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The 62nd Report on

**FOOD PRODUCTS**

And the 50th Report on

**DRUG PRODUCTS, 1957**

Bulletin 629

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## CONTENTS AND SUMMARY

<i>Materia</i>	<i>From</i>			<i>Total</i>	<i>Adulterated, misbranded or otherwise questionable</i>
	<i>Page</i>	<i>Food and Drug Commission</i>	<i>Other sources</i>		
<i>Foods</i>					
Alimentary pastes.....	6	18	...	18	13
Baked products:					
Bread.....	8	33	2	35	14
Other baked products.....	9	16	1	17	7
Beverages, carbonated, etc.:					
Alcoholic beverages.....	16	11	5	16	11
Breakfast drinks.....	16	6	...	6	1
Grape beverages and beverage bases.....	17	32	...	32	18
Lemonade and orangeade concentrates.....	21	4	...	4	2
Other beverages.....	21	59	1	60	28
Chocolate and cocoa.....	24	...	5	5	2
Coffee.....	24	1	1	2	2
Confectionery.....	25	18	...	18	16
Contaminated or decomposed foods.....	26	91	28	119	57
Dairy Products:					
Cheese.....	29	6	...	6	2
Cream.....	29	1	...	1	...
Dry skim milk.....	29	2	...	2	...
Ice cream and ice milk.....	31	6	...	6	3
Unfortified fluid milk.....	31	2	10	12	1
Vitamin D milk.....	31	...	236	236	27
Deceptively packed foods.....	35	23	...	23	19
Eggs.....	36	8	1	9	7
Extracts and flavors.....	36	10	3	13	9
Fish and shellfish.....	38	6	...	6	3
Flour.....	39	3	...	3	1
Fruit, canned.....	39	25	...	25	19
Fruit, dried.....	40	3	...	3	2
Fruit, fresh.....	40	6	85	91	5
Fruit juices.....	42	111	14	125	49
Meat and meat products:					
Frankforts.....	49	130	1	131	84
Hamburg.....	49	38	...	38	4
Pork sausage.....	49	42	...	42	13
Other products.....	54	7	46	53	2
Nuts.....	55	2	...	2	...
Oils and fats, vegetable:					
Blended oils.....	55	13	4	17	14
Oleomargarine.....	58	3	1	4	...
Olive and peanut oils.....	58	2	1	3	2
Preservatives.....	58	1	...	1	...
Salad dressings.....	58	3	...	3	2

CONTENTS AND SUMMARY—Concluded

Material	Page	From		Total	Adulterated, misbranded or otherwise questionable
		Food and Drug Commission	Other sources		
Spices.....	59	2	1	3	1
Spray residues.....	60	...	144	144	76
Syrups.....	60	12	3	15	6
Vegetables and vegetable products.....	62	26	2	28	19
Vinegar.....	63	15	...	15	11
Water.....	66	...	40	40	12
Miscellaneous.....	67	15	48	63	33
Totals.....		812	683	1,495	597
<i>Drugs</i>					
Aspirin tablets.....	70	2	1	3	...
Narcotics.....	70	...	28	28	20
Prescriptions.....	70	3	2	5	2
Tobacco.....	71	1	2	3	1
Veterinary medicine.....	71	1	...	1	...
Vitamin preparations.....	71	30	3	33	16
Miscellaneous drugs.....	75	7	7	14	6
Totals.....		44	43	87	45
Cosmetics.....	78	11	8	19	6
Collaborative.....	81	...	369	369	...
Total for all.....		867	1,103	1,970	648
Babcock glassware, etc.....	81	...	1,418	1,418	6

The Sixty-Second Report on  
FOOD PRODUCTS

and the Fiftieth Report on  
DRUG PRODUCTS

1957

H. J. Fisher

This report summarizes examinations of foods, drugs, cosmetics and miscellaneous materials submitted by the Food and Drug Commissioner and the Commissioner of Agriculture during the calendar year 1957, as well as like materials analyzed for the U. S. Geological Survey, the State Board of Fisheries and Game, the State Department of Health, the State Police, the State Supervisor of Purchases, local health departments, police, and others. The numbers of samples of all kinds analyzed for Federal, State and Station departments and not reported in other bulletins are also listed.

Sixteen hundred and one samples of foods, drugs, cosmetics and miscellaneous materials were examined during the year. This was an increase of 137 samples over the number analyzed in 1956, and of 385 over the 1955 total; it fell short by only 164 of meeting the all-time record of 1,765 samples set in 1952.

Meat and dairy products exceeded all other classes of foods in number of samples examined; there were respectively 264 samples of the former and 263 of the latter. Within these classes vitamin D milk led the list with 236 samples, followed by frank-forts with 131. Other classes of foods of which more than 100 samples were analyzed were: Materials tested for spray residues (144); fruit juices (125); foods suspected of insect or rodent contamination or decomposition (119); and carbonated and other beverages (118). Of the 87 drug samples 33 were vitamin preparations and 28 were narcotics (mostly submitted by police).

Inspection of the summary on the two preceding pages will show that 40 per cent of all food, drug and cosmetic samples tested were found to be adulterated, misbranded or otherwise objectionable. It should be emphasized that this does not mean that nearly half of the foods, drugs and cosmetics on the market are not what they should be; a large proportion of the samples whose analyses are reported herein were picked up just because the inspectors thought they warranted investigation or were improperly labelled.

There were two personnel changes in 1957. On December 3 Mrs. Joan Curtiss transferred to the Station library and was replaced as feed and fertilizer analyst by Miss Mary Lucibello (B.A., University of Connecticut). On January 1 Carrol Challengler resigned his laboratory dishwashing job; Mr. Edward Davis was hired to take his place, and remained until Mr. Knapp returned to duty on April 11.

The writer wishes to express his gratitude to all the members of the staff for their loyal and efficient work. All of our staff had some part in making the examinations reported in this bulletin, and if a few are singled out for special mention it is only because a greater proportion of their work has lain in the fields of food, drug and cosmetic analysis rather than in those of feed, fertilizer and pesticide analysis whose results are reported elsewhere. In general most of the food analyses were made by

Messrs. Wickroski and Squires, while the drugs and cosmetics were handled by Mr. Merwin. Dr. Hankin (ably supported by Mr. George Smith, Miss Barbara Johnson and other members of his staff) was responsible for the vitamin D milk and other vitamin assays. Miss Shepard made all of our microscopic examinations and did most of the testing listed under "Contaminated or Decomposed Foods", and Mr. Keirstead ran all of the spray residue determinations. Mr. Mathis was responsible for all spectrographic and infrared analyses, and his assistant Miss Agostini conducted the flame photometric sodium and potassium determinations.

In assigning credit, the work of Miss Caputo in typing and reading proof on this bulletin should not be overlooked. Attention should also be called to the fact that responsibility for obtaining the official samples reported on herein, and for taking legal action in cases where adulteration or misbranding was found, rested with Agriculture Commissioner Gill and Food and Drug Commissioner Frassinelli, Division Chiefs Goslee, Clark and Plank, and their inspectors. Except insofar as the Station possesses joint authority with the Food and Drug Commission in the promulgation of regulations it has no actual part in enforcement of the Food, Drug and Cosmetic Act; its functions under that law are only to arrive by analysis or other means at conclusions as to whether a particular sample does or does not violate the law, and to report its findings to the appropriate Commissioner.

## FOODS

### Alimentary Pastes

Federal regulations require that egg noodles contain not less than 87 per cent total solids and (on the dry basis) not less than 5.5 per cent of the solids of whole egg or egg yolk — whichever is declared. All alimentary paste products labelled as "Enriched" must contain the following proportions of vitamins and iron, in milligrams per pound: Thiamine (vitamin B<sub>1</sub>), 4 to 5; riboflavin (vitamin B<sub>2</sub>), 1.7 to 2.2; niacin, 27 to 34, and iron, 13 to 16.5. Of six samples of egg noodles, eight of macaroni and four of spaghetti submitted by the Commissioner, five were passed and thirteen were misbranded for failure to meet one or more of these requirements, or because of false claims to be high in protein or low in calories; one was short weight and slack filled:

*K.F.-1867. Buitoni Enriched Fancy Shaped Fusilli No. 50 Macaroni.* Buitoni Foods Corp., New York, N. Y. Labelled "Contains 20% Protein". Analysis showed: Water, 12.26, ash, 1.33, protein, 18.58, fiber, 0.45, available carbohydrate, 65.62, and fat, 1.76, per cent; riboflavin, 1.0, and niacin, 16.2, mg./lb.; calories/100 gm., 353. Not 20% protein as claimed; low in riboflavin and niacin.

*K.F.-1868. Buitoni Enriched Fancy Shaped Margherita No. 52 Macaroni.* Buitoni Foods Corp., New York, N. Y. Labelled "Contains 20% Protein". Analysis showed: Water, 12.18, ash, 1.12, protein, 19.47, fiber, 0.37, available carbohydrate, 65.82, and fat, 1.04, per cent; riboflavin, 1.3, and niacin, 15.3, mg./lb.; calories/100 gm., 351. Not 20% protein as claimed; low in riboflavin and niacin.

*K.F.-1869. Buitoni Enriched Fancy Shaped Mafalde No. 51 Macaroni.* Buitoni Foods Corp., New York, N. Y. Labelled "Contains 20% Protein". Analysis showed: Water, 12.11, ash, 1.24, protein, 18.98, fiber, 0.11, available carbohydrate, 66.14, and fat, 1.42, per cent; riboflavin, 1.5, and niacin, 16.2, mg./lb.; calories/100 gm., 353. Net weight was 7.64 oz. as against 8 oz. declared; fill of container was 63 per cent. Not 20% protein as claimed; low in riboflavin and niacin; short weight and slack filled.

*K.F.-1835. Buitoni Enriched Spaghettini 20% Protein.* Buitoni Foods Corp. New York, N. Y. Water, 9.83, ash, 1.28, protein, 18.81, fiber, 0.30, available carbohydrate, 68.14, and fat, 1.64, per cent; riboflavin, 1.9, and niacin, 36.5, mg./lb.; calories/100 gm., 363. Low in protein.

*J.B.-231. Buitoni Original & Only Lo-Starch 20% Protein Spaghettini (Thin Spaghetti No. 2).* Buitoni Foods Corp., New York, N. Y. Water, 8.28, ash, 0.94, protein, 19.78, fiber, 0.28, available carbohydrate, 69.36, and fat, 1.36, per cent; calories/100 gm., 369. Passed.

*K.C.-901. Buitoni 20% Protein Macaroni Original & Only Lo-Starch Spaghetti Twists No. 37.* Buitoni Foods Corp., New York, N. Y. Labelled: "Less Starch Less Calories More Protein almost twice as much protein as ordinary macaroni — No Salt Added — Calorie Content: Approx. 35 per serving oz. Sodium Content: Less than 0.5 mg. per 100 g." Analysis showed: Water, 9.50, ash, 1.24, protein, 18.64, fiber, 0.29, available carbohydrate, 69.37, and fat, 0.96, per cent; sodium, 1.7 mg./100 gm.; calories/100 gm., 361. Not 20% protein as claimed; not low calorie; sodium three times as much as declared.

*K.F.-1836. Finast Egg Noodles, Enriched, Italian Style.* First National Stores, Somerville, Mass. Labelled "High Protein—Salt Free". Analysis showed: Water, 9.19, ash, 0.58, protein, 13.79, fiber, 0.16, available carbohydrate, 71.81, fat, 4.47, lipoids, 5.36, lipid P<sub>2</sub>O<sub>5</sub>, 0.124, and egg solids (dry basis), 7.17, per cent; sodium, 12, riboflavin, 2.3, and niacin, 34.1, mg./lb.; calories/100 gm., 383. Sample was "high protein" as claimed and met the enrichment requirements, but it was misbranded because it did not declare the number of milligrams of sodium per 100 grams and per serving as regulations require for products labelled "Salt Free".

*K.F.-1819. Goodman's 2X Noodles, Twice the Eggs.* A. Goodman & Sons, New York, N.Y. Water, 9.04, lipoids, 8.08, lipid P<sub>2</sub>O<sub>5</sub>, 0.18, and egg solids (dry basis), 11.70, per cent. Since the egg solids content was twice that required for egg noodles, sample was passed.

*K.C.-840. Julietta Macaroni Specialty Gnocchi No. 92.* Refined Macaroni Co., Brooklyn, N. Y. Labelled: "Low in starch. No salt added". Analysis showed: Water, 9.46, ash, 0.75, protein, 11.86, fiber, 5.43, available carbohydrate, 71.55, and fat, 0.95, per cent; sodium, 30 mg./100 gm.; calories/100 gm., 342. Misbranded because milligrams of sodium per 100 gm. and per serving were not declared.

*P.R.-76. LaRosa Grade A Enriched Thin Spaghetti (Spaghettimi) No. 9 Italian Style.* V. La Rosa & Sons, Inc., Brooklyn, N.Y. Labelled: "No Artificial Coloring Or Salt Added—Salt Free—For persons on low-sodium diets La Rosa Enriched Spaghetti and Macaroni products are virtually salt free. Each 100 grams (3½ oz.) after cooking contains only one-half of a milligram of sodium. No artificial color added." Analysis showed: Water, 10.79, ash, 0.84, protein, 12.42, fiber, 0.76, available carbohydrate, 74.40, and fat, 0.79, per cent; sodium, 4.0, riboflavin, 1.7, and niacin, 26.0, mg./100 gm.; calories/100 gm., 354. Passed as far as its vitamin content was concerned, but misbranded because no proper declaration of the sodium content before cooking was made.

*K.C.-918. Mueller's Egg Noodles.* C. F. Mueller Co., Jersey City, N.J. Labelled: "These egg noodles have twice the egg content of ordinary noodles. No artificial coloring or salt added." Analysis showed: Water, 9.52, lipoids, 7.88, lipid P<sub>2</sub>O<sub>5</sub>, 0.15, and egg solids (dry basis), 9.44, per cent. Passed.

*K.F.-1768. Prince Enriched Elbow Macaroni.* Prince Macaroni Mfg. Co., Boston, Mass. Water, 9.09, ash, 0.77, protein, 12.31, fiber, 0.17, available carbohydrate, 75.22, and fat, 2.44, per cent; riboflavin, 2.0, and niacin, 32.3, mg./lb.; calories/100 gm., 372. Passed.

*K.F.-1803. Prince Special Macaroni, Cannoli Macaroni No. 101.* Prince Macaroni Co., Lowell, Mass. Labelled: "High Protein Low Calorie—Enriched! Starch Reduced! — NO SALT ADDED — NO ARTIFICIAL COLORING." Analysis showed: Water, 9.61, ash, 0.96, protein, 12.54, fiber, 0.26, available carbohydrate, 75.29, and fat, 1.34, per cent; riboflavin, 2.0, and niacin, 31.2, mg./100 gm.; calories/100 gm., 363. Passed vitamin requirements, but low in protein and high in calories.

*K.F.-1757. San Giorgio Home Style Pure Egg Pot Pie.* San Giorgio Macaroni, Inc., Lebanon, Pa. Labelled "Made from durum flour and egg yolk." Analysis showed: Water, 8.94, lipoids, 4.88, lipid P<sub>2</sub>O<sub>5</sub>, 0.11, and egg yolk solids (dry basis), 4.52, per cent. Low in egg yolk solids.

*K.F.-1756. San Giorgio Pure Egg Rings.* San Giorgio Macaroni, Inc., Lebanon, Pa. Labelled "Made from pure durum flour and selected egg yolk." Analysis showed: Water, 9.02, lipoids, 4.84, lipid P<sub>2</sub>O<sub>5</sub>, 0.11, and egg yolk solids (dry basis), 4.47, per cent. Low in egg yolk solids.

*K.F.-1770. Viva Egg Noodles, Enriched, High Protein.* Bay State Macaroni Mfg. Co., Everett, Mass. Labelled: "Viva Egg Products are made from Fancy Durum Flour and Selected Eggs and are known for their superior quality.—VIVA products are all SALT FREE". Analysis showed: Water, 8.71, ash, 0.63, protein, 13.62, fiber, 0.15, available carbohydrate, 73.54, and fat, 3.35, per cent; sodium, 5, riboflavin, 2.0, and niacin, 30.1, mg./100 gm.; calories/100 gm., 379. Sample met the vitamin requirements but was misbranded because the number of milligrams of sodium per 100 grams and per serving were not declared.

*K.F.-1769. Viva High Protein Mezzani-Rigati-18 Enriched Macaroni.* Bay State Macaroni Mfg. Co., Everett, Mass. Labelled "VIVA products are all SALT FREE." Analysis showed: Water, 9.76, ash, 0.54, protein, 11.91, fiber, 0.16, available carbohydrate, 74.97, and fat, 2.66, per cent; sodium, 11, riboflavin, 1.7, and niacin, 31.4, mg./lb.; calories/100 gm., 371. Passed as regards its vitamin content, but misbranded because not high protein and because the number of milligrams of sodium per 100 grams and per serving were not declared.

*K.C.-898. Viva Special No. 37 Margherita Enriched Macaroni.* S. Scarpaci & Sons, Everett, Mass. Labelled: "Low in Calories—High Protein Starch Reduced." Analysis showed: water, 11.44, ash, 0.98, protein, 12.20, fiber, 0.24, available carbohydrate, 74.55, and fat, 0.59, per cent; riboflavin, 1.3, and niacin, 27.7, mg./100 gm. Low in riboflavin; not high protein; not low calorie.

## Baked Products

### Bread

Last year<sup>1</sup> 20 samples of white bread were analyzed to see if they complied with Federal requirements for enriched bread or with special claims to be high in protein, low in calories or salt-free. In 1957 the Commissioner submitted 11 more samples of white bread, 11 of whole-wheat bread, eight of raisin bread, two of rye and one of "honey" bread for similar examination. In addition one sample each of white bread and whole wheat bread was analyzed for the Stratford school cafeteria system. Analyses are given in Table 1; 21 samples were passed and 14 were misbranded.

<sup>1</sup>Conn. Agr. Expt. Sta. Bul. 617, 19 (1958).

Enriched bread must contain the following proportions of vitamins and minerals, in milligrams per pound: Thiamine (vitamin B<sub>1</sub>) 1.1 - 1.8, riboflavin (vitamin B<sub>2</sub>) 0.7 - 1.6, niacin 10.0 - 15.0, and iron 8.0 - 12.5. Where added vitamin D and calcium are declared, the required proportions are 150 - 750 U.S.P. units of vitamin D, and 300 - 800 milligrams of calcium, per pound. Regulations also require that in raisin bread "Not less than 50 parts by weight of seeded or seedless raisins (be) used for each 100 parts by weight of flour". All foods labelled with terms such as "salt-free" must bear statements "of the number of milligrams of sodium in 100 grams . . . and . . . in an average serving of the food", and for foods bearing special dietary claims such as "high protein" or "low calorie" label declarations of the percentages of protein, available carbohydrate and fat, and of the number of calories in a specified quantity of the food, are required.<sup>2</sup>

The 14 misbranded samples were the following:

*Shortweight 0.01 to 0.80 oz.: W.M.-1099 to 1102 inclusive.*

*Low in vitamins: 1385, K.C.-870 and E.S.-8263.*

*Raisin content low: W.M.-1086 and 1099.*

*High in fat and weight of slices incorrectly declared: K.F.-1686 and 1795.*

*High in sodium: P.S.-18.*

*Sodium content not declared: K.C.-842 and 870.*

*Calorie content not declared: K.F.-1862 and E.S.-8262.*

In Table 2 the average compositions of the 31 samples of white bread analyzed in 1956 and 1957 and the 11 samples of whole wheat bread and eight of raisin bread analyzed this year are compared with each other and with the respective values for white and whole wheat bread reported in 1934.<sup>3</sup> It is noteworthy that the calorie contents of both white and whole wheat bread have shown no significant change over the 23-year period in spite of the recent advertising emphasis on "low calorie" products (a similar comparison could not be made for raisin bread because earlier analyses of this variety were unavailable). In the light of the general public impression that whole wheat bread is "less fattening" than white bread, it should perhaps also be noted that while whole wheat bread contains a few less calories on a weight basis there is essentially no difference on a per-slice basis, because a slice of commercial whole wheat bread weighs more. Raisin bread is definitely (although only slightly) higher in calories than either white or whole wheat bread - chiefly because it contains more sugar and less water. Whole wheat bread contains about four times as much fibrous material as the other varieties; it is also richer in niacin.

### Other Baked Products

Three samples each of bread sticks, cookies, crackers, Melba toast and pie and one of cake were examined for the Commissioner, and one sample of rolls was analyzed for the Stratford school cafeteria system. Ten samples were passed and seven were misbranded:

*K.F.-1667 and P.R.-23. Angel Puffs (Kos-Parve.)* Stella D'Oro Biscuit Co., Inc., New York, N. Y. Labelled "A specialty baked product for consumers of low calorie and sodium restricted diet—NO SALT! NO SUGAR!—18.1 Milligrams total sugars as invert per average piece.—2.05 Milligrams Sodium per average piece—5 Calories per average piece—White and whole eggs, flour, pure vegetable shortening, pure and imit.

<sup>2</sup>Federal Register, 6, 5926 (1941).

<sup>3</sup>Conn. Agr. Expt. Sta. Bul. 373, 539 (1935).

TABLE 1. BREAD

No.	Manufacturer and brand	Water, per cent	Ash, per cent	Protein, per cent	Fiber, per cent	Available carbohy- drate, per cent
W.M.-1098	Arnold Bakers, Inc., Port Chester, N.Y. <i>Arnold Brick-Oven Whole Wheat—100%</i> .....	37.62	2.59	9.61	1.39	44.02
W.M.-1094	Arnold Bakers, Inc., Port Chester, N.Y. <i>Arnold Raisin Tea Loaf</i> .....	33.60	1.77	7.03	0.34	53.28
K.C.-870	Bamby Bread Co., Bridgeport, Conn. <i>Hi-Protein Enriched— No Sugar—No Salt Added</i> ...	41.04	0.76	10.28	0.28	46.67
W.M.-1090	Borck & Stevens, Inc., Bridgeport, Conn. <i>Borck &amp; Stevens 100% Whole Wheat</i> .....	44.55	2.13	8.73	1.26	41.60
W.M.-1089	Borck & Stevens, Inc., Bridgeport, Conn. <i>Master Raisin (Thin Sliced)</i> .....	32.06	1.63	7.67	0.31	55.46
K.C.-842	Borck & Stevens, Inc., Bridgeport, Conn. <i>Master Salt-Free</i> .....	38.03	0.58	9.09	0.42	49.61
K.F.-1684	Continental Baking Co., Boston, Mass. <i>Profile Special Formula</i> .....	37.52	2.35	9.41 <sup>2</sup>	0.52	47.43 <sup>3</sup>
W.M.-1099	Country Home Bakery, Wolcott, Conn. <i>Country Home Raisin</i> ..	34.08	1.57	11.84	0.37	45.08
W.M.-1100	Country Home Bakery, Wolcott, Conn. <i>Country Home Thin Slic- ed 100% Whole Wheat</i> .....	35.80	2.57	9.66	1.06	47.02
W.M.-1102	Dugan Bros., Newark, N.J. <i>Du- gan's 100% Whole Wheat</i> ....	38.60	2.61	9.97	1.54	45.74
W.M.-1092	First National Stores, Inc., Somer- ville, Mass. <i>Betty Alden Raisin Sliced.</i> .....	37.96	1.76	8.23	0.37	49.15
W.M.-1093	First National Stores, Inc., Somer- ville, Mass. <i>Betty Alden Stone Ground 100% Whole Wheat</i> ..	41.16	2.33	9.47	1.47	42.09
E.S.-8262	Fischer Baking Co., Newark, N.J. <i>Fischer's Münchner Rye, Low Calorie</i> .....	37.99	2.69	11.84	0.85	45.16
W.M.-1105	General Baking Co., Boston, Mass. <i>Bond Raisin with Cinnamon Added</i> .....	35.16	1.50	7.07	0.24	54.36
P.S.-18	General Baking Co., Boston, Mass. <i>Bond Unsalted Enriched</i> .....	32.32	0.83	11.56	0.40	51.46
P.S.-42	General Baking Co., Boston, Mass. <i>Bond Unsalted Enriched</i> .....	33.44	0.58	9.07	0.46	55.12
E.S.-8264	Grand Union Co., East Paterson, N.J. <i>Grand Union Freshbake Enriched</i> .....	35.15	1.91	9.23	0.27	50.75

<sup>1</sup>Low  
<sup>2</sup>Claimed 9.50  
<sup>3</sup>Claimed 46.50  
<sup>4</sup>Claimed 2.80

<sup>5</sup>Claimed 0.95  
<sup>6</sup>Claimed 8.0  
<sup>7</sup>Calories/8 oz.: Claimed, 568; found, 572  
<sup>8</sup>Declared: 1 lb. 2 oz.

<sup>9</sup>Declared: 1 lb. 6 oz.  
<sup>10</sup>Claimed: 11

TABLE 1. BREAD—(Continued)

Fat, per cent	Riboflavin, mg./lb.	Niacin, mg./lb.	Iron, mg./lb.	Calcium, mg./lb.	Sodium, mg./100 gm.	Net wt., oz.	Wt. per slice, grams	Calories per 100 grams	Calories per slice
4.77	0.47	12.8	10.5	381	—	16.35	23.2	257	60
3.98	0.31	4.3	8.8	323	—	16.00	—	277	—
0.97	0.94	9.2 <sup>1</sup>	—	—	24	—	—	237	—
1.73	0.35	13.0	12.0	254	—	19.32	27.4	217	59
2.87	0.16	4.0	—	370	—	16.30	23.1	278	64
2.27	—	—	—	—	86	—	—	255	—
2.77 <sup>4</sup>	0.41 <sup>5</sup>	10.9 <sup>6</sup>	—	—	—	—	—	252 <sup>7</sup>	—
7.06	0.20	4.4	—	323	—	15.20 <sup>1</sup>	27.8	291	81
3.89	0.44	11.5	16.1	406	—	15.40 <sup>1</sup>	23.0	262	60
1.54	0.30	15.0	14.0	286	—	15.99 <sup>1</sup>	25.9	237	61
2.63	0.14	3.2	—	397	—	18.82 <sup>8</sup>	24.3	255	62
3.48	0.38	12.9	13.3	471	—	23.60 <sup>9</sup>	26.8	238	64
1.47	—	—	—	—	—	—	25.1	241	60
1.67	0.17	2.5	—	263	—	17.75	—	261	—
3.43	—	—	—	—	73 <sup>10</sup>	—	—	283	—
1.33	—	15.6	—	—	8 <sup>10</sup>	—	23.3	269	63
2.69	0.67	9.7 <sup>1</sup>	—	—	—	—	—	264	—

TABLE 1. BREAD—(Continued)

No.	Manufacturer and brand	Water, per cent	Ash, per cent	Protein, per cent	Fiber, per cent	Available carbohy- drate, per cent
W.M.-1097	Great Atlantic & Pacific Tea Co., New York, N.Y. <i>Jane Parker Raisin</i> .....	29.18	2.01	7.26	0.29	57.05
W.M.-1091	Great Atlantic & Pacific Tea Co., New York, N.Y. <i>Jane Parker Whole Wheat</i> .....	36.70	2.84	9.83	1.45	44.75
K.C.-871	Holland Honey Cake Co., Hol- land, Mich. <i>Fancy Honey Salt- Free</i> .....	20.79	0.71	4.58	0.44	71.74
1385	Manufacturer Unknown. <i>Enriched White</i> .....	—	—	—	—	—
1384	Manufacturer Unknown. <i>Whole Wheat</i> .....	—	—	—	—	—
W.M.-1101	Pepperidge Farm, Inc., Norwalk, Conn. <i>Pepperidge Farm Whole Wheat</i> .....	36.35	2.59	10.45	1.47	47.19
K.F.-1685	Reymond Baking Co., Waterbury, Conn. <i>Reymond's Hollywood Special Formula Light, No Fats Added</i> .....	36.71	2.11 <sup>17</sup>	9.65 <sup>18</sup>	0.41	48.82 <sup>14</sup>
K.F.-1796	Reymond Baking Co., Waterbury, Conn. <i>Reymond's Hollywood Special Formula Light, No Shortening Used</i> .....	38.28	1.96 <sup>17</sup>	9.48 <sup>18</sup>	0.36	48.73 <sup>14</sup>
K.F.-1686	Reymond Baking Co., Waterbury, Conn. <i>Reymond's Hollywood Special Formula Thinly Sliced, No Fats Added</i> .....	33.12	2.58 <sup>21</sup>	11.43 <sup>20</sup>	0.89	48.47 <sup>18</sup>
K.F.-1795	Reymond Baking Co., Waterbury, Conn. <i>Reymond's Hollywood Special Formula Thinly Sliced, No Shortening Used</i> .....	37.36	2.31 <sup>21</sup>	10.54 <sup>20</sup>	0.90	47.04 <sup>18</sup>
W.M.-1086	Reymond Baking Co., Waterbury, Conn. <i>Reymond's Raisin</i> .....	35.20	2.18	9.62	0.45	51.07
W.M.-1085	Reymond Baking Co., Waterbury, Conn. <i>Reymond's Stone Ground 100% Whole Wheat</i> .....	38.96	2.47	10.27	1.40	44.04
K.F.-1862	Spaulding Bakeries, Inc., Bingham- ton, N.Y. <i>Spaulding Thin Sliced Jewish Rye, Low Calorie</i> .....	38.49	2.92	10.42	0.91	45.57
W.M.-1096	Superior Bakery, North Grosvenor- dale, Conn. <i>Old Sturbridge 100% Stone Ground Whole Wheat</i> .....	39.72	2.55	9.65	1.37	44.11
W.M.-1095	S. S. Thomas, Inc., Long Island City, N.Y. <i>Thomas' 100% Whole Wheat</i> .....	36.90	2.51	10.87	1.56	44.50
W.M.-1087	Ward Baking Co., New York, N.Y. <i>Tip-Top Banner 100% Whole Wheat</i> .....	37.04	2.35	9.97	1.57	47.51
E.S.-8263	Ward Baking Co., New York, N.Y. <i>Ward's Tip-Top Enriched</i> .....	38.01	1.83	9.17	0.17	48.18
W.M.-1088	Ward Baking Co., New York, N.Y. <i>Tip-Top Homelike Raisin (Thin-Sliced)</i> .....	28.07	1.68	7.26	0.39	58.88

<sup>11</sup>Claimed: 26.6<sup>12</sup>Claimed: 58 "per usual slice"<sup>13</sup>Claimed: 46<sup>14</sup>Claimed: 50.81<sup>15</sup>Claimed: 1.46<sup>16</sup>Claimed: 9.52<sup>17</sup>Claimed: 1.86<sup>18</sup>Claimed: 48.12<sup>19</sup>Claimed: 0.86<sup>20</sup>Claimed: 11.94<sup>21</sup>Claimed: 2.33<sup>22</sup>Declared: 15 oz.<sup>23</sup>Declared: 14 oz.

TABLE 1. BREAD—(Continued)

Fat, per cent	Riboflavin, mg./lb.	Niacin, mg./lb.	Iron, mg./lb.	Calcium, mg./lb.	Sodium, mg./100 gm.	Net wt., oz.	Wt. per slice, grams	Calories per 100 grams	Calories per slice
4.21	0.21	8.9	10.5	388	—	16.53	27.6	295	81
4.43	0.33	14.3	16.5	490	—	—	23.6	258	61
1.74	—	—	—	—	122 <sup>11</sup>	—	—	321	unsliced <sup>12</sup>
—	0.55 <sup>1</sup>	5.8 <sup>1</sup>	—	—	—	—	—	—	—
—	0.43	5.5	—	—	—	—	—	—	—
1.95	0.36	14.9	14.8	232	—	15.53 <sup>1</sup>	25.9	248	64
2.30 <sup>15</sup>	—	—	—	—	—	—	—	255	<sup>13</sup>
1.19 <sup>18</sup>	—	—	—	—	—	—	19.9	244	48 <sup>18</sup>
3.51 <sup>19</sup>	—	—	—	—	—	—	—	271	<sup>13</sup>
1.85 <sup>19</sup>	—	—	—	—	—	—	21.0	247	52 <sup>18</sup>
1.48	0.30	6.2	9.0	363	—	16.40	23.3	256	60
2.86	0.44	15.5	15.3	322	—	15.98 <sup>22</sup>	21.6	243	52
1.69	—	—	—	—	—	—	—	239	64
2.60	0.39	12.8	10.7	491	—	16.00	25.9	240	62
3.66	0.43	14.8	13.7	299	—	16.20	20.9	255	53
1.56	0.30	14.0	13.7	333	—	17.53	27.6	244	67
2.64	0.60 <sup>1</sup>	9.2 <sup>1</sup>	—	—	—	—	—	253	—
3.72	0.28	5.0	12.0	374	—	14.00 <sup>23</sup>	23.4	298	70

TABLE 2. AVERAGE COMPOSITION OF BREAD

	White		Whole Wheat		Raisin
	1956-1957	1934	1957	1934	1957
Water, per cent	36.28	35.3	38.49	38.4	33.16
Ash, per cent	1.89	1.1	2.50	1.3	1.76
Protein, per cent	10.31	9.2	9.86	9.7	8.25
Fiber, per cent	0.34	0.5	1.41	1.2	0.35
Other carbohydrates, per cent	48.54	52.6	44.78	48.5	53.04
Fat, per cent	2.56	1.3	2.95	0.9	3.45
Riboflavin, mg./lb.	0.41	—	0.38	—	0.22
Niacin, mg./lb.	9.4	—	13.8	—	4.8
Iron, mg./lb.	12.1	—	13.7	—	10.1
Calcium, mg./lb.	469.	—	360.	—	350.
Calories/100 gm.	258.	259.	245.	241.	276.
Calories/actual slice	58.	—	60.	—	70.

flavors." Average analysis showed: Water, 10.46, ash, 1.49, protein, 15.78, fiber, 0.22, available carbohydrate, 49.84, and fat, 22.27, per cent; sodium, 276 mg./100 gm., 4.4 mg./piece; calories/100 gm., 462; calories/piece, 7.4. Misbranded because not "NO SUGAR!" and because the sodium content was twice that claimed.

*A.F.-253. Belle Meade Salt Free Crackers.* United Biscuit Co. of America, Chicago, Ill. Labelled: "Contains sodium in the amount of 11 milligrams per 100 grams of cracker and 0.4 milligrams per single cracker from natural mineral salts present in water and flour." Analysis showed: Sodium, 4 mg./100 gm., 0.14 mg./cracker. Passed.

*K.F.-1801. Devonsheer 100% Whole Wheat Protein Whole Grain Wafers.* Devonsheer Melba Corp., West New York, N.J. Labelled: "Approx. 5 calories per wafer—no sugar—no shortening." Analysis showed: Water, 13.31, ash, 2.66, protein, 9.76, fiber, 2.63, available carbohydrate, 70.48, and fat, 1.16, per cent; sodium, 547 mg./100 gm.; calories/100 gm., 331; calories/wafer, 6. Passed.

*K.F.-1798. Devonsheer Unsalted Melba Toast.* Devonsheer Melba Corp., West New York, N. J. Labelled: "Approx. 14 calories per slice—milligrams of sodium per 100 grams 10". Analysis showed: Water, 8.96, ash, 1.52, protein, 15.11, fiber, 0.47, available carbohydrate, 72.05, and fat, 1.89, per cent; sodium, 17 mg./100 gm.; calories/100 gm., 366; calories/slice, 16. Passed, although sodium content was 1.7 times as high as declared.

*K.F.-1800. Devonsheer Unsalted Rye Melba Toast.* Devonsheer Melba Corp., West New York, N. J. Labelled: "Approx. 14 calories per slice. Milligrams of sodium per 100 grams 10." Analysis showed: Water, 6.31, ash, 1.03, protein, 14.81, fiber, 0.61, available carbohydrate, 75.07, and fat, 2.17, per cent; sodium, 7 mg./100 gm.; calories/100 gm., 379; calories/slice, 16. Passed.

*K.F.-1799. Devonsheer Wheat Melba Toast.* Devonsheer Melba Corp., West New York, N. J. Labelled: "Approx. 16 calories per wafer." Analysis showed: Water, 5.49, ash, 3.96, protein, 15.18, fiber, 0.94, available carbohydrate, 72.91, and fat, 1.52, per cent; calories/100 gm., 366; calories/slice, 14. Passed.

*K.F.-1821. Fancy Holland Honey Fruit Cake, Salt-Free.* Holland Honey Cake Co., Holland, Mich. Labelled: "Ingredients Honey, Rye Flour, Butter, Milk, Mixed Fruit, Raisins, Spices and Leavening.—No Fats—No Syrup or Sugar Added—Sodium content 35.2 mg. per 100 grams or 10 mg. per 1/2 inch slice.—NO SALT OR SODIUM IN ANY FORM ADDED." Analysis showed: Water, 21.12, ash, 0.82, protein,

3.73, fiber, 0.54, available carbohydrate, 76.47, and fat, 0.32, per cent; sodium, 121 mg./100 gm.; calories/100 gm., 324. Sodium 3.4 times as high as declared; misbranded.

*S.O.-396. Frisbie Coconut Custard Pie.* Frisbie Pie Co., Bridgeport, Conn. Labelled: "Ingredients Flour, Shortening, Salt, Sugar, Water, Cornstarch, Butter, Eggs, U. S. Certified Food Color, Spices, Milk, Corn Syrup, Tapioca, Citric Acid, Molasses, Chocolate, Vanillin, Cocoa & Fruit." Analysis of the filling showed: Lipoids, 8.03, lipid P<sub>2</sub>O<sub>5</sub>, 0.092, and egg yolk, 9.39, per cent. Sample was a custard pie as labelled; it was not being sold under refrigeration, but was passed because it had been cooked after filling.

*1383. Poppysseed Rolls.* Wooster Jr. High School, Stratford, Conn. Riboflavin, 1.0, and niacin, 4.1; mg./lb. Low in niacin.

*K.F.-1749. Spinella's Butter Crust Bread Sticks, Salt Free.* Spinella's Bakery, Hartford, Conn. Labelled: "Ingredients: Filtered Water, Unbleached Enriched Flour, Sweet Butter, Pure Olive Oil." Analysis showed: Water, 10.99, ash, 0.50, protein, 10.35, fiber, 0.69, available carbohydrate, 72.27, and fat, 5.20, per cent; sodium, 37 mg./100 gm.; calories/100 gm., 377. Misbranded because milligrams of sodium per 100 grams and per piece were not declared.

*K.C.-834 and 891. Stella D'Oro Genuine Italian Bread Sticks, Low Calorie, No Salt Added, No Sugar Added.* Stella D'Oro Biscuit Co., Inc., New York, N. Y. Labelled: "Natural Salts and Sugars in Basic Ingredients Per Average Stick Sodium 1.13 Mgs. Total Sugars (as Invert Sugars) 210 Mgs.—Protein per Average Stick 1.17 Gms.—Calories Per Average Stick, 36—Ingredients: Flour, Pure Vegetable Shortening and Yeast." Average analysis was: Water, 11.45, ash, 0.65, protein, 13.92, fiber, 0.39, available carbohydrate, 62.53, and fat, 11.06, per cent; calories/100 gm., 405; calories/stick, 36; protein, 1.23 gm./stick. The sodium contents were respectively: *K.C.-834*, 38 mg./100 gm., 3.3 mg./stick; *K.C.-891*, 4 mg./100 gm., 0.4 mg./stick. Both samples were misbranded because although the declared amounts of protein and calories per stick were correct this was not a low calories product; *K.C.-834* also contained three times as much sodium as was declared.

*S.O.-394. Table Talk Chocolate Pie.* Table Talk Pie Co., Worcester, Mass. Labelled: "Ingredients Flour, Shortening, Salt, Eggs, Corn Starch, Citric Acid, U. S. Certified Food Color, Sugar, Butter, Corn Syrup, Vanilla and Cocoa, or Pineapple or Apple or Lemon or Coconut, or Bananas, or Cherries, Egg Whites or Whipped Cream." Analysis showed: Chocolate filling: Lipoids, 3.32, and lipid P<sub>2</sub>O<sub>5</sub>, 0.015, per cent. Whipped cream topping: Lipoids, 30.56, and lipid P<sub>2</sub>O<sub>5</sub>, 0.007, per cent. This analysis indicated that the chocolate filling probably contained some egg while the whipped cream topping did not. The pie had not been kept under refrigeration, but because it had been baked after filling it was passed.

*S.O.-395. Table Talk Coconut Custard Pie.* Table Talk Pie Co., Worcester, Mass. Ingredient statement was the same as that of *S.O.-394* above. Analysis of the filling showed: Lipoids, 3.81, lipid P<sub>2</sub>O<sub>5</sub>, 0.061, and egg yolk, 6.22, per cent. Not kept under refrigeration, but passed because baked after filling.

*K.F.-1486. Venus Strawberry Bars.* Venus Foods, Los Angeles, Calif. Labelled: "Ingredients: Sugar, Wheat and Oat Flours, Strawberries, Vegetable Shortening, Corn Syrup, Fruit Solids, Coconut Solids, Corn Starch, Fat-Free Milk Solids, Egg Yolk, Leavening, Salt, Citric Acid, Artificial Flavoring and Color, Lecithin." Microscopic examination confirmed the presence of strawberries; passed.



*P.S.-104. Venus Wheat Wafers, Salt Free.* Venus Wheat Wafer Co., Boston, Mass. Labelled: "A Toasted 100% Whole Wheat Wafer—Salt Free—Sodium Content 13.0 Milligrams Per 100 Grams of Wafers 0.54 Milligrams Per Wafer—Special For Low Sodium Diets—Approximately 17 Calories Per Wafer—Ingredients: Whole wheat flour, pure vegetable shortening, Sesame seeds, brown sugar, yeast.—Venus Wheat Wafers Low in Calories." Analysis showed: Water, 10.69, ash, 1.83, protein, 9.26, fiber, 2.07, available carbohydrate, 70.60, and fat, 5.55, per cent; sodium, 12 mg./100 gm., 0.51 mg./wafer; calories/100 gm., 369; calories/wafer, 16. Passed.

### Beverages, Carbonated, Etc.

#### Alcoholic Beverages

Eleven samples of ale and beer were submitted by the Commissioner because they were suspected of being short volume, and two additional samples were analyzed for alcohol for the East Haven and New Haven police. The alcohol contents of two samples of whiskey and one highball were also determined for the same police departments.

The official samples of ale and beer were all 12 fl. oz. cans. Five of these were fully up to declared volume and need not be listed here; those found to be short volume were the following:

*J.B.-235 and 237. Connecticut Yankee Ale.* Harvard Brewing Co., Lowell, Mass. Average net contents of 12 cans, 11.94 fl. oz.

*J.B.-236 and 238. Connecticut Yankee Beer.* Average net contents of 12 cans, 11.95 fl. oz.

*E.C.-964. Fitzgerald Burgomaster Beer.* Fitzgerald Bros. Brewing Co., Troy, N. Y. Average net contents of six cans, 11.91 fl. oz.

*K.F.-1806. Horlacher Pilsner Beer.* Horlacher Brewing Co., Allentown, Pa. Average net contents of six cans, 11.73 fl. oz.

#### Breakfast Drinks

Six official samples of canned beverages containing substantial proportions of fruit juice were examined; five were passed and one was misbranded:

*K.F.-1881. BC Breakfast Cocktail.* D. E. Winebrenner Co., Inc., Hanover, Pa. Labelled: "a delicious blend of ORANGE and APRICOT—a tasty treat at any time—VITAMIN C ENRICHED—Each six-ounce serving contains 30 milligrams or 100% of the minimum adult daily requirement of Vitamin C.—Water—Apricot Pulp and Juice—Sugar—Concentrated Orange Juice—Gum Arabic—Orange Oil—Citric Acid—Vitamin C." Analysis showed: Total solids, 13.04, total sugars, 12.17, and ash, 0.164, gm./100 cc.; K<sub>2</sub>O, 97, P<sub>2</sub>O<sub>5</sub>, 16, and ascorbic acid, 20, mg./100 cc. The ascorbic acid (vitamin C) content of 6 fl. oz. was 35 milligrams as against 30 mg. declared; estimated juice content was 38 per cent. Passed.

*K.F.-1882. Delmonte Brand Quality Orange-Apricot Drink, Vitamin C Enriched.* California Packing Corp., San Francisco, Calif. Labelled: "Contains: Water, Concentrated Apricot Puree, Sugar, Concentrated Orange Juice, Citric Acid, Vitamin C, Orange Oil—(One 6-oz. glass supplies 30 mgs. of Vitamin C, the daily minimum adult requirement)." Analysis showed: Total solids, 13.78, total sugars, 12.70, and ash, 0.199, gm./100 cc.; K<sub>2</sub>O, 108, P<sub>2</sub>O<sub>5</sub>, 20, and ascorbic acid, 22, mg./100 cc. Six fluid

ounces contained 39 mg. of vitamin C as against 30 mg. declared; estimated juice content was 43 per cent. Passed.

*K.F.-1642. Delmonte Brand Quality Pineapple-Grapefruit Drink, Vitamin-C Enriched.* Labelled: "(One 8-oz. glass supplies 30 Mgs. of Vitamin C, the daily adult minimum requirement)—A true fruit drink, made from concentrated pure juices of ripe pineapples and grapefruit with water added, retaining the refreshing and health-promoting qualities of these semi-tropical fruits. Sugar, and small amounts of citric acid, sodium citrate and orange oil are added to enhance flavor—Contains water, concentrated pineapple juice, sugar, concentrated grapefruit juice, citric acid, sodium citrate, orange oil emulsion, vitamin C." Analysis showed: Total solids, 14.14, total sugars, 12.94, ash, 0.241, and total acidity (as citric acid), 0.87, gm./100 cc.; K<sub>2</sub>O, 96, and ascorbic acid, 16, mg./100 cc. Vitamin C content per 8 fl. oz. was 38, as against 30 declared; estimated juice content was 53 per cent. Passed.

*K.F.-1605. Hawaiian Punch.* Pacific Hawaiian Products Co., Fullerton, Calif. Labelled: "Real Fruit Juice Punch—Made with delicious tropical fruit juices—Made with filtered water, sugar, orange juice, pineapple juice, apricot puree, papaya puree, guava puree, passion fruit juice, citric (from fruit), natural fruit flavors and artificial color." Analysis showed: Total solids, 13.37, total sugars, 13.23, ash, 0.056, and total acidity (as citric acid), 0.26, gm./100 cc.; K<sub>2</sub>O, 25 mg./100 cc. Probable juice content only 10 per cent, but passed.

*K.F.-1915. Veryfine Orange-Apricot Cocktail.* New England Apple Products Co., Littleton, Mass. Labelled: "VITAMIN C ENRICHED—Each 6 oz. serving provides at least 100 per cent of the minimum daily requirement of vitamin C.—Apricot pulp & juice, sugar, concentrated orange juice, citric acid, orange flavor, algin deriv., vegetable gum, vitamin C and sufficient water to properly process." Analysis showed: Ash, 163, K<sub>2</sub>O, 91, and ascorbic acid, 15, mg./100 cc. Probable juice content was 36 per cent; the vitamin C content per 6 fl. oz. was 27 milligrams, which did not quite meet the 30 mg. minimum daily requirement of Federal Regulation 125.03(b). Sample was nevertheless passed.

*K.F.-1847. Wilrick's Applpunch.* Wilrick's, Inc., Greenwich, Conn. Labelled: "Contents: Water, Sugar, Concentrated Apple Juice, Grape Juice, Citric Acid, Tartaric Acid, Oil of Orange, Imitation Flavor, U.S. Certified Color." Analysis showed: Total solids, 11.86, total sugars, 11.36, and ash, 0.099, gm./100 cc.; K<sub>2</sub>O, 47, and P<sub>2</sub>O<sub>5</sub>, 5 mg./100 cc.; flavor, imitation; probable juice content, 24 per cent. Misbranded because the presence of imitation flavor made it an imitation fruit drink not so labelled.

#### Grape Beverages and Beverage Bases

Thirty-two samples of carbonated and still grape beverages and beverage bases were submitted by the Commissioner, chiefly to establish whether they were properly labelled as "grape soda", etc., or were misbranded because they contained the synthetic flavor methyl anthranilate and were not labelled "imitation grape". Because methyl anthranilate occurs naturally in small proportions in certain varieties of grape such as the Concord, it was necessary before a beverage could be shown to be imitation to prove not only that methyl anthranilate was present but that the proportion was in excess of what could have been contributed by any grape juice in the sample. Analyses are given in Table 3; 14 samples were passed and 18 were misbranded.

TABLE 3. GRAPE BEVERAGES AND BEVERAGE BASES

No.	Manufacturer or distributor and brand	Ash, mg./100 cc.	K <sub>2</sub> O, mg./100 cc.	Methyl anthranilate, mg./100 cc.	Ratio K <sub>2</sub> O, to Me anthranilate, per cent	Grape juice, cc.	Remarks
P.R.-151	American Dry Beverage Corp., Manchester, N.H. Grape Soda	30.0	1.47	0.75	2	1	Imitation grape not so labelled.
P.R.-157	American Dry Beverage Corp., Manchester, N.H. Grape Soda	30.6	1.54	0.80	2	1	Imitation grape not so labelled.
S.O.-393	Atlantic Bottling Co., Portchester, N.Y. <i>Atlantic Red Fruit Grape Soda</i>	26.2	1.59	0.04	40	1	Passed.
F.M.-11	Blakeslee Bros., New Haven, Conn. <i>Blakeslee's Beverages Grape Soda</i>	28.6	0.79	0.75	1	0.6	Imitation grape not so labelled.
F.M.-12	Blakeslee Bros., New Haven, Conn. <i>Grape Soda</i>	28.4	0.92	0.86	1	0.7	Imitation grape not so labelled.
K.F.-1870A	Cott Beverage Corp., New Haven, Conn. <i>Cott Low Calorie Dietary Beverage, Non-Fattening, Grape Flavor</i>	109.	2.45	0.08	29	2	Labelled "No fat, no protein (1.037% available carbohy- drates) less than 7½ calories per serving." Found: Total sugars, 0.15 gm./100 cc.; cal- ories/pint, 2.8. Passed.
W.M.-1143	Cott Beverage Corp., New Haven, Conn. <i>Cott Quality Grape Soda</i>	35.0	3.70	0.12	31	3	Passed.
W.M.-1193	Cott Beverage Corp., New Haven, Conn. <i>Cott Quality True Fruit Grape Soda</i>	31.6	2.70	0.09	30	2	Misbranded because labelled "True Fruit" although it con- tains natural non-grape flavors.
J.B.-158	Cott Bottling Co., Inc., Manchester, N.H. <i>Cott Quality Sparkling Concord Delite</i>	27.6	2.18	0.42	5	2	Imitation grape not so labelled.
K.F.-1752	Cott Bottling Co., Inc., Manchester, N.H. <i>Cott Quality Sparkling Concord Delite</i>	30.4	3.10	0.38	8	2	Imitation grape not so labelled.

F.P.-296	Cott Bottling Co., Manchester, N.H. <i>Cott Quality Sparkling Concord Delite</i>	28.0	2.10	0.33	6	2	Net contents: Declared, 12 fl. oz.; found (average of 6 cans), 12.47 fl. oz. Imitation grape not so labelled.
E.C.-960	Cott Bottling Co., Pawtucket, R.I. <i>Cott Quality Sparkling Concord Punch</i>	38.6	2.65	1.29	2	2	Alcohol, 0.05% by volume. Mis- branded because "Imitation Grape Soda" on cap was il- legible.
P.R.-53	Dyala Spring Bottling Works, Woonsocket, R.I. <i>Bireley's Drink, Grape Flavor</i>	28.0	7.20	0.33	22	6	Passed.
K.C.-943	Fruitcrest Co., Brooklyn, N.Y. <i>Grape Squeeze Grape Drink</i>	129.	55.5	0.11	505	36	Passed.
K.F.-1764	Gra Rock Beverage Co., Wethersfield, Conn. <i>Pen- guin Brand Grape Soda</i>	25.0	9.50	0.35	27	7	Passed.
K.F.-1863	Light Rock Spring Water Co., Danbury, Conn. <i>Bireley's Grape Drink</i>	34.8	7.59	0.96	8	6	Imitation grape not so labelled.
S.O.-399	Light Rock Spring Water Co., Danbury, Conn. <i>Bireley's Grape Drink</i>	32.8	7.59	1.25	6	6	Imitation grape not so labelled.
J.Z.-54	Lynbrook Beverages, Inc., New Haven, Conn. <i>Lyn- brook Quality Bordeaux Grape Soda</i>	24.4	2.17	0.08	27	2	Passed.
J.Z.-55	Lynbrook Beverages, Inc., New Haven, Conn. <i>Lyn- brook Quality Imitation Grape Soda</i>	11.2	0.55	0.92	0.6	0.4	Passed.
K.C.-806	Plaza Beverage Co., Inc., Long Island City, N.Y. <i>Midtown Club Grape Soda</i>	37.2	1.47	0.14	11	1	Passed.
K.C.-859	Plaza Beverage Co., Inc., Long Island City, N.Y. <i>Midtown Club Grape Soda</i>	38.8	1.80	0.07	26	1	Passed.
P.R.-129	Polar Beverage Co., Worcester, Mass. <i>Vine Sweet- ened! Polar Grape Soda</i>	17.6	1.78	0.00	00	1	Passed.
P.R.-154	Polar Ginger Ale Co., Worcester, Mass. <i>Polar Grape Soda</i>	15.2	0.63	0.37	2	0.5	Imitation grape not so labelled.
P.R.-30	Royal Crown Bottling Co., West Springfield, Mass. <i>Nebi Grape Soda</i>	16.2	0.67	0.41	2	0.5	Imitation grape not so labelled.

TABLE 3. GRAPE BEVERAGES AND BEVERAGE BASES—(Concluded)

No.	Manufacturer or distributor and brand	Ash, mg./100 cc.	K <sub>2</sub> O, mg./100 cc.	Methyl anthranilate, mg./100 cc.	Ratio K <sub>2</sub> O, to Me- thyl an- thranilate, per cent	Grape juice, per cent	Remarks
K.C.-850	Snow Crest Beverages, Inc., Salem, Mass. <i>Dietetic Snow Crest Sugar Free Concentrated Grape Beverage Base</i>	676.	69.6	3.14	22	55	Labelled "Contents: Water, grape juice, grape flavor with other natural flavors, less than 1 3/4 of 1% sucaryl (Calcium Cyclamate Abbott), pectin, citric acid, U.S. certified color and less than 1/10 of 1% benzoate of soda." Found: Total sugars, 6.73 gm./100 cc. Misbranded because not "Sugar Free".
A.L.-342	Same	665.	65.0	2.49	26	51	Labelled same as K.C.-850. Found: Total sugars, 6.68 gm./100 cc. Misbranded; not "Sugar Free".
A.L.-372	Same	670.	85.3	3.15	27	67	Labelled same as K.C.-850. Found: Total sugars, 6.95 gm./100 cc. Misbranded; not "Sugar Free".
P.R.-21	Webster Bottling Co., Webster, Mass. <i>Lakeview Grape Soda</i>	5.0	0.70	0.79	1	0.5	Imitation grape not so labelled.
P.R.-20	White Eagle Bottling Co., Dudley, Mass. <i>Kist Grape Soda</i>	7.6	0.28	0.85	1	0.2	Imitation grape not so labelled.
K.C.-924	White Rock Corp., New York, N.Y. <i>Luscious True Fruit White Rock Grape Sparkling Beverage</i>	30.0	8.20	0.00	00	6	Passed.
P.R.-29	White Rock Bottling Co., Boston, Mass. <i>White Rock Sparkling Grape Beverage</i>	45.4	5.60	0.00	00	4	Passed.
E.S.-12	Wilrick, Inc., Greenwich, Conn. <i>Wilrick's Grape Concentration</i>	34.0	18.40	0.00	00	14	Passed.

### Lemonade and Orangeade Concentrates

Two official samples of frozen concentrated lemonade and one each of a "dietetic" orange beverage base and of frozen concentrated orangeade were analyzed; two samples were passed and two were misbranded:

*A.L.-374. Dietetic Snow Crest Sugar Free Concentrated Beverage Base.* Snow Crest Beverages, Inc., Salem, Mass. Labelled: "Contents: Water, concentrated orange juice, natural citrus oils, vegetable gum, sweetened with less than 1 3/4 of 1% sucaryl (Calcium Cyclamate Abbott), pectin, citric acid, less than 1/10 of 1% benzoate of soda and U.S. certified color.—Sweetened with less than 1 3/4 of 1% sucaryl (Calcium Cyclamate Abbott), a non-nutritive (*sic*) sweetening agent for persons who must restrict their intake of ordinary sweets." Analysis showed: Total solids, 7.90, total sugars, 3.70, and ash, 0.782, gm./100 cc.; K<sub>2</sub>O, 83.8, and P<sub>2</sub>O<sub>5</sub>, 18.3, mg./100 cc; estimated per cent orange juice, 33. Misbranded because not "Sugar Free".

*K.C.-991. Snow Crest Pink Lemon Concentrated Beverages.* Snow Crest Beverages, Inc., Salem, Mass. Analysis showed: Total solids, 67.76, sucrose, 3.85, invert sugar, 64.06, total sugars, 67.91, and ash, 0.084, gm./100 cc.; K<sub>2</sub>O, 10.3 mg./100 cc.; P<sub>2</sub>O<sub>5</sub>, trace; ascorbic acid, none; orange dye present; estimated per cent lemon juice, 7. Misbranded because it bore no ingredient statement and contained undeclared artificial color.

*K.C.-940. Sunblessed Frozen Concentrated Lemonade Mix.* Sunblessed Co., Bridgeport, Conn. Labelled: "Ingredients: Sugar Syrup, Concentrated Lemon Juice, Lemon Oil". Analysis showed: Ash, 127, K<sub>2</sub>O, 56, and ascorbic acid, 12, mg./100 cc.; estimated per cent lemon juice, 37. Passed.

*K.C.-939. Sunblessed Frozen Concentrated Orangeade Mix.* Sunblessed Co., Bridgeport, Conn. Analysis showed: Ash, 135, K<sub>2</sub>O, 57, and ascorbic acid, 8, mg./100 cc.; estimated per cent orange juice, 22. Misbranded because a product which is only 22 per cent juice is not concentrated.

### Other Beverages

Fifty-nine official and one unofficial samples of miscellaneous carbonated beverages and beverage bases were examined, chiefly to see if the flavors were imitation. Included were: Twelve samples of raspberry soda; nine of cherry soda; eight of strawberry soda; seven of orange soda; four of near-beer; two each of apple-ginger soda, a "dietetic" cherry beverage base, pineapple soda and root beer; and 12 samples of miscellaneous flavors. Thirty-two samples were passed and 28 were adulterated or misbranded.

The misbranded fruit-flavored sodas were the following:

#### Apple-Ginger:

*E.C.-961. Cott Apple Ginger Soda.* Cott Beverage Corp., Pawtucket, R.I. Ash, 40, K<sub>2</sub>O, 5.8, and P<sub>2</sub>O<sub>5</sub>, 0.8, mg./100 cc.; estimated per cent juice, 6; benzoate present. Sodium benzoate present not declared.

#### Cherry:

*P.S.-108. America's Finest Table Talk Natural Flavor Beverages Florade Black Cherry Soda.* Newgate Ginger Ale Co., Inc., Thompsonville, Conn. Ash, 48, K<sub>2</sub>O, 3.7, and P<sub>2</sub>O<sub>5</sub>, 0.8, mg./100 cc.; benzoate present; benzaldehyde flavor. Sodium benzoate present not declared; flavor not true cherry.

*W.M.-1050 and P.S.-68. Canada Dry True Fruit Black Cherry Beverage.* Canada Dry Bottling Co., Branford and Hartford, Conn. Benzaldehyde flavor predominant; not true cherry flavor.

*A.L.-343 and 373. Dietetic Snow Crest Sugar Free Concentrated Cherry Beverage Base.* Snow Crest Beverages, Inc., Salem, Mass. Labelled: "Contents: Water, cherry juice, cherry flavor with other natural flavors, less than  $\frac{1}{4}$  of 1% sucaryl (Calcium Cyclamate Abbott), pectin, citric acid, less than  $\frac{1}{10}$  of 1% benzoate of soda and U.S. certified color.—Sweetened with less than  $\frac{1}{4}$  of 1% sucaryl (Calcium Cyclamate Abbott), a non-nutritive (*sic*) sweetening agent for persons who should restrict their intake of ordinary sweets." Average analysis showed: Total solids, 10.08, total sugars, 7.11, and ash, 0.662, gm./100 cc.; K<sub>2</sub>O, 77.9, and P<sub>2</sub>O<sub>5</sub>, 17.3, mg./100 cc.; estimated per cent cherry juice, 32. Not "Sugar Free".

*P.R.-116 and 159. Finast Black Cherry Soda.* First National Stores, Inc., East Hartford, Conn. Average analysis was: Ash, 41, K<sub>2</sub>O, 4.0, and P<sub>2</sub>O<sub>5</sub>, 0.08, mg./100cc.; flavor, benzaldehyde. Not true cherry flavor.

*P.R.-130. Pure Fruit Flavor Black Cherry Polar Black Cherry Soda.* Polar Beverage Co., Worcester, Mass. Strong benzaldehyde flavor; not true cherry.

*P.R.-62. Stafford Springs Beverages Black Cherry Soda.* Stafford Ginger Ale Co., Stafford Springs, Conn. Total sugars, 11.92 per cent; flavor artificial. Not true cherry flavor.

#### Orange:

*K.C.-799. Non-Carbonated Castle Orange.* Crystal Bottling Works, Ansonia, Conn. Sucrose, 1.31, invert sugar, 10.30, and total sugars, 11.61, gm./100 cc.; ash, 30, and K<sub>2</sub>O, 1.2, mg./100 cc.; estimated per cent orange juice, 0.5; coal-tar dye present. Contained undeclared artificial color and little or no orange juice.

*F.H.-1776. Sun Dew Orange Drink "Sun Ripened".* Sun Dew Corp., Jamaica, N.Y. Labelled: "Contains: Water, Sugar, Concentrated Orange Juice, Orange Oil, Citric Acid, Less than  $\frac{1}{20}$  of 1% Benzoate of Soda." Analysis showed: Ash, 154, K<sub>2</sub>O, 19.8, and ascorbic acid, 0, mg./100 cc.; estimated per cent juice, 8. Deficient in orange juice.

*E.C.-788. White Rock Orange.* White Rock Bottling Co. of Boston, Boston, Mass. Sucrose, 0.95, invert sugar, 11.88, and total sugars, 12.83, gm./100 cc.; ash, 31, and K<sub>2</sub>O, 8.8, mg./100 cc.; estimated per cent juice, 3; coal-tar dye present. Undeclared artificial color present.

#### Raspberry:

*P.S.-60 and 69. American Dry Raspberry Soda.* American Dry Ginger Ale Co., Inc., Boston, Mass. Total sugars 12.50 per cent; flavor artificial. Imitation raspberry soda not so labelled.

*P.S.-101. Light Rock Dietary Beverage True Fruit Raspberry Soda—Sugar Free—No Calorie.* Total sugars, 0.038 gm./100 cc.; K<sub>2</sub>O, 2.25 mg./100 cc. Not straight raspberry flavor and therefore not a "true fruit" soda.

*P.R.-63. Stafford Springs Beverages Black Raspberry Soda.* Stafford Ginger Ale Co., Stafford Springs, Conn. Total sugars 11.20 per cent; flavor artificial. Imitation raspberry soda not so labelled.

#### Root Beer:

*K.C.-921. Mission Root Beer.* American Bottling Co., Inc., Bridgeport, Conn. Saponin present; adulterated.

#### Strawberry:

*P.S.-61 and 70. American Dry Strawberry Soda.* American Dry Ginger Ale Co., Inc., Boston, Mass. Total sugars 13.44 per cent; flavor artificial. Imitation strawberry soda not so labelled.

*F.P.-332. Pequot Spring Beverages Strawberry Soda.* Pequot Spring Water Co., Glastonbury, Conn. Ash, 17.4, and K<sub>2</sub>O, 0.35, mg./100 cc.; estimated per cent juice, 0.2; flavor artificial. Imitation strawberry soda not so labelled.

#### Miscellaneous flavors:

*E.S.-826. Bubble Up Lemon Lime Soda.* Elco Beverage Co., Bristol, Conn. This six-bottle carton was labelled "Low in Calories". Analysis showed 10.00 gm./100 cc. of total sugars, which is equivalent to 40 calories/100 cc. Of 215 samples of soda analyzed between 1947 and 1950 the average sugar content was 11.50 gm./100 cc., which is equivalent to 46 calories/100 cc. Misbranded because the bottles bore no address and were not labelled to show the number of calories per serving.

*A.L.-375. Dietetic Snow Crest Sugar Free Concentrated Lemon and Lime Beverage Base.* Snow Crest Beverages, Inc., Salem, Mass. Labelled: "Contents: Water, concentrated citrus juice, natural citrus oils, less than  $\frac{1}{4}$  of 1% sucaryl (Calcium Cyclamate Abbott), pectin, vegetable gum, citric acid, less than  $\frac{1}{10}$  of 1% benzoate of soda and U.S. certified color.—Sweetened with less than  $\frac{1}{4}$  of 1% sucaryl (Calcium Cyclamate Abbott), a non-nutritive (*sic*) sweetening agent for persons who must restrict their intake of ordinary sweets." Analysis showed: Total solids, 7.68, total sugars, 3.60, and ash, 0.772, gm./100 cc.; K<sub>2</sub>O, 83.8, and P<sub>2</sub>O<sub>5</sub>, 17.9, mg./100 cc.; estimated per cent juice, 55. Not "Sugar Free".

*E.C.-764. Fox Spring Beverages 48 Fruit Cocktail.* Fox Spring Beverage Co., Norwich, Conn. Total sugars, 10.29 per cent; ash, 16, and K<sub>2</sub>O, 0.99, mg./100 cc.; flavor artificial. Imitation fruit soda not so labelled.

*E.C.-759. Fruit Bowl.* Mathieu Bottling Co., Taftville, Conn. Total sugars, 12.85 per cent; ash, 13.8, and K<sub>2</sub>O, 2.5, mg./100 cc.; flavor artificial; coal-tar dye present. Imitation fruit soda containing undeclared artificial color.

*E.C.-777. Hosmer Mountain Beverages Punch.* Hosmer Mountain Beverage Co., Willimantic, Conn. Total sugars, 12.16 per cent; ash, 8, and K<sub>2</sub>O, 0.4, mg./100 cc.; flavor artificial. Imitation fruit soda not so labelled; address not declared.

*K.C.-731. Virginia Dare South Seas.* American Bottling Co., Inc., Bridgeport, Conn. Total sugars, 13.21 per cent; ash, 23, and K<sub>2</sub>O, 2.6, mg./100 cc.; estimated per cent orange juice, 1; flavor artificial. Imitation fruit soda not so labelled.

*E.C.-775. Yankee Beverages Punch.* Liberty Club Soda Water Co., Providence, R.I. Total sugars 13.52 per cent; ash, 20, and K<sub>2</sub>O, 4.0, mg./100 cc.; flavor artificial; coal-tar dye present. Imitation fruit soda not so labelled; artificial color present not declared.

All four samples of near-beer were passed:

*K.C.-927 and K.F.-1871 and 1872. Ehret's Extra Near Beer.* Metropolitan Brewery of New Jersey, Trenton, N.J. Average alcohol content, 0.57 per cent by volume; test for saponin negative.

*F.H.-1639. Pilsner's Mattcrest Brew.* Metropolis Brewer of New Jersey, Inc., Trenton, N.J. Alcohol, 0.50 per cent by volume; test for saponin negative.

### Chocolate and Cocoa

Two samples of baking chocolate and three of cocoa were submitted by the State Supervisor of Purchases to see if they complied with State purchasing specifications; three samples met the specifications and two did not:

419. *Baking Chocolate*. Specifications called for 50 to 58 per cent fat, and (on a moisture-and-fat-free basis) not more than 0.40 per cent of acid-insoluble ash and not more than 7.00 per cent fiber. Analysis showed: (As is basis) Fat, 51.60, moisture, 1.79, and total ash, 3.23, per cent; (moisture-and-fat-free basis) acid-insoluble ash, 0.26, and fiber, 4.31, per cent. Passed.

1539. *Breakfast Cocoa*. Analysis showed 7.48 per cent of moisture and 19.35 per cent of fat, which was below the minimum of 22 per cent set by Federal Regulation 14.3.

1755. *Cocoa, Breakfast, Dutch Process, Style B*. Henry Bresky & Sons, Bridgeport, Conn. Moisture, 4.10, fat, 18.88, total ash, 6.53, and insoluble ash, 1.98, per cent; alkalinity of soluble ash, 3.18, and alkalinity of insoluble ash, 3.63, cc. N/10 acid/gm.; estimated per cent added potassium carbonate, 2.20. Did not contain the 22 per cent fat required by Federal Purchasing Specification JJJ-C-501 b.

1830. *Dutch Process Medium Fat Cocoa*. Moisture, 5.85, fat, 11.45, total ash, 6.58, and insoluble ash, 2.15, per cent; alkalinity of soluble ash, 3.64, and alkalinity of insoluble ash, 4.16, cc. N/10 acid/gm.; estimated per cent added potassium carbonate, 1.00. Medium fat cocoa may contain between 10 and 22 per cent of fat; passed.

1538. *Rockwood Baking Chocolate, Unsweetened*. Rockwood & Co., Brooklyn, N.Y. Moisture, 3.53, and fat, 52.65, per cent. Passed.

### Coffee

One sample of coffee was examined for the Commissioner, and the caffeine content of another was determined for a food manufacturer who was interested in marketing it as a low-caffeine product; neither was passed:

A.F.-242. *Café Plus*. S.S. Pierce Co., Boston, Mass. Labelled: "Formerly Café des Invalides—a compound of the finest coffees and other vegetable substances." Microscopic examination showed this sample to contain (besides coffee) a little salt and a trace of chicory. Misbranded because the "vegetable substances" were not named.

Samples of this product under its old name of "Café des Invalides" were examined in 1915 and 1916<sup>4</sup>; at that time its label bore the statement: "This compound is not all coffee, but contains about seven-eighths coffee, of the finest grades, blended with vegetable substances, which have been found to render it more healthful than pure coffee, in that it does not produce nervousness or wakefulness. It may be taken freely by many who have found ordinary coffee to be harmful to them, and will be specially gratifying to those who have tried to like cereal substitutes." Analysis of the 1915 sample showed that the one-eighth vegetable matter was chiefly chicory, and that a little less caffeine and more tannin were present than in Java coffee. Apparently in the present-day version of this product not only have the therapeutically suggestive name and the claim that "it does not produce nervousness or wakefulness" been dropped, but the chicory content has been reduced.

<sup>4</sup>Conn. Agr. Expt. Sta. Reports on Food Products and Drugs: 1915, 274 and 276; 1916, 186 and 188.

9599. *Colombian Coffee*. H. Birdsall, New Haven, Conn. Caffeine found, 1.38 per cent. Since 20 market brands of coffee analyzed by us in 1925<sup>5</sup> averaged 1.21 per cent caffeine, this was not a low-caffeine coffee.

### Confectionery

Eighteen samples of candy were submitted by the Commissioner; two were passed and 16 were adulterated or misbranded:

K.C.-915. *Candy Filled Metal Telephone*. T. H. Stough Co., Jeannette, Pa. Adulterated because it contained a non-nutritive substance (carnaüba wax) and misbranded because the label was hidden inside the telephone.

F.M.-27. *Chesterfield King Size Candy Cigarettes*. World Candies, Inc., Brooklyn, N.Y. Net weight: Declared, 0.50 oz.; found (average of six packs), 0.42 oz. Short weight.

K.F.-1898. *Dia-Mel Dietetic Citrus Drops, Saccharin Sweetened*. Dietetic Food Co., Inc., Brooklyn, N.Y. Presence of saccharin confirmed; adulterated.

K.F.-1897 and 1906. *Dia-Mel Dietetic Twin-Pops*. Dietetic Food Co., Inc., Brooklyn, N.Y. Presence of saccharin confirmed; adulterated.

K.F.-1896, 1904 and 1905. *Dia-Mel Special Dietetic Product Dietetic Candy Substitute*. Dietetic Food Co., Inc., Brooklyn, N.Y. Presence of saccharin confirmed; adulterated.

K.F.-1907. *Drake's Sugarless\* Milk Type Chocolate Flavored Bar, Mint, with Non-Fat Milk Solids*. Amuro Products Co., Chicago, Ill. Labelled: "\*Natural lactose of the milk ingredient retained." Test for sucaryl positive; adulterated.

Another sample of this product was examined in 1955<sup>6</sup>.

K.F.-1823. *F & F Daily "C"*: F & F Laboratories, Inc., Chicago, Ill. This sample consisted of a carton of six packages of 11 candy tablets labelled: "with the Vitamin 'C' of 6 oranges—Delicious candy and Vitamin 'C' so essential to good health—EAT FREELY—Ing. Sugar, corn syrup, fruit acid, only natural flavors, & certified food colors; ascorbic acid as sodium ascorbate 42 mg. per tablet. Minimum daily requirements of ascorbic acid (Vit. C) 30 mg." Analysis showed 45 mg./tablet of ascorbic acid; passed.

K.C.-878. *Flooty the Musical Squirrel*. Frankford Candy and Chocolate Co., Philadelphia, Pa. This sample consisted of a large chocolate squirrel in a purple-and-green box with a cellophane front panel labelled: "Pure Milk Chocolate—Happy Easter—Ingredients: Milk chocolate, artificially flavored emulsifier added, sugar and certified coloring." Test for lactose positive; passed.

K.F.-1908. *Jel-Loebs Delicious Dietetic Sweets!*. Loeb Dietetic Foods Co., Inc., New York, N.Y. Test for sucaryl positive; adulterated.

K.C.-987. *Loft's Dietetic Dark Chocolate for the Sugar Restricted Diet*. Loft Candy Shops, Long Island City, N.Y. Sucaryl present; adulterated.

<sup>5</sup>Conn. Agr. Expt. Sta. Bul. 276, 338-339 (1926).

<sup>6</sup>Conn. Agr. Expt. Sta. Bul. 609, 23 (1957).

*F.M.-30. Pall Mall Candy Cigarettes, King Size.* World Candies, Inc., Brooklyn, N.Y. Net weight: Declared, 0.50 oz.; found (average of six packs), 0.47 oz. Short weight.

*K.C.-922 and 925. Ring Ding.* Ralph Robinson and Bridgeport Wholesale Confectionery, Bridgeport, Conn. These samples consisted respectively of three and six plastic balls, each containing several brightly-colored pieces of candy and a toy. Because the only labelling was the "Ring Ding Magnifying Glass—Squeeze to Open Pat. Pend." on a few of the balls, both samples were misbranded.

Another sample of this product was examined in 1956.<sup>7</sup>

*K.C.-917. Sweetie Pencil.* Leda Co., Japan. This sample consisted of a pen-shaped plastic container, with a piece of red crayon stuck into the pointed end and a metal clip on the other end, filled with varicolored tiny balls of candy held in place with a cork. Misbranded because it bore an insufficient address and no ingredient declaration and did not declare artificial color.

*K.C.-890. Woolly Willie, Milk Flavored.* R. M. Palmer Co., Reading, Pa. This sample consisted of a cardboard box with a cellophane window containing a large candy lamb. Labelled: "Ingredients: Sugar, albumen, vegetable butter, milk solids, vanilla an artificial flavor, emulsifier, cert. coloring." Misbranded because "vegetable butter" is not a specific name.

In 1956 another sample of this product was submitted to a rather complete analysis which indicated that its components were cocoa butter, dry skim milk and sugar; at that time "chocolate" was declared as the major ingredient.<sup>8</sup>

### Contaminated or Decomposed Foods

Ninety-one samples of foods were submitted by the Commissioner because of suspected insect or rodent infestation, contamination with foreign materials or decomposition, or because of complaints that they had made people ill. Included were: Eleven samples of sodas; seven of lard; six of vegetable shortening; five of dried milk; four each of bread, confectionery, fish and hamburger; three each of canned corn, grape jelly, ham and puffed rice; two each of baby food, breaded clams, evaporated milk, flour, macaroni products, oleomargarine, orange juice, pickles and soup; and one each of bologna, breaded shrimp, cheese, cider, codfish cakes, a doughnut, egg white, ice cream, metal, oatmeal, pie filling, pineapple juice, pork, potatoes au gratin, a teething biscuit and Welsh rabbit. Forty-eight samples were passed and 43 were adulterated. The adulterated samples were the following:

*K.C.-905. A & P Golden Sweet Corn, Cream Style.* Great Atlantic & Pacific Tea Co., New York, N.Y. One European corn borer (*Pyrausta nubilalis*) lying on top of corn.

*E.S.-32. Beinstein's Sliced Pumpnickel Bread.* Beinstein Bakery, Simsbury, Conn. Moldy.

*E.S.-22. Bologna.* Mrs. Angelina Ferrero, Hartford, Conn. V-shaped strip of steel, 1/4" long, imbedded in the bologna.

*K.C.-933. Brooklawn Club Birch Beer.* Brooklawn Club Beverages, Inc., Bridgeport, Conn. Sand and dirt present.

<sup>7</sup>Conn. Agr. Expt. Sta. Bul. 617, 27 (1958)

<sup>8</sup>Conn. Agr. Expt. Sta. Bul. 617, 25 (1958).

*K.C.-932 and 934. Brooklawn Club Club Soda.* Brooklawn Club Beverages, Inc., Bridgeport, Conn. Traces of sand and dirt present.

*K.C.-935. Brooklawn Club Cream Soda.* Brooklawn Club Beverages, Inc., Bridgeport, Conn. Traces of sand and dirt present.

*K.C.-931. Brooklawn Club Pale Dry Ginger Ale.* Brooklawn Club Beverages, Inc., Bridgeport, Conn. Traces of sand and dirt present.

*P.S.-115. Canada Dry Ginger Ale.* Canada Dry Bottling Co., Hartford, Conn. Unidentified plant material present; turpentine-like odor.

*E.C.-910. Clapp's Junior Baby Food Peaches.* Clapp's Baby Food Division, American Home Foods, Inc., Rochester, N.Y. Large clump of mold and trace of sand present; peaches decomposed.

*E.S.-21. Coca-Cola.* Coca-Cola Bottling Co., Northampton, Mass. Rusty tinned iron paper-clip present.

*E.S.-10. Cooked Macaroni.* Emanuel Trigenis, Hartford, Conn. Stated to have been made from "La Rosa Egg Bows" (see *E.S.-11* below). Infested with adult sawtoothed grain beetles (*Oryzaephilus surinamensis*).

*E.S.-3. Cott Quality California Orange Soda.* Cott Beverage Corp., New Haven, Conn. Portion of insect larva present.

*E.S.-17. Country Cured Ham.* Butler Grocery, Hartford, Conn. Live and dead cheese-skipper larvae (*Piophilidae casei*) present.

*E.S.-8369. Halibut.* Conn. State Hospital, Middletown, Conn.. Incipiently decomposed.

*K.C.-959. Hamburg.* Health Dept., Bridgeport, Conn. Badly decomposed.

*J.Z.-57. Hamburg Patties.* Roessler Packing Co., Inc., New Haven, Conn. Slightly decomposed.

*J.Z.-56. Hamburg Patties.* Ship Ahoy, Milford, Conn. Badly decomposed.

*E.S.-24. Hershey's Miniatures.* Hershey Chocolate Corp., Hershey, Pa. Those chocolates containing nuts were infested with Indian meal moth larvae (*Plodia interpunctella*).

*S.O.-419. Jane Parker Sliced Enriched White Bread.* Great Atlantic & Pacific Tea Co., Stamford, Conn. Contaminated with lubricating grease.

*P.S.-110. Jelly Doughnut.* Mrs. B. Brilakas, Hartford, Conn. Green bottle fly present.

*F.P.-310 to 312. Lard (Stabilized).* Ohio Provision Co., Cleveland, Ohio. Rancid.

*K.N.-2983. Lard, Stabilized.* B.N.S. International Sales Corp., New York, N.Y. Incipiently rancid.

*E.S.-11. LaRosa Egg Bows No. 68 (Tripolini).* V. LaRosa & Sons, Brooklyn, N.Y. Infested with live and dead adult sawtoothed grain beetles (*Oryzaephilus surinamensis*).

*E.S.-930. Louis Sherry Dietetic Concord Grape Jelly.* Louis Sherry Preserves, Inc., Long Island City, N.Y. Calcium tartrate crystals and trace of glass present.

K.C.-913. *Lynne Type Telephone*. T. H. Stough Co., Jeannette, Pa. Trace of insect larval casts present; candy not very fresh.

A.L.-381. *Metal*. Mrs. Olive C. Racken, Wallingford, Conn. Analysis of this metal fragment showed it to be mostly lead, with lesser proportions of antimony, bismuth and tin; it was probably solder. It was claimed to have been found in a package of "Quaker Puffed Rice".

E.C.-908. *Mission Beverages Cream Soda*. Mission Orange Bottling Co., Norwich, Conn. This bottle contained a whole mouse.

P.S.-128. *Old Fashioned Quaker Oats*. Quaker Oats Co., Chicago, Ill. Sample had a pine oil odor, which was traced to the spilling of "Pine-Sol" disinfectant on a case of this oatmeal in the storeroom of the Mohican Co. of New England, Hartford, Conn.

E.C.-980. *Orange Juice from Vending Machine*. Jesse J. LaBoue, New London, Conn. This juice had picked up 25 parts per million of lead and 100 p.p.m. of tin from solder connections in the machine.

F.P.-316. *Popular Brand Vitamin D Increased Evaporated Milk*. Popular Markets, Springfield, Mass. Piece of solder present in one of the three cans comprising this sample; all three cans were badly rusted inside, and the milk contained considerable quantities of flaked-off rust and dried milk particles.

S.O.-388. *Pork Roast*. Food Fair Stores, Norwalk, Conn. Two worms present, which were not trichinellae but free-living roundworms.

P.S.-87. *Royal Elm Brand Margarine*. Elm Sales Co., New Haven, Conn. Strong soapy flavor.

K.C.-944. *Rye Bread*. Zwerdling's Bakery, Bridgeport, Conn. Contained one live and one dead adult moth of a *Tinea* species and crushed fragments of a small beetle.

E.C.-870. *Sandwich Bread*. Mohican Market, Norwich, Conn. Trace of mouse feces present.

P.R.-94 to 96, 98 and 99. *Shortening (Hydrogenated Cottonseed Oil)*. E. F. Drew & Co. Incipiently rancid.

Twenty-eight samples were submitted by the Bridgeport, Hartford, Manchester, New Britain and Stamford health departments, attorneys, private citizens and an express company; of these 14 were passed and 14 were found to be contaminated or decomposed. Included were: Five samples of soda; three of milk; two each of cake, cookies and frankforts; and one each of beer, bread, canned roast beef, chili sauce, honeycomb, a lollipop, pastry, peas, preserves, rolls, salad, soup, spinach and vinegar. The adulterated samples were the following:

2955. *A & P Leaf Spinach, Quick Frozen*. Great Atlantic & Pacific Tea Co., New York, N.Y. One pentatomid beetle (*Chlorochroa persimilis*) present.

2405. *Campbell's Condensed Chicken Noodle Soup*. Campbell Soup Co., Camden, N.J. European corn borer (*Pyrausta nubilalis*) present.

1449. *Frankfort in Roll*. Alpine Restaurant, New Haven, Conn. This frankfort contained a small piece of zinc.

2340. *Ice Cream Sandwich Wafers*. Southern Biscuit Co., Richmond, Va. These cookies had a bitter after-flavor.

39. *Jes-So Sweet Tender Peas*. Sweet Life Brands, Inc., New York, N.Y. Corn ear worm (*Heliothis obsoleta*) present.

819. *Lincoln 100% Pure Peach Preserves*. Lincoln Foods, Inc., Lawrence, Mass. Honeybee and fragments of peach skin present.

537 and 9213. *Mason's Root Beer*. Lynbrook Beverages, Inc., New Haven, Conn. 537 contained a trace of mold and a piece of charcoal; 9213 contained a portion of a cigarette and a field cricket (*Acheta assimilis*).

41. *Pabst Blue Ribbon Beer*. Pabst Brewing Co., Newark, N.J. Olive fragments present.

1593. *Pastry*. Grand Pastry Shop, New Haven, Conn. Contained traces of rodent excreta.

1952. *Pepsi-Cola*. Paul Rakowski, Meriden, Conn. This bottle contained a disintegrated cigarette butt and two partially burned book matches.

9734. *Roessler Frankfort*. Carl Roessler, Inc., New Haven, Conn. Contained bristles from a brush.

2264. *Thin Sliced Wards Tip-Top Enriched Bread, Sandwich*. Ward Baking Co., New York, N.Y. The wrapper and the edges of some of the slices of this loaf of bread were contaminated with a large quantity of lubricating grease.

3598. *Vinegar*. Mrs. Willaim Skehan, Waterbury, Conn. Contained 0.19 per cent of white mineral oil.

## Dairy Products

### Cheese

Three samples of grated cheese, two of cottage cheese and one of cream cheese were examined for the Commissioner; four were passed and two were misbranded. Analyses are given in Table 4.

### Cream

P.S.-97, *New Instant Pream for your Coffee*, manufactured by H. C. Moores Co., Columbus, Ohio, was labelled: "Powdered formula of light cream, skim milk (calcium reduced), and lactose. A dried milk 100% Pure Dairy Product." At the request of the Hartford chapter of the American Heart Association it was analyzed for sodium; 575 mg./100 gm. were found. Passed.

### Dry Skim Milk

Two official samples were analyzed in continuation of a study of the lactose and casein contents of the brands of dry skim milk used in frankfort manufacture; both samples were passed:

W.M.-1252. *Aula Meat Binder*. Aula Co., Long Island City, N.Y. Water, 6.58, casein, 30.11, lactose, 52.90, dextrose, 0.00, and starch, 0.00, per cent; nitrite absent.

K.F.-1825. *Extra Grade Roller Process Non Fat Milk Solids*. Cooperdale Dairy Co., Skaneateles Junction, N.Y. Water, 3.44, casein, 36.37, lactose, 50.10, dextrose, 0.00, and starch, 0.00, per cent.



TABLE 4. CHEESE

No.	Manufacturer or distributor and brand	Water, per cent	Casein, per cent	Fat, per cent	Lactose, per cent	Ash, per cent	Dry skim milk, per cent	Starch	Remarks
S.O.-392	S. DiMauro, Hawthorne, N.Y. Aunt Millie's 100% Pure Imported Italian Pecorino Grated Cheese	19.85	35.66	35.44	0.00	7.76	0.00	absent	"Pecorino" is name applied to Romano cheese made from sheep's milk; Federal Regulation 19.610 (d) requires not less than 38% fat on dry basis. Passed.
K.F.-1804	Breakstone Bros., Inc., New York, N.Y. Breakstone's Pasteurized Cream Cheese	—	—	—	—	—	—	—	Test for gums negative; passed.
W.M.-1585	H. P. Hood & Sons, Boston, Mass. Hood Country Style Pasteurized Creamed Cottage Cheese	78.96	—	3.63	—	—	—	—	Federal Regulation 19.530 requires minimum of 4% fat and maximum of 80% water. Low in fat; misbranded.
K.C.-810	Jason Dairy Products Co., Inc., Brooklyn, N.Y. Jason Pure Grated Romano Cheese	15.78	36.75	37.49	0.00	8.32	0.00	absent	Passed.
W.M.-1552	National Dairy Products Corp., New York, N.Y. Seadest Pasteurized Creamed Cottage Cheese	81.13	10.85	3.50	—	1.30	—	—	Advertised as "High Protein—Low Calorie". Low instead of high in protein; substandard for creamed cottage cheese (low in fat and high in water). Misbranded.
J.B.-189	Pieroni's Food Products, Boston, Mass. Real Pieroni's Grated Parmesan	11.74	47.03	29.97	0.00	8.60	0.00	absent	This is a skim milk cheese that meets 32% fat requirement (dry basis) for Parmesan cheese of Federal Regulation 19.595. Passed.

## Ice Cream and Ice Milk

One brand of ice milk on the market in 1957 ("Hood Slim Delite", made by H. P. Hood & Sons, Boston, Mass.) was labelled with a "Low Calorie Dessert Guide" comparing the calorie content (stated to be 100) of an "average serving" of this product with those of a number of other desserts, to the disadvantage of the latter; the packages were also labelled specifically "Low in Calories—High in Proteins". The label did not state what an "average serving" of ice milk was, but calculating back from the calorie content of the "Hood" product as determined by analysis it would appear that they considered such a serving to be between one-fifth and one-sixth of a pint, or about two ounces by weight—scarcely a generous one. Both to check the Hood claims and to find out whether the calorie content of ice milk was in general less than that of ice cream on a volume basis, as was popularly supposed, the Commissioner submitted four samples of ice milk and two of ice cream for examination. Results of our analyses are given in Table 5.

The analyses confirmed that ice cream does have a higher calorie content than ice milk; the difference is not great, being only 70 calories per pint for chocolate ice cream and 117 calories per pint for vanilla ice cream. The three "Hood Slim Delite" ice milks (F.H.-1274, 1297 and 1298) were, however, misbranded because they were labelled as special dietary foods but did not "bear a statement of—(a) the percent by weight of protein, fat and available carbohydrates in such food; and (b) the number of available calories supplied by a specified quantity of such food" as Federal Regulation 125.06 requires.

## Unfortified Fluid Milk

Two quart paper cartons of milk were submitted by the Commissioner, partly to check their net contents and partly to find out what the gross weight of a full quart carton of milk was. Since for both samples one empty carton was found to weigh 1.59 ounces, and a quart of milk of 1.032 specific gravity weighs 34.44 ounces, the gross weight of a full quart carton was established to be 36.03 ounces. One of the samples was short volume and the other was not:

W.M.-1860. *Homogenized Approved Milk*. Clark Dairy, West Haven, Conn. Net contents, 31.35 fl. oz.; short volume 0.65 fl. oz., which is in excess of the half-ounce-per-quart tolerance. Misbranded.

W.M.-1861. *Homogenized Approved Milk*. New Haven Dairy, New Haven, Conn. Net contents, 32.19 fl. oz. Passed.

In addition, butter fat contents were determined for dairymen, the Amity Regional High School in Woodbridge and a county extension service home demonstration agent, on nine samples of ordinary milk and one of a chocolate milk drink.

## Vitamin D Milk

Vitamin D milk is standardized to contain 400 U.S.P. units of vitamin D per quart. Since 1935 this laboratory has checked the vitamin D contents of all brands of vitamin D milk on the market by feeding tests on rats. Samples were submitted by the Dairy and Food Commission until July 1, 1947; by the Department of Farms and Markets for the following six years; and by the State Department of Agriculture since July 1, 1953.

In 1957, 236 samples were examined—20 samples less than the year before. Results of the assays are shown in Table 6; 27 samples were definitely below the unitage claimed. The percentage of samples fully or substantially meeting guaranties was 89—a drop of three percentage points from the year before.



TABLE 5. ICE CREAM AND ICE MILK

No.	Manufacturer and brand	Weight per pint, grams	Water, per cent	Ash, per cent	Protein, per cent	Carbohydrates (by difference), per cent	Fat, per cent	Calories per 100 grams	Calories per pint
F.H.-1294	Dairy Queen No. 5, Stamford, Conn. <i>Dairy Queen Ice Milk</i> .....	—	66.54	0.94	3.89	22.27	6.36	162	—
F.H.-1299	H. P. Hood & Sons, Boston, Mass. <i>Hood Ice Cream, Chocolate</i> .....	263	52.82	0.96	5.87	29.35	11.00	240	631
F.H.-1300	H. P. Hood & Sons, Boston, Mass. <i>Hood Ice Cream, Vanilla</i> .....	283	60.45	0.99	4.27	23.79	10.50	207	585
F.H.-1298	H. P. Hood & Sons, Boston, Mass. <i>Hood Slim Delite, Chocolate</i> .....	315	59.09	1.30	6.25	29.40	3.96	178	561
F.H.-1274	H. P. Hood & Sons, Boston, Mass. <i>Hood Slim Delite, Vanilla</i> .....	—	65.86	1.02	4.40	25.39	3.33	149	—
F.H.-1297	H. P. Hood & Sons, Boston, Mass. <i>Hood Slim Delite, Vanilla</i> .....	305	65.26	0.99	4.47	25.60	3.68	153	468

In the 23-year period 1935-1957 inclusive, 3,268 samples have been tested; 91 per cent contained the required 400 units of vitamin D per quart or were sufficiently close thereto to be passed.

TABLE 6. VITAMIN D MILK

City or town	Dairy	No. of samples tested	Satisfactory	Passed	Below unitage claimed
Baltic	Sunrise Farm Dairy (John Ozga)	2	2	..	..
Berlin	Johnson's Dairy	2	2	..	..
	Lower Lane Dairy	2	2	..	..
	Ventres Dairy	2	2	..	..
Bloomfield	Maple Hill Farms	2	2	..	..
	Chris Nielsen & Sons	2	2	..	..
	Talcott View Farm	1	1	..	..
	A. J. Wade Dairy Farms	2	1	..	1
Bolton	Bolton Dairy, Inc.	1	1	..	..
Bridgeport	Beechmont Dairy	2	1	..	1
	Dewhurst Dairy	1	1	..	..
	Mitchell Dairy Co. Div., Borden's	2	2	..	..
Bristol	E. H. Elton Dairy	2	2	..	..
	Roberge Dairy, Inc.	2	2	..	..
Clinton	Burr Dairy, Inc.	2	1	..	1
Cromwell	McAllister Dairy	2	2	..	..
Danbury	Marcus Dairy	1	1	..	..
	Rider Dairy Co.	1	1	..	..
Derby	Kinney's Dairy	2	2	..	..
East Haddam	Sprecher Dairy	2	2	..	..
East Hampton	Wall's Dairy Farm	2	2	..	..
East Hartford	Bergren's Dairy Farms	2	1	..	1
East Lyme	Drabik Farms	1	1	..	..
Easton	Marsh Dairy	2	2	..	..
	Snow's Milk Farm	2	2	..	..
Ellington	Cordtsen's Dairy	1	1	..	..
Fairfield	Lobdell's Dairy	2	2	..	..
	Supreme Dairy	1	1	..	..
	Wade's Dairy	2	2	..	..
Farmington	Ridgeview Farm	2	1	..	1
Forestville	Peplau's Dairy	2	2	..	..
Greenwich	Round Hill Farms	1	1	..	..
Guilford	Maple Shade Farm, Inc.	2	2	..	..
Hamden	Brock-Hall Dairy Co.	2	2	..	..
Hartford	Bayer's Milk	3	2	..	1
	Bryant & Chapman—R. G. Miller & Sons	1	1	..	..
	Cloverdale Dairy	1	1	..	..
	Farmers' Co-Operative, Inc.	2	2	..	..
	Hilltop Dairy	1	1	..	..
	H. P. Hood & Sons	2	2	..	..
	Lincoln Dairy Co.	2	2	..	..
	National Dairy Products Corp. (Sealtest)	1	..	1	..
Jewett City	Norman's Dairy	2	2	..	..
Kensington	Ferndale Dairy, Inc.	2	1	..	1
	Rockland Dairy	2	1	..	1
Lebanon	Redwood Dairy	1	1	..	..
Lisbon	Stanley Wildowsky	2	2	..	..
Litchfield	Toll Gate Dairy Farms, Inc.	1	1	..	..
Manchester	Dari-Maid Milk Co.	2	2	..	..
	Dart's Dairy	2	2	..	..
	A. R. Wilkie	2	2	..	..

TABLE 6. VITAMIN D MILK—(Continued)

City or town	Dairy	No. of samples tested	Satisfactory	Passed	Below unitage claimed
Meriden	Countryside Dairy	1	1	..	..
	Charles Greenbacker & Sons, Inc.	1	1	..	..
	E. J. Kaemmer & Son	1	1	..	..
	W. F. Knapp	2	2	..	..
	Muenchow Dairy	1	1	..	..
	Schwink's Dairy	1	1	..	..
	Sievert's Dairy	2	1	..	1
	Triple Springs Farm	2	2	..	..
	Wayside Dairy	2	1	..	1
	Middletown	Daniels Farm Dairy	2	2	..
Hillside Dairy		2	1	..	1
Pleasant View Dairy		3	3	..	..
Sunshine Dairy		3	2	..	1
Milford	Clover Dairy	1	1	..	..
	A. J. Platt	1	1	..	..
Milldale	Riverside Dairy	2	2	..	..
New Britain	Guida-Seibert Dairy Co.	2	2	..	..
	Heslin Dairy Co.	2	2	..	..
New Canaan	J. J. Shapiro & Sons	2	1	1	..
	A. J. Spring & Sons	2	2	..	..
	Miller's Farm Dairy	1	1	..	..
New Haven	H. P. Hood & Sons	2	1	..	1
	National Dairy Products Corp.	1	1	..	..
Newington	Eddy Dairy	2	2	..	..
	J. William Holt & Son Farm Dairy	2	2	..	..
	Mortensen Dairy Farms	2	2	..	..
	J. A. Moylan & Son Dairy	2	2	..	..
	Spring Brook Farm Dairy	2	1	..	1
	Michael's Dairy	2	2	..	..
	New London & Mohegan Dairies	2	2	..	..
	Radway's Dairy	3	1	..	2
	Knudsen Bros.	2	2	..	..
	North Haven	Pious Hill Farm Dairy (Wm. Platt & Sons)	2	1	..
Clover Farms Dairy		1	1	..	..
North Stonington	Devine's Dairy	1	1	..	..
	Harrick's Dairy	1	1	..	..
Norwalk	Broad Brook Dairy (Niewiarowski & Sons)	2	1	..	1
	Preston Dairy	2	2	..	..
	Beebe's Dairy	3	2	..	1
	McDermott's Dairy	2	2	..	..
Orange	Great Oak Farm, Inc.	2	1	..	1
	Peterson's Dairy	3	2	..	1
Oxford	Fisher Bros. Dairy	1	1	..	..
Plainville	Burritt's Dairy	1	1	..	..
	Charles B. Gilbert	1	1	..	..
Putnam	Krol's Dairy	1	1	..	..
	Sunny Crest Farm	1	1	..	..
Redding	Sun Valley Dairy	1	1	..	..
	Ajello Bros.	2	2	..	..
Rocky Hill	Bomba Bros.	2	1	..	1
	Chatfield Dairy	1	1	..	..
Seymour	Pharos Farm Dairy	1	1	..	..
	W. W. Sherman & Sons	1	1	..	..
Simsbury	Newton Dairy	1	..	..	1
Southbridge, Mass.					
South Kent					

TABLE 6. VITAMIN D MILK—(Concluded)

City or town	Dairy	No. of samples tested	Satisfactory	Passed	Below unitage claimed
South Meriden	Diamond Hill Dairy (J. D. Ives)	1	1	..	..
Stamford	Sheffield Farms Co., Maplehurst Div.	1	1	..	..
	Stony Brook Farm, Inc.	2	2	..	..
Suffield	Welles Farms	1	1	..	..
Talcottville	C. C. Freimuth Dairy	2	1	..	1
Terryville	High Farm Dairy	2	2	..	..
	Fred J. Wood Dairy	2	1	..	1
Thomaston	Enfield Dairy (Simino Bros.)	2	2	..	..
Thompsonville	Riverview Dairy	2	2	..	..
	Smyth Farm Dairy	2	2	..	..
Torrington	Clover Dairy	1	1	..	..
	Co-Operative Dairy Co.	2	2	..	..
	Greenwood's Dairy	2	1	..	1
Trumbull	Torrington Creamery	1	..	1	..
	Parker's Dairy	1	1	..	..
Wallingford	Beaumont Farm	2	2	..	..
	J. H. Daly	2	2	..	..
Warehouse Point	Fairview Dairy	1	1	..	..
	J. P. Novak	2	2	..	..
Washington	Bassdale Farm Dairy	2	2	..	..
	Marsh Dairy Farm	2	1	..	1
Waterbury	Associated Milk Producers, Inc.	1	1	..	..
	Brookside Dairies, Inc.	1	1	..	..
Wauregan	Litchfield Farms, Inc.	1	1	..	..
	Tranquillity Farm Dairy	2	2	..	..
Webster, Mass.	Waterbury Co-Op. Dairy, Inc.	1	1	..	..
	Wauregan Dairy Farm	1	1	..	..
Westfield	Choiniere's Dairy	1	1	..	..
	Deary Bros.	1	1	..	..
West Hartford	Brookfield Dairy	3	3	..	..
West Haven	A. C. Petersen Farms	2	2	..	..
	Clark Dairy	1	1	..	..
Westport	Ferris Dairy	1	1	..	..
West Rocky Hill	Kenwood Farms	1	1	..	..
Wilton	Orem's Dairy	2	2	..	..
Winsted	J. O. Johnson & Son	1	1	..	..
Woodbridge	Rose-Hurst Farm	1	1	..	..
Yantic	Driscoll's Dairy	1	1	..	..
Total		236	206	3	27

## Deceptively Packed Foods

Section 19-222(d) of the General Statutes states that a food "shall be deemed to be misbranded...if its container shall be so made, formed or filled as to be misleading." In effect this means that it is illegal to pack foods in opaque containers that are larger than necessary, and so mislead the consumer into thinking that he (or more usually she) is getting more for his money than he is. In 1957, 23 samples were submitted by the Commissioner because of suspected slack fill; four samples were passed and 19 were misbranded. The deceptively packed samples were the following:

P.S.-40. Big Surprise. Supreme Novelty Co., Brooklyn, N.Y. Fill of container 30 per cent.

K.C.-853. *Candy Cigarettes*. Four Star Candy Co., Inc., Newark, N.Y. Fill of container 45 per cent (average of six packs).

K.C.-942, 961 and 986. *Candy Cigarettes*. World Candies, Inc., Brooklyn, N.Y. Average fill of container 35 per cent.

K.F.-1822. *Candy Cigarettes*. CeDe Inc., Bloomfield, N.J. Fill of container 55 per cent (average of six packs).

F.M.-31. *Chesterfield Candy Cigarettes*. World Candies, Inc., Brooklyn, N.Y. Fill of container 50 per cent.

E.C.-984 and 985. *Double Bingo Surprise*. Jaytown Products, Inc., Brooklyn, N.Y. Fill of container not over 50 per cent.

P.S.-85. *Duncan Hines Rice Pudding Mix*. Blue Ribbon Foods, Inc., Suffern, N.Y. Fill of container 47 per cent.

J.Z.-25. *King Size Chesterfield Candy Cigarettes*. American Nut & Chocolate Co., Boston, Mass. Fill of container 50 per cent.

S.O.-422. *Lady Belle Chocolates*. Lasalle Candy Co., Chicago, Ill. Fill of container 61 per cent.

K.C.-888. *Mickey Mouse and Popeye and his Pals Candies and Toys*. Super Novelty Candy Co., Inc., Newark, N.J. Fill of container 45 per cent (average of six packages).

F.M.-19. *Pall Mall Candy Cigarettes*. American Nut & Chocolate Co., Boston, Mass. Fill of container 47 per cent.

K.C.-941. *Ping the Pixie Candy and Toy Treasures*. Allison's Co., Brooklyn, N.Y. Fill of container less than 50 per cent.

E.C.-983 and K.C.-962. *Red Hot Candy Dynamite Sticks*. World Candies, Inc., Brooklyn, N.Y. Average fill of container 42 per cent.

E.C.-982 and 986. *Santa's Surprise Stocking*. Supreme Novelty Co., Brooklyn, N.Y. Fill of container not over 50 per cent.

Eggs

Seven samples of dried egg yolks and one of frozen whole eggs were examined for the Commissioner, and one sample of broken-out eggs was analyzed for the New Britain health department. Two samples were passed and seven were adulterated or misbranded; analyses are given in Table 7. The egg-yolk solids figures were calculated on the assumption that pure egg yolk solids contained 1.94 per cent of lipoid P<sub>2</sub>O<sub>5</sub>.<sup>10</sup>

Extracts and Flavors

Five official and two unofficial samples of root beer flavor, four official and one unofficial samples of foaming agents, and one official sample of imitation maple flavor, were examined. Four samples were passed and nine were adulterated or misbranded:

<sup>10</sup>Mitchell, J. *Assoc. Official Agr. Chem.*, 16, 304 (1933).

TABLE 7. EGGS

No.	Manufacturer or distributor and brand	As Received		Dry Basis			Remarks	
		Water, per cent	Ash, per cent	Lipoids, per cent	Lipoid P <sub>2</sub> O <sub>5</sub> , per cent	Sucrose, Dextrose, per cent		Egg yolk solids, per cent
K.F.-1683	Anheuser-Busch, Inc., St. Louis, Mo. <i>Bud Brand Dried Egg Product Egg Yolks</i>	4.02	3.42	53.55	1.20	—	62	Labelled: "Egg yolks, stabilizing syrup, salt." Misbranded because not straight egg yolk solids.
K.F.-1797	Anheuser-Busch, Inc., St. Louis, Mo. <i>Bud Brand Dried Egg Product Yolk Solids</i>	6.25	—	55.48	1.32	0.00	68	Salt 1.11 per cent (dry basis). Labelled: "Contains: egg yolks, corn syrup, and salt." Misbranded because not straight egg yolk solids.
P.S.-45	Armour & Co., Chicago, Ill. <i>Cloverbloom Egg Yolk Solids, Stabilized</i>	3.68	3.47	52.64	1.64	—	85	Misbranded because the "stabilizer" was not named.
1587	Health Dept., New Britain, Conn. <i>Broken-Out Eggs</i>	73.28	—	26.09	0.67	—	35	Not whole eggs; adulterated.
P.S.-34	National Products, Inc., Arlington, Mass. <i>Baker's Pride Brand Egg Yolk Solids</i>	6.78	2.49	41.84	0.92	—	47	Not straight egg yolk solids; adulterated and misbranded.
P.S.-43	National Products, Inc., Arlington, Mass. <i>Baker's Pride Brand Egg Yolk Solids</i>	7.22	2.57	42.58	0.97	—	50	Not straight egg yolk solids; adulterated and misbranded.
P.S.-35	Seymour Foods, Inc., Topeka, Kansas. <i>Consort Brand Egg Solids—Stabilized Dried Yolk</i>	3.51	3.57	57.51	1.37	—	71	Misbranded because "stabilizer" was not named.
K.N.-2806	Stein, Hall & Co., Inc., New York, N.Y. <i>Hallmark Spray Dried Egg Yolk</i>	3.50	—	62.39	1.58	0.00	81	Salt 0.33 per cent (dry basis). Passed.
F.M.-3	Tony's Donut Shop, New Haven, Conn. <i>Frozen Whole Eggs</i>	—	—	—	—	—	—	Ammonia nitrogen 1.9 mg./100 gm. Passed as fresh.

*K.C.-971. Baker's Imitation Maple for Table Syrup and Flavoring.* Baker Extract Co., Springfield, Mass. The label on the bottle read "Prepared from foenugreek, coffee, vanillin, vanilla, water, alcohol, vegetable extract, caramel coloring", while that on the carton listed coumarin as an additional ingredient. After tests on animals a few years ago showed that coumarin could cause liver damage its use in foods was banned by the Federal Government. A test for coumarin was negative on this sample, but it was nevertheless misbranded because of the conflicting ingredient statements and because "vegetable extract" was not a specific name.

*E.C.-976 and 989 and E.S.-33. Crown 4 Oz. Root Beer Flavor.* Crown Flavor Laboratories, Inc., Providence, R.I. Labelled: "Contains: Percolated roots & herbs, spice oils, sugar color, vegetable gum foam and water." *E.C.-976* contained saponin and was adulterated; the other two samples were passed.

*K.F.-1761, 1843 and 1844 and S.O.-405. Frothee, the Original Creamy Head.* House of Frothee, New York, N.Y. *K.F.-1761, 1843 and 1844* were labelled "Ingredients: Propylene glycol, root extraction, citric acid, distilled water, 1/10% benzoate of soda", while the declared ingredients on *S.O.-405* were "Polyoxyethylene sorbitan monostearate, propylene glycol, 'Sorbo', citric acid, distilled water, 1/10 of 1% benzoate of soda." The first three samples gave positive tests for saponin and were consequently adulterated; *S.O.-405* contained no saponin but was misbranded because "Sorbo" was not a common name.

*1975. Mission Root Beer Concentrate No. 444.* Mission Dry Corp., Los Angeles, Calif. Test for saponin negative; passed.

*1974 and E.C.-975. Mission Root Beer Concentrate No. 454.* Mission Dry Corp., Los Angeles, Calif. Saponin present; adulterated.

*E.C.-977. Sunto Brand Creamy Root Beer Foamy Type Flavor.* Bottlers' Associates, Inc., Providence, R.I. Test for saponin negative; passed.

*1973. Yuccarome Brand Root Extract of Yucca.* F. Ritter & Co., Los Angeles, Calif. Saponin present; adulterated.

### Fish and Shellfish

Three samples of canned bonito and tuna, and one each of frozen clam sticks, deviled crabs and seafood dinners, were submitted by the Commissioner; three samples were passed and three were misbranded:

*K.F.-1884. Chiquita Brand Bonito Flakes.* Robert Adelman, New York, N.Y. Net weight: Declared, 6 oz.; found, 5.82 oz. Short weight.

*P.S.-106. Chiquita Brand Fancy Solid Pack in Brine, Without Oil, Salt Added.* Robert Adelman, New York, N.Y. The contents of this can were submitted to Mr. L. R. Shelton, Jr., of the Division of Microbiology of the U.S. Food and Drug Administration in Washington, who identified them as solid-pack bonito, not of fancy grade because there was an excessive quantity of finely shredded flesh at the top and bottom of the can. Misbranded because not labelled with the name of the fish and not fancy pack.

*S.O.-389. Mrs. Paul's Deviled Crabs.* Froelich Transportation Co., Stamford, Conn. No evidence of decomposition; passed.

*S.O.-391. New Clam Sticks Frozen.* Froelich Transportation Co., Stamford, Conn. No evidence of decomposition; passed.

*K.C.-920. Pantry-Shelf Brand Light Meat Solid Pack Bonito Tuna Packed in Cotton Seed Oil, Salt Added.* Philip Green & Co. Ltd., Toronto, Canada. This Peruvian product was being sold as bonito, but examination by L. R. Shelton, Jr. of the U.S. Food and Drug Administration in Washington proved that it was solid pack tuna, somewhat soft and of low quality but not decomposed. Mislabelled because not a mixture of bonito and tuna.

*S.O.-390. Seafood Dinners, Twin Pack.* Froelich Transportation Co., Stamford, Conn. No evidence of decomposition; passed.

### Flour

Two samples of wheat flour and one of corn flour were examined for the Commissioner; two were passed and one was misbranded:

*W.M.-1255. Extra Fine Grind Yellow Corn Flour.* Sande, Taylor & Woods, Somerville, Mass. Water, 11.90, protein, 6.31, and starch, 71.73, per cent; dextrose trace; test for lactose negative. Passed.

*K.F.-1837. Fancy Durum Patent.* International Milling Co., Capital Durum Division, Minneapolis, Minn. Water, 12.28, ash, 1.14, protein, 13.68, fiber, 0.52, available carbohydrate, 70.64, and fat, 1.74, per cent. Passed.

*K.F.-1765. Freshbake Enriched Flour, Bleached.* Grand Union Co., East Paterson, N.J. Federal Regulation 15.10 requires enriched flour to contain (besides specified quantities of other vitamins and iron) 1.2-1.5 mg./lb. of riboflavin and 16-20 mg./lb. of niacin. Assay of this sample showed 0.98 mg./lb. of riboflavin and 16.8 mg./lb. of niacin. Deficient in riboflavin.

### Fruit, Canned

Twenty-one samples of "Maraschino" cherries, and one each of apricots, apricot and apple sauce, a mixed fruit sundae topping and strained prunes, were examined for the Commissioner; six samples were passed and 19 were adulterated or misbranded:

*P.R.-74. Bartley's Finest Quality Maraschino Cherries.* Brookdale Food Co., Brooklyn, N.Y. Sulfur dioxide not declared; found, 28 parts per million. Misbranded.

*K.C.-886. Beech-Nut Prunes Strained Foods.* Beech-Nut Packing Co., Canajoharie, N.Y. Test for benzoate negative; passed.

*E.C.-866. Bon Maraschino Cherries.* Bonoil Packing Corp., Brooklyn, N.Y. Sulfur dioxide not declared; found, 66 p.p.m. Misbranded.

*F.P.-330. Carroll E. Hills Apricots Packed in Cane Sugar Syrup.* Carroll E. Hills, East Hartford, Conn. Analysis showed the presence of 1,312 parts per million of undeclared sulfur dioxide; in fact the apricots tasted and smelled of this substance. These were not fresh but dried apricots. Adulterated and misbranded.

*K.C.-946. Castanet Fancy Maraschino Cherries.* Benedict Packing Corp., New York, N.Y. Sulfur dioxide not declared; found, 21 p.p.m. Misbranded.

*J.B.-259 and P.R.-78. Continental Maraschino Cherries in Sugar Syrup.* Continental Fruits, Inc., New York, N.Y. Sulfur dioxide not declared; found, 45 p.p.m. in *J.B.-259* and 145 p.p.m. in *P.R.-78*. Misbranded.

*K.C.-896. Fre-Mar Brand Cherries in Heavy Syrup.* Tulip, Inc., Philadelphia, Pa. Sulfur dioxide not declared; found, 29 p.p.m. Misbranded.

K.C.-997 and K.F.-1818. *Freshpak Brand Maraschino Cherries with Stems in Sugar Syrup*. Grand Union Co., East Paterson, N.J. Sulfur dioxide not declared; found, only 5 p.p.m. Passed.

P.R.-73. *Grandee Maraschino Cherries in Sugar Syrup*. Mawer-Gulden-Annis, Inc., Brooklyn, N.Y. Sulfur dioxide not declared; found, 24 p.p.m. Misbranded.

K.C.-887. *Heinz 57 Junior Apricots and Apple Sauce*. H. J. Heinz Co., Pittsburgh, Pa. Test for benzoate negative; passed.

K.C.-928. *Lincoln Mixed Fruit Sundae Topping*. Lincoln Foods, Inc., Lawrence, Mass. Misbranded because this tumbler bore no manufacturer's name or address.

P.R.-75 and E.S.-4 and 5. *Overland Maraschino Cherries with Stems in Sugar Syrup*. S. S. Pierce Co., Boston, Mass. Sulfur dioxide not declared; found, respectively 17, 4 and 147 p.p.m. E.S.-4 passed; the others misbranded.

E.C.-926, K.C.-889 and 992, and A.L.-360. *Paradise Maraschino Cherries in Sugar Syrup*. Paradise Packing Co., Brooklyn, N.Y. Sulfur dioxide not declared; found respectively 3, 231, 81 and 806 p.p.m. E.C.-926 passed; others misbranded.

K.C.-881. *Premier Maraschino Cherries*. Francis H. Leggett & Co., New York, N.Y. Sulfur dioxide not declared; found, 44 p.p.m. Misbranded.

J.B.-245. *Shurfine Maraschino Cherries, Artificially Colored and Flavored*. National Retailer-Owned Grocers, Inc., Chicago, Ill. Sulfur dioxide not declared; found, only 6 p.p.m. Passed.

E.C.-917 *S & W Maraschino Cherries*. S & W Fine Foods, Inc., Redwood City, Calif. Sulfur dioxide not declared; found, 29 p.p.m. Misbranded.

E.C.-927. *Three Star Brand Maraschino Cherries in Sugar Syrup, Artificially Flavored and Colored*. Paradise Packing Co., Brooklyn, N.Y. Sulfur dioxide not declared; found, 914 p.p.m. Misbranded.

K.C.-893. *White Rose Maraschino Cherries in Heavy Cane Sugar Syrup, Artificially Flavored and Colored*. Seeman Bros., Inc., New York, N.Y. Sulfur dioxide not declared; found, only 2 p.p.m. Passed.

### Fruit, Dried

Three samples of dried apricots were submitted by the Commissioner to be tested for the presence of excessive sulfur dioxide; one was passed and two were adulterated:

W.M.-2287. *Finast Apricots, Large Size-Sun Dried*. First National Stores, Inc., Somerville, Mass. Labelled "Prepared with sulphur dioxide." Sulfur dioxide found, 1,751 p.p.m.; the apricots had a slight flavor of this substance. Adulterated.

W.M.-2285 and 2286. *Mariani Brand Fancy Blenheim Apricots*. Carroll E. Hills, East Hartford, Conn. Labelled "Prepared with sulphur dioxide." W.M.-2285 contained 4,549 p.p.m. of sulfur dioxide and the apricots tasted and smelled of this substance; adulterated. W.M.-2286 contained 929 p.p.m. of sulfur dioxide but had no perceptible odor or flavor of this substance; it was therefore passed since the compound was declared.

### Fruit, Fresh

Two samples each of grapefruit, oranges and tangerines were examined for the Commissioner. The grapefruit and oranges were submitted for the purpose of obtaining information on the composition of authentic juices and were of course passed, while the tangerines were coated with an unknown and undeclared substance and were consequently misbranded:

J.Z.-11. *Dankee Jr. Brand Florida Citrus Grapefruit*. Great Atlantic & Pacific Tea Co., New Haven, Conn. Analysis of the juice showed: Ash, 311, K<sub>2</sub>O, 170, and ascorbic acid, 42, mg./100 cc.

H.C.-11. *Florida Oranges*. First National Stores, Inc., Hamden, Conn. Analysis of the juice showed: Ash, 317, K<sub>2</sub>O, 179, P<sub>2</sub>O<sub>5</sub>, 23, and ascorbic acid, 55, mg./100 cc.; invert sugar, 3.29, sucrose, 3.61, total sugars, 6.90, and citric acid, 0.71, gm./100 cc.; degrees Brix, 8.6; ratio Brix to acidity, 12.1.

H.C.-9. *Florida Oranges*. Juice Corporation of America, Glendale, N.Y. Analysis of the juice showed: Ash, 468, K<sub>2</sub>O, 284, and ascorbic acid, 71, mg./100 cc.

J.B.-222. *Indian River Grapefruit*. Public Market, Middletown, Conn. Analysis of the juice showed: Ash, 240, K<sub>2</sub>O, 139, and ascorbic acid, 39, mg./100 cc.

K.C.-823. *Hurdy Gurdy Tangerines*. Grand Island Citrus Corp., Umatilla, Fla. A shiny coating on these tangerines was identified by infrared comparison as rosin; misbranded.

K.C.-855. *Tangerines*. Black Rock Open Air Market, Bridgeport, Conn. Coated with undeclared rosin; misbranded.

In addition to the official samples, the juices from three samples of oranges were analyzed for the Mitchell Dairy of Bridgeport, and solids, ash and minerals were determined on 82 samples of apples for Dr. Philip Garman of our entomology department. Analyses of the oranges were as follows:

2821. *Florida Oranges*. Hi-Ester Corporation of Florida, Inc., Deland, Fla. Analysis of the juice (discarding one rotten orange) showed: Ash, 326, K<sub>2</sub>O, 194, P<sub>2</sub>O<sub>5</sub>, 33, and ascorbic acid, 37, mg./100 cc.; invert sugar, 2.36, sucrose, 3.61, total sugars, 5.97, and citric acid, 0.51, gm./100 cc.; degrees Brix, 7.7; ratio Brix to acidity, 15.1. These oranges were quite green, and the juice had a poor and watery flavor.

3018. *Pitt Cole St. Johns River Oranges*, Pitt Cole Co., Deland, Fla. Analysis of the juice showed: Ash, 371, K<sub>2</sub>O, 211, P<sub>2</sub>O<sub>5</sub>, 29 and ascorbic acid, 48, mg./100 cc.; invert sugar, 3.32, sucrose, 4.01, total sugars, 7.33, and citric acid, 0.72, gm./100 cc.; degrees Brix, 9.4; ratio Brix to acidity, 13.0; flavor, very weak.

2856. *Sealdsweet Oranges*. Mitchell Dairy Co., Bridgeport, Conn. Analysis of the juice showed: Ash, 301, K<sub>2</sub>O, 177, P<sub>2</sub>O<sub>5</sub>, 28, and ascorbic acid, 46, mg./100 cc.; invert sugar, 3.28, sucrose, 3.80, total sugars, 7.08, and citric acid, 0.61, gm./100 cc.; degrees Brix, 8.9; ratio Brix to acidity, 14.6; flavor, poor.

While the above juices giving these abnormal analyses were unquestionably authentic, they were also of such poor quality that they would not normally come on the market.

Maximum, minimum and average values found on the 82 apple samples are reproduced herewith as a contribution to the literature on the mineral composition of apples:

	Maximum	Minimum	Average
Total solids, per cent .....	20.54	10.64	16.39
Total ash, per cent .....	0.37	0.24	0.28
Potassium, p.p.m. ....	1,700	750	1,157
Calcium, p.p.m. ....	117	18	42
Magnesium, p.p.m. ....	100	61	76
Phosphorus, p.p.m. ....	320	103	204
Manganese, p.p.m. ....	2.6	0.3	0.6
Iron, p.p.m. ....	17.6	1.4	2.7
Aluminum, p.p.m. ....	3.8	0.0	1.1
Zinc, p.p.m. ....	3.7	1.7	2.3
Copper, p.p.m. ....	14.5	3.3	7.5
Boron, p.p.m. ....	13.0	1.7	4.7

### Fruit Juices

Ninety-five samples of orange juice, 10 of grapefruit juice, three of cider, two of lemon juice and one of a mixed grapefruit-pineapple juice were examined for the Commissioner, 13 samples of cider were analyzed for Dr. Philip Garman of our entomology department, and one sample of authentic lemon juice was prepared in our laboratory. Seventy-six samples were passed and 49 were adulterated or misbranded.

Analyses of the grapefruit juices are given in Table 8, and of the commercial orange juices in Table 9. Most of the market juices were in refrigerated quart paper cartons; a few were in 46 fl. oz. cans.

Four of the official orange juice samples were extracted from fresh oranges at the plant of the Juice Corporation of America, Glendale, N.Y., under the supervision of Mr. Harold Clark of the Connecticut Food and Drug Commission, and were consequently authentic. Analyses of these samples and of the authentic lemon juice prepared in our laboratory were as follows:

H.C.-5, 6, 7 and 8. *Fresh Orange Juice*. Juice Corporation of America, Glendale, N.Y. Analyses were as follows:

	H.C.-5	H.C.-6	H.C.-7	H.C.-8
Ash, mg./100 cc. ....	439	440	439	449
K <sub>2</sub> O, mg./100 cc. ....	262	269	261	255
Ascorbic acid, mg./100 cc. ....	68	68	69	71

9980. *Juice of "Sunkist" Lemons*. Connecticut Agricultural Experiment Station. Ash, 264, K<sub>2</sub>O, 143, and ascorbic acid, 51, mg./100 cc.; citric acid, 5.62 gm./100 cc.; total volume of juice obtained from one lemon, 47.5 cc.

The other official juice samples were the following:

K.F.-1876. *Geiger's "Breakfast Quality" Fresh Chilled Apple Cider Enriched with Vitamin C*. Geiger's Cider Mill, Westfield, N.J. Labelled: "VITAMIN 'C' ADDED—Each 8 oz. serving contains 30 mg. of Vitamin 'C', the minimum daily adult requirement—No Sugar or Water Added." Analysis showed: Specific gravity, 20°C., 1.046; total sugars as invert sugar, 10.95, and ash, 0.24, gm./100 cc.; per cent potassium carbonate in ash, 60.4; ascorbic acid, mg./8 oz., 24. Passed.

K.F.-1802. *Holly Hill Pin Gra, a Delicious Blend of Florida Grapefruit Juice and Hawaiian Pineapple Juice, Sugar Added, Rich in Vitamin C*. Holly Hill Products, Inc., Davenport, Fla. Total solids, 14.35, total sugars, 12.88, and citric acid, 0.96, gm./100 cc.; ash, 339, K<sub>2</sub>O, 207, P<sub>2</sub>O<sub>5</sub>, 23, and ascorbic acid, 21, mg./100 cc. Misbranded because it was not "Rich in Vitamin C" since its ascorbic acid content was only half that of fresh grapefruit juice.

K.C.-879. *Lazy-Lemon Pure Concentrated Lemon Juice*. Soc. p. Az. S.L.I.A., Catania, Sicily. Labelled: "Juice of 8 Lemons\* (Concentrated) (\*finest Sicilian lemons weighing about 3 oz. each)—Preservative: Sulphur Dioxide—Concentrated 2½ times." Analysis showed: Ash, 1,241, K<sub>2</sub>O, 585, and ascorbic acid, 59, mg./100 cc.; estimated concentration, 4 to 1. Misbranded because equivalent to no more than five lemons from a flavoring standpoint and to much less than that as far as its vitamin C content was concerned.

E.C.-974 and 978. *Pure Cider*. Wallstone Orchards, Norwich, Conn. Average analysis showed: Specific gravity, 20°C., 1.0423; total sugars as invert sugar, 9.21, and ash, 0.167, gm./100 cc.; potassium carbonate in ash, 68 per cent; alcohol, 0.83 per cent by volume. Low ash; probably watered.

K.C.-862. *Pure Concentrated Lemon Juice in the Easy Juicer for All Lemon Uses*. Citrus Corporation of America, Boston, Mass. Labelled: "EASY JUICER Contains Juice of 8 Lemons 2 Teasp. Equal Juice Of 1 Lemon Sulphur Dioxide added as preservative." Analysis showed: Ash, 581, K<sub>2</sub>O, 339, and ascorbic acid, 31, mg./100 cc.; estimated concentration 2.10 to 1; net contents 2.13 fl. oz. Since analysis of 9980 above had shown that the claim that two teaspoonsful of K.C.-862 equalled the juice of one lemon was equivalent to a claim of 4.75 to 1 concentration, sample was misbranded.

Maximum, minimum and average values for the 13 unofficial ciders were as follows:

	Maximum	Minimum	Average
Ash, gm./100 cc. ....	0.256	0.190	0.217
Malic acid, gm./100 cc. ....	0.58	0.30	0.40
Sucrose, gm./100 cc. ....	2.80	0.27	2.11
Invert sugar, gm./100 cc. ....	10.57	7.01	9.11
Total sugars, gm./100 cc. ....	12.60	9.26	11.22
Alcohol, per cent by vol. ....	1.42	0.20	0.41
Potassium, p.p.m. ....	1,015	610	815
Calcium, p.p.m. ....	52	16	27
Magnesium, p.p.m. ....	69	35	43
Phosphorus, p.p.m. ....	95	45	71
Manganese, p.p.m. ....	0.5	0.2	0.3
Iron, p.p.m. ....	15.0	1.3	5.1
Aluminum, p.p.m. ....	1.0	0.3	0.7
Zinc, p.p.m. ....	2.1	1.5	1.7
Copper, p.p.m. ....	6.2	2.6	4.3
Boron, p.p.m. ....	3.0	1.0	1.8
pH .....	3.7	3.4	3.6

TABLE 8. GRAPEFRUIT JUICE

No.	Manufacturer or distributor and brand	Ash, mg./100 cc.	K <sub>2</sub> O, mg./100 cc.	Ascorbic acid, mg./100 cc.	Estimated per cent juice	Net contents, fl. oz.	Remarks
F.H.-1366	Golden Gift, Inc., Deland, Fla. <i>Golden Gift</i>	305	175	36	113	32.12	Passed.
F.H.-1515	Same	312	179	30	116	31.10	Short volume.
F.H.-1608	Same	350	201	—	130	31.10	Concentrated juice, short volume; misbranded.
F.H.-1903	Same	406	225	—	145	31.61	Concentrated juice; misbranded.
F.H.-1983	Juice Corporation of America, Glendale, N.Y. <i>Pure Maid</i>	306	178	34	115	32.73	Passed.
F.H.-1513	Osceola Fruit Distributors, Kissimmee, Fla. <i>Ivey's King Sun</i>	371	200	26	129	32.12	Concentrated juice; misbranded.
F.H.-1606	Same	291	157	—	101	31.61	Passed.
F.H.-1981	Same	323	190	28	123	32.05	Concentrated juice; misbranded.
F.H.-1240	Osceola Fruit Distributors, Kissimmee, Fla. <i>Kiss-Me Sweet</i>	312	175	29	113	31.85	Passed.
F.H.-1290	Same	332	203	29	131	32.12	Concentrated juice; misbranded.

TABLE 9. ORANGE JUICE

No.	Manufacturer or distributor and brand	Ash, mg./100 cc.	K <sub>2</sub> O, mg./100 cc.	Ascorbic acid, mg./100 cc.	Estimated per cent juice	Net Contents, fl. oz.	Remarks
F.H.-1242	Borden Co., New York, N.Y. <i>Borden's</i>	220	129	29	50	31.97	Adulterated with water.
W.M.-1457	Same	229	132	27	52	32.07	Adulterated with water.
W.M.-2152	Same	340	200	26	78	32.12	Adulterated with water.
E.S.-8402	Same	221	124	28	48	—	Adulterated with water.
A.L.-397	Bordo Products Co., Chicago, Ill. <i>Plee-Zing</i>	488	269	44	105	45.97	Passed.
F.H.-2159	Dairy Service Corp., Brooksville, Fla. <i>Grove-Sweet</i>	432	249	32	98	31.27	Short volume; misbranded.
W.M.-2216	Same	450	258	41	101	32.12	Passed.
W.M.-2363	Same	435	239	51	93	31.94	Passed.
A.L.-395	First National Stores, Inc., Somerville, Mass. <i>"Yor" Garden California Unsweetened</i>	366	189	38	74	46.31	Adulterated with water.
W.M.-1559	Florida Fresh-Up Juice Co., Glendale, N.Y. <i>Borden's</i>	405	243	52	95	31.94	Passed.
W.M.-1743	Same	387	233	24	91	32.12	Passed.
W.M.-1797	Same	460	276	29	108	31.94	Passed.
W.M.-1952	Same	385	229	25	89	32.39	Passed.
W.M.-1999	Same	400	223	28	87	32.46	Passed.
W.M.-2084	Same	363	203	31	79	32.12	Adulterated with water.
W.M.-2102	Same	361	212	30	83	32.46	Passed.
W.M.-2180	Same	333	185	36	72	32.39	Adulterated with water.
W.M.-2181	Same	329	188	38	73	32.05	Adulterated with water.
W.M.-2182	Same	343	187	37	73	32.29	Adulterated with water.
W.M.-2183	Same	341	180	39	70	32.12	Adulterated with water.
W.M.-2184	Same	344	187	39	73	32.62	Adulterated with water.
W.M.-2185	Same	341	187	40	73	32.12	Adulterated with water.

TABLE 9. ORANGE JUICE—(Continued)

No.	Manufacturer or distributor and brand	Asb, mg./100 cc.	K <sub>2</sub> O, mg./100 cc. mg./100 cc.	Ascorbic acid, mg./100 cc.	Estimated per cent juice	Net Contents, fl. oz.	Remarks
W.M.-2186	Same	311	187	38	73	32.05	Adulterated with water.
W.M.-2187	Same	346	185	37	72	32.79	Adulterated with water.
W.M.-2188	Same	315	191	37	75	32.62	Adulterated with water.
W.M.-2189	Same	337	189	36	74	31.94	Adulterated with water.
W.M.-2190	Same	324	189	38	74	31.71	Adulterated with water.
W.M.-2191	Same	316	187	38	73	32.05	Adulterated with water.
F.H.-2103	Fruit Industries, Inc., Bradenton, Fla. <i>Royal Sun</i>	396	227	37	89	32.02	Passed.
F.H.-2213	Same	383	223	34	87	31.61	Passed.
W.M.-1461	Fruit Industries, Inc., Bradenton, Fla. <i>Tropicana</i>	449	269	55	105	31.85	Passed.
K.N.-2802	Same	436	268	49	105	31.71	Passed.
F.H.-1237	Golden Gift, Inc., Deland, Fla. <i>Golden Gift</i>	318	183	43	72	31.78	Adulterated with water.
F.H.-1238	Same	216	113	23	44	31.20	Adulterated with water; short volume.
F.H.-1291	Same	418	318	49	124	31.78	Concentrated juice; misbranded.
F.H.-1365	Same	485	298	47	116	31.78	Passed.
F.H.-1516	Same	415	261	40	102	31.44	Short volume; misbranded.
F.H.-1607	Same	464	260	—	102	31.10	Short volume; misbranded.
E.S.-8403	Same	402	251	67	100	31.66	Passed.
A.L.-393	Great Atlantic & Pacific Tea Co., New York, N.Y. <i>A &amp; P</i>	392	221	39	86	46.31	Passed.
W.M.-1462	H. P. Hood & Sons, Fairville, Fla. <i>Hood</i>	403	300	58	117	31.61	Passed.
K.N.-2800	Same	438	276	58	108	32.06	Passed.
K.N.-2818	Same	504	327	53	128	32.02	Concentrated juice; misbranded.
K.N.-3022	Same	488	296	37	116	32.12	Passed.
K.N.-3100	Same	489	269	36	105	32.12	Passed.

K.N.-3297	Same	424	253	36	99	31.94	Passed.
F.H.-1982	Juice Corporation of America, Glendale, N.Y. <i>Pure Maid</i>	339	207	26	81	32.46	Passed.
F.H.-2047	Same	316	193	27	75	32.79	Adulterated with water.
F.H.-2214	Same	396	236	44	92	32.46	Passed.
F.H.-2245	Same	431	240	43	94	31.78	Passed.
W.M.-1456	Same	211	120	27	47	31.90	Adulterated with water.
W.M.-2072	Same	334	185	26	72	32.12	Adulterated with water.
W.M.-2103	Same	345	201	25	79	32.12	Adulterated with water.
W.M.-2156	Same	322	181	25	71	32.29	Adulterated with water.
W.M.-2214	Same	369	212	37	83	31.94	Passed.
W.M.-2229	Same	344	190	35	74	32.73	Flavor poor; adulterated with water.
W.M.-2230	Same	349	195	35	76	31.78	Adulterated with water.
F.H.-1272	Kraft Foods Co., Chicago, Ill. <i>Kraft</i>	475	287	30	112	32.05	Passed.
F.H.-1273	Same	463	259	40	101	31.94	Passed.
K.N.-2816	Same	439	265	41	104	32.09	Passed.
K.N.-3021	Same	467	267	38	104	31.94	Passed.
K.N.-3099	Same	440	258	28	100	31.78	Passed.
K.N.-3318	Same	444	273	39	107	31.44	Short volume; misbranded.
A.L.-396	Francis H. Leggett & Co., New York, N.Y. <i>Premier</i>	434	240	42	94	46.65	Passed.
F.H.-1293	Osceola Fruit Distributors, Kissimmee, Fla. <i>Ivey's King Sun</i>	476	270	47	106	32.12	Passed.
F.H.-1360	Same	421	250	48	98	32.46	Passed.
F.H.-1514	Same	403	234	40	91	32.05	Passed.
F.H.-1605	Same	446	250	—	98	32.12	Passed.
F.H.-1901	Same	441	257	28	100	—	Passed.
F.H.-1902	Same	447	254	25	100	32.12	Passed.
F.H.-1980	Same	324	193	33	75	32.46	Adulterated with water.
F.H.-2048	Same	346	198	40	77	32.12	Adulterated with water.
F.H.-2102	Same	292	173	38	68	32.34	Adulterated with water.
F.H.-2162	Same	320	183	41	72	32.06	Adulterated with water.



TABLE 9. ORANGE JUICE—(Concluded)

No.	Manufacturer or distributor and brand	Ash, mg./100 cc.	K <sub>2</sub> O, mg./100 cc.	Ascorbic acid, mg./100 cc.	Estimated per cent juice	Net Contents, fl. oz.	Remarks
F.H.-2203	Same	380	228	44	89	32.29	Passed.
F.H.-2212	Same	414	245	45	96	32.12	Passed.
F.H.-2247	Same	448	247	50	97	32.12	Passed.
F.H.-1236	Oseola Fruit Distributors, Kissimmee, Fla. <i>Kiss-Me Sweet</i>	381	227	42	89	31.71	Passed.
F.H.-1239	Same	400	236	46	92	31.99	Passed.
F.H.-1289	Same	380	237	45	93	32.06	Passed.
F.H.-2246	Same	391	218	48	85	32.12	Passed.
K.N.-2790	Same	363	220	42	88	31.66	Passed.
A.L.-394	Southern Fruit Distributors, Inc., Orlando, Fla. <i>Bluebird</i>	413	223	37	87	46.82	Passed.
H.C.-10	Tropicana of New York, Inc., White-stone, L.I., N.Y. <i>Tropicana</i>	394	225	35	88	31.78	Passed.
W.M.-1557	Same	459	271	51	106	31.44	Short volume; misbranded.
W.M.-1745	Same	455	266	32	104	31.61	Passed.
W.M.-1909	Same	467	274	29	107	31.78	Passed.
W.M.-2082	Same	462	261	26	102	31.94	Passed.
W.M.-2151	Same	438	240	22	94	31.78	Passed.
W.M.-2368	Same	398	221	43	86	32.05	Passed.
A.L.-398	Universal Food Stores, Inc., Norwich, Conn. <i>Thames Valley Fancy Unsweetened</i>	434	241	38	94	46.46	Passed.

## Meat and Meat Products

## Frankforts

One hundred and thirty samples of frankforts were examined for the Commissioner, and one sample was tested for the State Supervisor of Purchases; forty-seven were passed and eighty-four were misbranded for failure to comply with one or more of the requirements for frankforts set by regulations under the Food, Drug and Cosmetic Act—that is, they contained more than 3.5 per cent of fillers, 10 per cent of added water or 200 parts per million of sodium nitrite, or failed to declare the presence of these optional ingredients. The percentage of satisfactory samples was 36 this year as against 33 in 1957, but while the percentage improvement was slight there was a noticeable decrease in samples containing very large amounts of filler (i.e., 10 per cent or more of dry skim milk).

Because of the great amount of space that would be required, detailed analyses of these 131 samples are not reproduced in this bulletin, but Table 10 lists the numbers of samples of each brand that were passed or misbranded and the violations found.

## Hamburg

A State regulation sets a fat limit of 30 per cent on hamburg, which is defined as "Comminuted fresh beef, with or without addition of suet." Hamburg may legally contain no other meat than beef, and the Connecticut standards (unlike the Federal ones) do not permit the addition of seasoning. The addition of sulphur dioxide to hamburg (as to all meat products) as a preservative is forbidden, because it makes old meat look redder and fresher, covers up the odor of decomposition and destroys thiamine (vitamin B<sub>1</sub>).

Thirty-eight samples of hamburg submitted by the Commissioner were analyzed for fat and tested for the presence of sulphur dioxide; no sulphur dioxide was found in any sample, but four contained excessive fat. The misbranded samples were the following:

No.	Market	Fat, per cent
P.R.-66	Harry Bretschneider, Willimantic	32.08
P.S.-63	Mott's Super Market, Hartford	30.52
K.C.-900	Purity Food Co., Bridgeport	51.22
J.B.-248	Sussman's Market, New Britain	33.85

Hamburg picked up at Sussman's Market in 1956 also contained excessive fat.<sup>11</sup>

## Pork Sausage

Pork sausage may not contain more than 50 per cent of fat. Of 42 samples submitted by the Commissioner 39 were analyzed for fat, and of these 26 were passed and 13 found to contain excessive fat. The misbranded samples are listed in Table 11.

The following three samples were tested only for the presence of undeclared sodium benzoate; none was found:

J.Z.-39. *Lamberti Italian Style Sausage*. Lamberti Packing Co., New Haven, Conn.

J.Z.-40. *Longhini Home Style Pure Pork Sausage*. Longhini Packing Co., New Haven, Conn.

J.Z.-38. *Perris Brand Sweet Italian Pure Sausage*. R. Perris & Son, New Haven, Conn.

<sup>11</sup>Conn. Agr. Expt. Sta. Bul. 617, 46 (1958).

TABLE 10. FRANKFORTS

Manufacturer or distributor and brand	Number of Samples		Violations Found
	Passed	Misbranded	
Armour & Co., Chicago, Ill. <i>Armour Star</i> .....	1	2	3
Armour & Co., Chicago, Ill. <i>Armour Star All Beef</i> .....	2	1	3
Armour & Co., Chicago, Ill. <i>Armour Star Skinless</i> ..	2	0	2
Armour & Co., Chicago, Ill. <i>Banner</i> .....	0	4	4
A.Y.O. Packing Co., New Britain, Conn. ....	0	1	1
A.Y.O. Packing Co., New Britain, Conn. <i>Skinless</i> ...	0	1	1
A.Y.O. Packing Co., New Britain, Conn. <i>Special</i> ....	0	1	1
Chamberlain, Boston, Mass. <i>Chamberlain Leadership</i> ..	0	1	1
Cherry-Lewis Food Products Co., Philadelphia, Pa. <i>Slim Jims Smoked Beef Sausage</i> .....	3	0	3
Colonial Provision Co., Inc., Boston, Mass. <i>Colonial All Beef</i> .....	3	0	3
Colonial Provision Co., Inc., Boston, Mass. <i>Family Pak Skinless</i> .....	1	7	8
Colonial Provision Co., Inc., Boston, Mass. <i>Unlabelled</i>	0	1	1
Columbia Packing Co., Boston, Mass. <i>Gem All Beef</i>	2	1	3
Columbia Packing Co., Boston, Mass. <i>Gem Skinless</i> ..	2	5	7
Columbia Packing Co., Boston, Mass. <i>Southampton Skinless</i> .....	1	3	4

Violations Found

Two excessive added water (av. 13.70%) and dry skim milk (av. 4.81%).

One excessive added water (12.98%) and dry skim milk (5.15%).

None.

Two excessive added water (av. 17.68%), two undeclared starch (av. 0.82%), one excessive dry skim milk (7.83%), one undeclared sodium nitrite..

Excessive sodium nitrite (240 p.p.m.); undeclared starch (0.56%).

Excessive sodium nitrite (248 p.p.m.); undeclared starch (0.60%).

Undeclared dry skim milk (2.41%) and starch (0.56%).

Excessive sodium nitrite (208 p.p.m.).

None.

None.

Six excessive dry skim milk (av. 5.35%), one excessive added water (11.34%).

Excessive dry skim milk (6.68%).

One excessive added water (12.48%) and undeclared dry skim milk (7.40%).

Five excessive dry skim milk (av. 7.99%); one undeclared starch (0.75%); one excessive added water (10.12%).

Three excessive dry skim milk (av. 8.93%); one excessive added water (12.00%).

Cudahy Bros., Cudahy, Wis. <i>Patrick Cudahy All Meat Skinless</i> .....	1	0	1	None.
Otto Czirkowsky's Quality Meats, Taftville, Conn. ...	1	1	2	One excessive dry skim milk (5.07%).
Deerfoot Farms Co., Southborough, Mass. <i>Deerfoot Farms Skinless</i> .....	0	1	1	Excessive added water (11.15%).
Eastern Packing Co., East Hartford, Conn. <i>Economy</i>	1	2	3	Two excessive dry skim milk (av. 4.01%).
Eastern Packing Co., East Hartford, Conn. <i>Economy Skinless</i> .....	0	1	1	Excessive dry skim milk (4.21%).
Eastern Packing Co., East Hartford, Conn. <i>Quality</i>	1	2	3	One excessive dry skim milk (4.60%); one dry skim milk declared but absent.
Eastern Packing Co., East Hartford, Conn. <i>Quality Skinless</i> .....	1	0	1	None.
Eastern Packing Co., East Hartford, Conn. <i>Regular</i>	1	3	4	Two excessive dry skim milk (av. 6.18%); one excessive sodium nitrite (260 p.p.m.); one excessive added water (10.85%).
Great Atlantic & Pacific Tea Co., New York, N.Y. <i>Super-Right All Beef Skinless</i> .....	2	0	2	None.
Great Atlantic & Pacific Tea Co., New York, N.Y. <i>Super-Right All Meat Skinless</i> .....	0	1	1	Excessive undeclared dry skim milk (4.14%).
Handschemacher & Co., Inc., Boston, Mass. <i>Hand-schemacher's Skinless</i> .....	0	1	1	Dry skim milk (3.48%) not declared.
M. I. Handy Co., Springfield, Mass. <i>Handy's Brightwood Skinless</i> .....	0	1	1	Dry skim milk (1.96%) not declared.
Hartford Provision Co., Hartford, Conn. <i>Capitol in Sheep Casings</i> .....	0	1	1	Excessive added water (11.12%).
Hartford Provision Co., Hartford, Conn. <i>Capitol Superior Quality Skinless</i> .....	0	2	2	Two excessive dry skim milk (3.81%); one excessive added water (10.89%).
Hartford Provision Co., Hartford, Conn. <i>State</i> .....	1	0	1	None.
Hartford Provision Co., Hartford, Conn. <i>State Skinless</i>	1	1	2	One excessive undeclared dry skim milk (3.94%).
Home Pride Provision Co., Inc., Stafford Springs, Conn.	0	2	2	Two excessive dry skim milk (av. 6.42%); one undeclared dextrose (1.05%).
Hummel Bros., Inc., New Haven, Conn. <i>Hummel's Quality (Sheep Casings)</i> .....	1	1	2	One excessive dry skim milk (4.21%) and added water (11.82%).

TABLE 10. FRANKFORTS—(Concluded)

Manufacturer or distributor and brand	Number of Samples		Violations Found	
	Passed	Misbranded Total		
Hummel Bros., Inc., New Haven, Conn. <i>Hummel's Quality Skinless</i> .....	2	1	3	One excessive dry skim milk (4.60%).
Hummel Bros., Inc., New Haven, Conn. <i>Hummel's Quality (special for Savin Rock trade)</i> .....	2	0	2	None.
Hygrade Food Products, Detroit, Mich. <i>Hygrade's All Beef</i> .....	1	1	2	One undeclared dry skim milk (2.82%).
Hygrade Food Products, Detroit, Mich. <i>Hygrade's All Meat Skinless</i> .....	1	0	1	None.
Lenhardt Sausage Mfg. Co., Hartford, Conn. ....	0	1	1	Excessive dry skim milk (4.54%).
Merkel, Inc., Jamaica, L.I., N.Y. <i>Merkel's Quality Products Skinless</i> .....	1	0	1	None.
Miller's Stratford Provision Co., Stratford, Conn. <i>Miller's (Sheep Casing)</i> .....	2	1	3	One excessive dry skim milk (3.75%), added water (14.97%) and sodium nitrite (240 p.p.m.).
Miller's Stratford Provision Co., Stratford, Conn. <i>Miller's (Skinless)</i> .....	0	3	3	Two excessive added water (av. 14.39%); one excessive dry skim milk (4.80%); one excessive sodium nitrite (256 p.p.m.); one undeclared dry skim milk (3.48%).
John Morrell & Co., Chicago, Ill. <i>Morrell Pride Cheeseburger</i> .....	1	0	1	None.
New England Provision Co., Inc., Boston, Mass. <i>Nepco All Beef Baby</i> .....	1	0	1	None.
Plymouth Rock Provision Co., New York, N.Y. <i>Plymouth Rock All Beef</i> .....	1	0	1	None.
Premier Packing Co., Inc., Boston, Mass. <i>Zest Skinless</i> .....	0	4	4	Four excessive dry skim milk (av. 4.76%); two starch present (av. 1.02%) not declared; one excessive sodium nitrite (260 p.p.m.); one dry skim milk present not declared; one corn syrup and dextrose declared but absent.
Roby's Provision Co., Bridgeport, Conn. <i>Roby's</i> .....	1	3	4	Three excessive dry skim milk (av. 5.83%); two excessive added water (av. 13.26%).

Roesler Packing Co., New Haven, Conn. <i>Roesler's Extra Mild</i> .....	0	1	1	Dry skim milk (3.81%) present not declared.
Roesler Packing Co., New Haven, Conn. <i>Roesler's Yellow Tag</i> .....	1	6	7	Six excessive dry skim milk (av. 5.39%); two excessive sodium nitrite (av. 252 p.p.m.).
Roesler Packing Co., New Haven, Conn. <i>Roesler's Yellow Tag Skinless</i> .....	0	3	3	Three excessive dry skim milk (av. 4.09%); one excessive sodium nitrite (220 p.p.m.).
R & L Provision Co., New Britain, Conn. <i>Home Style</i> .....	0	2	2	Two excessive added water (av. 14.56%) and undeclared starch (av. 0.82%); one excessive dry skim milk (6.27%).
Martin Rosol, Inc., New Britain, Conn. <i>Martin Rosol's</i> .....	1	1	2	One excessive dry skim milk (6.89%) and sodium nitrite (215 p.p.m.); "cereal" declared but absent.
Martin Rosol, Inc., New Britain, Conn. <i>Martin Rosol Select</i> .....	0	2	2	One excessive dry skim milk (6.54%) and added water (11.76%) and declared "cereal" not present; other contained undeclared dextrose (0.87%), added water (6.45%) and sodium nitrite (126 p.p.m.).
Martin Rosol, Inc., New Britain, Conn. <i>Martin Rosol's Skinless</i> .....	0	2	2	Two excessive dry skim milk (av. 5.40%); one excessive added water (11.69%).
Sperry & Barnes Co., New Haven, Conn. <i>Old Homestead All Beef Skinless</i> .....	0	1	1	Dry skim milk (3.48%) present not declared.
Otto Stange's, Inc., Meriden, Conn. <i>Bulk</i> .....	0	1	1	Dry skim milk (1.77%) and sodium nitrite (80 p.p.m.) present not declared.
Star Provision, New Britain, Conn. ....	0	1	1	Excessive dry skim milk (5.73%) and added water (18.08%) and starch (1.02%) present not declared.
State Supervisor of Purchases, Hartford, Conn. ....	1	0	1	None.
Swift & Co., Chicago, Ill. <i>Swift's Premium</i> .....	2	2	4	Two excessive added water (av. 13.93%).
Trunz, Inc., Brooklyn, N.Y. <i>Farmer Boy</i> .....	1	0	1	None.

TABLE 11. PORK SAUSAGE CONTAINING EXCESSIVE FAT

No.	Manufacturer and brand	Fat, per cent
K.F.-1781	Armour & Co., Chicago, Ill. <i>Armour Star</i> .....	52.80
K.C.-967	Colonial Provision Co., Inc., Boston, Mass. <i>Colonial</i> .....	50.45
K.F.-1921	Same .....	50.62
K.F.-1791	John Morrell & Co., Ottumwa, Iowa. <i>Morrell Pride</i> .....	52.74
K.F.-1828	Same .....	50.55
K.F.-1829	Same .....	50.55
K.F.-1901	Same .....	53.75
K.F.-1929	Same .....	55.54
K.F.-1772	Roessler Packing Co., New Haven, Conn. <i>Roessler Yellow Tag</i> .....	54.99
K.F.-1928	Same .....	55.25
K.F.-1790	Sperry & Barnes Co., New Haven, Conn. <i>Old Homestead</i> .....	51.91
K.F.-1889	Swift & Co., Chicago, Ill. <i>Swift's Brookfield</i> .....	54.48
K.F.-1919	Same .....	51.60

### Other Products

Two samples of Porto Rican style sausages and one each of bologna, jellied corn beef, *Kosher* sausage, smoked beef sausage and veal loaf were examined for the Commissioner; five samples were passed and two were misbranded:

*K.F.-1787. Capitol Brand Bologna, Dried Skim Milk Added.* Hartford Provision Co., Hartford, Conn. Labelled: "Ingredients Beef, Pork, Water, Dried Skim Milk, Salt, Sugar, Spices, Flavoring, Sodium Nitrite, Sodium Nitrate." Analysis showed: Water, 53.45, protein, 12.25, lactose, 2.99, dextrose, 0.40, dry skim milk, 5.81, and added water, 12.77, per cent; starch, trace; sodium nitrite, 20 p.p.m. Misbranded because of excessive dry skim milk and added water.

*K.F.-1554. Capitol Brand Veal Loaf.* Hartford Provision Co., Hartford, Conn. Labelled: "Ingredients: Veal, Beef, Pork, Water, Dried Milk Solids, Wheat Flour, Salt, Spices, Flavoring, Sodium Nitrite, Sodium Nitrate." Analysis showed: Water, 51.73, protein, 13.50, lactose, 4.36, dextrose, 0.35, starch, 5.07, dry skim milk, 8.47, and added water, 9.85, per cent; sodium nitrite, 60 p.p.m. Total fillers equalled 13.54 per cent, but since this sample was not sausage, and "meat loaf" is permitted by Regulation 186-27.11 to contain cereals and milk, sample was passed.

*K.C.-902. Creitz's Smoked Red Hot Sausage.* C & M Creitz, Mount Union, Pa. Declared ingredients were "Beef, Water, Salt, Spices, Sodium Nitrate, Sodium Nitrite, and Flavoring." Analysis showed: Water, 6.49, and protein, 37.19, per cent; dextrose, trace; no lactose, starch, added water or sodium nitrite. Passed.

*K.F.-1830. Gonsalves Chowriço, Dried Skim Milk Added.* Henry Gonsalves Co., Providence, R.I. Declared ingredients were "pork, salt, dried skim milk, paprika, vinegar, garlic, spices, sodium nitrite and sodium nitrate." Analysis showed: Water, 44.41, protein, 18.13, lactose, 0.57, and dry skim milk, 1.11, per cent; no dextrose, starch, added water or sodium nitrite. Passed.

*K.F.-1834. Gonsalves Linguica, Dried Skim Milk Added.* Henry Gonsalves Co., Providence, R.I. The ingredient declaration was the same as that of *K.F.-1830*. Analysis showed: Water, 49.42, and protein, 18.00, per cent; lactose and dextrose, traces; sodium nitrite, 10 p.p.m.; no starch, dry skim milk or added water. Misbranded because dry skim milk was declared but not present.

*K.F.-1890. Kosher Sausage.* Kosh-R-Best, Inc., Hartford, Conn. Fat, 30.35 per cent; passed.

*K.F.-1785. Rothmund's Sliced Jellied Corned Beef.* Eugene Rothmund, Inc., Somerville, Mass. Labelled: "Ingredients: Beef, Water, Gelatin, Salt, Dextrose, Sodium Nitrite, Sodium Nitrate." Analysis showed: Water, 75.78, protein, 16.00, dextrose, 0.48, and added water, 11.78, per cent; no lactose or starch; sodium nitrite, 20 p.p.m. Passed.

In addition to the official samples, 16 samples each of dried pig heart and pig muscle and seven samples each of dried calf heart and calf muscle (46 samples in all) were analyzed for dry matter (total solids), ash, calcium, magnesium and phosphorus for Prof. H. D. Eaton of the University of Connecticut at Storrs, who needed these figures for a research study. As a contribution to the general knowledge of the mineral content of meat, the maximum, minimum and average values found on these samples are reproduced in Table 12.

TABLE 12. MINERAL CONTENT OF DRIED VEAL AND PORK

Ingredient	Calf Heart			Calf Muscle		
	Maximum, per cent	Minimum, per cent	Average, per cent	Maximum, per cent	Minimum, per cent	Average, per cent
Moisture .....	5.65	4.38	5.18	8.12	5.11	5.94
Ash .....	5.04	4.66	4.88	4.80	4.50	4.64
Calcium .....	0.028	0.023	0.024	0.028	0.019	0.023
Magnesium .....	0.119	0.108	0.114	0.111	0.100	0.107
Phosphorus .....	1.08	0.97	1.02	0.93	0.86	0.89

  

Ingredient	Pig Heart			Pig Muscle		
	Maximum, per cent	Minimum, per cent	Average, per cent	Maximum, per cent	Minimum, per cent	Average, per cent
Moisture .....	8.13	4.62	5.14	9.65	3.74	4.92
Ash .....	5.03	4.76	4.85	4.53	3.51	4.12
Calcium .....	0.028	0.021	0.023	0.024	0.015	0.019
Magnesium .....	0.103	0.079	0.098	1.07	0.085	0.094
Phosphorus .....	1.05	0.89	1.01	0.94	0.73	0.83

### Nuts

One sample each of mixed nuts and pecans was examined for the Commissioner; both were passed:

*K.C.-908. Assorted DeLuxe Nuts.* Casanova Chocolate Co., Inc., Milford, Conn. Labelled: "Ingredients Assorted Nuts, Vegetable Butter and Salt". Analysis of the fatty coating of these nuts showed: Butyro refraction, 40°C., 49.8; iodine number, 87; saponification number, 189. Probably hydrogenated peanut oil.

*K.F.-1909. DiMare's Tip Top Brand Extra Fancy Pecans.* DiMare Bros., Boston, Mass. Labelled: "Shells Bleached or Artificially Colored." Orange-red coal-tar dye present.

### Oils and Fats, Vegetable

#### Blended Oils

Thirteen official and four unofficial samples of blended cooking and salad oils were analyzed; three were passed and 14 were adulterated or misbranded. The adulterated and misbranded samples are listed in Table 13.

TABLE 13. BLENDED SALAD OILS

No.	Manufacturer or distributor, brand and refraction, declared composition	Buyiro and refraction, 25°C.	Cottonseed oil	Peanut oil	Mineral oil	Squalene, mg./100 gm.	Estimated per cent olive oil	Artificial flavor & color	Net Contents, fl. oz.	Remarks
A.L.-357	Caruso Products Distributing Corp., Pelham Manor, N.Y. <i>Enrico Caruso</i> (75% corn and peanut oils, 25% olive oil)	68.4	small proportion	absent	absent	75	16	not detected	126.4	Adulterated (cottonseed oil present, no peanut oil); short volume 1.6 fl. oz.
A.L.-401	Same	68.1	absent	absent	absent	56	9	no color; flavor doubtful	125.5	Adulterated (absence of peanut oil); short volume 2.5 fl. oz.
W.M.-2100	Same	68.2	absent	absent	absent	64	12	no color; flavor doubtful	123.5	Adulterated (absence of peanut oil); short volume 4.5 fl. oz.
S.O.-406	Same	69.0	small proportion	small proportion	absent	31	3	no color; flavor doubtful	124.9	Adulterated (cottonseed oil present, little or no olive oil); short volume 3.1 fl. oz.
A.L.-359	A. Corrao Corp., Brooklyn, N.Y. <i>Pace O Mio Dio</i> (75% corn and peanut oils, 25% olive oil)	67.4	trace	trace	absent	46	6	not detected	—	Adulterated (little or no olive or peanut oil).
A.L.-410	Deliziosa Oil Co., Brooklyn, N.Y. <i>Saturia</i> (75% corn and peanut oils, 25% olive oil)	68.2	trace	about 10%	absent	100	24	not detected	126.2	Misbranded; short volume 1.8 fl. oz.
K.C.-937	Imported and Domestic Oil Co., Brooklyn, N.Y. <i>Paradiso</i> . (75% peanut or corn oil, 25% olive oil)	63.7	small proportion	75% or more	absent	79	18	no color; flavor doubtful	123.2	Adulterated with cottonseed oil; short volume 4.8 fl. oz.

K.F.-1888	Same	69.2	present	trace	absent	61	11	not detected	127.8	Adulterated with cottonseed oil.
S.O.-420	Same	67.4	much	20-25%	absent	11	1	color not detected	121.8	Adulterated (cottonseed oil present, no olive oil); short volume 6.2 fl. oz.
1534	Same	69.2	absent	absent	absent	51	8	no color; flavor doubtful	125.7	Adulterated (low in olive oil, no peanut oil); short volume 2.3 fl. oz.; flavor very poor.
S.O.-421	J. Ossola Co., New York, N.Y. <i>Prosperity</i> (78% corn and/or peanut oil, 22% olive oil)	68.3	absent	5-10%	absent	59	10	not detected	123.4	Misbranded; short volume 4.6 fl. oz.
K.F.-1943	Sansone Food Products Co., Brooklyn, N.Y. <i>Fratissimi</i> (80% peanut oil, 20% olive oil)	63.6	absent	60-80%	absent	53	8	not detected	124.6	Misbranded; short volume 3.4 fl. oz.
K.F.-1887	V. Santangelo & Sons, Corona, N.Y. <i>Paramonte</i> (80% peanut or corn oil, 20% olive oil)	69.2	present	about 5%	absent	67	13	not detected	126.2	Adulterated with cottonseed oil; short volume 1.8 fl. oz.
K.F.-1826	Societa Italiana Commerciale, Brooklyn, N.Y. <i>Pace O Mio Dio</i> (75% corn and peanut oils, 25% olive oil)	67.2	trace	small proportion	absent	83	18	not detected	124.9	Misbranded; short volume 3.1 fl. oz.

### Oleomargarine

Three samples of oleomargarine were examined for the Commissioner and one for the State Supervisor of Purchases; all were passed:

*K.F.-1779. Del-Farm Oleomargarine.* Shedd Bartush Foods, Inc., Detroit, Mich. Water, 14.90, and fat, 80.75, per cent.

*S.O.-367. Imperial Margarine.* Lever Bros., New York, N.Y. Water, 15.64, and fat, 82.15, per cent; Reichert-Meissl value of fat, 0.92; Polenske value of fat, 0.24; estimated per cent butter, 3.2.

*A.L.-358. Kraft DeLuxe Margarine.* Kraft Foods Co., Chicago, Ill. Water, 15.98, and fat, 80.28, per cent; Reichert-Meissl value of fat, 1.70; Polenske value of fat, 0.36; estimated per cent butter, 5.6.

1369. *Oleomargarine.* Connecticut State Prison, Wethersfield, Conn. This sample was submitted by the State Supervisor of Purchases because the prisoners were not eating it. Analysis showed: Water, 15.03, casein, 1.30, salt, 2.75, and fat, 80.92, per cent; Kreis test for rancidity negative. This oleomargarine had a "flat" flavor with little or no suggestion of butter, which probably explained the prisoners' aversion to it.

### Olive and Peanut Oils

Two official and one unofficial samples of olive oil and one of peanut oil were examined; two samples were passed and two were adulterated and misbranded:

*K.C.-867. Donna D'Italia Peanut Oil.* Venice Importing Co., Brooklyn, N.Y. Butyro refraction, 25°C., 63.4; peanut oil test indicated 100% peanut oil; cottonseed oil, trace; no mineral oil or artificial flavor or color. Passed.

1533. *Monterbano Olive Oil.* Frederick Mignone, New Haven, Conn. Butyro refraction, 25°C., 61.6; no cottonseed, peanut or mineral oil or artificial color; flavor, good olive. Passed.

*W.M.-2066 and 2101. Prince Brand 100% Pure Olive Oil.* Elite Packing Co., Lodi, N.J. Average analysis showed: Butyro refraction, 25°C., 69.8; no cottonseed, peanut or mineral oil or artificial color; squalene, 38 mg./100 gm.; estimated per cent olive oil, 3; Kreis test for rancidity, positive. Rancid corn or soy oil with little or no olive oil; adulterated.

### Preservatives

*W.M.-1129, Todd's Butcher's Friend,* manufactured by Butcher's Friend Co., Des Moines, Iowa, was labelled: "A complete preservative for all ground meats—the contents of this package is sufficient to process 50 lbs. ground meat.—Contents: Salt, sugar (dextrose and sucrose) and sodium benzoate." Analysis showed: Salt, 65.68, dextrose, 12.30, sucrose, 11.39, sodium benzoate, 8.33, moisture, 1.46, and undetermined, 0.84, per cent; net weight, 7.83 oz.

While the sample itself was not illegal and was passed, hamburger containing it would be in violation of Regulations 186-27.10 and 186-27.13(d) because flavoring is not permitted in hamburger and no preservative may be added to fresh meat.

### Salad Dressings

Three samples of salad dressings were submitted by the Commissioner; one was passed and two were misbranded:

*K.F.-1738. Loeb Low Calorie Imitation Mayonnaise Substitute.* Loeb Dietetic Food Co., Inc., New York, N.Y. Labelled: "For salt, starch & sugar restricted diets—Only 7 calories per teaspoon—Reduced sodium content 9½ mgs. per 100 gms. ½ of 1 mg. per tspn. Ingredients: Veg. oil, water, vinegar, egg yolks, vegetable stabilizer, spices, .035% saccharin, non-nutritive artificial sweetener for those who must reduce their intake of ordinary sweets. Approx. 7 calories per tspn. Carbohyd. .07%, protein 1½%, fat 16%, 148 calories per 100 grams." Analysis showed: Egg yolk, 6.23, egg white, 4.50, corn or soy oil, 15.53, vinegar (4% acidity), 35.25, added water, 39.49, carbohydrate, 0.00 (claimed 0.07), protein, 1.49 (claimed 1.50), and fat, 17.36 (claimed 16.00), per cent; calories/100 cc., 162 (claimed 148); calories/teaspoonful, 8 (claimed 7); sodium, mg./100 gm., 25 (claimed 9.5); sodium, mg./teaspoonful, 1.3 (claimed 0.5). Should have been labelled "Imitation Mayonnaise" instead of "Imitation Mayonnaise Substitute"; misbranded because it contained 2.6 times as much sodium as claimed.

*K.F.-1658. Non-Fattening Frenchette Dressing for Salads.* Frenchette Co., Inc., New York, N.Y. Labelled: "98% LESS CALORIES—Wins Taste Test Too! Only 1 CALORIE per tablespoonful—French Dressing Contains 60 Calories Per Tablespoon.—Contains No Oil—a delicious low-calorie replacement for French Dressing—Less than 1 CALORIE per tablespoon—Contains vinegar, tomato, salt, seasonings, vegetable gums and stabilizer (non-nutritive), U.S. certified food colors and saccharin 0.05%. Saccharin is a non-nutritive artificial sweetener which should be used only by persons who must restrict their intake of ordinary sweets." Calculated composition from the analysis was: Egg yolk, 2.93, egg white, 0.00, vegetable oil, 0.00, vinegar (4% acidity), 26.00, gums, salt, spices, etc., 6.98, and added water, 64.09, per cent; calories/100 cc., 16; calories/tablespoonful, 2. Passed.

*E.S.-8259. Robinson's Wallingford, Conn. French Dressing.* A. Ganning, Wallingford, Conn. Labelled: "Ingredients: Corn Oil, Tomato, Sugar, Salt, Vinegar, Spices, Onion, Flavoring and Strictly Fresh Lemon Juice." Calculated composition from the analysis was: Egg yolk, 0.55, egg white, 3.54, corn or soy oil, 29.82, vinegar (4.29% acidity), 48.22, and sugar, salt, spices, 17.87, per cent. Misbranded because it contained less than the 35 per cent of vegetable oil required by Federal Regulation 25.2(a) for French dressing.

### Spices

Two samples of horseradish were examined for the Commissioner; both were passed:

*K.F.-1643. Good & Hot Horseradish.* Ralph Zolan, Inc., Bridgeport, Conn. Labelled: "Grated horseradish root, white distilled vinegar, salt—Contains not over .1% sulfur dioxide." Analysis showed 276 parts per million of sulphur dioxide.

*K.F.-1644. Parfait Pure Horse Radish.* H. E. Whitaker Co., Philadelphia, Pa. Labelled: "Pure Horseradish prepared with vinegar." Analysis showed only 10 p.p.m. of sulphur dioxide.

697, a small plastic vial found at the AVCO Lycoming Co. Division, Stratford, was submitted by the Stratford police for identification. This vial contained some coarse brown and white powder between two cotton plugs; microscopic examination showed the powder to be a mixture of pepper hulls and salt. Such mixtures were occasionally found sold as pure pepper during the war when pepper was scarce, but what this vial was doing in an airplane plant is a mystery.

### Spray Residues

Seventy-four samples of alfalfa and 56 of beet tops were analyzed for Diazinon, Difterex, Endrin, Heptachlor, Thiodan and Trithion for Dr. Richard Quinton of our entomology department in connection with field research experiments, and six samples of water, four of cucumber seed and one each of an apple, apple wood, mushrooms and soil were tested for various pesticides for the State Board of Fisheries and Game, the Hartford health department, seed growers and private citizens. Of the total of 144 samples residues were found in the following 76:

1514-1516, 1519, 1521, 1523-1525, 1527, 1529-1531. *Alfalfa*. Dr. Richard Quinton, Entomology Dept., Conn. Agr. Expt. Sta. Trithion, trace to 38.2 p.p.m.

1714-1716, 1718, 1720 and 1724. *Alfalfa*. Dr. Richard Quinton, Entomology Dept., Conn. Agr. Expt. Sta. Diazinon, 0.1 to 15.2 p.p.m.

2474-2476, 2478, 2480, 2482-2484, 2487 and 2489-2491. *Alfalfa*. Dr. Richard Quinton, Entomology Dept., Conn. Agr. Expt. Sta. Endrin, 0.4 to 19.8 p.p.m.

2901-2903, 2905, 2907, 2909-2911, 2913 and 2916-2917. *Alfalfa*. Dr. Richard Quinton, Entomology Dept., Conn. Agr. Expt. Sta. Thiodan, 0.6 to 13.8 p.p.m.

46. *Apple*. Health Dept., Hartford, Conn. Lead arsenate and DDT present; no methoxychlor.

8590-8592, 8607-8609, 8623-8625 and 8676-8678. *Beet Tops*. Dr. Richard Quinton, Entomology Dept., Conn. Agr. Expt. Sta. Difterex, 0.2 to 10.6 p.p.m.

8594-8596, 8627-8629, 8680-8682, 8695-8697 and 8731-8733. *Beet Tops*. Dr. Richard Quinton, Entomology Dept., Conn. Agr. Expt. Sta. Heptachlor, 0.8 to 18.8 p.p.m.

2145 to 2147. *Cucumber Seed, Model Variety*. Associated Seed Growers, Inc., New Haven, Conn. Mercury present (about 50 p.p.m.).

2152. *Soil*. Thomas Burgess, Jr., Wapping, Conn. Arsenic trioxide, 20 p.p.m.

1827 to 1829. *Waters*. State Board of Fisheries and Game. Arsenic trioxide, p.p.m.: Dissolved, 0.1-1.6; in sediment, 8.4-21.0; total, 8.5-22.6.

### Syrups

Seven samples of grape-flavored syrup, two each of coffee and vanilla syrups, and one of raspberry-flavored syrup, were examined for the Commissioner; three samples of molasses were analyzed for a pharmacist and a private citizen. Nine samples were passed and six were misbranded:

E.S.-8406. *Autocrat Coffee Flavored Syrup, Pasteurized, for Milk Shakes and Desserts*. Brownell & Field Co., Providence, R.I. Labelled: "Sugar, Water, Freshly Roasted Coffee, Chicory and Glycerine—Preserved with 1/10 of 1% Benzoate of Soda". Analysis showed: Total solids, 73.56, ash, 0.31, and caffeine, 0.040, gm./100 cc. Misbranded because not labelled "Coffee and Chicory Flavored Syrup" and because the ingredient statement should have declared "coffee extract" instead of "freshly roasted coffee".

1265 and 1266. *Blackstrap Molasses*. Taft Pharmacal Co., Inc., New Haven, Conn. Average analysis showed: Water, 27.27, ash, 7.19, sucrose, 21.20, invert sugar, 26.34, total sugars, 47.54, potassium, 2.20, calcium, 0.92, magnesium, 0.38, phosphorus, 0.08, sodium, 0.09, iron, 0.023, manganese, 0.0026, copper, 0.0017, and boron, less than 0.002, per cent. Passed.

K.C.-419, K.F.-1850 and W.M.-1192. *Cott Concentrated Pure Fruit Flavored Grape Syrup*. Cott Pure Fruit Syrup Corp., Manchester, N.H. Declared ingredients were "sugar, water, grape juice, artificial flavor, fruit acid, 1/10 of 1% benzoate of soda." Average analysis showed: Total solids, 77.26, and ash, 0.147, gm./100 cc.; K<sub>2</sub>O, 18.5, P<sub>2</sub>O<sub>5</sub>, 1.6, and methyl anthranilate, 4.2, mg./100 cc.; ratio K<sub>2</sub>O to methyl anthranilate, 6.6; estimated per cent grape juice, 16. Misbranded because they contained added methyl anthranilate and therefore should have been labelled "Imitation Grape Syrup."

E.S.-8405. *Eclipse Coffee Syrup, Pasteurized, for Milk Shakes, Fortified with Vitamin D*. Eclipse Food Products Corp., Providence, R.I. Labelled: "Fortified with Vitamin D (irradiated 7-dehydrocholesterol)—(1 oz.) of Eclipse Coffee Supplies 50% Minimum Daily Requirement of This Nutrient. Contains Fresh Roasted Coffee, Water, Cane Sugar, Chicory, Caramel Color, 1/10 of 1% Benzoate of Soda." Analysis showed: Total solids, 69.89, ash, 0.30, and caffeine, 0.082, gm./100 cc. An assay by feeding to rats confirmed the presence of vitamin D equal to 50 per cent of the minimum daily requirement for this vitamin. Misbranded because it was not a coffee syrup but a coffee and chicory syrup, and because the ingredient statement should have declared "coffee extract" instead of "fresh roasted coffee".

E.C.-928. *Eclipse Pure Fruit Raspberry Flavored Syrup for Milk Shakes*. Eclipse Food Products Corp., Providence, R.I. Labelled: "Contains cane sugar syrup, concentrated raspberry flavor with other natural flavors, citric acid and artificial color, preserved with 1/10 of 1% benzoate of soda." Analysis showed: Total solids, 74.12, and ash, 0.120, gm./100 cc.; K<sub>2</sub>O, 16.8 mg./100 cc.; estimated per cent raspberry juice, 9. Passed.

E.C.-929. *Eclipse Pure Vanilla Flavored Syrup for Milk Shakes*. Eclipse Food Products Corp., Providence, R.I. Labelled: "Contains cane sugar, pure vanilla and caramel color—preserved with 1/10 of 1% benzoate of soda." Total solids, 71.96 gm./100 cc. Passed.

J.B.-249. *Imitation Vanilla Flavored Syrup*. Larry's Diner, Kensington, Conn. Test for coumarin negative; passed.

517. *Molasses*. Arthur J. J. Lyon, Putnam, Conn. Odor normal; no lead or zinc; copper 8 p.p.m. Passed.

W.M.-1195. *Snow Crest Concentrated Pure Grape Flavored Syrup*. Snow Crest Beverages, Inc., Salem, Mass. Labelled: "Contains sugar, water, pure grape juice, grape flavor with other natural flavors, citric acid, 1/10 of 1% benzoate of soda and U.S. Certified color." Analysis showed: Total solids, 54.89, and ash, 0.135, gm./100 cc.; K<sub>2</sub>O, 47.6, P<sub>2</sub>O<sub>5</sub>, 4.5, and methyl anthranilate, 2.1, mg./100 cc.; ratio K<sub>2</sub>O to methyl anthranilate, 23; estimated per cent grape juice, 38. Passed.

J.B.-261. *Spring Up Syrup, Grape*. Crotty Bros., New Britain, Conn. Labelled: "Contains artificial color, flavor and sugar." Analysis showed: Ash, 67, K<sub>2</sub>O, 8.8, and methyl anthranilate, 7.4, mg./100 cc.; ratio K<sub>2</sub>O to methyl anthranilate, 1.2; estimated per cent grape juice, 7. Added methyl anthranilate present; misbranded because not labelled "Imitation Grape Syrup" and because it bore no name or address of a manufacturer, packer or distributor.

J.B.-185 and K.C.-802. *Virginia Dare True Fruit Grape Flavored Syrup*. Virginia Dare Extract Co., Inc., Brooklyn, N.Y. Labelled: "Contains concentrated grape juice, fruit acids, 1/10 of 1% benzoate of soda, U.S. certified color, sugar,

and water." Average analysis showed: Total solids, 60.42, and ash, 0.141, gm./100 cc.; K<sub>2</sub>O, 23.6, P<sub>2</sub>O<sub>5</sub>, 77.2, and methyl anthranilate, 0.13, mg./100 cc.; ratio K<sub>2</sub>O to methyl anthranilate, 139; estimated per cent grape juice, 18. Passed.

### Vegetables and Vegetable Products

Seventeen samples of sweet and six of white potatoes, and one sample each of canned sweet potatoes, pepper salad and rhubarb, were submitted by the Commissioner; two samples of canned green beans were examined for a grocer. Nine samples were passed and 19 were adulterated or misbranded.

A number of the sweet potato samples were sold as "yams". As was explained in last year's report<sup>12</sup>, the true yam is a West Indies tuber of an entirely different species (*Dioscorea*) from the sweet potato (*Ipomoea batatas*), and is infrequently if ever found on the market in the United States. However, because varieties of the sweet potato with moist, deep orange flesh are commonly called "yams", no objection was taken to this nomenclature as applied to sweet potatoes. Both the sweet and white potato samples were tested only for the presence of artificial color on their skins. Because such coloring was obviously applied only to make the products "appear better or of greater value than they are"—i.e., to make light-colored varieties of sweet potatoes look like "yams" and the white potatoes like red-skinned new potatoes—it constituted adulteration even if the color were declared (which it usually was not). Of the 23 samples examined, four were untreated and were passed, while the following 19 were adulterated because their skins contained red or orange coal-tar dye:

K.C.-996. *Bernie Bee Brand Garden State Finest Quality No. 1 Sweet Potatoes, Jersey Orange, Washed and Waxed.* Charles Molinelli, Vineland, N.J.

K.C.-911. *Canaday Produce Co. Canaday's Yams, Porto Rican Sweet Potatoes, Super Rich, Washed, Waxed and Graded.* Canaday Produce Co., Four Oaks, N.C. Labelled "Color Added"; consequently adulterated but not misbranded.

K.C.-912. *Garden States Finest Quality No. 1 Sweet Potatoes.* Charles Molinelli, Vineland, N.J.

K.C.-894. *Limestone Russet Baking Potatoes, U.S. One.* F. H. Vahlsing, Inc., Easton, Maine. Labelled: "I'm the Maine Russet. You can eat my skin. I have been rubbed, tubbed, scrubbed." [Another sample of this brand (P.S.-67) was not artificially colored.]

K.C.-995. *Little Pete Brand Potatoes, U.S. No. 1.* Peterson's Beans and Potatoes, Scott's Bluff, Nebraska. Labelled: "Washed and wax-protected with a special wax material that is artificially colored with a U.S. certified food color." Adulterated but not misbranded.

K.C.-883. *Miami Beach Red South Florida Washed-Dried-Federal Inspected U.S. No. 1 New Potatoes.* Tropical Agriculture Cooperative Association, Gould's, Fla. (These potatoes had naturally red skins which had been made even redder by dyeing.)

K.C.-880. *Molinelli Brand Jersey Orange Sweet Potatoes, Washed and Waxed.* Charles Molinelli, Vineland, N.J.

P.R.-70. *New Potatoes.* Great Atlantic & Pacific Tea Co., New London, Conn.

<sup>12</sup>Conn. Agr. Expt. Sta. Bul. 617, 66 (1958).

K.C.-884. *Orange Sweets.* Glossy Fruit Farm, Hammonton, N.J.

J.Z.-14 and 16. *South Jersey Produce New Jersey Yams.* George Gordon Fruit & Produce Co., New Haven, Conn.

K.C.-907. *Tar Heel's Best Brand Porto Rican North Carolina Yams.* M. O. Blount & Sons, Bethel, N.C.

K.C.-868. *Yams.* L. Bernstein & Sons, Bridgeport, Conn.

J.Z.-26. *Yam.* Food and Drug Commission, Hartford, Conn.

J.Z.-13. *Yams.* Umberto Piccolo & Co., Inc., New Haven, Conn.

J.Z.-15. *Yam.* Senter Bros., New York, N.Y.

K.C.-952. *Yams.* Supreme Celery Co., Bridgeport, Conn.

K.F.-1945 and 1946. *Yams, Waxed and Colored.* Grand Union, Newtown, Conn.

The one sample of fresh rhubarb was also tested for artificial color but none was found:

K.C.-882. *Fresh Rhubarb.* Food Fair Produce, Philadelphia, Pa.

All four of the other samples were passed:

W.M.-2104. *Enrico Caruso Brand Pepper Salad in Pure Olive Oil.* Caruso Products Distributing Corp., Pelham Manor, N.Y. Labelled: "Ingredients: Peppers, celery, capers, garlic, vinegar, salt and spices." The oil separated from this sample had a butyro refraction of 61.4 at 25°C., contained 360 milligrams of squalene per 100 grams, and gave negative tests for cottonseed and peanut oils, so it probably was pure olive oil as claimed.

1080 and 1081. *No. 7 Sieve Blue Lake Cut Green Beans, Standard Grade.* Ross-Darwin Food Co., New Haven, Conn. The beans in these cans appeared fresh and were tender, of good flavor, and quite uniform in size.

K.C.-706. *Royal Prince Southern Yams Sweet Potatoes in Heavy Syrup.* Princeville Canning Co., St. Francisville, La. Labelled: "This can contains Southern Golden Yams grown from the finest seed obtainable. They are packed in heavy sugar syrup and are all ready to be candied.—Color Golden—Variety Porto Rican—Seasoning Heavy Sugar Syrup." Analysis of the liquid portion showed: Total solids, 23.17, sucrose, 14.53, invert sugar, 4.27, and total sugars, 18.80, per cent.

A sample of this brand analyzed in 1946 contained only 10.43 per cent of total sugars in the liquid portion.<sup>13</sup>

### Vinegar

Eleven samples of wine vinegar, two of distilled vinegar, and one each of cider vinegar and red-wine-flavored distilled vinegar, were examined for the Commissioner; four samples were passed and 11 were adulterated or misbranded.

Analyses of the wine vinegars are given in Table 14; one sample was passed, one was adulterated and nine were misbranded.

Of the four miscellaneous vinegars all were passed except the cider vinegar:

<sup>13</sup>Conn. Agr. Expt. Sta. Bul. 510, 32 (1947).



TABLE 14. WINE VINEGAR

No.	Manufacturer or distributor and brand	Total solids, gm./100 cc.	Ash, gm./100 cc.	Total acidity as acetic acid, gm./100 cc.	Tartaric acid, gm./100 cc.	Color	Remarks
J.Z.-12	Ellena Bros., Etiwanda, Calif. <i>Regina Ruby Red All-Purpose</i>	1.75	0.25	6.00	0.090	natural	Passed.
P.S.-129	Genoa Packing Co., Boston, Mass. <i>Genoa Garlic Flavor</i>	0.59	0.11	2.74	0.046	natural	Misbranded; substandard (acidity below 4%) diluted vinegar not so labelled.
K.C.-949	J. Ossola Co., New York, N.Y. <i>Torino</i>	1.44	0.12	4.60	0.064	natural	Labelled "Reduced to 5% acidity;" misbranded because below declared strength and because labelling was misleading.
K.C.-988	J. Ossola Co., New York, N.Y. <i>Torino</i>	0.96	0.06	5.31	0.025	natural	Labelled "Reduced to 5% acidity;" adulterated with distilled vinegar or acetic acid and colored with grape pomace.
K.C.-948	Pastene & Co., Inc., New York, N.Y. <i>Pastene Pure Claret</i>	1.70	0.12	4.88	0.026	natural	Labelled "Reduced with water to a uniform table strength of 5% acidity." Misbranded because below declared strength and because labelling was misleading.
F.M.-1	Pastene & Co., Inc., New York, N.Y. <i>Pastene Pure Claret</i>	0.98	0.08	4.60	0.007	natural	Misbranded. (See K.C.-948 above)
K.F.-1842	Randell Wine Vinegar Co., New York, N.Y. <i>Elderen</i>	1.45	0.11	4.76	0.026	natural	Labelled "Reduced with water to 5% acidity." Misbranded because below declared strength.

K.C.-869	Rouse Co., Somerville, Mass. <i>Madera Pure California</i>	2.23	0.10	4.98	0.010	natural	Labelled "5% Acid Strength;" misbranded because not a "pure" but a diluted vinegar.
K.C.-972	Rouse Co., Inc., Greenville, N.H. <i>Madera</i>	1.83	0.21	5.03	0.038	natural	Labelled "5% Acid Strength;" misbranded because not a "pure" but a diluted vinegar.
K.F.-1879	Wayne County Produce Co., Greenpoint, L.I., N.Y. <i>Wayne County</i>	1.04	0.07	4.88	0.025	natural	Misbranded; diluted vinegar not so labelled.
K.F.-1925	Wayne County Produce Co., Greenpoint, L.I., N.Y. <i>Wayne County</i>	1.75	0.08	4.99	0.026	natural	Misbranded; diluted vinegar not so labelled.

*K.F.-1760. Abbey Garden Brand Distilled White Vinegar.* Abbey Gardens, Inc., New York, N.Y. Labelled "Made from distilled alcohol". Analysis showed: Total acidity, 4.63 gm./100 cc.; permanganate oxidation number, 4.82." Passed.

*K.C.-938. Progresso Distilled Vinegar, Red Wine Flavored.* Uddo & Taormina Co., Brooklyn, N.Y. Labelled: "Contains distilled vinegar, red wine, reduced with water to 5% acidity." Analysis showed: Total solids, 0.45, ash, 0.045, total acidity, 5.13, and tartaric acid, 0.008, gm./100 cc.; color natural. Passed.

*K.F.-1767. Wayne County Distilled White Vinegar.* Wayne County Produce Co., Greenpoint, L.I., N.Y. Labelled "Made from distilled alcohol." Analysis showed: Total acidity, 4.57 gm./100 cc.; permanganate oxidation number, 6.72. Passed.

*K.F.-1766. Wayne County Pure Apple Cider Vinegar.* Wayne County Produce Co., Greenpoint, L.I., N.Y. Analysis showed: Total solids, 1.47, and total acidity, 4.56, gm./100 cc.; caramel absent. Misbranded; diluted vinegar not so labelled.

### Water

Despite an apparently prevalent impression to the contrary, as demonstrated by the frequent submission of samples of well-water with requests that they be tested to see if they are fit to drink, this Station does not make and never has made sanitary analyses of water; neither do we conduct bacteriological tests of any other sort. The only State laboratory that does this type of work is the Laboratory Services Section of the State Department of Health in Hartford. As an accomodation we do occasionally test water for its acidity or alkalinity and hardness, and we have made more extended analyses of mineral waters for the Food and Drug Commission.

During 1958 40 samples of water submitted by private citizens were tested, chiefly for pH and hardness. Results of examination of most of these samples were not of general interest, but the following six cases may be worth recording:

1445. *Swamp Water.* Mrs. Virginia DeLuca, Oxford, Conn. pH, 6.1; total hardness, 16, sodium, 40, calcium, 10, magnesium, 5, iron, 1, and chloride, 20, parts per million. This was a very soft and quite acid water, comparatively high in sodium and chloride.

1619. *Water.* Edgar Myers, East Haven, Conn. Chloride, 310 p.p.m., which was about 40 times the chloride level of New Haven city water.

1176. *Water from New Haven-Northampton Canal.* Frank J. Leach, Milldale, Conn. This sample was submitted because contamination with oily waste from a nearby screw-machine factory was suspected. Examination proved that no oil was present but indicated that there probably was septic tank pollution; the sample contained live mosquito larvae and a tadpole.

1679 to 1681. *Waters from Indian River.* U.S. Electrical Motors, Inc., Milford, Conn. These samples were taken from the river at three tidal stages; results for chloride were as follows: High tide, 8,900, half tide, 7,400, and low tide, 7,500, p.p.m. The water from the river at this point was obviously very salty—too much to make it safe for watering a lawn as was desired.

<sup>14</sup>J. Assoc. Official Agr. Chem. 27, 271 (1944).

### Miscellaneous

Fifteen samples of miscellaneous food and other products were submitted by the Commissioner; seven samples were passed and eight were adulterated or misbranded:

*P.S.-93. Avisco MSBO Sheet.* American Viscose Corporation, Philadelphia, Pa. This sample consisted of a roll of colorless sheets designed to wrap meat. Infrared comparison proved that the sheets were made of cellophane; they were coated on one side with an unidentified waxy material. Inquiry from the manufacturers elicited a statement that no antioxidant or bactericidal or fungicidal agent had been used in their preparation. Passed.

*A.F.-254. Caramel Color.* Canada Dry Bottling Co., Torrington, Conn. Tests for saponin negative; passed.

*K.C.-532. Cider Settling Powder.* Easton Road Cider Mill, Easton, Conn. Dextrose, 85.20, tricalcium phosphate, 2.60, and undetermined, 12.27, per cent. Passed.

*K.C.-822. DeLuxe Imported 100% Pure Mushroom Powder.* Central Food Co., New York, N.Y. Microscopic examination showed no foreign ingredient; passed.

*K.F.-1834. Filler's Taste Thrillers Vacuum Packed Corn-Chips.* Filler Products, Inc., Atlanta, Ga. These were described as "Crisp, deep cooked chips made by grinding the choicest corn with the old fashioned stone method"; declared ingredients were "Corn, Vegetable Oil, Salt." Microscopic examination showed corn meal to be present, and no artificial color was found. Passed.

*K.F.-1886. Good Foods Brand Cheez On Rye.* Good Foods, Inc., Culver City, Calif. Labelled: "Corn Snacks Flavored with Aged Cheddar, Bleu Cheese And Rye—Ingredients: Processed Corn Meal, Vegetable Oil, Cheese Flavor, Salt, Artificial Flavor, Certified Color." Misbranded because not labelled "Imitation" and because of lack of prominence of the "Artificial Flavor, Certified Color".

*K.F.-1885. Good Foods Brand Swiss On Rye.* Good Foods, Inc., Culver City, Calif. Labelled: "Swiss Cheese and Rye Flavored Corn Snacks—Ingredients: Processed Corn Meal, Vegetable Oil, Cheese Flavor, Salt, Artificial Flavor, Certified color." Misbranded for the same reasons as *K.F.-1886* above.

*K.F.-1880. Krim-Ko Topps Pure Chocolate Fudge Sauce.* Krim-Ko Corp., Chicago, Ill. This sample was a collapsible plastic tube labelled "Do Not Refrigerate—Ingredients pure chocolate, milk solids, creamery butter, sugar syrup, pure vanilla, salt and vanillin (an artificial flavoring)." Analysis showed: Water, 28.82, and fat, 9.07, per cent; butyro refraction of fat (40°C.), 44.5; Reichert-Meissl value of fat, 5.75; Polenske value of fat, 0.43; estimated per cent butter, 2; benzoate absent; flavor, excellent chocolate. Passed.

*K.C.-929. Lincoln Better Foods Pecans Sundae Topping.* Lincoln Foods, Lawrence, Mass. Misbranded because it bore no manufacturer's name or address.

*K.C.-923 and 930 and E.S.-15 and 16. Lincoln Claret Sauce Sundae Topping.* Lincoln Foods, Lawrence, Mass. Declared ingredients were "Sugar Syrup, Pure Claret Wine, Corn Syrup, Citric Acid, Certified Food Color." Average analysis showed: Alcohol, 2.71 per cent by volume; K<sub>2</sub>O, 58, and methyl anthranilate, 1.77, mg./100 cc.; estimated per cent wine from alcohol, 22; estimated per cent total grape juice, 47. Misbranded because artificially flavored with undeclared synthetic methyl anthranilate and because the manufacturer's name and address were not declared.

*F.M.-16. Made Rite Starch Free As A Chip Can Be Potato Chips.* Made Rite Potato Chips, Fall River, Mass. Labelled: "Ingredients Potatoes—Vegetable Oil—Salt Added." Fastened over the top of this cellophane bag was also a paper slip reading "SALT FREE—Sodium Content 57 milligrams per 100 grams or 16.3 milligrams per oz. average serving." Analysis showed 119 mg./100 gm. of sodium, which is equivalent to 33.7 mg./oz. of this element. Misbranded because sample contained twice as much sodium as claimed and because the statement "Starch Free As A Chip Can Be" was misleading.

*K.C.-1824. O.K. Du Sweet Coarse Granulated Corn Syrup Dried.* Hubinger Co., Keokuk, Iowa. This sample was picked up in a study of the composition of materials employed as additives in the manufacture of frankforts. Analysis showed: Water, 4.80, protein, 0.31, maltose, 28.90, and dextrose, 13.90, per cent; starch absent.

The labels of some brands of frankforts declare "corn syrup solids" as an ingredient. The analysis of *K.F.-1824* shows that where such addition has been practiced the usual method for the determination of dry skim milk<sup>15</sup> will yield fictitiously high values. In such cases it will be necessary to resort to a more recent method employing yeast that has been "educated" to adsorb maltose as well as dextrose.<sup>16</sup>

In addition to the official samples, 48 miscellaneous foods and non-food-materials were analyzed for the State Supervisor of Purchases, the New Britain health department, the West Haven fire marshal, Cheshire, Groton, Hamden, New Haven and Orange police, a pharmacist, a nursery and private citizens. Of these, 23 samples were passed and 25 were adulterated or misbranded or otherwise objectionable. Some of these samples were not of public interest, but the following may be:

*1785. Favorite Imitation Butterscotch Flavor Instant Pudding.* Favorite Food Products, New York, N.Y. Labelled: "Ingredients: Sugar, Pre-cooked Starch, Sodium Phosphates, Salt, Artificial flavor and U.S. Certified Color (Coconut in Coconut Pudding) (Cocoa in Chocolate Pudding)." This sample was submitted by the State Supervisor of Purchases to see if it complied with Federal Purchasing Specification C-D-221a for "Type III Dessert Powder (flavored)", which called for not more than 30 per cent starch and not more than 75 per cent of total sweetening ingredients, of which no more than 40 per cent could be dextrose. Analysis showed: Water, 3.52, ash, 4.84, gelatin, 0.22, sucrose, 74.90, dextrose, 10.52, starch, 4.96, and undetermined, 1.04, per cent. Excessive sweetening agents present.

*2388. Ford Flower Delivery Wagon, Friction.* Liggett's Drug Co., Hamden, Conn. This toy of Japanese manufacture was submitted by a drugstore to be examined for the presence of lead; this request was made because of a newspaper article that stated (in part): "Toy trucks made in Japan and possibly capable of killing or making life-long idiots of American children are presently on sale at toy counters across the nation, it has been reported. A warning of potential danger in the high lead content of paint on the imported toys was issued to 30 state and city health departments by the Toy Guidance Council which said the possibly deadly paint was disclosed in routine laboratory tests on toys it was considering listing as recommended playthings." Spectrographic analysis of the paint on this truck confirmed that one of the pigments contained lead, but we have no evidence that Japanese toys are unique in this respect, and the danger of lead poisoning from such toys would appear to be confined to their use by children so small that they might gnaw on them. In any case the statement that American children might be made "life-long idiots" if they played with these trucks seems chauvinistically extreme.

<sup>15</sup> *Conn. Agr. Expt. Sta. Bul.* 401, 869 (1937); 415, 695 (1938); 426, 14 (1939).  
<sup>16</sup> *J. Assoc. Official Agr. Chem.*, 40, 57, 770 (1957); 41, 293 (1958); 42, 275 (1959).

*1758. "Insta-Valve" for Nursing Bottle.* George Beal, Meriden, Conn. This article was suspected of having caused lead poisoning in a baby, but analysis proved that it was made of steel and contained no lead.

*1259. Kingsford Charcoal Briquets.* Kingsford Charcoal Co., Iron Mountain, Mich. These briquets were submitted by the New Britain health department because of a complaint that their smoke made four people faint. Examination showed, however, that they burned with almost no smoke or odor and without producing any unusual effects on our laboratory personnel. It was suspected that the complainants had suffered from carbon monoxide poisoning caused by burning the charcoal too long in an enclosed space.

*1646. Lock of Hair of Virginia Thompson.* Daniel R. Hazard, Fire Marshal, West Haven, Conn. This sample was submitted in an attempt to test a theory of the cause of an accident that resulted in a nearly fatal burning. When found, the victim was unconscious with all of her clothes burned off, and it was known that she had been using a hair-setting preparation and that the last thing she remembered was lighting a match. The sample of hair we received bore no coating of any cosmetic, however.

*538. Material from Long Island Sound Suspected of being Ambergris.* George Sabine, East Haven, Conn. This faintly yellow substance proved to be not ambergris but a commercial grease.

*1215, 1216 and 1217, Methanol.* State Supervisor of Purchases. All of these antifreeze samples contained 91.40 per cent of methanol (wood alcohol); 1215 contained 1.16 per cent of mineral oil and borax, while the other two were free of nonvolatile material. 1215 and 1216 were colored purple, while 1217 was yellowish.

*1833. Permo Proof Ethylene Glycol Permanent Type Anti-Freeze.* American Hydrocarbon Corporation Division, Peerless Oil & Chemical Corp., Long Island City, N.Y. This sample was submitted by the State Supervisor of Purchases for analysis for compliance with State Purchasing Specification P-191-433; results were as follows:

	Found	Specification calls for
pH .....	6.55	5.8 - 7.0
pH of 33 1/3% solution .....	7.95	7.5 - 9.5
Ash, gm./100 cc. ....	0.78	Not over 3.0% by wt.
Specific gravity, 60/60°F .....	1.1122	1.112 - 1.132
Net contents, fl. oz. ....	124.3	128.

Sample met all analytical requirements but was short volume 3.7 fl. oz.

*3193. Pliofilm.* Fred Scimone, Hamden, Conn. Mr. Scimone stated that he had been using this material to cover chickens placed on a tray in a freezer, but that he had found that where it actually touched the chickens it imparted a foreign odor to them; this odor became intensified on cooking. Examination confirmed that certain spots on this ten-inch-wide six-foot strip had a faint odor resembling iodoform; it was suspected that this odor might have been picked up from some medicinal product stored near the "Pliofilm". No health hazard appeared to be involved.

*1786. Red E. Made Gelatin Dessert, Lime Flavor.* T. A. Fields Co. Div., Vaka Bros. Corp., Boston, Mass. Labelled: "Contains: Gelatin, Citric Acid, Natural Fruit Flavor enhanced with Artificial Flavor, Salt, Sugar, U.S. Certified Color." Submitted by the State Supervisor of Purchases to be tested for compliance with

specifications calling for 8-12.5% gelatin, 2.5-3.5% of citric acid, no more than 0.3% salt, buffering salts equal to no more than 33% of the acid, and sucrose to make 100%. Analysis showed: Water, 0.93; gelatin, 7.44; sucrose, 86.74; citric acid, 2.24; buffering salts (as sodium citrate), 0.43; salt, 0.60, and undetermined, 1.62, per cent. Deficient in gelatin.

2746. *Unknown Material Working Out of Concrete Wall in Cellar.* R. C. Gunther, North Haven, Conn. Identified as sodium carbonate.

## DRUGS

### Aspirin Tablets

Two official and one unofficial samples of aspirin tablets were examined; all were passed:

H.P.-195. *Merck's Aspirin Tablets, U.S.P.* Merck & Co., Rahway, N.J. Acetylsalicylic acid, grains/tablet: Declared, 5; found, 4.83.

514 and W.S.-659. *Robin Brand Aspirin Tablets, U.S.P.* Lesley Sales Corp., Needham, Mass. Acetylsalicylic acid, grains/tablet: Declared, 5; found, 5.14.

### Narcotics

Twenty-eight miscellaneous unofficial samples were analyzed for the presence of narcotics at the request of the Branford, Bridgeport, New Haven, Orange and Stamford police. In eight of these samples no narcotic was found, while 16 contained heroin (diacetylmorphine hydrochloride) and four marijuana (*Cannabis sativa*).

### Prescriptions

One prescription sample submitted by the Commissioner was found to be adulterated, while two others were passed:

W.S.-712. *Prescription No. 77042*, Cashman Drug Co., Inc., Newtown, Conn. This prescription called for "Atropine sulphate 1% 15 cc.", but analysis showed it to be a 1.57 gm./100 cc. solution of pilocarpine hydrochloride. Adulterated.

W.S.-709. *Prescription.* Landy Pharmacy, Bridgeport, Conn. This sample was supplied on a prescription calling for equal parts of "Elixir Alurate" and Elixir of Five Bromides; the patient claimed that she had been told by her latest physician that it contained free bromine and had poisoned her but that he would not testify to that effect.

Five Bromides Elixir is a National Formulary X product containing bromides of sodium, potassium, calcium, lithium and ammonium, plus licorice and raspberry syrups and aromatic elixir; it is required to contain between 18.5 and 20.0 grams of total bromide in each 100 cc. "Alurate Elixir" is a proprietary product of Hoffman-Laroche, Inc., containing 0.03 gram of "Alurate" (allyl isopropyl barbituric acid) in each teaspoonful (4 cc.) of "a cherry-colored, pleasant-tasting vehicle".

Qualitative analysis of W.S.-709 showed sodium, potassium, calcium, lithium and allyl isopropyl barbituric acid to be present and free bromine absent; proportions found were: Total bromide, 11.20, and allyl isopropyl barbituric acid, 0.40, gm./100 cc. Since this analysis proved that Five Bromides Elixir and Alurate Elixir were present in 1.05 to 1 ratio and free bromine was absent, sample was passed.

<sup>1</sup>Modern Drug Encyclopedia and Therapeutic Index, 6th Ed., p. 37.

W.S.-710. *Prescription for Elsie Chambers.* Landy Pharmacy, Bridgeport, Conn. These red capsules were identified as "Vi-Aqua" capsules manufactured by U.S. Vitamin Corp., New York, N.Y., whose declared ingredients per capsule were: "Vitamin A (natural) 5,000 U.S.P. units, Vitamin D (calciferol) 500 U.S.P. units, Thiamine Mononitrate (B<sub>1</sub>) 5 mg., Riboflavin (B<sub>2</sub>) 5 mg., Vitamin B<sub>12</sub> 1 mcg., Niacinamide 20 mg., Pyridoxine HCl (B<sub>6</sub>) 0.5 mg., a Calcium Pantothenate 5 mg., Ascorbic Acid (C) 50 mg., Vitamin E (d1 Alpha Tocopheryl Acetate) 1 int. Unit." Passed.

Fillings of a prescription calling for 10 cc. of a one per cent ophthalmic solution of pilocarpine hydrochloride made in two different drugstores were analyzed for the patient's daughter; one sample was found to be completely satisfactory while the other was questionable:

421. *Prescription No. 654203.* Mason's Pharmacy, New Haven, Conn. Analysis showed this sample to contain 0.92 gm./100 cc. of impure pilocarpine hydrochloride.

422. *Prescription.* Taft Pharmacy, New Haven, Conn. Analysis showed 0.99 gm./100 cc. of pilocarpine hydrochloride whose infrared pattern showed it to be pure.

### Tobacco

One sample of cigars was examined for the Commissioner, and two samples of tobacco were analyzed spectrographically for a tobacco-growing company:

W.S.-720. *Garcia Supreme Cigars.* Post Auction, Southington, Conn. These cigars were picked up as a result of a complaint by a purchaser to the Hartford Better Business Bureau, Inc.; the complainant charged that while the outer wrappers were tobacco leaf the binder layers were only brown or green paper and the fillers nothing but masses of tobacco shavings. Examination by Dr. Gordon S. Taylor of our tobacco laboratory confirmed this complaint: The wrappers were found to be leaf tobacco, the binders were paper similar to Kraft paper, and the fillers consisted of tobacco fragments no larger than those in pipe tobacco.

1623 and 1624. *Ground Air-Dry Tobacco.* Consolidated Cigar Corp., Glastonbury, Conn. Average analysis showed: Potassium, 4.65; calcium, 3.95; magnesium, 1.19; phosphorus, 0.33; iron, 0.07; aluminum, 0.05; manganese, 0.011; copper, 0.004, and boron, 0.008, per cent.

### Veterinary Medicine

One sample of medicine dispensed by a veterinarian for the treatment of a colt was examined for the Commissioner:

R.W.-379. *Prescription of F. I. Maxon, V.M.D., Hartford, Conn.* This preparation was stated to contain in each fluid ounce: Strychnine sulfate ½ grain, arsenic trioxide ½ grain, solution of ferric chloride 14 minims, and cobalt chloride ¼ grain. Partial analysis confirmed the presence of arsenic, iron and cobalt.

### Vitamin Preparations

After the microbiological laboratory started functioning in 1954 and it became possible to conduct assays for other vitamins than D by non-chemical means, our work was at first directed toward the examination of vitamin-enriched foods (including milk) for man and beast. In 1957 it was decided that the vitamin capsules and tablets being consumed on so large a scale by the general public equally merited

TABLE 15. VITAMIN PREPARATIONS

No.	Manufacturer or distributor and brand	Control No.	Riboflavin, mg./unit		Niacinamide, mg./unit		Calcium Pantothenate, mg./unit		Folic Acid, mg./unit		Vitamin D, U.S.P. units/unit		Ascorbic Acid, mg./unit		Remarks
			Claimed	Found	Claimed	Found	Claimed	Found	Claimed	Found	Claimed	Found	Claimed	Found	
W.S.-676	Abbott Laboratories, Chicago, Ill. <i>Deylets</i>	675-1652-21	5	4.29	25	31.1 <sup>1</sup>	5	5.06	0.1	0.11	1,000	O.K.	—	—	High in niacinamide.
W.S.-692	Arlington-Funk Labs. Div., U.S. Vitamin Corp., New York, N.Y. <i>Two-C, V. P. (double strength)</i>	16789	—	—	—	—	—	—	—	—	—	—	200	211	O.K.
W.S.-684	Arlington-Funk Labs. Div., U.S. Vitamin Corp., New York, N.Y. <i>Vi-Aqua</i>	16385	5	4.50	20	2.32	5	5.07	—	—	500	not tested	—	—	Passed.
W.S.-678	Biggs Laboratories, New Haven, Conn. <i>Super Vitamins</i>	6023163	5	4.65	30	37.8 <sup>1</sup>	10	8.27	0.5	0.41	1,000	not tested	—	—	High in niacinamide.
W.S.-683	Davis Drug Co., New Haven, Conn. <i>De Vit-Mins</i>	22375	2	1.81	10	10.9	1.0	0.90	0.67	0.69	400	not tested	—	—	O.K. Low in Ca pantothenate and Vitamin D.
W.S.-662	Delco Chemical Co., Yonkers, N.Y. <i>Delco-Vites</i>	4949	2.5	2.56	20	21.1	5	0.58 <sup>2</sup>	—	—	500	deficient <sup>2</sup>	—	—	See note 3.
167	Foods Plus, Inc., New York, N.Y. <i>Foods Plus Formula 102</i>	7249	6	6.02	30	33.0	5	5.08	0.25	0.22	—	—	—	—	Passed.
168	Foods Plus, Inc., New York, N.Y. <i>Foods Plus Formula 132</i>	7217	4	3.96	30	32.0	3	3.31	0.1	0.10	—	—	—	—	See note 3.
W.S.-673	Lederle Labs. Div., American Cyanamid Co., New York, N.Y. <i>Vi-Magna</i>	4333-115	3	2.97	20	20.8	1	0.92	1.0	1.22 <sup>1</sup>	500	not tested	—	—	High in folic acid.
W.S.-663	Eli Lilly & Co., Indianapolis, Ind. <i>Multicetin</i>	8093-691263	3	2.80	25	26.6	5	5.25	0.1	0.13 <sup>1</sup>	1,000	O.K.	—	—	High in folic acid.
3359	Manufacturer, unknown. <i>Unknown Pills</i>	—	—	—	—	—	—	—	—	—	—	—	20	—	Passed.

## Drug Products

W.S.-420	Manufacturer, unknown. <i>Multi-Vitamin Drops</i>	—	0.4	0.33	5	3.18 <sup>2</sup>	2	1.35 <sup>2</sup>	—	—	1,000	not tested	50	not tested	Low in niacinamide and Ca pantothenate.
W.S.-421	Manufacturer, unknown. <i>Vitamin Pills</i>	—	3	4.64 <sup>1</sup>	25	48.6 <sup>1</sup>	5	not tested	6.25	not tested	1,000	not tested	50	not tested	High in riboflavin and niacinamide.
W.S.-680	S. E. Massengill Co., Bristol, Tenn. <i>Homogenets</i>	B015716	5	5.46	25	31.2 <sup>1</sup>	—	—	0.125	0.123	1,000	O.K.	—	—	High in niacinamide.
W.S.-666	Mead, Johnson & Co., Evansville, Ind. <i>Mead's Mixed Vitamins</i>	1054	4	3.83	25	25.0	—	—	—	—	1,000	O.K.	—	—	O.K.
W.S.-669	Miles Laboratories, Inc., Elkhart, Ind. <i>One A Day</i>	M318-5106	2.5	2.56	20	21.6	—	—	—	—	500	O.K.	—	—	O.K.
S.-422	National Drug Co., Philadelphia, Pa. <i>Heper-C</i>	136748	—	—	—	—	—	—	—	—	—	—	100	101	O.K.
S.-423	National Drug Co., Philadelphia, Pa. <i>Heper-C</i>	136746	—	—	—	—	—	—	—	—	—	—	100	103	O.K.
W.S.-681	New England Pharmaceutical Co., New Haven, Conn. <i>Vimeral</i>	1428	2	2.25	20	21.0	1	0.97	—	—	—	—	—	—	O.K. Low in Ca pantothenate.
W.S.-664	Parke, Davis & Co., Detroit, Mich. <i>Abdol</i>	7-218-25	2.5	2.43	20	23.8	5	2.21 <sup>2</sup>	—	—	—	—	—	—	Low in Ca pantothenate.
W.S.-667	Park Laboratories, New York, N.Y. <i>Park Nine</i>	20723	3,000	3,020	20	21.0	5	3.73 <sup>2</sup>	—	—	—	—	—	—	High in folic acid.
W.S.-665	Pharmaceuticals, Inc., Newark, N.J. <i>Genitol</i>	298603	5	5.41	30	34.5	2	2.18	0.25	0.31 <sup>1</sup>	—	—	—	—	Passed.
W.S.-660	J. B. Roerig & Co., Chicago, Ill. <i>Viterra</i>	58152	3	2.40	25	26.0	5	5.25	—	—	500	passed	—	—	Passed.
W.S.-667	Sharp & Dohme Div., Merck & Co., Philadelphia, Pa. <i>Multivite</i>	P1859	10	9.45	50	52.8	10	13.00 <sup>1</sup>	—	—	2,000	not tested	—	—	High in Ca pantothenate.
W.S.-662	E. R. Squibb & Sons Div., Olin-Mathieson Chemical Corp., New York, N.Y. <i>Hyperam</i>	7A61159	10	8.15	150	164.0	—	—	—	—	1,000	not tested	—	—	Passed.
W.S.-672	Stuart Co., Pasadena, Cal. <i>The Stuart Formula</i>	15009-027	2.5	2.55	15	17.8	—	—	—	—	500	O.K.	—	—	Passed.

TABLE 15. VITAMIN PREPARATIONS—(Concluded)

No.	Manufacturer of distributor and brand	Control No.	Riboflavin, mg./unit		Niacinamide, mg./unit		Calcium Pantothenate, mg./unit		Folic Acid, mg./unit		Vitamin D, U.S.P. units/unit		Ascorbic Acid, mg./unit		Remarks
			Claimed	Found	Claimed	Found	Claimed	Found	Claimed	Found	Claimed	Found	Claimed	Found	
7.S.-682	Marvin R. Thompson, Inc., Stamford, Conn. "Vitamin-MRT"	1556	5	5.51	30	36.1 <sup>1</sup>	2.5	0.57 <sup>2</sup>	—	—	1,200	not tested	—	—	High in niacinamide and low in Ca pantothenate.
7.S.-674	Upjohn Co., Kalamazoo, Mich. <i>Unicest</i> .	GE729	2.5	2.25	20	23.8	5	4.93	0.25	0.28	500	not tested	—	—	Passed.
7.S.-675	Virtual Pharmaceutical Co., New Haven, Conn. <i>Vitamin Telmin</i>	none	2	2.20	20	22.4	1	0.52 <sup>2</sup>	—	—	1,000	not tested	—	—	Low in Ca pantothenate.
7.S.-670	Vitamin Corp. of America Div., VCA Labs., Los Angeles, Calif. <i>Rybutol</i> .	40159	6	6.54	10	11.7	3	1.65 <sup>2</sup>	0.10	0.09	—	—	—	—	Low in Ca pantothenate.
7.S.-661	White Laboratories, Inc., Kenilworth, N.J. <i>Cerofort</i> .	6349	3.33	3.19	33	40.8 <sup>1</sup>	6.67	10.78 <sup>1</sup>	0.50	0.59	333	O.K.	—	—	High in niacinamide and Ca pantothenate.
7.S.-668	White Laboratories, Inc., Kenilworth, N.J. <i>Mal-Fort</i> .	4092	2	1.93	10	10.7	—	—	—	—	500	O.K.	—	—	O.K.
7.S.-671	Wilfred Pharmaceutical Co., Hamden, Conn. <i>Mal-Forte</i> .	20569	1.5	1.45	10	11.7	1.0	0.85	—	—	250	passed	—	—	Passed.

<sup>1</sup>High<sup>2</sup>Low<sup>3</sup>Biotin, micrograms/capsule: Claimed, 10; found, 9.73. O.K.

investigation, and to this end the Commissioner submitted 30 samples of multi-vitamin preparations being sold over-the-counter, representing 29 different brands. Most of these samples were assayed microbiologically for riboflavin (vitamin B<sub>2</sub>), niacin, calcium pantothenate and folic acid, and a few were also assayed for vitamin D by feeding to rats or analyzed chemically for ascorbic acid (vitamin C); biotin was determined on one. Results of analysis of these 30 official and three unofficial samples are shown in Table 15; 17 samples were passed and 16 were found to be deficient in one or more vitamins on the basis of a plus/minus 20 per cent tolerance. The vitamin which most often failed to meet its guaranty was calcium pantothenate; six samples were low and two too high in this compound. Five samples were too high and one low in niacinamide, three contained too much folic acid, and one each was found deficient in riboflavin and vitamin D.

### Miscellaneous Drugs

Seven official samples of miscellaneous drugs were examined for the Commissioner, and seven unofficial samples were tested for the Commissioner, the Fairfield County State's Attorney, a physician, a druggist and private citizens. Eight samples were passed and six were misbranded or otherwise objectionable:

9640. *Aspirin in Propylene Glycol*. Liggett Drug Co., Manchester, Conn. Acetylsalicylic acid, 10.36 gm./100 cc. Passed.

9333. *Ava Tranquil Brand, a Tranquilizing Aid for Relief in Nervousness*. Alva Laboratories, Chicago, Ill. Labelled: "Active Ingredients: Each TRANQUIL contains in Grams: Scopolamine Aminoxide Hydrobromide .00010; Methapyraline (*sic*) Hydrochloride N,N-Dimethyl-N'(2-Thenyl)-N'(2-Pyridyl)-Ethylendiamine Hydrochloride; Bromides: Sodium .99700, Potassium .19400, Ammonium .03285; Niacin; Niacinamide; Thiamine Hydrochloride; Riboflavin; Cyanocobalamin; Stomach & Liver whole desiccated (containing entire B Complex); Ferric Pyrophosphate; Acetanilid .05000; Other ingredients: Hesperidin; Ascorbic Acid; Ammonium Chloride; Dextrose; Yeast; Vegelecithin; Magnesium Trisilicate; Tricalcium Phosphate; Calcium Stearate. Combination of Bromides, Niacin and Niacinamide and Vegelecithin is designated as Nervizene\* (Trademark Reg.)." There were also dosage directions and a caution statement, and a statement on the front panel read: "For relief in NERVOUSNESS, Irritability (Nerves), Excitability, Nervous Stomach, Headache, Restlessness, Insomnia, Anxiety DUE TO NERVOUS TENSION—NO NARCOTICS—NO BARBITURATES—NOT HABIT FORMING."

Scopolamine aminoxide hydrobromide is a derivative of scopolamine (hyosine) sold under the trade name of "Scopodex", which has been "claimed to be one-third as active but only one-sixth as toxic" as scopolamine, and has been "recommended in motion sickness either alone or in combination with diphenhydramine."<sup>18</sup> Methapyrilene hydrochloride U.S.P. is an antihistaminic better known under the trade names of "Histadyl" (Eli Lilly & Co.) and "Thenylene Hydrochloride" (Abbott Laboratories); it should be particularly noted that while unnecessary space is taken to give the chemical name for this compound the label nowhere states how much of it is present. Sodium, potassium and ammonium bromides are frequently found together in triple bromide elixirs, syrups and tablets; bromides have long been "used in medicine to promote sleep to allay general nervous excitation, and at times to control epileptic seizures."<sup>19</sup>

<sup>18</sup>U.S. Dispensatory XXV, p. 1223<sup>19</sup>U.S. Dispensatory XXV, p. 1260

This preparation is essentially a mixture of two different tranquilizing drugs with an antihistaminic, vitamins and minerals. Misbranded because of misleading statements and for failure to carry warnings that "Use in excess of recommended dosage may cause serious nervous or mental disturbances", and "frequent or continued use may lead to mental derangement, skin eruptions or other serious effects."

*J.S.-414. Balsamo Opodeldoch (Soap Liniment).* Antillana Pharmacal Co., Inc., Brooklyn, N.Y. Labeled: "For External Use—Mild Rubefacient." "Soap Liniment" is a synonym for Camphor and Soap Liniment N.F. X; "Solid Opodeldoc" was a synonym for the Camphorated Soap Liniment of the N.F. V which preceded the present official preparation. Analysis of *J.S.-414*, as compared with the formula requirements of Camphor and Soap Liniment N.F. X, was as follows:

	Found	Formula calls for
Sodium soap, gm./100 cc. ....	5.62	6.00
Alcohol, per cent by volume .....	65.70	62 to 66
Camphor, gm./100 cc. ....	present	4.50

Passed.

*W.S.-658. Cyclodrine Tablets.* Hance Bros. & White Co., Philadelphia, Pa. Labeled: "Each tablet contains: Cyclodrine\*—25 mg.—For effective control to aid weight reduction—\*Hance Brand of Phenylpropanolamine Hydrochloride.—Dosage: Adults only, one tablet three times daily, ½ hour before meals.—Caution: Individuals with Heart Disease, Diabetes, High Blood Pressure, or Thyroid Disease should use this product only on the advice of a physician. Do not exceed recommended dosage." Passed.

*J.S.-424. Nebs.* Norwich Pharmacal Co., Norwich, N.Y. Labeled: "Acetyl-P-Aminophenol 5 Grains—For the relief of pain of simple headache and minor neuralgia, muscular aches, and minor discomforts of the menstrual period... A New Potent Pain Killer". There were also directions for use and a "Warning: Do not take for more than 10 days or give to children under 6 years of age except upon the advice of a physician." Passed.

*J.S.-419. Rexall Sleep Tablets.* Rexall Drug Co., Los Angeles, Calif. Labeled in part: "Nonhabit-Forming—An Aid in the Relief of Insomnia, Reduces Simple Nervousness Promotes Sleep—EACH TABLET CONTAINS: Methapyrilene Hydrochloride 25 mg., Sodium Bromide 3 grains, Potassium Bromide 3 grains, Ammonium Bromide 1½ grains—DIRECTIONS **Adult:** 1 or 2 tablets ½ hour before bedtime **Children:** Give only as a physician directs—CAUTION: Frequent or continued use may cause serious nervous disorders or skin eruptions. Tablets should not be taken by those suffering from kidney disease."

Methapyrilene Hydrochloride U.S.P. is an antihistaminic better known by its trade names of "Histadyl" (Lilly) and "Thenylene" (Abbott). All of the antihistaminics possess in greater or less degree a side-effect of producing drowsiness, and it was no doubt for this reason that this drug was combined with the tranquilizing triple bromides in "Rexall Sleep Tablets"—a mixture similar to that found in the "Tranquil" tablets listed above.

Sample was misbranded because the essentially meaningless euphemism "serious nervous disorders" had been substituted for "mental derangement" in the caution statement.

*J.S.-400. Schering Coricidin.* Schering Corp., Bloomfield, N.J. Analysis, as compared with the claimed composition, was as follows:

	Declared, gm./tablet	Found, gm./tablet
Aspirin .....	0.23	0.231
Phenacetin .....	0.16	0.166
Caffeine .....	0.03	0.035
Chlorpropenphenamine maleate .....	0.002	

Passed.

*431 and J.S.-408. Sodium Amytal 3 Grain Capsules.* Eli Lilly & Co., Indianapolis, Ind. Average analysis showed 2.92 grains/capsule of Sodium Amytal. Passed as to composition, but misbranded because not sold on prescription.

*W.S.-707. Stimavite Tastitabs.* J.B. Roernig & Co., Chicago, Ill. Labeled: "A pleasant tasting appetite stimulant for children, containing Lysine to promote proper growth—DOSAGE: 1 tablet daily as directed by physician.—Stimavite tastes like candy and is readily accepted by children... Each Tablet Contains: Vitamin B-12 20 mcg., Vitamin B-6 3 mg., Vitamin B-1 10 mg., Vitamin C (as Sodium Ascorbate) 25 mg., l-Lysine 15 mg." Analysis showed 28.1 mg./tablet of sodium ascorbate.

It was believed that the 15 milligrams of lysine in one tablet of "Stimavite" was far too little to have any significant effect in correcting any dietary deficiency of this amino acid; sample was also misbranded because the claims made it a special dietary food yet its label did not "bear such information concerning its vitamin... properties as shall be necessary in order fully to inform purchasers as to its value for such uses" [Federal Regulation 125.03(a)(1) and (2)].

*420. Unknown Liquid.* Otto Willner, M.D., New Haven, Conn. A patient of Dr. Willner's had taken a half-teaspoonful of what she thought was chloral hydrate solution, only to notice after swallowing it that it was not colorless; she became afraid that it might have been "Metaphen" or "Merthiolate" solution. Analysis showed, however, that the sample contained 19.59 gm./100 cc. of chloral hydrate, 23.34 gm./100 cc. of potassium bromide, and no organic mercurial; it was therefore Compound Elixir of Chloral and Potassium Bromide N.F.VI. Passed.

*2155. Unknown Medicine.* Albert Guerra, New Haven, Conn. This preparation was given to Mr. Guerra by a friend in the Marines; he had found it to be the only material that would help his young son's acne, and therefore wanted it analyzed so that he could have a pharmacist prepare more of it. Analysis indicated the following composition: Calamine and bentonite, 31.94, sulphur, 3.72, and glycerine, 3.63, gm./100 cc. Mr. Guerra was notified that a double-strength Calamine Lotion U.S.P. XV to which 4 gm./100 cc. of precipitated sulphur was added would essentially duplicate this preparation.

*2153. Unknown Pills.* Mrs. Mary Dolinsky, East Hampton, Conn. Mrs. Dolinsky sold live bait to fishermen, and one morning she found all of the bait in her tank (including crawfish) dead, while the water had a milky-white appearance and contained these "pills". Examination showed the "pills" to be cup-shaped particles composed chiefly of calcium and magnesium carbonates. It was suspected that someone had dumped some lime-water in the tank, and that the increased alkalinity had been responsible for the death of the bait.



1948. *Unknown Plant*. Frank Bowes, State's Attorney, Bridgeport, Conn. This plant was submitted because it was suspected of being marijuana (*Cannabis sativa*), but examination by Mr. Ernest Stoddard of our Plant Pathology Department proved that it was only giant ragweed (*Ambrosia trifida* L.).

## COSMETICS

Eleven official and eight unofficial samples of cosmetics were examined; 13 were passed and six were misbranded or otherwise objectionable:

*W.S.-711. Blount's New Two Star Treatment Hair and Scalp Conditioner*. Farmington Mfg., Inc., Farmington, Mich. Labelled: "Restores color to grey hair—Removes unwanted dandruff—DIRECTIONS Shake well before using. Apply freely on the scalp and massage well with finger-tips. Use at least once daily until dandruff is removed and color is retored to grey hair, then use frequently—Satisfaction guaranteed, if used as directed, or your money back—ACTIVE INGREDIENTS Lead Acetate, Bay Rum, Glycerine, Tincture Cantharides, Lac Sulphur, Alcohol 4% by volume." Analysis showed: Lead acetate, 0.27, sulphur, 0.80, and glycerine, 3.68, gm./100 cc.; alcohol, 3.47 per cent by volume; cantharidin not detected; arsenic, possible trace; blue coal-tar dye present. Misbranded because the statement "Restores color to grey hair" was misleading if not false.

*774. Concentrated 36% Min. Anhydrous Soap*. Howard Chemical Co., New Haven, Conn. This sample was submitted by the State Supervisor of Purchases for analysis for compliance with State Purchasing Specification 5730-S-40 for Soap, Toilet, Liquid, Type II. This specification called for a minimum of 36 per cent anhydrous soap (calculated as potash soap), a maximum of 0.02% free alkali and a maximum pH of 8.5. Sample had a lemon odor and was colored green; analysis showed: Anhydrous soap (as potassium oleate), 11.62, and free alkali (as KOH), 0.40, gm./100 cc.; pH, 13.6. Soap content far below that required by the specification; excessive free caustic present.

*W.S.-715. Eau de Toilette Réplique*. Raphael, Paris, France. This sample was obtained for comparison with *W.S.-714* below. Analysis showed: Alcohol, 68.88 per cent by volume; esters (as ethyl acetate), 1.17 gm./100 cc. Passed.

*J.S.-385 and 386. Fresh Cream Deodorant*. Pharma-Craft Corp., New York, N.Y. Labelled: "Contains basic aluminum formate and aluminum chloride made safe for clothing." These samples were submitted because of a complaint of a purchaser that this product caused a rash under her arms. Tests on five members of our staff showed no irritation in any case, however, so both samples were passed.

*W.S.-717. Hair Brush*. Max Factor & Co., Hollywood, Calif. This colorless plastic brush was submitted because of a consumer complaint that when it was moistened with "Sof-Set Curl Control" (see *W.S.-716* and *717* below) and left standing over night it disintegrated. Our first suspicion was that the solvent in the cosmetic had softened the plastic of the brush, but close examination revealed that the broken edges were sharp and that it was only along these edges that the bristles had become detached or could even be pulled out. It was obvious, therefore, that the "disintegration" of the brush had been due not to any attack of the cosmetic but to a sharp blow caused by dropping or hitting it. Passed.

*W.S.-718. Juvené Hormone Cream*. Fuller Brush Co., Hartford, Conn. Labelled: "Smooth on daily to help keep your skin firmer and younger looking. Ju-

vené not only contains 10,000 International units of natural estrogenic hormones per ounce, but also contains precious lanolin and other effective smoothing and corrective emollients.—Juvené will help 'cushion' hormone depleted skin. See results in 30 days." This sample was submitted because of a user's complaint that it caused her face to break out; since it had no adverse effect on five members of our staff it was passed.

*1213. Liquid Toilet Soap Type I*. Howard Chemical Co., New Haven, Conn. Submitted by the State Supervisor of Purchases to see if it complied with specifications calling for a minimum of 15 per cent anhydrous potassium soap, a maximum of 0.02 per cent free alkali and a maximum pH of 8.5. Analysis showed: Anhydrous soap (as potassium oleate), 10.73, and free caustic, 0.00, gm./100 cc.; pH, 12.5. Deficient in soap.

*1214. Liquid Toilet Soap Type II*. Howard Chemical Co., New Haven, Conn. This sample was also examined for the State Supervisor of Purchases; required specifications were as outlined under 774 above. Analysis showed: Anhydrous soap (as potassium oleate), 27.23, and free caustic, 0.00, gm./100 cc.; pH, 8.5. The pH was satisfactory but the soap content was too low.

*2154. Pond's Angel Skin Hand and Body Lotion*. Chesebrough-Pond's, Inc., New York, N.Y. This was a pink creamy preparation with a rose odor that was submitted with a complaint that its use produced a rash. When four members of our staff applied it to themselves on two successive days none suffered any ill effect, so sample was passed.

*W.S.-714. Réplique*. W. T. Grant Co., New Haven, Conn. Labelled "Rebottled From The Genuine Product By DeLenac Ltd. Wholly Independent of Parfums Marcy 2 Drs." This sample was picked up because of a complaint of a competitor that it was not the genuine article (see *W.S.-715* above). Analysis showed: Alcohol, 66.14 per cent by volume; esters (as ethyl acetate), 1.28 gm./100 cc.; odor and intensity of yellow color identical with those of *W.S.-715*. No evidence of substitution, but misbranded because it bore no manufacturer's address.

*2151. 'Satin-Set' Revlon*. Revlon, Inc., New York, N.Y. Labelled: "Positively Contains No Lacquer—Caution: Flammable Do Not Use Near Fire Or Flame." This hair setting preparation was the same one that was implicated in the nearly fatal burning of Virginia Thompson (see Sample 1646 on page 69). Qualitative analysis showed it to be a heavily perfumed dilute alcoholic solution of white shellac containing a small proportion of an unidentified oil; quantitative analysis was as follows: Alcohol, 57.30 per cent by volume; total solids (chiefly shellac), 3.75 gm./100 cc. Since this sample appeared to be properly labelled it was passed.

*2987. Soap, Toilet, Liquid*. Sisson Drug Co., Hartford, Conn. Submitted by the State Supervisor of Purchases for analysis for compliance with purchasing specifications for Type II Liquid toilet soap. Analysis showed: Anhydrous soap, 34.58, and free alkali (as KOH), 0.00, per cent; pH, 10.2. Somewhat deficient in soap content.

*W.S.-716. Sof-Set Curl Control Spray for Medium Texture Hair*. Max Factor, Hollywood, Calif. Labelled: "Contains miracle protein polymist". Analysis showed 58.10 per cent of alcohol by volume and 2.50 gm./100 cc. of solids whose infrared pattern resembled that of shellac. Passed.

*W.S.-713. Sun Bath Beauty Tanning Lotion Revlon*. Revlon, Inc., New York, N.Y. Labelled: "Contains: Glyceryl P-Aminobenzoate." Submitted because of a



complaint of a user that it caused her face to break out "all over". Tests on eight members of our staff, however, showed no reaction whatever, and according to Greenberg, Lester and Haggard<sup>20</sup> glyceryl mono-p-aminobenzoate (whose trade name is "Escalol 106") is a nontoxic and nonirritating sun screen agent. Sample was therefore passed.

J.S.-402. *Tartan Sun Lotion*. McKesson & Robbins, Bridgeport, Conn. Labelled: "ETHYL ALCOHOL 47%—Active Ingredients: Monoglycerylester of p-aminobenzoic acid and di-isobutyl cresoxy ethoxy ethyl dimethyl benzyl ammonium chloride.—TARTAN lets you TAN without burn!—when used as directed." Submitted because of a purchaser's complaint that after applying it and exposing himself to the sun he developed a "diffuse erythematous eruption associated with swelling and tenderness". Analysis showed: Alcohol, 46.05 per cent by volume; glyceryl p-aminobenzoate, 1.42 gm./100 cc.; quaternary ammonium compound present. (The trade name of the quaternary listed on the label only by its chemical name is "Hyamine 10-X".)

While the medical evidence that some ingredient in "Tartan Sun Lotion" had a photosensitizing effect on the patient in question appeared convincing, because the concentration of the sunscreen was not excessive and the sufferer had a known history of sensitivity to drugs, this sample was passed.

W.S.-192. *Vitalis Dandruff Treatment Shampoo*. Bristol-Myers Co., New York, N.Y. Labelled: "No Alcohol Contains Kurium." Analysis of this reddish-brown perfumed liquid showed: Total solids, 21.42, and ash, 0.00, gm./100 cc.; quaternary ammonium compound and yellow dye present; no soap or ammonium salt. Passed.

9332. *Vitene*. Vitene Mfg. Co., Bronx, N.Y. This preparation was sold by the manufacturer as a cleaner for rollers in printing plants, but a Joseph Bard of Hartford, Conn. combined it with hydrogen peroxide solution to form a depilatory that he named "Keep Off That Beard!" Analysis showed "Vitene" to be a brown viscous liquid of the following composition: Triethanolamine oleate, 13.09, free triethanolamine, 19.02, sodium sulphate (Na<sub>2</sub>SO<sub>4</sub>), 1.88, gm./100 cc.; tin, lead and iron, traces. It is doubtful whether a mixture of this preparation with hydrogen peroxide would be a safe depilatory, but for the purpose for which it was originally intended "Vitene" must be passed.

430. *Wildroot Cream-Oil Hair Tonic*. Wildroot Co., Inc., Buffalo, N.Y. Labelled "Contains liquid petrolatum, refined lanolin, oxycholesterol, cholesterol." Submitted with a complaint that it had caused hair to fall out. Analysis showed: Lanolin, 29.39, vaseline, 12.23, and water and perfume, 58.38, per cent. Passed.

<sup>20</sup>Handbook of Cosmetic Materials, p. 119 (1954).

### Collaboration With Other Departments

Three hundred and sixty-nine samples, not included in other reports from this laboratory, were analyzed for other Federal, State and Station departments. Distribution was as follows:

	Samples
State Board of Fisheries and Game .....	2
State Dept. of Health (narcotics) .....	3
State Police .....	5
U.S. Geological Survey (water) .....	48
Station Departments:	
Biochemistry .....	25
Entomology .....	172
Plant Pathology .....	73
Soils .....	24
Tobacco Laboratory .....	17
	369

### BABCOCK GLASSWARE, ETC.

As required by Sections 22-151 and 22-198 of the General Statutes, milk and cream test bottles and milk pipettes, and check thermometers used in milk pasteurizing plants, were examined as follows:

	Pieces	Incomplete or inaccurate
Babcock glassware .....	1,396	5
Thermometers .....	22	1

## INDEX

Alcoholic beverages.....	16, 29	Clam sticks.....	38
Alcohol, methyl.....	69	"Coca-Cola".....	27
Ale.....	16	Cocoa.....	24
Alfalfa, diazinon, endrin, Thiodan and Trithion on.....	60	Coffee.....	24
Alimentary pastes.....	6, 27	Coffee syrup.....	60, 61
"Alurate Elixir".....	70	Collaboration with other departments.....	81
Ambergris.....	69	Confectionery.....	25, 27, 28, 36
"Amytal Sodium Capsules".....	77	Contaminated or decomposed foods.....	26
Anti-freezes.....	69	Cookies.....	9, 28
Apple-ginger soda.....	21	"Coricidin".....	77
Apple juice.....	42, 43	Corn, canned.....	26
"Applpunch, Wilrick's".....	17	Corn chips.....	67
Apples.....	42, 60	Corned beef.....	55
Apricots and apple sauce, strained.....	40	Corn syrup, dried.....	68
Apricots, canned.....	39	Cosmetics.....	78
Apricots, dried.....	40	Cottonseed oil, hydrogenated.....	28
Arsenic in soil.....	60	Crabmeat.....	38
Arsenic in water.....	60	Crackers.....	9, 14
Aspirin in propylene glycol.....	75	Cream.....	29
Aspirin tablets.....	70	Cream, hormone.....	78
Atropine, substitution of pilocarpine for.....	70	Cream soda.....	27, 28
Babcock glassware.....	81	Cucumber seed, mercury on.....	60
Baked products.....	8	Dairy products.....	29
Barbiturate.....	70	"Dandruff Treatment for Shampoo, Vitalis".....	80
Beans, green.....	63	Deceptively packed foods.....	35
Beef, corned.....	55	Deodorant.....	78
Beer.....	16, 29	Doughnut.....	27
Beer, "near".....	23	Dressings, salad.....	58
Beet tops, Dipterex and heptachlor on.....	60	Drugs.....	70
Beverages, alcoholic.....	16, 29	Drugs, miscellaneous.....	75
Beverages, carbonated, etc.....	16	Drugs, prescription.....	70
Birch beer.....	26	Drugs, veterinary.....	71
"Blount's Hair and Scalp Conditioner".....	78	Eggs.....	36, 37
Bologna.....	26, 54	Ethylene glycol.....	69
Bonito.....	38, 39	Extracts and flavors.....	36
Bottle, nursing, valve for.....	69	Fish.....	27, 38
Bread.....	8, 26, 27, 28, 29	Flavors and extracts.....	36
Bread sticks.....	9, 15	Flour.....	39
Breakfast drinks.....	16	Foaming agents.....	38
Bromides, Elixir of Five.....	70	Foods.....	6
Brush, hair.....	78	Frankforts.....	28, 29, 49, 50
Cake.....	14	"Frothee".....	38
Calcium carbonate "pills".....	77	Fruit, canned.....	27, 39
Candy.....	25, 27, 28, 36	Fruit, dried.....	40
Cannabis.....	70	Fruit, fresh.....	40
Caramel color.....	67	Fruit juices.....	28, 42
Cellophane sheets.....	67	Fudge sauce, chocolate.....	67
Cereals.....	28	Gelatin dessert.....	69
Charcoal briquets.....	69	Ginger ale.....	27
Cheese.....	29, 30	Glassware, Babcock.....	81
"Cheese on Rye".....	67	Grape beverages.....	17, 18
Cherries, "Maraschino".....	39, 40	Grapefruit, canned.....	41
Cherry soda.....	21	Grapefruit juice.....	44
Chloral and potassium bromide elixir.....	77	Grapefruit-pineapple juice.....	43
Chocolate.....	24	Grape syrup.....	61
Chocolate fudge sauce.....	67	Grease.....	69
Chocolates.....	27, 36	Hair, human.....	69
Cider.....	42, 43	Hair lacquer.....	79
Cider settling powder.....	67		
Cigarettes, candy.....	25, 26, 36		
Cigars.....	70		

## INDEX—Continued

Hair "tonic".....	80	Pepper salad.....	63
Halibut.....	27	"Pepsi-Cola".....	29
Ham.....	27	Perfume.....	78, 79
Hamburg.....	27, 49	Personnel changes.....	5
Heroin.....	70	Pie.....	9, 15
Hormone cream.....	78	Pilocarpine, atropine substituted for.....	70
Horseradish.....	59	Pineapple-grapefruit drink.....	17
Ice cream.....	31, 32	Pliofilm.....	69
Ice milk.....	31, 32	Pork.....	28, 55
Jelly.....	27	Potato chips.....	68
Lacquer, hair.....	79	Potatoes, sweet.....	62, 63
Lard.....	27	Potatoes, white.....	62
Lemon and lime soda.....	23	Powder, settling, cider.....	67
Lemonade mix.....	21	Prescriptions.....	70
Lemon juice.....	42, 43	Preservatives.....	58
Liniment, soap.....	76	Preserves, peach.....	29
Lollipops.....	25	Prunes.....	39
"Lotion, Pond's Angel Skin Hand and Body".....	79	Pudding mixes.....	36, 68
Lotion, tanning.....	79, 80	Ragweed.....	78
Macaroni.....	6, 27	Raspberry soda.....	22
Maple flavor, imitation.....	38	Raspberry syrup.....	61
Marijuana.....	70	"Rexall Sleep Tablets".....	76
Mayonnaise.....	59	Rhubarb.....	63
Meat products.....	26, 27, 28, 29, 49	Rolls.....	15
Medicines.....	70	Root beer.....	22, 29
Medicine, veterinary.....	71	Root beer flavor.....	38
Mercury on cucumber seed.....	60	Salad dressings.....	58
Metal found in cereal.....	28	Salad, pepper.....	63
Methanol.....	69	Saponin.....	38
Methyl alcohol.....	69	Sauce, chocolate fudge.....	67
Milk, dry skim.....	29	Sausage.....	49, 54
Milk, evaporated.....	28	"Shampoo, Vitalis Dandruff Treat- ment".....	80
Milk, fluid, unfortified.....	31	Shellfish.....	38
Milk, vitamin D.....	31, 33	Shortening.....	28
Miscellaneous drugs.....	75	Soap.....	78, 79
Miscellaneous foods.....	67	Soap liniment.....	76
Molasses.....	60, 61	Soda, club.....	27
Mushroom powder.....	67	Sodas.....	17, 21, 26, 27, 28, 29
Narcotics.....	70	Soil, arsenic in.....	60
"Nebs".....	76	Soup.....	28
Noodles.....	6, 27	Spaghetti.....	6
Nuts.....	55	Spices.....	59
Oil, cottonseed, hydrogenated.....	28	Spinach.....	28
Oil, olive.....	58	Spray residues.....	60
Oil, peanut.....	58	Strawberry soda.....	23
Oils and fats, vegetable.....	55, 56	Sundae topping.....	40, 67
Oleomargarine.....	28, 58	"Swiss On Rye".....	67
Olive oil.....	58	Syrup, coffee.....	60, 61
Orangeade mix.....	21	Syrup, corn, dried.....	68
Orange-apricot drink.....	16, 17	Syrup, grape.....	61
Orange juice.....	28, 42, 44	Syrup, raspberry.....	61
Oranges.....	41	Syrups.....	60
Orange soda.....	22, 27	Syrup, vanilla.....	61
Pastry.....	29	Tangerines.....	41
Peaches, canned.....	27	Tanning lotion.....	79, 80
Peach preserves.....	29	"Tastitabs".....	77
Peanut oil.....	58	Thermometers, dairy.....	81
Peas.....	29	Toast, Melba.....	9, 14
Pecans.....	55	Tobacco.....	71
		Toilet water.....	78, 79

INDEX—Concluded

"Tonic", hair.....	80	Veterinary medicine.....	71
Tranquilizers.....	75, 76	Vinegar.....	29, 63, 64
"Tranquil" tablets.....	75	"Vitalis Dandruff Treatment Shampoo".....	80
Truck, toy, lead in.....	68	Vitamin preparations.....	25, 31, 33, 71, 72, 77
Tuna.....	38, 39	"Vitene".....	80
Vanilla syrup.....	61	Water.....	60, 66
Veal.....	55	Water, toilet.....	78, 79
Veal loaf.....	54	Yams.....	62, 63
Vegetables and vegetable products.....	62		