardin	Country
4823	"	"	W. A. Hardin	"
4824	"	"	H. K. Greeley	"
4825	"	"	S. Lucas	"
5521	"	Jan. 25, 1899	Atlantic & Pacific Tea Co.	Elgin Creamery
5522	"	"	E. W. James	"
5523	"	"	McCulloch & Jenne	Creamery
5524	"	Jan. 25, 1899	C. W. Jefferson	Creamery
5525	"	Jan. 26, 1899	A. Bohlsen	Fox River Creamery
5526	"	"	C. W. Watkins & Co.	Creamery
5527	"	"	T. J. Tierney	Elgin Creamery
5528	"	"	A. J. Ross & Son	"
5529	"	"	C. W. Jefferson	"
5530	"	Jan. 27, 1899	Moses & Nicholls	Creamery
5531	"	"	Hikes & Hess	"
5533	"	"	McCulloch & Butler	"
5534	"	"	The Model Grocery	Country
5536	"	"	N. Wile & Co.	"
5538	"	"	Jas. Shaw	Diamond Creamery
5540	"	Jan. 28, 1899	D. H. Ewing & Son	Creamery, Own Make
5541	"	Feb. 3, 1899	Theo. J. Pike	Creamery
5542	"	"	Ross & McCall	Elgin Creamery
5543	"	"	T. J. Tierney & Co.	"
5544	"	"	Phil. Steinacker	Creamery, A. C. Bowen & Co. ...
5545	"	"	Ben. Saltenbrock	Spring Brook Creamery
4850	Newport	Oct. 29, 1898	Otto Delpenbrock	Creamery
4851	"	"	Geo. Hesinger	Country
4852	"	"	Otto Delpenbrock	"
4853	"	"	Walter Bennett	"
4854	"	"	R. S. Pyle	Creamery
4855	"	"	R. S. Pyle	"
4856	"	"	B. H. Kroger	"
4930	Nicholasville .	Nov. 12, 1898	Bluegrass Grocery Co.	Country
4547	Paducah	Aug. 23, 1898	J. L. Brown	Elgin Creamery
4548	"	"	J. T. Bishop	Swanwick Creamery
6078	Paris	Nov. 29, 1899	Lavin & Connell	Country
6079	"	"	A. C. Cook	"
6080	"	"	L. Solashin & Co.	"
6081	"	"	V. K. Shipp	Creamery
6082	"	"	Geo. N. Paris	Country
6096	Versailles	Dec. 7, 1899	J. E. Neet	"
6097	"	"	Bluegrass Grocery Co.	"
6098	"	"	J. M. Wasson	"
6083	Winchester ..	Dec. 2, 1899	J. M. Lackman	"
6084	"	"	Mrs. C. T. Haggard	"
6085	"	"	New Enterprise Gro. Co. ...	"
6086	"	"	B. T. Busch	"
6105	Richmond	Dec. 9, 1899	E. Deatherage	"
6106	"	"	Higgins & Ellis	"
6107	"	"	Bluegrass Grocery Co.	"
6108	"	"	Hurst Bros.	"

TO BE ADULTERATED.

Retail Price per pound	Riechert Number	Valenta Test (Degrees C)	Color	Remarks
25	28.0	40	Coal-tar dye ..	
20	28.8	42	Annatto	
25	25.2	46	Natural	
15	24.5	45	"	
21	27.9	38	Azo-dye	Very questionable.
.....	29.5	54	"	Iodine No. 30.6.
.....	29.4	65	"	Iodine No. 33.8.
\$0 25	26.7	32	Coal-tar dye ..	Iodine No. 33.5.
.....	27.5	32	"	
.....	25.6	41	.....
.....	27.8	37	Azo-dye	
.....	26.2	34	Coal-tar dye ..	
17½	27.6	39	Azo-dye	
.....	29.3	28	"	
.....	25.7	34	Coal-tar dye ..	Iodine No. 31.3.
.....	29.7	32	Azo-dye	
.....	29.0	38	.....
.....	25.9	27	.....
.....	25.5	34	Azo-dye	
30	27.3	33	Coal-tar dye ..	
.....	28.2	40	Azo-dye	Iodine No. 31.5; Koettstorfer No. 226.
.....	27.4	34	"	
15	25.7	29	"	
.....	27.3	39	"	
.....	27.8	33	"	Koettstorfer No. 220.5.
22	29.6	32	Coal-tar dye ..	Koettstorfer No. 220.4.
20	.....	38	Natural	
17	31.8	32	"	
20	29.0	34	"	
12½	.....	39	Annatto	
20	27.0	43	Natural	
.....	29.4	41	Azo-dye	
12½	27.2	45	Annatto	
.....	26.1	.....	"
.....	28.1	.....	Azo-dye	
20	.....	45	Natural	
20	26.8	21	"	
20	.....	39	"	
35	.....	44	Azo-dye	
20	.....	44	Natural	
20	.....	37	"	
20	.....	36	"	
20	.....	44	"	
20	.....	46	"	
20	.....	42	"	
20	.....	49	"	
15	.....	52	"	
20	.....	46	"	
20	.....	43	"	
20	.....	49	"	
15	.....	41	"	

CANNED GOODS.

Six samples of canned goods were examined for antiseptics, including formaldehyde, salicylic acid, benzoic acid and boric acid, none being found in any of the samples. The samples examined are described as follows:

5631—"Victory Fancy Grated Pineapple," packed by the John Boyle Co., Baltimore, Md. Bought of Bluegrass Grocery Co., Lexington, Ky., June 29, 1899.

5632—"Winter's Luxury Corn," H. F. Webb Co. Portland, Me. Bought same as 5631.

5633—"National Brand, Standard Quality, Lemon Cling Peaches," Lincoln Fruit Packing Co., Lincoln, Cal. Bought same as 5631.

5634—"Royal Brand Sugar Corn," Rumford Canning Co., Rumford, Me. Bought same as 5631.

5635—"Concentrated Clear Consomme," Armour Packing Co. Bought same as 5631.

5640—"Hitz Brand, White Pie Peaches," Madison Packing Co., Madison, Ind. Bought of Bacher Bros., Lexington, Ky., June 30, 1899.

FLOUR.

Twenty samples of wheat flour were examined by means of the microscope for adulteration with corn starch or "flourine," and for alum by the logwood test. No sample was found to be adulterated, though in two or three there was a very small amount of corn starch probably accidental. The samples examined are described as follows:

5021—Sample of the flour in daily use in the Kentucky Penitentiary, sent by the Warden, Mr. E. T. Lillard, Frankfort, Dec. 19, 1898. Moisture, 7.61 per cent.; ash, 0.63 per cent.; protein, 11.44 per cent.

5167—Same, sent Jan. 18, 1899. Moisture, 8.12 per cent. ash, 0.78 per cent.; protein, 11.56 per cent.

4585—Silver Star, Guthrie Mill Co., Guthrie, Ky. Bought of T. T. Russell, Guthrie, Ky., Sept. 5, 1898.

4595—"Acme," Acme Mills Co., Hopkinsville. Bought of A. M. Wallis, Hopkinsville, Sept. 3d, 1898.

4596—"Orient," Crescent Milling Co., Hopkinsville. Bought same as 4595.

4623—"Eagle," Acme Mills Co., Hopkinsville, Ky. Sent by Wm. Grau, Hopkinsville, Ky., Aug. 8, 1898.

5548—Sample obtained from Luther McMillan, Lexington, May 25, 1899, out of a lot bought by him in Crittenden, Ky. Moisture, 12.38 per cent.; protein, 9.72 per cent.; ash, 0.75 per cent.; silica, .006 per cent.; alumina, .001 per cent.

4597—"Obelisk," Ballard & Ballard Co. Louisville, Ky. Bought of Jacob Gast, Louisville, Ky., Sept. 6, 1898.

4598—Same. Bought of H. K. Greeley, Louisville, Sept. 7, 1898.

4599—"Golden Rule," Meloy & Robinson, Scottsburg, Ind. Bought same as 4598.

4600—"Gold Dust," R. O. Gathright & Co., Louisville, Ky. Bought same as 4598.

4601—"Acme," Eberts Bros., Jeffersonville, Ind. Bought same as 4598.

4602—"White Dove," same make. Bought same as 4598. A small amount of corn starch was noted in this sample, probably not more than one-half of one per cent.

4603—"Gold Medal," Washburn & Crosby, Minneapolis, Minn. Bought same as 4598.

4604—"Standard Roller Mill O. K.," E. B. McCormick, Charlestown, Ind. Bought same as 4598.

4605—"Old Gold," Evans & Henthorn, Otisco, Ind. Bought same as 4598.

4606—"Sea Foam," E. B. McCormick, Charlestown, Ind. Bought same as 4598.

4593—"Triumph, Extra Fancy," Wilford Stinson & Co., Mayfield, Ky. Bought of J. B. Wrather & Son, Mayfield, Aug. 24, 1898.

4594—"Jersey Cream," Wilford Stinson & Co., Mayfield, Ky. Bought of T. B. McNeely, Mayfield, Aug. 24, 1898.

4624—Sample sent by Walcott Bros., South Carrollton, Ky., Aug 14, 1898.

JELLIES, PRESERVES,

Station No.	Represented to be	Where Obtained	Date of Collection	From Whom Obtained
5084	Currant Jelly	Louisville	Sept. —, 1898 ..	Mammoth Grocery Co.
5869	Raspberry Jelly	"	July 3, 1899	M. Kaltenbach
5870	Blackberry Jam	"	"	H. Wilken & Son
5871	Currant Jelly	"	"	Moses & Nicholls
5872	Currant Jelly	"	"	"
5873	Cherry Preserves	"	"	Mammoth Grocery Co.
5874	Currant Jam	"	July 4, 1899	A. Button & Son
5876	Plum Jam	"	"	"
5877	Raspberry Preserves	"	"	"
5878	Currant Jelly	"	July 5, 1899	M. Wolf & Sons
5879	Currant Preserves	"	"	McCulloch & Jenne
5880	Raspberry Jam	"	"	"
5881	Cherry Jam	"	July 6, 1899	E. A. King
5883	Raspberry Preserves	Lexington	June 30, 1899	Bacher Bros.
5641	Quince Jelly	"	"	"
5642	Raspberry Jelly	"	"	W. F. Burke
5643	Raspberry Jelly	"	"	Vogt & Foley
4569	Currant Jelly	"	"	"
5082	Orange Marmelade	Louisville	Sept. 5, 1898	"
5085	Grape Jelly	"	Sept. 7, 1898	"
5086	Grape Jelly	"	"	"
5087	Blackberry Jelly	"	Sept. 2, 1898	"
5660	Quince Jam	"	"	"
5657	Peach Pres., Diamond....	"	"	"
5658	Raspberry Pres., High'd	"	"	"
5659	Fig Preserves. Cloverdale	"	"	"
	Flavored Apple Jelly	Lexington	"	"

JELLIES, PRESERVES, ETC.,

Station No.	Represented to be	Where Obtained	Date of Collection	From Whom Obtained
5673	Strawberry Jelly	Lexington	July 11, 1899	J. B. Rogers & Co.
5083	Currant Jelly	Louisville	Sept. —, 1898	McCulloch & Jenne
5088	Shredded Pineapple	"	July 3, 1899	Mammoth Grocery Co.
5875	Blackberry Jelly	"	July 5, 1899	W. H. Norwood
5882	Currant Jelly	"	"	"
	Strawberry Preserves	Lexington	"	"
	Wild Plum Jelly	"	"	"
	Strawberry Preserves	"	"	"
	Raspberry Jam	"	"	"

MINCE MEAT

Station No.	Represented to be	Where Obtained	Date of Collection	From Whom Obtained
6129	Condensed Mince Meat...	Danville	Dec. 11, 1899	Durham & Cecil
6123	Mince Meat	Georgetown	Nov. 27, 1899	Wolf & Co.
6124	Mince Meat	"	"	J. S. Gaines & Co.
6131	Condensed Mince Meat ..	"	"	Gus. Margolen
6125	Condensed Mince Meat ..	Paris	Nov. 29, 1899	A. C. Cook
6126	Fig Mince	Versailles	Dec. 7, 1899	Blue Grass Grocery Co.
6127	Mince Meat	"	"	O'Neill & Bro.

ETC., ADULTERATED.

Manufacturer or Wholesaler	Polarization		Sugar Per Cent	Antiseptics	Remarks
	Direct	Inv't			
Cruikshanks Bros.	32.8	-23.	43.1	Benzoic acid..	
Louisville Preserving Co.	132.	127.8		" "	Contains glucose.
Empire Preserving Co.	93.2	84.5		" "	" "
H. J. Heinz & Co.	75.	72.6		" "	" "
J. D. Stilz Preserving Co.	-2.4	-19.4	13.	" "	Contains some starch.
J. D. Stilz Preserving Co.	26.6	-16.9	33.2	Salicylic acid.	Reducing sugar, 38.8.
Curtice Bros.	35.8	20.9	11.3	" "	Reducing sugar, 48.5.
Hoosier Packing Co.	128.8	128.		" "	Contains glucose.
Sprague, Warner & Co.	11.2	-10.1	16.3	" "	Reducing sugar, 30.2.
Sprague, Warner & Co.	101.	99.4		Benzoic acid .	Contains glucose.
Sprague, Warner & Co.	102.4	97.		" "	" "
Melrose Packing Co.	73.2	67.4		Salicylic acid .	" "
Melrose Packing Co.	78.2	73.3		" "	" "
Williams Bros. & Charbonneau .	78.2	77.4		Benzoic acid .	" "
J. Weller Co.	116.4	116.8	None.	None	" "
J. Weller Co.	104.	104.4	None.	None	" "
Louisville Preserving Co.	126.6	126.4	None.	Salicylic acid .	" "
Geo. K. McMechen & Son	-12.8	-19.4	5.1	" "	No glucose or starch.
Geo. K. McMechen & Son	84.4	77.5	5.3	None	Contains glucose.
Geo. K. McMechen & Son	128.	125.6	1.9	None	" "
E. Ottenheimer & Son	133.6	131.	2.	None	" "
M. Kahn	-11.1	-20.5	7.3	Salicylic acid.	Starch present.
J. D. Stilz Preserving Co.	96.6	92.4	2.7	None	Contains Glucose; labeled adult.
Sprague, Warner & Co.	51.7	37.5	10.9	Trace Borate..	Contains glucose.
Williams Bros. & Charbonneau .	80.5	79.6	.7	None	Contains glucose; starch found.
Sprague, Warner & Co.	110.4	110.	None.	Borate	" " " "
E. G. Dailey & Co.	113.6	111.6	1.5	None	" " " "

NOT FOUND ADULTERATED.

Manufacturer or Wholesaler.	Polarization		Sugar Per Cent	Antiseptics	Remarks
	Direct	Inv't			
Austin, Nicholls & Co.	9.6	-21.6	22.4	None	Traces of starch.
J. D. Stilz Preserving Co. ....	.5	-19.8	15.7	" "	
Githens, Rexamer & Co.	-2.6	-6.5	3.0	" "	
Geo. K. McMechen & Son	41.8	-3.5	34.6	" "	Reducing sugar, 34.4. Glucose.
Shaker Preserving Co.	3.6	-19.1	17.3	" "	Reducing sugar, 41.7.
Home-Made	-14.8	-20.	3.9	None	} Home-made, genuine pre- serves for comparison.
"	-8.6	-21.6	9.8	"	
"	8.	-14.8	17.4	"	
"	1.8	-15.2	12.3	"	

ADULTERATED.

Manufacturer or Wholesaler	Polarization		Sugar Per Cent	Antiseptics	Remarks
	Direct	Invert			
Sprague, Warner & Co.	33.	-9.7	32.3	Borate	Contains glucose.
The J. Weller Co.	25.6	24.6		Salicylic acid .	
The J. Weller Co.	55.2	54.1		" "	
Murrell, Soule Co.	-12.8	-25.5	9.6	Borate	
Emery Provision Co.	13.	-15.4	21.5	" "	
Sherman Fig Co.	-14.8	-17.6	2.1	" "	Contains glucose.
American Grocery Co.	15.2	14.5		Salicylic acid .	

TOMATO CATSUPS, PICKLES,

Station Number	Name Taken from Label	Where Obtained	Date of Collection	From Whom Obtained
6169	Tip Top Tomato Ketchup	Danville	Dec. 11, 1899	W. B. Holmes
5080	Choice Family Pickles	Guthrie	Sept. 5, 1898	Mimms & Martin ..
4654	Maple Leaf Tomato Catsup.....	Lexington	Sept. 26, 1898 ...	W. W. Williamson ..
4655	Snider's Home Made Tomato Catsup..	"	"	J. T. Honaker
4989	Maple Leaf Tomato Catsup	"	Nov. 29, 1898	W. W. Williamson..
4990	" " " "	"	Nov. 30, 1898	J. C. Woolfolk
5273	" " " "	"	Jan. 3, 1899	Blue Grass Gro. Co.
5349	" " " "	"	Mar. 24, 1899	"
5637	Hyman's Tomato Catsup	"	June 29, 1899	G. H. Harris
5645	Tomato Catsup	"	June 17, 1899	W. B. Chasteen
5662	Royal Tomato Ketchup	"	July 11, 1899	Vogt & Foley
5664	Maple Leaf Tomato Catsup	"	"	J. W. Parish
5665	Sunny Side Ketchup	"	"	H. M. Sausley
5668	Heinz Tomato Ketchup	"	"	W. S. Griffey
5669	Tomato Catsup	"	"	W. H. Watts
5671	" "	"	Oct. 3, 1899	J. B. Rogers & Co..
5907	" "	"	"	J. B. Rogers & Co..
5672	Flaccus' Chilmato	"	"	Chas. O'Lee
5674	Queen City Tomato Catsup	"	Oct. 20, 1899	J. E. Duncan
5683	Tomato Catsup	"	Oct. 3, 1899	J. B. Rogers & Co..
5908	High Grade Tomato Catsup	Louisville	Sept. —, 1898 ...	E. W. James
4650	Tomato Catsup	"	Sept. 9, 1898	J. B. Wurach
4651	Triumph Tomato Catsup	"	Sept. —, 1898 ...	N. Wile & Co.
4652	Our Best Tomato Catsup	"	"	N. Wile & Co.
4653	Tomato Catsup	"	July 3, 1899	H. Wilken & Son... Mammoth Gro. Co..
6046	Snider's Home Made Tomato Catsup..	"	"	A. Button & Son ..
6048	Columbia Catsup	"	July 4, 1899	A. Button & Son... M. Wolf & Sons ...
6049	Ontario Tomato Catsup	"	"	McCulloch & Jenne.
6050	Champion Catsup	"	July 5, 1899	W. H. Norwood
6051	Tomato Catsup	"	"	W. H. Norwood....
6052	" "	"	"	Ross & McCall
6053	Acme Home Made Tomato Catsup....	"	July 6, 1899	Frank Otte
6054	Van Camp's Pure Catsup	"	"	A. Button & Son ..
6055	Blue Label Ketchup	"	"	H. Wilken & Son ..
6056	High Grade Tomato Catsup	"	Aug. 14, 1899 ...	W. O'Connell
6057	Tomato Catsup	"	"	Atl. & Pac. Tea Co.
6059	Snider's Home Made Tomato Catsup..	"	Aug. 17, 1899	Frank Otte
6060	Tomato Catsup	"	"	Frank Otte
6062	Green Label Sauce and Ketchup	"	"	Frank Otte
6063	High Grade Tomato Catsup	"	"	Frank Otte
6064	Crescent Tomato Ketchup	"	"	Carter Bros.
4557	Ohio Valley Ketchup	Mayfield	Aug. 27, 1898	E. Deatherage
6163	United States Catsup	Richmond	Dec. 9, 1899	T. B. Collins
6164	Queen City Tomato Catsup	"	"	R. A. Baxter
6165	Cruikshank Tomato Ketchup	"	"	Hirsch Bros.
6166	New England Catsup	"	"	Hirsch Bros.
6167	The Colter Catsup	"	"	"
5348	Mrs. Jones' Home Made Catsup	Lexington	Mar. 23, 1899.....	"
5350	Chili Sauce	"	Mar. 29, 1899	"

ETC., FOUND ADULTERATED.

Manufacturer or Wholesaler as taken from label or stated by retailer	Antiseptic Found	Remarks
Tip Top Ketchup Co., Cincinnati	Benzoic Acid	No copper found.
Hyman Pickle Co., Louisville	Salicylic Acid	
Maple Leaf Packing Co., Brookville, Ind...	" "	
T. A. Snider Preserve Co., Cincinnati	Benzoic Acid	
Maple Leaf Packing Co., Brookville, Ind...	" "	Artificial color.
" " " "	" "	
" " " "	" "	
Hyman Pickle Co., Louisville	" "	Contains eosin.
Great Southern Mfg. Co., Louisville	Salicylic Acid	
The Horton Cato. Mfg. Co., Detroit	" "	Contains eosin.
Maple Leaf Packing Co., Brookville, Ind...	Benzoic Acid	
Tip Top Ketchup Co., Cincinnati	" "	Contains eosin.
H. J. Heinz & Co., Pittsburgh	" "	
Lutz & Schramm Co., Allegheny, Pa.	" "	
Flaccus Bros., Wheeling, W. Va.	" "	Duplicate of 5671.
" " " "	" "	
The E. C. Flaccus Co., Wheeling, W. Va.	" "	Artificially colored.
The J. Weller Co., Cincinnati	Salicylic Acid	
H. J. Heinz & Co., Pittsburgh	Benzoic Acid	Artificially colored.
Ohio Valley Preserving Co., Wheeling	" "	
Crescent Preserving Co., Camden, N. J. ...	" "	
Meyer-Bain Mfg. Co., St. Louis	Salicylic Acid	
M. Kahn & Co., Louisville	" "	
E. Ottenheimer & Son, Louisville	" "	
T. A. Snider Preserve Co., Cincinnati	Benzoic Acid	
The Mullen Blackledge Co.	Salicylic Acid	
Standard Preserving Co., New Jersey	Benzoic Acid	
Champion Syrup Refining Co.	Salicylic Acid	
Pickling and Preserving Co., Indianapolis..	" "	Artificially colored.
R. J. Ritter Preserve Co., Philadelphia ...	" "	
The J. Weller Co., Cincinnati	" "	
Van Camp Packing Co., Indianapolis	" "	
Curtice Bros., Rochester, New York	" "	
M. Kahn & Co., Louisville	" "	
Ontario Preserving Co., Middleport, N. Y. ...	Benzoic Acid	
T. A. Snider Preserve Co., Cincinnati	" "	
Great Southern Mfg. Co., Louisville	Salicylic Acid	
Little Silver Sauce Co., Little Silver, N. J. ...	Benzoic Acid	
M. Kahn & Co., Louisville	Salicylic Acid	Artificially colored.
Crescent Preserving Co., Camden, N. J. ...	Benzoic Acid	
Covington Bros., Paducah, Ky.	Salicylic Acid	
Standard Pkg. Co., Indianapolis	" "	
The J. Weller Co., Cincinnati	" "	
Cruikshank Bros. & Co., Allegheny, Pa.	Benzoic Acid	
Eddy & Eddy, St. Louis	Salicylic Acid	
A. W. Colter Canning Co., Mt. Wash., O. ...	Benzoic Acid	
Williams Bros. & Charbonneau, Detroi t .	" "	
Jos. Campbell Preserve. Co., Camden, N. J. ...	" "	

LARD AND OLIVE

Station No.	Represented to be	Where Obtained	Date of Collection	From Whom Obtained
4910	Supreme Brand Pure Leaf Lard	Bowling Green .	Sept. 7, 1898	P. J. Morphew
4900	Kettle-Rendered Lard	Fulton	Aug. 30, 1898 ...	Reed & Sellers
4907	Pure Country-Kettle Rend. Leaf Lard.	Hopkinsville ...	Sept. 3, 1898	Vanhooover & Myers ...
4908	Silver Leaf Lard	"	Sept. 4, 1898	C. E. Olliver
4914	Leaf Lard	Louisville	Sept. 7, 1898	H. K. Greeley
4899	Pure Leaf Lard	Paducah	Aug. 23, 1898 ...	J. L. Brown
4904	Snowflake Pure Kettle Rendered Lard.	Princeton	Sept. 2, 1898	T. J. Johnson
4905	White Frost Pure Kettle Leaf Lard...	"	"	T. J. Johnson
4909	P. D. X. Leaf Lard	Russellville ...	Sept. 6, 1898	Gaines Cooksey
5039	Olive Oil	"	"	Harris & Bros.
4921	Pure Leaf Lard	Somerset	Sept. 24, 1898 ...	Sears & Owens
4920	White Label Pure Leaf Lard	Trenton	Sept. 9, 1898	S. P. Smith & Co.
5305	Pure Butchers' Lard (Compound)	Lexington	March 16, 1899 ..	.....
5312	Rex Kettle Rendered Leaf Lard	"	March 17, 1899 ..	.....
4918	Compound Lard	Louisville	Sept. 8, 1898	A. Button & Son

CATSUP, PICKLES, ETC.,

Station No.	Name Taken from Label.	Where Obtained	Date of Collection	From Whom Obtained
6168	Van Camp Tomato Catsup	Danville	Dec. 11, 1899	Durham & Cecil ..
4656	Tomato Catsup	Lexington	Sept. 27, 1898 ...	J. T. Honaker
4657	Climax Tomato Catsup	"	"	"
5636	Snider's Homemade Tomato Catsup	"	June 29, 1899	G. H. Harris
5663	Grated Horse Radish	"	July 11, 1899	Vogt & Foley
5670	W. Virginia Tomato Catsup	"	July 12, 1899	S. K. Cozine
5675	Star Home-made Catsup	"	July 3, 1899	P. J. Furlong
6045	Heinz Tomato Ketchup	Louisville	July 3, 1899	M. Kaltenbach
6047	Shrewsbury Tomato Ketchup	"	"	Mammoth Gro. Co.
6058	Heinz Tomato Ketchup	"	Aug. 14, 1899 ...	M. Kaltenbach
6061	Shrewsbury Tomato Ketchup	"	Aug. 15, 1899 ..	Mammoth Gro. Co.
5081	Tri-State Brand Pickles	Mayfield	Aug. 27, 1898	Carter Bros.

OIL, ADULTERATED.

Manufacturer or Wholesaler as taken from label or stated by retailer	Iodine Number	Bechi Test	Nitric Acid Test	Sulphuric Acid Test	Remarks
Nelson Morris & Co.	42.7	Black			Contains Cotton Seed Oil.
J. K. Bondurant & Son	62.4	Great Reduction	Light Brown		" " "
Armour & Co.	58	Black	Dark Brown		" " "
Swift & Co.	51.2	"	"		" " "
Louis P. Bornwasser	67	Great Reduction	Brown	Dark Brown	" " "
Cudahy Packing Co.	55.9	Black	Dark Brown		" " "
Louisville Packing Co.	68.1	Brown			" " "
.....	59.5	Brownish	Dark Brown		" " "
.....		Black	"		" " "
Overbacker, Gilmore Co.	57.1	Black	"		" " "
E. Lubon, Nice (G. K. & Co.).	106.1	Brown			Cotton Seed Oil.
Cudahy Packing Co.	82	Much Reduction	Dark Brown	Dark Brown	Contains Cotton Seed Oil.
Armour & Co.	60.5	Black	"		" " "
Steel-Wedeles Co.	88.4	Dark	"	Dark Brown	Analyzed for comparison.
Cudahy Packing Co.	58.8	Brown		"	" " "
Louisville Packing Co.	81.8	Consid'ble Reduction	Pink		" " "
.....		Brown			Contains Cotton Seed Oil.

NOT FOUND ADULTERATED.

Manufacturer or Wholesaler as taken from label or stated by retailer	Antiseptics Found	Remarks
Van Camp Packing Co., Indianapolis		No antiseptics found.
National Pure Food Co., Cincinnati		" " "
Climax Packing Co., Cincinnati		" " "
T. A. Snider Preserve Co.		" " "
Wm. Spencer & Sons, Cincinnati		" " "
.....		" " "
The J. Weller Co., Cincinnati		" " "
H. J. Heinz & Co., Pittsburgh, Pa.		" " "
E. C. Hazzard & Co., New York		" " "
H. J. Heinz & Co., Pittsburgh, Pa.		" " "
E. C. Hazzard & Co., New York		" " "
Keokuk Canning Co., Keokuk, Iowa		No copper found.

LARD AND OLIVE OIL

Station No.	Represented to be	Where Obtained	Date of Collection	From Whom Obtained
4901	C. & G. Lard	Fulton	Aug. 30, 1898	Reed & Sellers
4902	Robin Pure Kettle Rendered Lard	"	"	J. H. Cayce
4906	Shield Brand Lard	Hopkinsville ...	Sept. 3, 1898	Mrs. A. M. Wallace ...
5027	Pure Kettle Rendered Lard	Lexington	Dec. 22, 1898	W. W. Williamson
5028	Kettle Rendered Lard	"	"	John Hutchison
5029	Maple Leaf Choice Kettle Rend. Lard.	"	"	J. T. Honaker
5030	Superior Compound Lard	"	Dec. 21, 1898	W. B. Chasteen
5031	Country Lard	"	Dec. 22, 1898	N. Self
5032	Shield Brand Pure Leaf Lard	"	"	J. D. See
5033	Country Lard	"	"	T. Norris
5038	Maple Leaf Kettle Rend. Leaf Lard...	"	"	John O'Neill
5041	Pure Lucca Oil	"	Oct. —, 1898	E. Buchignani
5099	Price's Lard	"	Dec. —, 1898	W. B. Chasteen
5100	Choice Kettle Rendered Leaf Lard	"	"	Market House
5101	Pure Kettle Rendered Lard	"	"	P. D. Foster
5102	Pure Leaf Lard	"	"	Lankart
5103	Pure Kettle Rendered Lard	"	"	S. K. Cozine
5311	Lard	"	March 17, 1899...	John Hutchison
5313	Climax Leaf Lard	"	"	Curry, Tunis & Nor- wood
4911	Lard	Louisville	Sept. 3, 1898	E. H. Jenne
4912	Lard	"	Sept. 6, 1898	Jacob Gast
4913	Lard	"	Sept. 7, 1898	Jeffersont'n Creamery .
4915	Lard	"	"	Geo. Wepler
4916	Shield Brand Pure Leaf Lard	"	Sept. 8, 1898	A. Button & Son
4917	Leaf Lard	"	"	A. Button & Son
4919	Best Lard	"	"	A. Button & Son
4903	Pure Country Leaf Lard	Princeton	Sept. 2, 1898	Arch. Cash & Bro.
4922	Choice Leaf Lard	Somerset	Sept. 24, 1898 ...	Ogden & Son
4923	Leaf Lard	"	"	G. C. Cundiff

NOT FOUND ADULTERATED.

Manufacturer or Wholesaler as taken from label or stated by retailer	Iodine Number	Bechi Test	Nitric Acid Test	Sulphuric Acid Test	Remarks
Cox & Gordon	62.1	Brown	Slight Coloration		Doubtful.
Meeks-West Grocery Co.	62.9	"	"		"
Armour & Co.	63.7	No Color			
John F. Price	55.6	"	Slight Color		
Vogel & Son	61.5	Dark Brown	Light Pink		Doubtful.
Jacob Vogel & Son	58.4	No Color			
Swift & Co.	84.9	Brown			
Miss B. Murphy	56.7	No Color			
Armour & Co.	61.9	"			
George Ott	60.2	"			
Jacob Vogel & Son	60	Black	Light Pink		Doubtful.
.....	82.1	Slight Coloration			
.....	52.4	No Color	Slightly Pink		
Ott & Martin	60	"	"		
P. D. Foster	55.4	"	"		
Geo. W. Lankart	57.8	"	"		
The Ruttle Schlickman Pkg Co.	58.9	"	"		
Jacob Vogel & Son	64.2	Slight Reduction	Pinkish Color	Slight Brown	Acetic acid test, 87 degrees.
Curry, Tunis & Norwood	59.3	No Color	"	No Color	Acetic acid test, 88 degrees.
C. F. Vissman & Co.	66.7	"			
Pfaffinger & Co.	67.5	Slight Reduction			
Braun & Fitts	57.8	Slight Brown			
Armour & Co.	68.6	Slight Reduction			
Armour & Co.	57.6	Slight Color			
Vissman & Co.	77	No Color			
Conrad Provision Co.	65.7	Slight Color			
Armour & Co.	60	"			
The Ruttle Schlickman Pkg Co.	60.4	No Color			
Torbitt & Castleman	56.5	Slight Reduction			

ADULTERATED

Station No.	Where Obtained	Date of Collection	Seller or Producer
5763	Lexington	July 5, 1899	J. T. Adams
5764	"	"	Henry Kriegel
5769	"	"	J. E. Lilly
5793	"	July 18, 1899	J. E. Lilly
5324	Louisville	March 20, 1899	A. Fienburg
5326	"	"	J. P. Gray
5430	"	April 1, 1899	Jno. C. Straut
5431	"	"	P. A. Ackerman
5434	"	"	W. Thielmeier
5451	"	"	B. Pater
5453	"	"	G. W. Cuscaden
5454	"	"	Carmichael & Moore
5459	"	April 11, 1899	A. Fienburg
5460	"	"	A. Fienburg
5477	"	April 20, 1899	Theo. Brumleve
5478	"	"	J. M. Schoenbaechler
5479	"	"	J. Strohmeier
5481	"	"	Redin & Crawford
5482	"	"	Andy Kaelln
5806	"	Aug. 14, 1899	A. J. Philips
5807	"	"	Centennial Creamery
5808	"	"	B. Reichmuth
5810	"	"	Schange Bros.
5812	"	Aug. 15, 1899	Fred. Meyer
5813	"	"	Fred. Meyer
5816	"	"	J. Stein
5817	"	"	Wm. Kunker
5818	"	"	Mrs. Mary Siegurst
5826	"	Aug. 18, 1899	S. Lucas
5828	"	"	Orr's Creamery
5829	"	"	H. Gus Emery
5832	"	Aug. 21, 1899	Tip Top Dairy
5845	"	Aug. 23, 1899	Frank & Keller
5846	"	"	D. Zehnder
5850	"	"	Kentucky Dairy

MILK.

Specific Gravity	Fat Per Cent.	Solids not Fat Per Cent	Total Solids Per Cent	Antiseptics	Milk Color	Remarks
1.031	2.65	8.28	10.93	None	None	Watered or partly skimmed.
1.034	4.30	9.38	13.68	Formaldehyde ...	"	Contains antiseptic.
1.034	4.20	9.36	13.56	"	"	"
1.030	4.40	8.39	12.79	"	"	"
.....	4.20	.....	.....	.....	Annatto..	Artificially colored.
.....	1.85	.....	.....	.....	"	Skimmed and colored.
1.0259	3.35	7.18	10.53	None	"	Watered and colored.
1.0323	3.50	8.71	12.21	None	"	Artificially colored.
1.0287	3.30	7.92	11.22	"	"	Colored and watered.
1.0323	7.60	.....	.....	Borate	None	Contains antiseptic.
1.0323	3.40	8.80	12.20	Formaldehyde ...	"	"
1.0323	4.10	8.90	13.00	Borate	"	"
.....	3.65	.....	.....	None	Annatto..	Artificially colored.
.....	3.02	.....	.....	"	"	"
1.0313	4.20	8.68	12.88	"	"	"
.....	3.40	.....	.....	Borate	None	Contains antiseptic.
1.0267	3.40	7.34	10.74	Formaldehyde ...	"	Watered.
1.0313	2.40	8.31	10.71	None	"	Partly skimmed.
1.0265	3.60	7.35	10.95	"	"	Watered.
1.0295	2.60	8.04	10.64	Formaldehyde ...	"	Contains antiseptic.
1.0320	3.20	8.78	11.98	Borate	"	"
1.0300	2.70	8.18	10.88	None	"	Watered or skimmed.
1.0310	2.60	8.41	11.01	Borate	"	Contains antiseptic.
1.0260	5.40	7.72	13.12	"	"	"
1.0285	4.20	8.11	12.31	"	"	"
1.0315	3.60	8.70	12.33	"	"	"
1.031	3.80	8.65	12.45	"	"	"
1.030	4.20	8.48	12.68	"	"	"
1.0315	3.80	8.77	12.57	"	"	"
1.0295	2.10	7.94	10.04	Formaldehyde ...	"	"
1.032	3.20	8.78	11.98	Borate	"	"
1.028	3.10	7.76	10.86	.....	"	Watered.
1.0315	3.70	8.75	12.45	Borate	"	Contains antiseptic.
1.0295	3.40	8.19	11.59	"	"	"
1.032	3.80	8.90	12.70	Formaldehyde ...	"	"

MILK NOT FOUND

Station No.	Where Obtained	Date of Collection	Seller or Producer
4727	Lexington	Oct. 6, 1898	Mrs. A. R. Bergen
4728	"	"	Mrs. M. Vandever.....
4729	"	"	Mrs. W. C. Lyne.....
4730	"	"	Mrs. W. C. Lyne
4731	"	"	Mrs. G. J. Downing
5759	"	July 5, 1899	J. M. Downing
5760	"	"	M. R. Perkins
5761	"	"	R. L. Sweeney
5762	"	"	G. W. Jett
5765	"	"	Lexington Bluegrass Creamery
5766	"	"	M. L. Sayre
5767	"	"	David Cahill
5768	"	"	Mrs. C. Porter
5770	"	"	O. N. Featherston
5771	"	"	C. A. Mahin
5772	"	"	N. B. Haggard
5773	"	"	W. B. Taylor
5774	"	"	C. B. Lair
5775	"	"	B. R. McClure
5776	"	"	A. Schuler
5777	"	"	J. W. Clark
5778	"	"	D. A. Trapp
5779	"	July 18, 1899	Lear Bros.
5780	"	"	M. G. Featherston
5781	"	"	G. R. Ballard
5782	"	"	Mrs. D. A. Thompson
5783	"	"	J. H. Parker
5784	"	"	"
5785	"	"	"
5786	"	"	H. Kriegel
5787	"	"	Krahenbuehl Bros.
5788	"	"	Berry Bros.
5789	"	"	W. B. Hawkins
5790	"	"	H. E. McGovern
5791	"	"	J. B. Beautikofer
5792	"	"	Frank Wheatly
5794	"	Aug. 11, 1899	Mrs. D. C. Young
5795	"	"	W. B. Taylor
5796	"	"	H. S. Sheridan
5797	"	"	Odd Fellows' W. & O. Home Dairy.
5798	"	"	"
5922	"	Oct. 9, 1899	Dr. W. O. Sweeney
5945	"	Oct. 13, 1899	Dr. W. O. Sweeney
5321	Louisville	Mar. 21, 1899 ...	M. Gye
5322	"	"	Sherley Beadle
5323	"	"	E. W. Sewell
5325	"	"	A. Zehnder
5327	"	"	B. Fisher
5328	"	"	F. Bauer
5432	"	April 1, 1899	F. Schurch
5433	"	"	Less Haft
5435	"	"	B. M. Leinert
5436	"	"	N. T. Ragland & Son
5437	"	"	H. E. Lewman
5438	"	"	"
5439	"	"	"
5440	"	"	"
5441	"	"	"

ADULTERATED.

Specific Gravity	Fat per cent	Solids Not Fat per cent	Total Solids per cent	Anti-septics	Milk Color	Remarks
.....	.....	.....	.....	None	None.....	Buttermilk.
.....	"	"	"
.....	"	"	"
.....	"	"	"
1.035	4.15	9.60	13.75	"	"	
1.033	4.30	9.13	13.43	"	"	
1.033	4.10	9.09	13.19	"	"	
1.033	4.10	9.09	13.19	"	"	
1.033	3.85	9.03	12.88	"	"	
1.031	4.25	8.61	12.86	"	"	
1.033	3.70	9.00	12.70	"	"	
1.032	.....	.....	.....	"	"
1.033	4.35	9.14	13.49	"	"	
1.033	4.60	9.19	13.79	"	"	
1.035	4.45	9.67	14.12	"	"	
1.036	3.60	9.74	13.34	"	"	
.....	3.50	.....	.....	"	"
1.033	3.15	8.89	12.04	"	"	
1.033	3.30	8.92	12.22	"	"	
1.032	4.25	8.86	13.11	"	"	
1.033	4.05	9.07	13.12	"	"	
1.032	4.05	8.82	12.87	"	"	
.....	1.00	.....	.....	"	"	Buttermilk.
1.035	3.80	9.53	13.33	"	"	
1.033	4.10	9.09	13.19	"	"	
1.030	4.45	8.40	12.85	"	"	
1.031	3.80	8.52	12.32	"	"	From A. M. Black.
1.033	3.60	8.98	12.58	"	"	From Walter Dingle.
1.031	4.30	8.62	12.92	"	"	From E. Downing.
.....	0.10	.....	.....	"	"	From S. L. VanMeter.
1.031	4.60	8.68	13.28	"	"	Buttermilk.
.....	0.30	.....	.....	"	"
1.031	3.85	8.53	12.38	"	"	Buttermilk.
1.036	3.60	9.74	13.34	"	"	
1.030	4.80	8.47	13.27	"	"	
1.031	3.70	8.50	12.30	"	"	
1.035	5.45	9.87	15.32	"	"	
1.030	3.65	8.24	11.89	"	"	
1.032	3.75	8.76	12.51	"	"	
1.035	3.95	9.56	13.51	"	"	
1.0312	5.35	8.89	14.24	"	"	
1.0352	2.60	9.30	11.90	"	"	
.....	3.60	.....	.....	"	"
.....	4.25	.....	.....	"	"
.....	4.75	.....	.....	"	"
.....	4.55	.....	.....	"	"
.....	3.80	.....	.....	"	"
.....	4.00	.....	.....	"	"
1.0323	4.35	8.90	13.25	"	"	
1.0323	3.10	8.63	11.73	"	"	
1.0296	3.40	8.19	11.59	"	"	
1.021	12.00	.....	.....	"	"
1.0296	3.45	8.19	11.64	"	"	
1.0287	3.70	8.00	11.70	"	"	From W. B. Cox, Indiana.
1.0305	4.45	8.64	13.09	"	"	From Chas. Schwartz, Indiana.
1.0287	5.10	8.28	13.38	"	"	From W. M. Simmons, Indiana.
1.0305	4.20	8.60	12.80	"	"	From E. M. Lutz, Indiana.
						From Mrs. Morris, Indiana.

MILK NOT FOUND

Station No.	Where Obtained	Date of Collection	Seller or Producer
5442	Louisville	April 1, 1899	H. E. Lewman
43	"	"	" "
44	"	"	" "
45	"	"	O. F. Shaftlein
46	"	"	T. J. Wathen
47	"	"	A. C. Cole
48	"	"	Fred. Sanders
49	"	"	W. F. Sheets
5450	"	"	Wilson Clare
52	"	April 10, 1899 ...	J. P. Gray
55	"	"	G. W. Cuscaden
56	"	"	" "
57	"	"	B. Pater
58	"	April 12, 1899 ...	J. P. Gray
5461	"	April 20, 1899 ...	B. Grieve
5480	"	May 19, 1899	J. Theis
5514	"	"	E. W. Sewell
15	"	"	J. Reinert
16	"	"	F. F. Gilmore
17	"	"	E. Smithers
18	"	Aug. 14, 1899 ...	J. Strohmeier
5802	"	"	" "
3	"	"	A. Schoenbaechler
4	"	"	J. C. Straut
5	"	"	B. Pater
9	"	Aug. 15, 1899	Fred. Meyer
5811	"	"	F. Von Allen
5814	"	"	T. Schuler
15	"	"	David Otto
19	"	"	George Bouse
20	"	Aug. 18, 1899	C. Bisig
21	"	"	J. Bischler
22	"	"	Von Grunigen Bros.
23	"	"	S. Lucas
24	"	"	" "
25	"	"	" "
27	"	"	The Elite
5830	"	"	M. F. Blanton
31	"	Aug. 21, 1899	Tip Top Dairy
33	"	"	" "
34	"	"	" "
35	"	"	" "
36	"	"	" "
37	"	"	" "
38	"	Aug. 23, 1899	Kentucky Dairy
39	"	"	Tip Top Dairy
40	"	"	" "
41	"	"	Sollberger & Schmidt
42	"	"	Gauman & Bro.
43	"	"	L. Liebert
44	"	"	Kentucky Dairy
47	"	"	J. L. Simcoe
48	"	"	G. W. Cuscaden
49	"	"	Kentucky Dairy
5851	"	"	" "
52	"	"	" "
53	"	"	C. Rodenbonder

ADULTERATED.

Specific Gravity	Fat per cent	Solids Not Fat per cent	Total Solids per cent	Anti-septics	Milk Color	Remarks
1.0305	4.60	8.68	13.28	None	None.....	F. S. James, Indiana.
1.0296	4.90	8.49	13.39	"	"	J. W. Ashton, Indiana.
1.0287	4.20	8.10	12.30	"	"	Mrs. N. Zink, Indiana.
1.0278	4.60	7.93	12.53	"	"	N. G. Adair, Indiana.
1.0305	5.65	8.89	14.54	"	"	
1.0314	3.60	8.55	12.15	"	"	
1.0259	8.80	.....	.....	"	"
1.0305	4.70	8.57	13.27	"	"	
1.0340	3.70	9.26	12.96	"	"	
1.0305	4.90	8.62	13.52	"	"	
.....	3.18	.....	.....	"	"
.....	2.91	.....	.....	"	"	From W. H. Bell.
.....	2.70	.....	.....	"	"	From Scott Bell.
.....	2.96	.....	.....	"	"
.....	3.22	.....	.....	"	"
1.0303	4.60	8.51	13.11	"	"	
1.0287	3.85	7.96	11.81	"	"	
1.0318	4.50	8.87	13.37	"	"	
1.0329	2.80	8.80	11.60	"	"	
1.0344	3.60	9.34	12.94	"	"	
1.0329	3.35	8.90	12.25	"	"	
1.0330	3.00	8.99	11.99	"	"	
1.0330	3.20	9.03	12.23	"	"	
1.0335	3.00	9.12	12.12	"	"	
1.0335	3.10	9.14	12.24	"	"	
1.0290	3.90	8.17	12.07	"	"	
1.0280	4.20	7.98	12.18	"	"	
1.034	3.20	9.28	12.48	"	"	
1.0335	3.00	9.12	12.12	"	"	
1.033	3.00	8.99	11.99	"	"	
1.0298	4.20	8.43	12.63	"	"	
1.0295	3.00	8.11	11.11	"	"	
1.0283	3.40	7.95	11.35	"	"	
1.0325	4.50	9.17	13.67	"	"	
1.0300	4.40	8.52	12.92	"	"	From J. H. Sagaser.
1.0305	4.70	8.71	13.41	"	"	" S. E. Cooper.
1.0320	4.50	9.04	13.54	"	"	" Wm. Fields.
1.0305	4.60	8.69	13.29	"	"	" T. Z. Sherley.
1.0280	4.20	7.98	12.18	"	"	" E. A. Dunn.
1.0340	2.80	9.20	12.00	"	"	" Ellis Potter.
1.0295	4.20	8.36	12.56	"	"	" W. D. Clare.
1.0250	4.20	7.22	11.42	"	"	" W. H. Snider.
1.0310	3.80	8.65	12.45	"	"	" S. A. Prather.
1.0305	4.00	8.57	12.57	"	"	" Chas. Litzler.
1.0250	4.00	7.19	11.19	"	"	" N. R. Blankenbaker.
1.0285	4.10	8.09	12.19	"	"	" Lewman & Graves.
1.0300	3.00	8.24	11.24	"	"	" S. P. Lewman.
1.0305	4.00	8.57	12.57	"	"	
1.0310	4.00	8.69	12.69	"	"	
1.0290	3.50	8.09	11.59	"	"	
1.0240	8.80	.....	.....	"	"
1.0315	3.60	8.73	12.33	"	"	
1.0320	3.80	8.90	12.70	"	"	
1.0300	4.00	8.44	12.44	"	"	From Scott Bell.
1.0310	3.70	8.60	12.33	"	"	" J. T. Cowherd.
1.0315	4.20	8.86	13.06	"	"	" G. F. Collins.
1.0305	3.00	8.37	11.37	"	"	

OLEOMARGARINE

Station No.	Where Obtained	Date of Collection	From Whom Obtained
6077	Frankfort	Nov. 28, 1899	Ree Hive Grocery Co.
4575	Lexington	Aug. 31, 1898 ...	W. W. Gill & Son
4576	"	"	W. M. Gulley
4579	"	Sept. 3, 1898	J. B. Rogers & Co.
4780	"	Oct. 17, 1898	Blue Grass Grocery Co.
5175	"	Feb. 7, 1899 ....	.....
5184	"	Feb. 11, 1899 ....	.....
4687	Louisville	Sept. 9, 1898	Grem Bros.
4688	"	Sept. —, 1898	S. Lucas
4689	"	Sept. 8, 1898	A. Button & Son
4690	"	"	A. Button & Son
4691	"	Sept. —, 1898 ...	J. S. Spinner
4692	"	"	Mammoth Grocery Co.
4693	"	Sept. 9, 1898	Swift Bros.
4694	"	Sept. 6, 1898	Jacob Gast
4695	"	Sept. 9, 1898 ...	Swift Bros.
4696	"	Sept. 3, 1898	E. H. Jenne
4697	"	Sept. —, 1898 ...	Binder Bros.

OLEOMARGARINE NOT

Station No.	Where Obtained	Date of Collection	From Whom Obtained
4779	Lexington	Oct. 7, 1898	W. W. Gill & Son
5013	"	Dec. 15, 1898	" " "

SYRUP, HONEY AND

Station No.	Represented to be	Where Obtained	Date of Collection	From Whom Obtained
5063	Strained Honey	Covington	Oct. 29, 1898	Wm. J. Drew
4587	White Clover Honey	Fulton	Aug. 30, 1898	S. Lovelace
5862	Honey	Louisville	Feb. 4, 1899	Moses & Nicholls
5864	"	"	"	McCulloch & Jenne
5865	"	"	"	Mammoth Grocery Co.
4560	Virginia Sorghum	Mayfield	Aug. 24, 1898 ...	T. A. Slaughter
4586	Royal Sugar Syrup	Murray	Aug. 27, 1898 ...	McElrath & Sexton
5089	Country Sorghum	"	"	T. Shipley
4564	Sugar Syrup	Paducah	Aug. 22, 1898	J. E. Potter
5093	Honey	Louisville	Sept. 9, 1898 ....	.....
5094	" .....	" .....	" .....	.....

ADULTERATED.

Make or Brand as marked on package or stated by retailer	Retail price per pound	Reichert Number	Valenta Test (Degs. C)	Color	Remarks
Braun & Fitts' Holstein.....	\$0 20	.....	96	Azo-dye ...	Colored to look like butter.
Friedman's Oak Grove .....	.....	1.3	.....	" .....	" " "
Capital City Dairy Co. ....	.....	2.5	.....	Annatto ...	" " "
Braun & Fitts' Holstein.....	20	.....	.....	Azo-dye ...	" " "
Capital City Dairy Co.'s Elgin	20	1.3	.....	Annatto ...	" " "
Braun & Fitts' Holstein .....	.....	3.2	91	Azo-dye ...	Duplicates for comparison.
" .....	.....	3.4	91	"	" " "
" .....	.....	2.5	.....	" .....	Colored to look like butter.
Wm. Moxley, Chicago .....	.....	.....	.....	" .....	" " "
Wm. Moxley, Fancy D. ....	.....	.....	.....	" .....	" " "
Swift & Co.	12½	.....	.....	" .....	" " "
Braun & Fitts' Elgin .....	.....	.....	.....	" .....	" " "
"	"	" " "
Factory No. 4, 1st Dist., Ill...	.....	.....	.....	Coal-tar dye	" " "
Capital City Dairy Co.	20	.....	.....	Azo-dye ...	" " "
"	20	.....	.....	Annatto ...	" " "
"	20	.....	.....	" .....	" " "
Kingman & Co.	15	.....	.....	Azo-dye ...	" " "
Kingman & Co., Bluebell	15	.....	.....	Coal-tar dye	" " "
.....	20	.....	.....	Azo-dye ..	" " "

FOUND ADULTERATED.

Make or Brand as marked on package or stated by retailer	Retail price per pound	Reichert Number	Valenta Test (Degs. C)	Color	Remarks
Friedmann Mfg. Co.	86	None	No cotton seed oil found.
"	84	"	Trace cotton seed oil found

SUGAR, ADULTERATED.

Manufacturer or Wholesaler	Polarization		Sugar Per Cent	Remarks
	Direct	Invert		
Kenwood Mfg. Co.	69.	55.	10.5	Contains glucose.
Dodson & Brown	81.4	77.	3.3	" "
Geo. McMechen & Co.	22.	20.	.....	" "
Dodson & Brown Mfg. Co.	78.6	77.	.....	" "
Geo. McMechen & Co.	20.	18.	.....	" "
Noble, Overby & Co.	144.	139.5	3.50	Glucose syrup. Contains salicylic
Covington Bros.	157.4	157.4	None	Glucose syrup.
Weeks Bros.	129.6	126.5	2.4	" "
M. Livingston & Co.	145.2	137.8	5.5	Contains glucose.
W. Va. Preserving Co.	149.	146.5	1.9	" "
"	79.2	77.5	2.1	" "

SYRUP, HONEY AND SUGAR

Station No.	Represented to be	Where Obtained	Date of Collection	From Whom Obtained
5062	Maple Syrup	Covington	Oct. 29, 1898	J. B. Purk
5064	Strained Honey	"	"	R. Hamilton Grocery Co.
5238	Maple Syrup	"	Feb. 24, 1899	John Evans
6152	"	Danville	Dec. 11, 1899	Durham & Cecil
6155	White Clover Honey	"	"	"
6144	Maple Syrup	Frankfort	Nov. 28, 1899	Howard Noonan
6142	"	Georgetown	Nov. 27, 1899	J. J. Thomason
6143	H. S. Syrup	"	"	"
4988	Maple Syrup	Lexington	Nov. 29, 1898	W. W. Williamson
5067	Maple Syrup	"	Dec. 17, 1898	J. D. McGuire
5246	Comb Honey	"	Jan. 3, 1899	A. E. Shields
5293	Maple Syrup	"	Feb. 4, 1899	H. M. Sousley
5294	"	"	"	Simmons & Co.
5295	"	"	"	J. T. Honaker
5296	"	"	"	J. E. Butler
5297	"	"	"	W. F. Burke
5298	Strained Honey	"	"	Vogt & Foley
5299	Maple Syrup	"	Jan. 7, 1899	John Hutchison
5300	Strained Honey	"	Feb. 4, 1899	Geo. Harris
5333	Maple Syrup	"	March 24, 1899	Curry, Tunis & Norwood
5654	"	"	"	Shouse & Looney
5655	"	"	April 29, 1899	J. W. Nelson
5682	Honey	"	July 20, 1899	Fred. W. Sauer
5860	Maple Syrup	Louisville	Feb. 4, 1899	Moses & Nicholls
5861	"	"	"	E. W. James
5863	Comb Honey	"	"	E. W. James
5866	"	"	"	C. W. Jefferson
4556	Maple Syrup	Mayfield	Aug. 24, 1898	Carter Bros.
4559	Rose Drip	"	"	T. A. Slaughter
5092	Royal Sugar Drips	"	"	C. Wallis
5091	Table Syrup	Murray	Aug. 26, 1898	Slaughter & Son
5065	Strained Honey	Newport	Oct. 29, 1898	A. Dames
5066	"	"	"	J. H. Voss & Co.
5090	Maple Syrup	Nicholasville	Nov. 12, 1898	H. H. Lowry
6145	"	Paris	Nov. 29, 1899	A. C. Cook
6146	"	"	"	L. Solashin & Co.
6153	Honey	"	"	Lavin & Connell
6156	"	Richmond	Dec. 9, 1899	Arnold Bros.
6150	Maple Syrup	Versailles	Dec. 7, 1899	Berryman Bros.
6147	"	Winchester	Dec. 2, 1899	Lee Evans & Bro.
6161	Granulated Sugar	"	"	Blue Grass Grocery Co.
6102	Confectioners' Glucose	Lexington	"	"
6103	41 Degree Glucose	Louisville	"	"

NOT FOUND ADULTERATED.

Manufacturer or Wholesaler	Polarization		Sugar Per Cent	Remarks
	Direct	Invert		
L. G. Yoe & Co.	54.	-22.	57.9	
Hudson Packing Co.	-21.	-21.6	66.8	
Ontario Preserving Co.	66.6	-23.	59.1	
Scudder Syrup Co.	56.4	-21.7	3.2	Contains much invert sugar.
Theo. Sarlls Maple Syrup Co. ...	-60.8	-21.1	65.4	
H. S. Co., Cleveland, Ohio	64.6	-21.4	21.1	
L. G. Yoe & Co.	8.6	-19.2	40.4	Water, 6.4. Ash, .26.
Manierre Yoe Syrup Co.	35.2	-18.	59.8	
Sprague, Warner & Co.	58.2	-21.6	91.	
Williams Bros. & Charbonneau .	91.5	-30.4	2.	
Wm. R. Manierre	-14.8	-17.5	54.9	
Welch Bros. Maple Co.	52.5	-20.5	61.	
E. G. Dailey Co.	60.6	-20.6	61.2	
Wm. R. Manierre	60.1	-21.6	60.6	
Mr. Downing	59.6	-21.3	60.8	
J. C. Cantrill	59.9	-21.2	4.7	Ash, .51.
J. W. Nelson	-7.8	-14.1	5.3	" .87.
Country Honey	60.2	-21.5	57.8	" .98.
Scudder, Conn & Brown	-10.1	-17.2	54.6	Reducing sugar, 2.7.
J. D. Stiltz Preserving Co.	56.5	-19.3	64.9	" " 43.6.
Reid & Murdock	57.4	-19.1	23.1	" " 66.6.
Columbia Preserving Co.	51.8	-19.5	61.5	" " 72.9.
R. G. Terrell	-10.2	-14.2	6.3	Glucose syrup colored with cochineal.
Covington Bros.	64.4	-21.	2.7	Glucose syrup.
John H. Bradshaw	11.	-19.4	1.8	
Chas. F. Muth & Co.	-3.4	-5.5	6.	* Ash, .25.
L. G. Yoe & Co.	-10.3	-18.	59.2	
H. E. Langdon & Co.	63.8	-18.6	62.1	
Schnull & Co.	160.	159.3	62.8	
Chas. F. Muth & Son	153.8	145.6	1.8	
Country Honey	149.6	146.1	1.2	
Francis H. Leggett & Co.	-15.8	-18.2	61.8	
Sprague, Warner & Co.	-9.8	-17.8	62.6	
H. E. Langdon & Co.	57.6	-19.4	99.8	
.....	62.	-19.7	.....	Used in candy, preserves, etc.
.....	62.	-20.6	.....	Analyzed for comparison.
.....	-14.5	-16.9	.....
.....	-17.	-18.6	.....
.....	60.8	-20.8	.....
.....	62.2	-20.1	.....
.....	99.8	.....	.....
.....	180.6	179.	.....
.....	165.8	165.	.....

PEPPER, SPICES, COFFEE, ETC.

Seventeen samples of these articles were examined by means of the microscope, twelve of them being found adulterated by admixture with foreign material.

Adulterated.

- 4675—Ground Cayenne, Newton & Frank, Cincinnati, O. Bought of E. W. James, Louisville, September, 1898; contains corn starch.
- 4677—Ground Mace, same, bought same; contains starch.
- 4678—Ground Cloves, same, bought same; contains starch.
- 4679—Ground Allspice, same, bought same; contains foreign starch.
- 4680—Ground White Pepper, same, bought same; contains foreign starch.
- 4681—Ground Black Pepper, same, bought same; contains Demerara pepper and much foreign starch.
- 4682—Ground Mustard, same, bought same; contains starch.
- 4683—Ground Cinnamon, same, bought same; contains starch.
- 4561—"Pure Ground Pepper," Nash Smith Tea & Coffee Co., St. Louis, Mo. Bought of C. A. Payne, Mayfield, Aug. 24, 1898; contains foreign starch.
- 4676—Ground Ginger, Weeks Bros., Paducah, Ky. Bought of Tilghen Shipley, Murray, Ky., Aug. 26, 1898; contains wheat starch.
- 4566—"Primrose Strictly Pure Pepper," R. G. Terrell, Paducah. Bought of J. L. Brown, Paducah; contains foreign starch.
- 4667—Ground Coffee, "Evans' Star Best." Bought of M. F. Simons, Russellville; contains chicory and cereal starch.

Not Found Adulterated.

- 5003—"Madja" coffee, roasted, James Heekin & Co., Cincinnati, O. Bought of J. B. Rogers & Co., Lexington, Ky.
- 4558—"Morning Joy," ground coffee, New Orleans Coffee Co., New Orleans and Atlanta. Bought of R. D. Robertson & Co., Mayfield, Aug. 24, 1898.
- 4565—Ground Black Pepper, E. R. Durkee & Co., New York, Gauntlet brand. Bought of Jo. T. Bishop, Paducah, Aug. 22, 1898.
- 4666—Ground Pepper, Thompson & Taylor Spice Co., Chicago, Ill. Bought of Robertson Bros., Murray, Ky., Aug. 26, 1898.
- 4674—"Strictly Pure Cayenne Pepper," Weeks Bros. & Co., Paducah, Ky. Bought of Tilghen Shipley, Murray, Aug. 26, 1898.

CORN STARCH—NOT FOUND ADULTERATED.

One sample was examined, no adulteration being found.

5098—"Oxford High Grade Corn Starch." Bought of Ryan Furgeson, Murray, Ky. Moisture, 12.13 per cent.; protein, 0.37 per cent.; ash, 0.12 per cent.; starch, by difference, 87.38 per cent.

COOKING SODA—NOT FOUND ADULTERATED.

Three samples were analyzed, none being found to contain anything unwholesome or that would cause the article to be pronounced adulterated. There was some difference in quality, however, the "Arm and Hammer" brand being the purest and DeLand's "Cap Sheaf" being the lowest grade.

5096—"Cow Brand Soda," John Dwight & Co., New York. Bought of R. D. Robertson & Co., Mayfield, Ky.; bicarbonate of soda, 98.7 per cent.; chloride of sodium, 0.3 per cent.; carbonate and sulphate of soda, moisture, etc., 1.0 per cent.

5097—"Cap Sheaf Soda," DeLand & Co., Fairport, N. Y. Bought of Ryan & Furgeson, Murray, Ky.; bicarbonate of soda, 95.1 per cent.; chloride of sodium, 0.5 per cent.; carbonate and sulphate of soda, moisture, etc., 4.1 per cent.

4595—"Arm and Hammer Soda," Church & Co., New York. Bought of J. E. Potter, Paducah, Ky.; bicarbonate of soda, 99.2 per cent.; carbonate of soda, traces of insoluble matter and moisture, 0.8 per cent.

SWEET CIDER AND GRAPE JUICE—ADULTERATED.

Three samples were examined for antiseptics, all of them being found to contain salicylic acid.

4607—"Welch's Grape Juice," The Welch Grape Juice Co., Westfield, N. Y. Bought of T. P. Taylor & Co., Louisville, Sept. 9, 1898; contains salicylic acid.

4706—"Pure Cherry Wine Cider," M. Livingston & Co., Paducah, Ky. Bought of M. L. Wilson, Lynnvile, Aug. 29, 1898; contains salicylic acid.

4707—"Blackberry Cider," Price & Lucas Cider & Vinegar Co., Louisville. Sample obtained in Lexington for comparison; contains salicylic acid.

4573—"Sparkling Sweet Cider," Hirsch Bros. & Co., Louisville, Ky. Bought of G. N. Leisner, Paducah, Ky., Aug. 22, 1898; contains salicylic acid. (Messrs. Hirsch Bros. state that they have this bottled for them in New York State, and did not know it contained antiseptic. They will hereafter have it to comply with the law.)

MILK COLOR.

5462—"The Ideal Milk and Cream Color," "made from the best annatto," The Creamery Package Manufacturing Co., Chicago. Bought of J. H. Parker, Lexington, Ky. Chemical tests agree with those of annatto.

ADULTERATED

Station No.	Represented to be	Where Obtained.	Date of Collection	From Whom Obtained
5240	Cider Vinegar.	Covington	Feb. 24, 1899	J. E. Stephens
5241	" "	" "	" "	B. H. Kroger
5243	" "	" "	Feb. 25, 1899 ...	B. H. Brames
6214	Apple	Danville	Dec. 11, 1899 ...	A. B. Gadberry
6215	" "	" "	" "	Blue Grass Grocery Co. ...
6199	" "	Frankfort	Nov. 28, 1899 ...	N. F. Richardson
6200	" "	" "	" "	Duvall & Rogers
6194	Cider	Georgetown	Nov. 27, 1899 ...	Gus Margolen
4885	Apple	Lexington	Nov. 2, 1898	B. F. White
4889	" "	" "	Nov. 4, 1898	W. S. Bradley
5024	Cider	" "	Dec. 20, 1898	" "
5025	Apple	" "	Dec. 23, 1898 ...	B. F. White
5245	" "	" "	Dec. 21, 1898 ...	D. P. Sallee
5639	Cider	" "	June 30, 1899 ...	H. M. Griffing
5636	Apple	" "	July 11, 1899 ...	Wm. Shields
5667	Cider	" "	" "	M. Smith
5676	Apple	" "	July 12, 1899 ...	Mitchell & Waller
5679	" "	" "	July 20, 1899 ...	Jo. Dinelli
5074	Cider	Louisville	Sept. 7, 1898	" "
5391	" "	" "	June 24, 1898 ...	R. J. Fitzgerald
5393	" "	" "	" "	Joseph Riley & Sons
5394	Apple	" "	" "	Henry Kerler
5397	" "	" "	" "	Wm. Norton & Son
5398	" "	" "	" "	R. B. Boyd
5399	" "	" "	" "	Frank Waters
5400	Crab	" "	" "	Hikes & Hess
5401	Cider	" "	" "	Ben Saltenbrock
5403	Apple	" "	Jan. 25, 1899 ...	A. J. Ross & Son
5406	Cider	" "	" "	E. H. Jenne
5407	" "	" "	" "	Theo. Evers
5409	" "	" "	" "	L. Zook
5411	" "	" "	Jan. 30, 1899 ...	R. M. Hughes & Co.
5417	" "	" "	Feb. 1, 1899	Hubert Haas
5419	" "	" "	" "	Phil. Steinacker
5423	" "	" "	" "	Schlange Bros.
5427	" "	" "	Feb. 2, 1899	L. G. Stoke
5429	" "	" "	Feb. 3, 1899 ...	Frank Brown
5558	" "	" "	May 19, 1899 ...	Ross & McCall
5559	" "	" "	" "	" "
5560	" "	" "	" "	J. F. Bader
5561	" "	" "	" "	Leo Klarer
5867	" "	" "	Aug. 22, 1899 ...	J. Wm. Miller
5059	" "	Newport	Oct. 29, 1898 ...	Walter Bennett
5060	" "	" "	" "	B. H. Kroger
5061	" "	" "	" "	Albert Dames
5078	" "	Nicholasville ...	Nov. 12, 1898 ...	J. R. Miller
5079	Apple	" "	" "	Martin & Greene
4549	" "	" "	" "	Gus Beyer
4550	" "	Paducah	June 6, 1898	J. Biederman Grocery Co.
4551	" "	" "	Aug. 23, 1898 ...	J. Bishop
4553	" "	" "	Aug. 22, 1898 ...	Jo. Bishop
6202	Cider	Paris	Aug. 23, 1898 ...	Wes. Flowers
4887	Apple	Russellville	Nov. 29, 1899 ...	C. D. Mitchell
4618	" "	Somerset	Sept. 6, 1898 ...	Mary F. Simmons
4619	Malt	" "	Sept. 16, 1898 ...	Ogden & Son
4886	Apple	" "	" "	" "
5076	" "	" "	Sept. 24, 1898 ...	" "
6209	" "	Versailles	Dec. 9, 1899	J. E. Harris
6213	" "	" "	" "	J. R. Prentiss
6206	" "	Winchester	Dec. 2, 1899	J. M. Lockman

*Hirsch Bros. state they have not sold Theo. Evers any vinegar for several years, except 1 bbl. white distilled vinegar on August 1, 1898.

†Hirsch Bros. state they sold Hubert Haas 2 bbls. of white distilled vinegar and 1 bbl. of pickling vinegar, all properly stamped on the bbl.

‡Barrel stenciled "Jones & Bros., white wine vinegar."

VINEGAR.

Manufacturer or Wholesaler	Specific Gravity	Acetic Acid Per Cent	Total Solids Per Cent	Ash Per Cent	Kind of Color.
The Ahlers Co.	1.0055	2.64	.23	.02	Natural.
.....	1.0095	3.84	1.00	.20	
.....	1.0065	3.72	.18	.02	
.....	1.007	3.84	.37	.....	Caramel.
H. E. Langdon	1.006	4.08	.15	.....
R. M. Hughes & Co.	1.008	3.00	.29	.06	"
Price & Lucas	1.008	3.48	.28	.07	"
.....	1.008	3.96	.36	.04	"
R. M. Hughes & Co.	1.007	3.73	.31	.04	Caramel.
.....	1.030	3.42	.34	.04	
Price & Lucas	1.0085	4.86	.33	.05	Caramel.
R. M. Hughes & Co.	1.0085	4.32	.34	.03	
Price & Lucas	1.007	3.69	.26	.06	Caramel.
Wallace & Gregory Bros	1.010	5.04	.61	.13	
.....	1.010	4.48	.29	.02	"
.....	1.010	4.60	.48	.11	"
Price & Lucas	1.010	4.84	1.22	.18	"
Wallace & Gregory Bros.	1.008	4.12	.39	.03	"
Acme Vinegar Co.	1.009	3.87	.73	.05	Caramel.
R. M. Hughes & Co.	1.0092	5.17	.33	.04	
Price & Lucas	1.0068	4.12	.42	.06	Caramel.
.....	1.0063	4.75	.30	.04	
Country made	1.0013	3.50	.24	.04	Caramel.
Ouerbacker, Gilmore Co.	1.0038	3.56	.28	.03	
Louisville Cider & Vinegar Co...	1.004	4.42	.27	.04	Caramel.
Price & Lucas	1.0023	3.00	.73	.09	
Louisville Cider & Vinegar Co...	1.0022	3.31	.73	.08	Caramel.
.....	1.0067	4.42	.49	.05	
Country made	1.0033	3.54	.76	.19	Caramel.
*Hirsch Bros. & Co.	1.0067	4.36	.40	.10	
Louisville Cider & Vinegar Co...	1.0026	3.96	.48	.09	Caramel.
R. M. Hughes & Co.	1.0129	7.12	.90	.16	
+Hirsch Bros. & Co.	1.0053	4.05	.26	.03	Caramel.
Country made	1.0062	3.19	.78	.20	
.....	1.0019	3.62	.36	.03	Caramel.
.....	1.0065	4.24	.69	.09	
.....	1.008	4.85	.49	.05	Caramel.
.....	1.010	4.63	.39	.04	
‡Jones Bros.	1.008	4.80	.31	.04	Caramel.
.....	1.009	5.28	.41	.09	
Louisville Cider & Vinegar Co...	1.009	4.32	.43	.08	Caramel.
John Heeb (Jobber)	1.0075	4.20	.30	.03	
R. M. Hughes & Co.	1.010	4.56	1.09	.20	Caramel.
.....	1.0115	4.05	1.18	.24	
The Ahlers Co.	1.004	3.87	.31	.03	Caramel.
.....	1.007	1.50	.90	.18	
Wallace & Gregory Bros.	1.009	4.02	.32	.02	Caramel.
J. Friedman & Co.	1.006	3.78	.25	.05	
Paducah Vinegar Works	1.008	3.06	.76	.24	Caramel.
Wallace & Gregory Bros.	1.008	4.38	.93	.21	
Diamond Vinegar Co.	1.011	3.54	1.97	.11	Caramel.
The Power Vinegar Co.	1.007	3.42	.38	.03	
R. M. Hughes & Co.	1.0065	4.29	.40	.04	Caramel.
.....	.....	4.60	.38	.04	
.....	.....	3.60	.20	.03	Caramel.
.....	1.0055	4.59	.34	.04	
.....	1.006	3.72	.20	.03	Caramel.
Howard Black	1.006	2.40	1.06	.21	
Wallace & Gregory Bros.	1.0125	4.68	1.15	.07	Caramel.
R. M. Hughes & Co.	1.005	3.18	.35	.05	

VINEGAR NOT

Station No.	Represented to be	Where Obtained	Date of Collection	From Whom Obtained
5069	Cider vinegar	Bowling Green	Sept. 7, 1898	Massey & Rabold
5057	"	Covington	Oct. 29, 1898	Chas. Hand
5058	"	"	Feb. 24, 1899	George C. Goode
5239	"	"	Feb. 25, 1899	J. E. Stephens
5242	"	"	"	The R. Hamilton Grocery Co.
5244	"	"	"	The Great China Tea Co.
5215	Pickling vinegar	"	Feb. 18, 1899	D. G. McVean
6216	Apple vinegar	Danville	Dec. 11, 1899	W. O. Alexander
*6195	Cider vinegar	Georgetown	Nov. 27, 1899	K. Stone
6196	"	"	"	Blue Grass Grocery Co.
6197	Apple vinegar	Frankfort	Nov. 28, 1899	Mrs. Jas. O'Donnell
6198	Vinegar	"	"	M. Ellwanger
*4999	Apple vinegar	Lexington	Dec. 12, 1898	W. W. Patterson
5306	Family vinegar	"	March 17, 1899	Dr. E. M. Wiley
5332	"	"	March 23, 1899	"
5599	Apple vinegar	"	June 19, 1899	Alex Oaks
5638	Cider vinegar	"	June 29, 1899	G. H. Harris
5644	"	"	June 30, 1899	Jno. Hutchison
*5661	Apple vinegar	"	July 11, 1899	Scully & Gorham
5681	"	"	July 20, 1899	Fred W. Sauer
5720	Cider vinegar	"	Aug. 11, 1899	W. B. Chasteen
5721	"	"	"	Mitchell & Waller
5906	Apple vinegar	"	Oct. 3, 1899	A. McKenna
5070	"	Louisville	Sept. 2, 1898	John Kiefer
4888	Family vinegar	"	Sept. 6, 1898	Jacob Gast
4871	Pickling vinegar	"	"	John Kiefer
4872	Family vinegar	"	"	A. Button & Son
*4873	Cider vinegar	"	"	J. B. Wurach
4875	Tarragon vinegar	"	Sept. —, 1898	C. W. Jefferson & Co.
5392	Apple vinegar	"	Jan. 24, 1899	J. W. M. Miller
*5395	Cider vinegar	"	"	A. Marcus
5396	Apple vinegar	"	"	M. M. O'Connell
5402	Cider vinegar	"	"	M. Kaltenbach
5404	Apple vinegar	"	Jan. 25, 1899	Moses & Nicholls
5405	"	"	"	Mammoth Grocery Co.
5408	Cider vinegar	"	"	Fred Brinke
5410	"	"	Jan. 30, 1899	H. J. Heinz & Co.
*5412	"	"	Jan. 31, 1899	Eclipse Vinegar Works
*5413	"	"	"	Hirsch Bros. & Co.
*5414	"	"	"	Jacob F. Bader
*5415	"	"	"	Strosler & Co.
*5416	"	"	"	Jones Bros. & Co.
5418	"	"	Feb. 1, 1899	J. L. Hopf
5420	"	"	"	G. J. Schmidt
5421	"	"	"	Geo. Mayer & Son
5422	"	"	"	W. P. Grigsby
*5424	"	"	Feb. 2, 1899	C. K. Sprowl & Son
*5425	"	"	"	H. G. Eggers
*5426	"	"	"	Phillip Guetig
5428	"	"	"	Chas. Deckel
5520	"	"	May 24, 1899	Louis Zapp & Co.
5562	"	"	May 19, 1899	P. C. Clapper
5868	"	"	Aug. 22, 1899	W. H. Norwood
4555	Pickling vinegar	Mayfield	Aug. 24, 1898	John N. Counts & Co.
5068	"	Murray	Aug. 26, 1898	Ryan Ferguson
4552	"	Paducah	Aug. 22, 1898	G. N. Leisner
4554	Apple vinegar	"	"	J. E. Potter
6201	"	Paris	Nov. 29, 1899	V. K. Shipp
6203	"	"	"	Chas. Stephens
5077	Vinegar	Somerset	Sept. 24, 1898	Sears & Owens
6210	Apple Vinegar	Versailles	Dec. 7, 1899	Berryman Bros.
*6211	"	"	"	O'Neill Bro. & Co.
6212	"	"	"	J. M. Wasson
6204	"	Winchester	Dec. 2, 1899	W. T. Gilbert
6205	"	"	"	J. W. Holler
*6207	"	"	"	Tanner & Shipp
6208	"	"	"	Blue Grass Grocery Co.

*Apparently genuine but not completely soured.

FOUND ADULTERATED.

Manufacturer or Wholesaler	Specific Gravity	Acetic Acid Per Cent	Total Solids Per Cent	Ash Per Cent	Kind of Color
.....	1.026	4.44	4.29	.47	Natural.
.....	1.0175	5.79	2.45	.31	
.....	1.0155	4.44	2.53	.22	
H. J. Heinz & Co.	1.019	5.07	2.59	.24	
Williams Bros. & Charbonneau.	1.016	3.72	2.60	.29	
.....	1.016	5.94	1.90	.40	
The Ahlers Co.	1.0055	2.46	.20	.03	None.
Lutz & Schramm	1.017	4.02	2.78	.31	
Country made	1.0015	1.86	2.29	.30	Natural.
E. H. Langdon & Co.	1.0175	4.08	2.58	.27	"
H. J. Heinz & Co.	1.018	4.74	2.98	.33	"
Hirsch Bros. & Co.	1.013	3.72	1.60	.24	"
Country made	1.002	1.08	1.37	.27	"
Bayless Fruit Co.	1.012	4.77	.78	.19	Caramel.
.....	1.0055	3.84	.35	.07	"
H. J. Heinz & Co.	1.020	4.80	2.98	.36	Natural.
Hirsch Bros. & Co.	1.016	3.96	2.19	.30	
Country made	1.021	4.80	3.46	.27	
Hirsch Bros. & Co.	1.007	3.34	1.41	.46	Natural.
Hirsch Bros. & Co.	1.016	4.00	2.16	.31	"
Wallace & Gregory Bros.	1.016	4.06	1.89	.33	Caramel.
Price & Lucas	1.016	4.12	1.90	.36	"
Country made	1.014	4.26	2.29	.41	
R. M. Hughes & Co.	1.022	6.90	2.68	.41	Natural.
H. J. Heinz & Co.	1.0065	5.70	.33	.04	
Hirsch Bros. & Co.	1.009	5.40	.22	.02	None.
Country made	1.007	5.08	.24	.03	Caramel.
.....	1.012	3.18	1.49	.28	Natural.
.....	1.010	5.46	.30	.02	Caramel.
.....	1.0176	4.16	2.50	.14	
.....	.9996	.92	2.18	.19	
Hirsch Bros. & Co.	1.0156	4.17	2.14	.14	
H. J. Heinz & Co.	1.0205	8.41	1.92	.48	
John Mott	1.0121	4.18	1.60	.47	
H. J. Heinz & Co.	1.0152	4.85	2.50	.23	
.....	1.0177	4.72	2.72	.31	
.....	1.0169	4.79	2.53	.27	
Eclipse Vinegar Works	1.0115	2.60	2.02	.39	
John Mott	1.0195	4.73	3.27	.20	
Jacob F. Bader	1.049	2.95	1.22	.24	
.....	1.00 9	1.90	2.41	.30	
Jones Bros. & Co.	1.017	6.44	2.14	.35	
J. L. Hopf	1.0115	4.66	2.35	.41	
Country made	1.0137	3.99	1.95	.33	
.....	1.0188	5.40	3.17	.20	
.....	1.0103	4.79	1.06	.22	
C. K. Sprowl & Son	1.0108	3.68	2.23	.34	
Country made	1.004	3.38	2.00	.33	
.....	1.0046	3.16	1.89	.37	
.....	1.0125	4.79	2.12	.31	
.....	1.0013	4.14	1.75	.28	
Country made	1.012	4.44	1.25	.24	
H. J. Heinz & Co.	1.0185	4.56	3.02	.31	
Louisville Cider & Vinegar Wks.	1.006	4.23	.44	.11	
H. J. Heinz & Co.	1.010	5.46	.19	.02	Caramel.
Hirsch Bros. & Co.	1.005	3.48	.31	.05	
.....	1.016	4.56	2.51	.31	
Hirsch Bros. & Co.	1.015	4.44	1.68	.26	Natural.
Lutz & Schramm	1.0185	3.96	2.88	.28	
Red Cross Vinegar Co.	1.005	3.54	.22	.03	Caramel.
Country made	1.0195	4.80	4.67	.54	Natural.
.....	1.005	2.64	1.63	.32	"
Hirsch Bros. & Co.	1.0165	3.90	2.35	.30	"
Wallace & Gregory Bros.	1.0135	4.08	1.38	.15	
Knadler & Lucas	1.016	3.96	2.29	.31	Natural.
Country made	1.050	1.86	12.31	.32	"
F. M. Miller	1.0185	4.14	2.68	.33	

BAKING POWDERS.

It will be seen from these tables that 56 baking powders were analyzed, 45 of which were found to be alum—or alum-phosphate powders, and eleven cream of tartar powders.

Baking powders are a mixture of sodium bicarbonate and some form of acid salt, together with from one-fifth to one-half of their weight of starch or flour.

Baking powders may be classed under four kinds, depending upon the acid salt used, viz.: First, cream of tartar baking powders; second, alum baking powders; third, alum-phosphate baking powders; and fourth, phosphate baking powders.

So far as their efficiency in bread-making is concerned, they are about of equal value; that is to say they all liberate about the same amount of carbonic acid gas when fresh. It is the liberation of this carbonic acid gas in the dough in the process of baking that causes the bread to rise and to be porous.

When baking powders are used in bread-making, a chemical change takes place, caused by the water used in mixing the dough and the heat in baking the bread resulting in the evolution of carbonic acid gas, and a fixed residue remains in the bread. This fixed residue in the case of cream of tartar baking powder is potassium sodium tartrate, usually called "Rochelle Salts." In the case of alum baking powders or alum-phosphate baking powders, this residue, if the reaction is complete, is sodium sulphate and alumina hydrate or phosphate. In the case of phosphate baking powders, the residue is calcium and sodium phosphates.

In the case of alum baking powders, or alum-phosphate baking powders, there seems to be a difference of opinion as to whether they are injurious to health or not. It often happens that the reaction is not complete in the process of bread-making. In all such cases alum is left in the bread. This is known to be an astringent and irritant to the mucous membranes. Even when the reaction in bread-making is complete, the alumina hydrate is undoubtedly soluble to some extent in the juices of the stomach and albuminous substances, thus irritating weak stomachs, and is undoubtedly injurious in such cases.

I do not believe that by the use of alum baking powders injury to health has been sufficiently proven to prohibit the sale or manufacture of such baking powders. I am strongly of the opinion, however, that baking powders should be named and plainly labeled according to the acid salt which they contain; and I believe a pure food law should compel all manufacturers of cream of tartar baking powders to label their goods "Cream of Tartar Baking Powder"—not "Pure Baking Powder," or "Baking Powder;" all manufacturers

of alum baking powders should be compelled to label their goods "Alum Baking Powder;" all manufacturers of alum-phosphate baking powders should be compelled to label their goods "Alum-Phosphate Baking Powder;" and all manufacturers of phosphate baking powders, "Phosphate Baking Powder." Such labeling would inform the purchaser of the kind of baking powder he was buying.

As one of the objects of the present law is to inform the purchaser or consumer of what he is buying or consuming, I have ruled that baking powders should be labeled as above. All of the samples described in the table of adulterated baking powder were without any mark to show their true character. One of them bore on the label the legend "This powder contains C. T. S., Bic. Soda, E. A. & S. T." which leaves the reader uninformed as to whether the contents of the can was alum baking powder or not.

I think it would be better if this ruling could be incorporated as a part of the law.

BUTTER.

Of 147 samples of butter analyzed, 29 were found to be adulterated with oleomargarine, or kindred compounds. These 29 adulterated samples covered only those which were purchased as butter. A number of samples were purchased as butter, and when closely examined were found to be marked "oleomargarine." If the rulings of this station in regard to butter are within the scope of the law, or, if otherwise, the law could be made so as to contain these rulings, I am of the opinion that oleomargarine would have to be sold on its merits. Now it is put up mostly in pound packages and colored the same as butter and marked "Holstein," "Elgin," etc., to deceive the purchaser; grocers often advertise it and bill it as creamery butter, and when butter is called for, sell it as butter, putting it in a package, most generally in a paper sack, the bottom of which has previously been stamped "oleomargarine," in order to comply with the Federal law. Oleomargarine should not be advertised as butter. The law prohibits its sale as butter, and when consumers call for butter substitutes should not be offered them as butter. Oleomargarine, or any substitute for butter, when put up in pound packages, should be stamped plainly "oleomargarine" on the package before being wrapped, and the tissue paper which is wrapped around it should be stamped in bold letters "oleomargarine," and no other markings whatever, such as "Elgin," or "Holstein," etc., should be allowed on packages of oleomargarine or other butter substitute.

FLOUR.

A number of samples of flour were analyzed with the expectation

that corn starch might be found as an adulterant, but since the Government requires the stamping of all such flour, we have found no such adulterant.

JELLIES, PRESERVES, ETC.,

With the limited number of examinations of jellies, preserves, etc., which we have made, it becomes at once apparent that most of such are adulterated. Currant jellies in reality are apple jellies, colored like currant jellies, and phosphoric acid and glucose, etc., are put in as adulterants. Preserves contain in most instances salicylic acid, or other antiseptic, which should not be used except such statement is printed on the label. In cheap jellies glue or starch paste are often used; in fact, pure jellies and preserves are rare. In the height of fruit seasons the manufacturers of preserves, jellies, etc., buy up large quantities of fruit, and often times, no doubt, when it is unfit for consumption, because it has commenced decaying, and in order to preserve it from further decomposition, add salicylic acid, or other antiseptic, heat it, store it in large cans, and when the busy season is over this stock is worked up at leisure into preserves, jellies, etc., etc.

TOMATO CATSUPS.

Tomato catsups almost invariably contain salicylic acid, or other antiseptic. It is claimed by some of the manufacturers that this is essential to the preservation of them, but it is a well-known fact that if properly prepared at first, they can be put up without danger of fermentation; and I believe the law should be enforced requiring that all manufacturers of preserves, jellies, catsups, etc., should note plainly on the label if any antiseptic is used.

LARD.

Only a few samples of lard (40), were analyzed. Eleven were adulterated, mostly with cotton seed oil.

MILK.

One hundred and fifty samples of milk were examined. Thirty-five of these were found to be adulterated. Twenty-two contained preservatives; eight were artificially colored to make them look richer; and nine contained skim milk, or were watered. It is clearly a violation of the law to add preservatives to milk for the purpose of keeping it from souring, as such preservatives, at least, retard digestion when the milk is taken into the stomach, if they do not have a direct injurious effect on the system. When we re-

member that such milk is often sold to be fed to small children and infants, their use becomes criminal.

In several instances, milk was found to contain artificial coloring matter to make it look like rich milk or cream. In one instance this milk contained only 1.85 per cent. of fat, showing it to have been mixed with skim milk. This is clearly a deception, and a deception that will be practiced by the unscrupulous unless the law is strictly enforced.

Milk is a great absorber of impurities of all kinds. Germs of the various diseases grow and multiply in it at an enormous rate. It is the richest food for all bacteria. It becomes important, therefore, that dairy cattle should be kept in quarters free from filth and disease, and that they should be fed only wholesome food. Milk from cows quartered in close, unventilated barns, unkept and filthy, and which are fed on distillery slops, should be condemned as unfit for human consumption.

SPICES.

From our brief work on spices, we find them almost invariably adulterated, showing conclusively the necessity of the law.

VINEGAR.

Of the 126 samples of vinegar analyzed, we found fifty-nine adulterated. Most of these adulterated vinegars are vinegars made from low wines, called distilled vinegars, and colored with burnt sugar and labeled "Apple" or "Cider" vinegars. They are sold at wholesale anywhere at from 8 to 18 cents and retailed at from 20 to 40 cents per gallon. It costs the manufacturer very little to make these vinegars, and it is a deception and a fraud to sell them as cider or apple vinegars.

I believe the rulings in regard to vinegars should be incorporated as a part of the law.

CONCLUSION.

From the results obtained under the operation of the pure food law in so short a time, the necessity of the law is clearly shown. Fully 40 per cent. of all samples of food taken have been found adulterated. Some of the adulterants used are injurious to health; others have been put in to cheapen articles of food. From the investigations of the United States Senate Committee on Pure Foods, it is shown that nearly 90 per cent. of all food products are being adulterated in this country. Says Mr. H. B. Mason, in summing up the work before the Senatorial Committee:

"Dr. Wiley, who has been chief chemist of the Agricultural Department at Washington for many years, asserted that nearly every kind of food upon the market is, to a greater or lesser extent, adul-

terated, misbranded, or otherwise rendered harmful or fraudulent. More Vermont maple sugar is made every year in Davenport, Iowa, from cheap yellow sugar, flavored with vegetable extracts, than can be produced from all the maple trees in the whole State of Vermont! Currant jelly is manufactured from the cores and parings of apples utilized after they have been evaporated; glucose, sugar, a vegetable acid, and some coloring and flavoring matter complete the delicacy! Nearly all of the 'pure olive oil' imported to this country is cottonseed oil made in the Southern States, sent abroad and there refined and returned to us as the pure product of the Mediterranean olive!

"Dr. Wiley, Professor Mitchell, of the Wisconsin Dairy and Food Commission, and others told how the public purse is defrauded and the public health damaged by butter from which the milk fats have been taken and vegetable and animal fats added; how coffee has often been found to consist mainly of molasses and flour molded into berries; how fully 70 per cent. of beer is made without malt; how the color of tea leaves, pickles, and of certain vegetables and canned goods is made with copper salts and the like; how condensed milk is made from milk which has been skimmed and effectually ridden of nearly all of its nutritious material; how spices are not spices; how sardines are not sardines; how fifteen-year-old whisky can be made in fifteen minutes; and how communion wine is usually nothing but a weak solution of salicylic acid flavored with unfermented grape juice.* * * Antiseptics and preservatives of various kinds are used indiscriminately to defraud and to deceive.' and that these are nearly always harmful and sometimes positively dangerous.' Butchers use preserving fluids on choice scraps of meat which they lay aside for transformation into the delicacy known as 'Hamburger steak.' Milk and butter are preserved with 'freezine,' which is nothing more than a solution of formaldehyde. Fruits and fruit products are preserved with salicylic acid; bacon, sausage, and other animal products with boracic acid.

"It was disclosed also that this country had long been a 'dumping-ground, for all sorts of adulterated and inferior food products sent here from abroad."

"This neglect of the public health has enabled manufacturers of foods and drinks to go to almost unlimited lengths in the adulterations and cheapening of their products, regardless alike of the public purse and the public health. Their greed has had no check; their dishonesty has received no punishment. They have flourished and grown fat at the expense of the people who have consumed their inferior, counterfeited, and harmful products. This is no indifferent matter; it is further reaching in its effects than a cursory thought indicates. Reflection must convince any thoughtful man that the prevalent consumption of inferior and harmful foods by a people

must result in the physical and moral deterioration of that people."

In endeavoring to carry into effect the law, we have found as striking examples in our own State. Kentucky has been the "dumping-ground" for inferior food products that could not be sold in other States. I am told by a manufacturer of preserves that a carload of certain preserves were condemned as unfit for use in Ohio. Instructions were given to ship to Indianapolis, and add salicylic acid, boil and ship to Kentucky.

A grocer bought a carload of jelly at a very low price in tubs. After keeping a short time, it separated into glue and liquid and was worthless. One of the preserving companies in Louisville told me that runners were offering a cheap grade of glue for jellies, and certain preservatives, which they guaranteed chemists could not detect.

We have found salicylic acid, sometimes in large quantities, in tomato catsups, preserves, and other food products which were sold as pure. We have found formaldehyde and other preservatives in milk, which perhaps in some cases was fed to infants. The most striking example of all is in the case of essence of peppermint and essence of cinnamon sent to us from the county attorney of Pike county. These extracts both contained "wood alcohol," a poisonous substance, as one of the ingredients, and the county attorney stated that death had been caused by their use. In the preparation of these essences a mixture of wood alcohol and common alcohol was used in place of common alcohol, presumably to avoid the Government tax on alcohol.