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Original Submission

ADM

James R. Randall Research Center

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FOOD ADDITIVE SAFETY

August 19, 2002

Alan M. Rulis, Ph.D., Director
Office of Food Additive Safety (HFS-200)
Center for Food Safety and Applied Nutrition
Food and Drug Administration
5100 Paint Branch Parkway
College Park, MD 20740-3835

Re: GRAS Notification for Expanded use of Diacylglycerol Oil

Dear Dr. Rulis:

ADM-Kao, LLC, by this letter and enclosed document, is providing the Food and Drug Administration ("FDA") notice in accordance with the FDA proposed regulation at 62 Fed. Reg. 18938, 18960 (April 17, 1997), that it has determined, based on a review of the data referenced in the enclosed document, that the substance, diacylglycerol oil (Enova™ oil), is generally recognized as safe ("GRAS") for use as a replacement of liquid vegetable oil in food. This substance is the subject of a previous GRAS notification (GRN 000056).

The document contains a listing of eight additional GRAS use categories for diacylglycerol incorporation into foods, and the GRAS use for these extended categories is fully supported by the safety studies and intake exposure calculations provided therein. This GRAS expansion determination is fully supported by the panel of experts who evaluated the first GRAS use of diacylglycerol oil, and their written concurrence is provided.

This GRAS notification is based on published, generally available and accepted scientific data, information, methods and principles, as well as experience based on common use in foods. ADM-Kao has determined that the use of diacylglycerol oil, as a replacement for liquid vegetable oil in certain foods, is GRAS, and therefore, it is exempt from the premarket approval requirements of the Food, Drug and Cosmetic Act.

Very truly yours,

Mark W. Empie, Ph.D.
Vice President,
Regulatory and Scientific Affairs

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I. GRAS Exemption Claim

A. **Claim of Exemption From the Requirement for Premarket Approval, Pursuant to Proposed 21 C.F.R. 170.36 (c)(1)n**

ADM-Kao L.L.C. has determined that diacylglycerol oil is generally recognized as safe for the intended applications, and therefore, exempt from the requirement for premarket approval. These intended applications are additions to those notified to and acknowledged by the Agency on December 4, 2000. An independent panel of experts has reached this same conclusion regarding the expanded categories for GRAS use. The basis for the GRAS category expansion is described in the following sections.

Signed, on behalf of ADM Kao L.L.C.,

Mark W. Empie, Ph.D.

Vice President
Regulatory & Scientific Affairs
Archer Daniels Midland Company

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B. Name and Address of Notifier

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C. Name of GRAS Substance

The ingredient proposed by ADM Kao for classification as Generally Recognized As Safe (GRAS) is diacylglycerol oil (DAG oil). The Food and Drug Administration has previously reviewed the GRAS status of diacylglycerol oil for use in home cooking oil and margarine spreads. A letter, dated December 4, 2000, acknowledged that the Agency had no further questions concerning the determination that the substance was GRAS for these uses. In that same letter, the Agency further stated that the common and usual name for the notified substance was diacylglycerol oil. The substance, trade name Enova Oil™, is composed of predominantly diacylglycerides, with minor amounts of common vegetable oil triacylglycerides and monoacylglycerides. The fatty acids used to prepare the diacylglycerides are derived from common vegetable oils, such as soybean, canola, cottonseed, and corn oil. The specification for the substance has not changed from the original notification.

D. Conditions of Use

1. Intended use of Diacylglycerol oil

Diacylglycerol oil is intended to be used as a replacement for liquid vegetable oils (non-hydrogenated oils) incorporated into the following food applications: home cooking oil, margarine spreads, bakery products, salad dressings, mayonnaise, pizza, breakfast/snack/power bars, soup/gravies, meal replacements, and frozen dinner entrees. These foods are identified in the attached appendices according to food codes listed in the U.S. Department of Agriculture (USDA) 1994-1996,98 Continuing Survey of Food

Intakes by Individuals (CSFII 94-96,98), and these codes have been used to calculate the Estimated Daily Intake (EDI) values for diacylglycerol oil consumption. Diacylglycerol oil is intended as a replacement oil for liquid vegetable oil. It is not intended for repetitive, institutional frying applications (some examples provided in Appendix K).

E. Basis for GRAS Determination

Pursuant to 21 CFR 170.30, ADM Kao L.L.C. has determined that diacylglycerol oil is GRAS based upon scientific procedures and by the supportive opinion of an outside panel of experts. This expert panel is the same panel used for the original GRAS determination, and they met and conversed by telephone on 2 occasions and had numerous additional discussions between individual members. In view of proposed expanded uses, the expert panel re-evaluated the published literature regarding acute, subacute and chronic studies in animals, *in vitro* mutagenicity studies, and clinical studies of the human tolerance and nutritional effects of diacylglycerol oil, as well as several unpublished studies in humans and animals. In addition, the GRAS status of diacylglycerol oil is supported by over three years of general use in Japan as a cooking oil by hundreds of thousands of people without reports of serious adverse effects. The diacylglycerol oil product has become one of the leading consumed premium oil products in that country.

1. Description

Diacylglycerol oil is composed of the same substance previously notified, and reference is made to the original submission (GRN 000056)

2. Summary of Safety Data

Summaries of the safety data are referenced to the original GRAS submission (GRN 000056).

3. Estimated Consumption

The previous GRAS notification (GRN 000056) for diacylglycerol oil relied upon an estimated mean intake of 5.11 g/person/d or 0.09 g/kg-bw/d for the all users category in the total population. In this report, the heavy consumer (90th percentile) per-user intake of diacylglycerol oil by the total population was noted to be 11.5 g/person/d or 0.21 g/kg-bw/d. On a body weight basis, infants and children exhibited the highest intakes of DAG oil, up to 0.42 g/kg-bw/d, as a result of their higher food or energy requirements.

Calculations of the EDI for individuals consuming products in the 10 expanded categories is approximately 0.49 g/kg-bw/d for people in the highest consumption group (90th percentile, children age 0-2 years). These values are considered to be essentially the same within the error of the calculation and the differences of the databases used (CSFII 89-91 vs 94-96,98). Consequently, the previous safety data and safety evaluation may be applied to the expanded categories, and the consumption values for the expanded categories are within the EDI values of the first GRAS determination.

4. General Recognition of Safety

A panel of experts qualified in the fields of medicine, nutrition, food safety and toxicology, and fats and oils metabolism, has reviewed the data provided in this notification. It is their considered opinion that diacylglycerol oil is Generally Recognized As Safe for use as a replacement oil in foods of the requested categories. This expert panel consists of members of the previous GRAS panel identified in the first notification and listed in the GRAS Expert Panel Evaluation section on page 19 of this submission.

F. Availability of Information

See GRN 000056

II. Identity and Specification

A. Chemical Identity

See GRN 000056

B. Chemical Abstract Service (CAS) Registry Number

See GRN 000056

C. Empirical Formula

See GRN 000056

D. Structural Formula

See GRN 000056

E. Molecular Weight

See GRN 000056

F. Specification for Food Grade Materials

See GRN 000056

G. Quantitative Composition

See GRN 000056

H. Physicochemical Characteristics of DAG

See GRN 000056

III. Manufacturing Process

A. Reaction Scheme

See GRN 000056

B. Use of Immobilized Lipase Preparation in the Manufacture of DAG

See GRN 000056

C. Refining Process for DAG

See GRN 000056

D. Typical Product Characteristics

See GRN 000056

E. List of Constituents Used in Manufacture of DAG and Recognition in FDA Regulations

See GRN 000056

F. Potential Contaminants and Human Toxicants

See GRN 000056

IV. Estimated Daily Intake of Enova Oil for Proposed Expanded Use Categories

The Enova oil composition consists of 80% diglycerides with the remaining 20% of the oil as traditional vegetable oil triglycerides. The diglyceride portion consists of 70% 1,3 diglycerides and 30% as 1,2 diglycerides. As noted in the original GRAS determination scientific summaries, the 1,3 diglycerides are metabolized by a different mechanism than the 1,2 diglycerides and vegetable oil. The 1,3 diglycerides are burned for energy rather than packaged into chylomicrons for storage in fat tissue. In terms of the following exposure calculations, the entire Enova oil composition was used in the estimates, even though 20% of the Enova oil exposure is a replacement of one vegetable oil for another and the 1,2 diglyceride portion is metabolized the same as a traditional vegetable oil.

The daily intake is estimated below (g/kg-bw/d) for use of diacylglycerol oil (Enova oil) in the proposed expanded categories. These calculations used: 1) the USDA Continuing Survey of Food Intakes by Individuals (CSFII) 1994-96, 98 database including additional children (released 2000), 2) the EPA Food Commodity Intake database (released 09/2001), and 3) SAS software (SAS System, V8.2, SAS Institute, Cary, NC). The purpose of this estimation is to predict mean and 90th percentile consumption values for users only of Enova oil as a replacement for liquid vegetable oil in the expanded use categories. Seven of the most commonly consumed vegetable oils (soybean, corn, cottonseed, olive, peanut, rapeseed or Canola, and sunflower oils) were used as the basis for our estimation. Other rarely used oils, such as almond, coconut, walnut, flaxseed, and wheat germ oils, were not included. Participants who did not have

body weight records (about 2.4% of all participants in CSFII 1994-96, 98 database) were excluded. Calculations were made under the assumption that Enova diacylglycerol oil would be used in only single-use, liquid vegetable oil applications. This excludes oil amounts which arise from hydrogenated forms or from repetitive frying.

The steps used in this estimation include: 1) selection of food categories and food codes comprising the expansion uses, 2) determine the vegetable oil content of selected food items using the EPA food commodity recipe database, 3) calculate the total vegetable oil intake of each individual participant in the 2 survey days by category or categories assuming general substitution of Enova oil for the liquid vegetable oil content, 4) to estimate liquid oil content, set up adjusting coefficients for the non-hydrogenated fraction of vegetable oil used in foods containing margarine and shortening products (other foods are assumed to contain only liquid oils), and 5) calculate the mean and 90th percentile oil consumption (g/kg-bw/d) for selected age groups, adjusted for the weighted population demographic .

In this summary, the users category is calculated by selecting individuals who consumed an item of the food category at least once in the two days surveyed. The consumption for the two days is then averaged. In some categories about 80% of the users consumed a category item only once in the two days. Vegetable oil intakes from ten food categories (baking foods, margarine/spreads, salad dressing, pizza, mayonnaise, breakfast/snack/power bars, soup/gravies, meal replacement, frozen dinner/entrees, and edible cooking oil) are reported. The categories used in the initial GRAS evaluation were used for the edible cooking oil category. Table 1 presents estimated oil intake data for all "user" survey participants. The data are separated by age group, and liquid vegetable oil intake representing non-hydrogenated oil. This latter category is the category in which Enova diacylglycerol oil will be used. In this notification, "liquid vegeoil" is defined as 'vegetable oils not being processed with hydrogenation', and "users" are defined as 'participants who consumed food(s) in named food category(s) at least once in the 2 survey-days'. The food codes used for each food category are listed by specific food category group in the attached Appendices.

Table 1 is constructed by listing the cumulative addition of the proposed food categories, by age group for users of those foods. The number of participants used in the calculation is listed in the first column after each age group. The next 2 columns list the mean and 90th percentile intakes of liquid vegetable oil for each age group. Liquid oil values for bakery products and margarine/shortening were calculated by correcting for hydrogenated fat contents (hydrogenation rates). These hydrogenation rate correction tables are available for inspection at the law offices of Covington & Burling, Washington, D.C. Liquid oil contents in the remaining food categories were assumed to be the same as for the total vegetable oil values. All animal derived fats were excluded in the calculations.

Currently, diacylglycerol oil is not proposed for use in repetitive frying applications or for hydrogenated fat use. In order to separate the hydrogenated oil fraction from total vegetable oils, we surveyed the use of hydrogenated vegetable oils in margarine and shortening and their hydrogenation processing rates. Hydrogenated vegetable oils have been widely used in the baking industry and in margarine/spreads. In the baking industry and home use baking, six kinds of margarine/shortenings are mainly used and their weighted mean hydrogenation rate is 91.54%. For margarine and vegetable oil spreads in supermarkets/home use, hydrogenation rates range from 3 to 55%. Six hundred and ninety-seven (697) kinds of bakery products containing vegetable oil(s) are identified from the USDA CSFII 1994-96, 98 database. About 8.5% of them contain only liquid vegetable oils (contributing to about 3.5% of the total vegetable oil intake). The others contain margarine or shortening as an ingredient. Thus, for the intake estimate of 'liquid vegeoil', the hydrogenation-processing rates of different margarine and shortenings are considered, and the oil content adjusted to be only the liquid oil portion in the categories of bakery products and margarine/spread. The category of deep-fried food/popcorn is not included in 'vegeoil intakes' from all food sources because these are not included in this GRAS expansion, but are listed only for comparison purposes.

Users Only Data

As shown in Table 1, mean consumption values for all proposed food categories for all participants is 0.20 g/kg-bw/d for ages 2 years and under, while the value for adults is 0.13 g/kg-bw/d for adults. At the 90th percentile level, consumption of liquid oil for the categories proposed for GRAS use inclusion is 0.49 g/kg-bw/d for children under 2 and 0.30 g/kg-bw/d for adults. These two groups represent the highest and lowest consumption value groups respectively.

It should be noted that the initial GRAS notification for cooking oil and margarine spreads estimated a consumption value of 0.38 g/kg-bw/d for the age group 3-11 years. This initial calculation was made using data from the USDA 89-91 CSFII survey and USDA recipe database, while the present notification uses the 94-96, 98 USDA CSFII survey data and the EPA food commodity intake database. The reason for using the EPA food commodity intake database was to accurately determine only the vegetable oil content, compared to the total fat content, contained in each selected food. Small differences exist between the two sets of numbers, and these may arise for several reasons. ADM may use differing factors to calculate liquid oil versus hard fat content in various foods. Also, there are slight differences in recipes used as ADM employs the EPA food commodity intake database while the initial GRAS notification used USDA recipes. We have explored this difference for 45 different foods used in the edible cooking oil category calculation. Table 2 lists these foods in descending order of oil content, their listed EPA recipe oil content, their listed USDA recipe oil content. The differences in absolute oil amounts as a percentage of each food are not largely different.

The estimated daily intake values may contain elements leading to overestimation of consumption. 1. We noticed that some participants reported a certain amount of pure vegetable oil consumption. Most likely, these individuals consumed the oils as ingredients instead of consuming them directly. 2. Some foods, such as margarine, can be consumed directly or used as an ingredient in home cooking. As a result, these uses could possibly be double-counted in the vegetable oil intake estimation from these kinds of foods. 3. For food categories of salad dressings, pizza, mayonnaise, bars,

soup/gravies, meal replacements, and frozen dinner/entrees, all vegetable oils appearing in these categorized foods are assumed to be non-hydrogenated. This assumption may not be totally true. As a result, it is possible for 'liquid vegetable oil' intake to be somewhat overestimated.

Due to the differing survey data bases, the inherent limitations of a two or three day dietary survey, the variation in calculation methodology, and the differing food recipe data bases, it is concluded that the consumption values for the 10 proposed categories are not significantly different from the current estimated GRAS intake values.

Although much higher values of vegetable oil intake are observed in younger age groups compared to adults, their fat intake as a percentage of energy expended is not high when compared to the corresponding values in the adult population. Table 3 shows that the younger the age, the higher the energy needed per unit body weight (due to growth and higher physical activity), but the ratios of energy consumption from fat are very similar in all the assigned age groups. This suggests that younger individuals require a higher energy intake and that part of this increased energy requirement is satisfied by a higher fat intake. Therefore, even though children have a higher potential intake of Enova oil, this higher intake is entirely consistent with their requirements for healthy growth and energy intake.

Table 1. Estimated daily vegetable oil intake from expanded food use categories proposed for Enoval oil
(Based on USDA CFSII 1994-96, 98 database, g/kg-bw/d, users' data only)

Categories	Age groups	N	Liquid vegetable oils	
			Mean	90th Pctl
Original GRAS Categories				
Edible oil + margarine	2 and under	1119	0.19	0.413
	kids 3-11	2959	0.15	0.341
	Teenagers 12-19	590	0.099	0.223
	adults 20 & over	4979	0.08	0.177
Proposed GRAS Categories				
Edible oil + margarine + salad	2 and under	2310	0.201	0.493
dressing + mayonnaise +	kids 3-11	5833	0.206	0.474
meal replacements + bars +	Teenagers 12-19	1337	0.147	0.346
pizza + soup/gravy + frozen	Adults 20 & over	8989	0.127	0.295
dinner entrée + bakery products				

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Table 2. Comparison of vegetable oil content in specific food products listed in USDA and EPA databases (food items with oil contents between 5- 4 40% selected).

No.	Food code	Food name	EPA percent	USDA percent
1	81302070	Pesto sauce	35.480	35.480
2	75506100	Mustard sauce	21.988	21.727
3	27151050	Shrimp in garlic sauce, Puerto Rican style (m	20.558	10.152
4	77250110	Stuffed tannier fritters, Puerto Rican style	19.271	11.793
5	41209000	Falafil	17.038	11.305
6	27150140	Clam sauce, white	16.515	15.558
7	28510010	Gravy or sauce, poultry-based from Puerto Ric	14.032	14.014
8	27118130	Stewed dried beef, Puerto Rican style (Tasajo	12.921	9.706
9	71905110	Fried ripe plantain, Puerto Rican style (Plat	12.842	10.201
10	71900200	Plantain, fried, NS as to green or ripe	12.326	10.201
11	27418410	Beef steak with onions, Puerto Rican style (m	12.117	7.750
12	75409020	Cauliflower, batter-dipped, fried	12.064	11.675
13	71901110	Fried green plantain, Puerto Rican style (Tos	11.514	5.953
14	27330170	Stuffed grape leaves with lamb and rice	11.457	10.312
15	71905120	Plantain, ripe, rolled in flour, fried	11.451	9.739
16	22002100	Pork, ground or patty, breaded, cooked	11.299	10.331
17	58161510	Grape leaves stuffed with rice	11.047	11.004
18	27315270	Stuffed grape leaves with beef and rice	10.609	9.510
19	58147100	Pasta with pesto sauce	10.188	10.189
20	75418010	Squash, summer, yellow or green, breaded or b	10.166	11.750
21	58100370	Chilaquiles, tortilla casserole with salsa an	9.972	6.206
22	24198710	Chicken patty with cheese, breaded, cooked	9.878	8.977
23	58116110	Meat turnover, Puerto Rican style (Pastelillo	9.809	8.964
24	75142550	Cucumber salad made with cucumber, oil, and v	9.602	9.608
25	72202030	Broccoli, batter-dipped and fried	9.420	8.541
26	27450080	Seafood salad	9.160	10.193
27	58175110	Tabbouleh (bulgar with tomatoes and parsley)	9.116	9.121
28	58100360	Chilaquiles, tortilla casserole with salsa, c	8.504	5.300
29	35001000	Scrambled eggs, sausage, hash brown potatoes	8.421	5.030
30	75201030	Artichoke salad in oil	8.253	8.257
31	27420170	Pork and onions with soy-based sauce (mixture	7.854	5.444
32	25120150	Heart, fried	7.335	7.303
33	24156250	Chicken, thigh, with or without bone, breaded	7.116	5.241
34	58132800	Spaghetti with clam sauce, NS as to red or wh	7.064	7.040
35	58150110	Rice, fried, meatless	6.760	5.948
36	71403000	White potato, home fries	6.642	7.140
37	27416150	Pepper steak	6.480	6.003
38	27450420	Shrimp and vegetables (excluding carrots, bro	6.229	5.463
39	73111400	Carrots in tomato sauce	5.835	5.623
40	58132820	Spaghetti with white clam sauce	5.782	7.040
41	27450410	Shrimp and vegetables (including carrots, bro	5.766	5.251
42	75316050	Ratatouille	5.558	5.500
43	22300120	Ham, fried, NS as to fat eaten	5.070	5.073
44	22300130	Ham, fried, lean and fat eaten	5.070	5.073
45	22300140	Ham, fried, lean only eaten	5.069	5.070

Table 3. Mean energy intakes and energy from fat in US population (Based on USDA CSFII 1994-96, 98 database, weighted data)

Age group (years)	N	Total energy (kcal/kg BW)		Energy from fat (kcal/kg BW)		% of energy from fat
		Mean	90th Pctl	Mean	90th Pctl	
2 and under	3295	101.61	150.31	35.48	57.36	34.92
Kids 3-11	5898	72.77	109.92	23.72	37.53	32.60
Teenagers 12-19	1373	38.49	61.27	12.67	20.54	32.92
Adults 20 & over	9161	27.06	41.51	9.05	14.86	33.44

V. Self-Limiting Uses

See GRN 000056

VI. Basis for GRAS Determination

A. Information to Assess the Safety of Diacylglycerol Oil

1. Safety of Diacylglycerol Oil Components

See GRN 000056

2. Metabolism of Triglycerides and Diacylglycerides

See GRN 000056

3. Toxicological Studies

See GRN 000056

4. Human Clinical Studies

See GRN 000056

Additional human studies have been published since the first GRAS notification. Several were referenced in the notification as unpublished studies and these have now been published. The Kao Corporation has conducted additional new studies since the filing of the initial GRAS notification. These studies have been directed toward studying the effect of diacylglycerol oil consumption on serum lipid parameters, body fat deposition and clinical chemistries. New studies have confirmed the observation that long term ingestion of dietary diacylglycerol oil lowers serum triglyceride levels in subjects who particularly have high initial triglycerides, yet maintains normal triglyceride levels in subjects with healthy starting triglyceride levels (Teramoto, et. al., 2000; Yamamoto, et. al., 2001; Kobayashi, et. al., unpublished). A similar effect was found on postprandial serum remnant lipoproteins (Tada, et. al., 2001).

Several studies have found that consumption of diacylglycerol oil, in place of triacylglycerol oil, suppressed the accumulation of body fat, lowered weight and improved anthropometric scores (Teramoto, et. al., 2000; Maki, et. al., in press; Kobayashi, et. al., unpublished). In most of these studies, diacylglycerol oil consumption was in the range of 10 to 35 grams per day for several months. The Maki, et. al, study (in press) was designed to determine weight loss effects. Here, over 100 subjects consumed diacylglycerol oil or control vegetable oil in a mildly hypocaloric, Step 1, diet for 6 months. The diacylglycerol oil group lost more weight ($p<0.05$) than the vegetable oil group.

In all studies, measurements of serum clinical chemistry parameters used to assess safety did not indicate any adverse or abnormal values, and these studies are considered to be confirmatory of the previous GRAS safety determination. The studies included consumption values in humans as high as 0.5 g/kg-bw/d for 12 weeks (Kobayashi, unpublished).

Lastly, diacylglycerol oil has been on the market in Japan for over three years, and the oil has achieved the number one ranking in volume sales in its premium oil category. Many hundreds of thousands of people have consumed the oil without reports of serious adverse health effects. Review of the Kao Corporation consumer complaint records reveal only a few cases of mild stomach upset, loose stools or eczema. It could not be verified that a cause and effect relationship existed specifically between Enova oil consumption and the anecdotal report. These reported cases total less than 50 in number over the past three years. Overall, the combined safe use in Japan and the data arising from continuing clinical studies further support the safe use of diacylglycerol oil as a replacement for liquid vegetable oil.

5. Review of the Safety Aspects of DAG-Related Substances

See GRN 000056

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6. Conclusions and Basis for Expert Consensus

The initial GRAS determination for edible cooking oil and margarine spreads employed an upper limit for exposure of about 0.42 g/kg-bw/d for age groups 3-11 years. This report shows that the addition of the proposed categories results in an estimated daily intake of 0.47g/kg-bw/d within this same age group, and this intake estimate is not significantly different compared to the exposure for the 90th percentile of users category of the first GRAS notification. With the possible error in the sampling between the two USDA survey data bases and the estimations made within the food categories, the difference between 0.42 and 0.47 g/kg-bw/d is considered to be not significant. Consequently, we conclude that the use of Enova oil, in the proposed expanded categories, are consistent with the safety data cited in this and the first GRAS determination documents. The expert panel concurs with this conclusion and with the General Recognition of Safety of diacylglycerol oil use in the expanded categories.

The curriculum vitae of the expert panel members and their original expert opinion may be found in GRN 000056.

VII. Statement of Compliance with Good Laboratory and Clinical Practices

See GRN 000056

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A Critical Evaluation of the Expanded Uses of Diacylglycerol (DAG) Oil By an Independent Expert GRAS Panel

This independent expert GRAS Panel initially critically evaluated the available information on Diacylglycerol (DAG) Oil and concluded that Diacylglycerol (DAG) Oil, meeting food grade specifications and produced in accordance with current Good Manufacturing Practice (cGMP), was GRAS by scientific procedures for use as a substitute for vegetable oils in cooking oil and in the commercial formulation of spreads for home use. The Expert Panel was requested to reassess the GRAS status of DAG Oil in light of proposed new uses in addition to permitted uses. Previous GRAS uses of DAG Oil include replacement for non-hydrogenated, liquid vegetable oils incorporated into cooking oil and margarine spreads. Expanded uses include bakery products, salad dressings, mayonnaise, pizza, breakfast/snack/power bars, soups, gravies, meal replacements, and frozen dinner entrees. The Expert Panel members independently and collectively critically evaluated new exposure data and additional unpublished safety information prior to unanimously concluding that the available information supports the GRAS status of Diacylglycerol (DAG) Oil for the proposed new uses. The additional information raised no safety concerns and was considered complementary to previous information.

Diacylglycerol (DAG) Oil is composed of triacylglycerol and greater than 80 % diacylglycerol as a mixture of 1,3-diglyceride and 1,2-diglyceride at a ratio of 7:3. Diacylglycerol (DAG) Oil is readily hydrolyzed in the gastrointestinal tract to 1-monoglyceride (main metabolite) that is hydrolyzed into free fatty acids and glycerol and to 2-monoglyceride that is re-esterified into triglycerides. It is noted that the FDA has affirmed the GRAS status of monoglycerides and diglycerides when used at levels not to exceed cGMP as emulsifiers, stabilizers, thickeners and texturizers.

The manufacture of Diacylglycerol (DAG) Oil involves the enzyme-catalyzed esterification of fatty acids derived from natural edible plant oils (including corn, olive, rapeseed (canola) and sunflower) and either monoacylglycerol or glycerol. The main fatty acid constituents of DAG Oil include oleic, linoleic, and linolenic acids.

It is estimated that the consumption of monoglycerides and diglycerides from currently consumed foods is 1-10 grams/person/day. The estimated consumption from existing GRAS uses, at the 90th percentile of eaters only for the total population, range from 6-16 grams/person/day. The estimated daily intake (EDI) in the highest consuming group, children 0-2 years of age, is approximately 0.42 g/kg-bw/day. The estimated daily intake for eaters only in the highest consuming group (90th percentile, children 0-2 years of age) consuming products in the expanded categories and previous GRAS uses is 0.49 g/kg-bw/day. The Expert Panel considers these values, 0.42 and 0.49 g/kg-bw/day, to be essentially the same considering the error in the intake estimates and the differences in the databases used (CSFII 89-91 for the initial evaluation vs. 94-96, 98 for the current evaluation). Therefore, the previous safety data and the

safety evaluation may be applied to the expanded categories since the consumption for the proposed new uses are within the EDI values of the initial GRAS determination.

The Expert Panel independently and collectively critically evaluated information generated since the first GRAS review. This information is consistent with that provided in the first GRAS determination and fully supports the GRAS status of Diacylglycerol (DAG) Oil. The Expert Panel has also critically evaluated estimated consumption data for the proposed expanded uses of Diacylglycerol (DAG) Oil. The consumption estimates for these categories collectively are within the consumption estimates for the original GRAS determination. Consequently, the added categories do not raise the estimated exposure values beyond the original GRAS determination. Based on the sum total of the available information and data presented in this GRAS notification, we, the Expert Panel, conclude that Diacylglycerol (DAG) Oil, meeting appropriate food grade specifications and produced in accordance with current Good Manufacturing Practice, is Generally Recognized As Safe (GRAS) by scientific procedures, when used for home cooking oil, commercially prepared margarine spreads, salad dressings, mayonnaise, pizza, soups and gravies, meal replacements, frozen dinner entrees, bakery products, and breakfast/snack/power bars.

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Appendices

Appendix A

Bakery Products

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Bakery Products

Food codes for bakery products in which hard or liquid vegetable oil are used as Ingredients. (From USDA CSFII 1994-96,98 database and EPA food recipe database)

Note: Liquid vegetable oil content is determined by multiplying the total vegetable oil content percentage by (1 – 0.9154). The factor 0.9154 is the mean value determined for hydrogenated fat content for shortening, margarine and butter used in baking applications.

Foodcode	Total vegetable oil content %	Liquid vegetable oil content %	Food name
51000100	2.269	0.192	Bread, NS as to major flour
51000110	2.521	0.213	Toast, NS as to major flour
51000180	4.352	0.368	Bread, made from home recipe or purchased at a bakery, NS as to major
51000190	4.818	0.408	Bread, made from home recipe or purchased at a bakery, toasted, NS as
51000200	3.796	0.321	Roll, NS as to major flour
51000230	4.167	0.353	Roll, NS as to major flour, toasted
51000250	5.236	0.443	Roll, made from home recipe or purchased at a bakery, NS as to major
51000300	3.021	0.256	Roll, hard, NS as to major flour
51101000	2.269	0.192	Bread, white
51101010	2.521	0.213	Bread, white, toasted
51101050	4.352	0.368	Bread, white, made from home recipe or purchased at a bakery
51101060	4.818	0.408	Bread, white, made from home recipe or purchased at a bakery, toasted
51102010	2.363	0.200	Bread, white with whole wheat swirl
51102020	2.664	0.225	Bread, white with whole wheat swirl, toasted
51105010	1.91	0.162	Bread, Cuban
51105040	2.1	0.178	Bread, Cuban, toasted
51106010	1.91	0.162	Bread, Native, Puerto Rican style (Pan Criollo)
51106020	2.1	0.178	Bread, Native, Puerto Rican style, toasted (Pan Criollo)
51107010	1.65	0.140	Bread, French or Vienna
51107040	1.814	0.153	Bread, French or Vienna, toasted
51109010	2.216	0.187	Bread, Italian, Grecian, Armenian

51109040	2.432	0.206	Bread, Italian, Grecian, Armenian, toasted
51111010	2.152	0.182	Bread, cheese
51111040	2.391	0.202	Bread, cheese, toasted
51113010	2.269	0.192	Bread, cinnamon
51113100	2.521	0.213	Bread, cinnamon, toasted
51115010	3.704	0.313	Bread, cornmeal and molasses
51115020	4.115	0.348	Bread, cornmeal and molasses, toasted
51119010	3.686	0.312	Bread, egg, Challah
51119040	4.054	0.343	Bread, egg, Challah, toasted
51119100	2.21	0.187	Bread, lowfat, 98% fat free
51119110	2.432	0.206	Bread, lowfat, 98% fat free, toasted
51121010	8.651	0.732	Bread, garlic
51121010	1.422	0.120	Bread, garlic
51121010	14.35	1.214	Bread, garlic
51121040	9.505	0.804	Bread, garlic, toasted
51121040	7.031	0.595	Bread, garlic, toasted
51121040	1.562	0.132	Bread, garlic, toasted
51121040	1.562	0.132	Bread, garlic, toasted
51121040	1.562	0.132	Bread, garlic, toasted
51121040	15.764	1.334	Bread, garlic, toasted
51121040	15.764	1.334	Bread, garlic, toasted
51121040	1.774	0.150	Bread, garlic, toasted
51121040	10.131	0.857	Bread, garlic, toasted
51121040	15.764	1.334	Bread, garlic, toasted
51121110	2.117	0.179	Bread, onion
51122000	1.392	0.118	Bread, reduced calorie and/or high fiber, white or NFS
51122010	1.526	0.129	Bread, reduced calorie and/or high fiber, white or NFS, toasted
51122050	0.97	0.082	Bread, reduced calorie and/or high fiber, Italian
51122060	1.063	0.090	Bread, reduced calorie and/or high fiber, Italian, toasted
51122100	1.001	0.085	Bread, reduced calorie and/or high fiber, white or NFS, with fruit an
51122110	1.099	0.093	Bread, reduced calorie and/or high fiber, white or NFS, with fruit an
51122300	1.023	0.087	Bread, white, special formula, added fiber
51122310	1.123	0.095	Bread, white, special formula, added fiber, toasted
51127010	3.146	0.266	Bread, potato
51127020	3.458	0.293	Bread, potato, toasted
51129010	3.664	0.310	Bread, raisin
51129020	3.998	0.338	Bread, raisin, toasted
51130510	2.51	0.212	Bread, white, low sodium or no salt
51130520	2.753	0.233	Bread, white, low sodium or no salt,

			toasted
51133010	1.65	0.140	Bread, sour dough
51133020	1.814	0.153	Bread, sour dough, toasted
51135000	1.994	0.169	Bread, vegetable
51135010	2.19	0.185	Bread, vegetable, toasted
51140100	17.063	1.444	Bread, dough, fried
51140100	17.235	1.458	Bread, dough, fried
51150000	3.796	0.321	Roll, white, soft
51150100	4.167	0.353	Roll, white, soft, toasted
51151060	5.236	0.443	Roll, white, soft, made from home recipe or purchased at a bakery
51152000	1.204	0.102	Roll, white, soft, reduced calorie and/or high fiber
51152100	1.318	0.112	Roll, white, soft, reduced calorie and/or high fiber, toasted
51153000	3.021	0.256	Roll, white, hard
51153010	3.315	0.280	Roll, white, hard, toasted
51154550	4.089	0.346	Roll, egg bread
51154600	5.907	0.500	Roll, cheese
51154600	5.908	0.500	Roll, cheese
51155000	3.132	0.265	Roll, French or Vienna
51155010	1.809	0.153	Roll, French or Vienna, toasted
51156500	6.183	0.523	Roll, garlic
51157000	3.796	0.321	Roll, hoagie, submarine
51157010	4.167	0.353	Roll, hoagie, submarine, toasted
51159000	1.65	0.140	Roll, sour dough
51160000	14.645	1.239	Roll, sweet
51160010	16.091	1.361	Roll, sweet, toasted
51160100	14.645	1.239	Roll, sweet, cinnamon bun, no frosting
51160110	13.189	1.116	Roll, sweet, cinnamon bun, frosted
51161000	13.616	1.152	Roll, sweet, with fruit, no frosting
51161020	12.037	1.018	Roll, sweet, with fruit, frosted
51161030	3.989	0.337	Roll, sweet, with fruit, frosted, diet
51161050	12.145	1.027	Roll, sweet, with nuts, frosted
51161150	12.035	1.018	Roll, sweet, with fruit and nuts, frosted
51161200	13.859	1.172	Roll, sweet, with nuts, no frosting
51161250	4.439	0.376	Roll, sweet, no topping, Mexican (Pan Dulce)
51161260	7.907	0.669	Roll, sweet, crumb topping, Mexican (Pan Dulce)
51161270	7.083	0.599	Roll, sweet, sugar topping, Mexican (Pan Dulce)
51161280	7.315	0.619	Roll, sweet, with raisins and icing, Mexican (Pan Dulce)
51165000	14.645	1.239	Coffee cake, yeast type
51165060	5.518	0.467	Coffee cake, yeast type, made from home

			recipe or purchased at a bake
51166100	12.356	1.045	Croissant, cheese
51167000	6.91	0.585	Brioche
51182010	5.725	0.484	Bread stuffing
51182010	0.436	0.037	Bread stuffing
51182010	6.173	0.522	Bread stuffing
51182010	0.434	0.037	Bread stuffing
51182010	0.437	0.037	Bread stuffing
51182010	0.437	0.037	Bread stuffing
51182020	5.301	0.448	Bread stuffing made with egg
51182020	5.999	0.508	Bread stuffing made with egg
51184000	8.038	0.680	Bread sticks, hard
51184010	7.276	0.616	Bread stick, soft
51184020	8.038	0.680	Bread stick, NS as to hard or soft
51184030	15.172	1.284	Bread stick, soft, prepared with garlic and parmesan cheese
51184030	6.393	0.541	Bread stick, soft, prepared with garlic and parmesan cheese
51184100	11.518	0.974	Bread stick, hard, low sodium
51185000	16.515	1.397	Croutons
51186010	0.645	0.055	Muffin, English
51186020	0.716	0.061	Muffin, English, toasted
51186100	1.708	0.144	Muffin, English, with raisins
51186120	1.834	0.155	Muffin, English, with raisins, toasted
51186160	0.668	0.057	Muffin, English, with fruit other than raisins
51186180	0.77	0.065	Muffin, English, with fruit other than raisins, toasted
51187000	1.216	0.103	Melba toast
51188100	3.784	0.320	Pannetone (Italian-style sweetbread)
51188500	9	0.761	Zwieback toast
51201010	2.457	0.208	Bread, whole wheat, 100%
51201020	2.808	0.238	Bread, whole wheat, 100%, toasted
51201060	4.899	0.414	Bread, whole wheat, 100%, made from home recipe or purchased at baker
51201070	5.384	0.455	Bread, whole wheat, 100%, made from home recipe or purchased at baker
51201110	2.175	0.184	Bread, whole wheat, 100%, with raisins
51201120	2.485	0.210	Bread, whole wheat, 100%, with raisins, toasted
51202000	1.023	0.087	Muffin, English, whole wheat, 100%
51202020	1.121	0.095	Muffin, English, whole wheat, 100%, toasted
51202060	1.403	0.119	Muffin, English, whole wheat, 100%, with raisins, toasted
51207020	3.122	0.264	Bread, sprouted wheat, toasted

51220000	3.526	0.298	Roll, whole wheat, 100%
51220010	3.872	0.328	Roll, whole wheat, 100%, toasted
51220030	5.974	0.505	Roll, whole wheat, 100%, made from home recipe or purchased at bakery
51300110	2.91	0.246	Bread, whole wheat, other than 100% or NS as to 100%
51300120	3.122	0.264	Bread, whole wheat, other than 100% or NS as to 100%, toasted
51300140	4.342	0.367	Bread, whole wheat, other than 100% or NS as to 100%, made from home
51300150	4.744	0.401	Bread, whole wheat, other than 100% or NS as to 100%, made from home
51300210	2.574	0.218	Bread, whole wheat, NS as to 100%, with raisins
51300220	2.759	0.233	Bread, whole wheat, NS as to 100%, with raisins, toasted
51301010	2.91	0.246	Bread, wheat or cracked wheat
51301020	3.122	0.264	Bread, wheat or cracked wheat, toasted
51301040	4.898	0.414	Bread, wheat or cracked wheat, made from home recipe or purchased at
51301050	5.44	0.460	Bread, wheat or cracked wheat, made from home recipe or purchased at
51301120	2.574	0.218	Bread, wheat or cracked wheat, with raisins
51301130	2.759	0.233	Bread, wheat or cracked wheat, with raisins, toasted
51301540	1.906	0.161	Bread, French or Vienna, whole wheat, other than 100% or NS as to 100
51301550	2.117	0.179	Bread, French or Vienna, whole wheat, other than 100% or NS as to 100
51302010	2.266	0.192	Bread, wheat bran
51302020	2.486	0.210	Bread, wheat bran, toasted
51302500	1.34	0.113	Muffin, English, wheat bran
51302510	1.545	0.131	Muffin, English, wheat bran, toasted
51303010	0.914	0.077	Muffin, English, wheat or cracked wheat
51303020	0.96	0.081	Muffin, English, wheat or cracked wheat, toasted
51303040	0.96	0.081	Muffin, English, whole wheat, other than 100% or NS as to 100%, toast
51303060	1.431	0.121	Muffin, English, wheat or cracked wheat, with raisins, toasted
51303080	1.431	0.121	Muffin, English, whole wheat, other than 100% or NS as to 100%, with
51306000	4.409	0.373	Bread stick, hard, whole wheat, NS as to 100%
51320010	5.201	0.440	Roll, wheat or cracked wheat

51320020	5.713	0.483	Rolls, wheat or cracked wheat, toasted
51320040	5.987	0.507	Roll, wheat or cracked wheat, made from home recipe or purchased at b
51320500	5.201	0.440	Roll, whole wheat, NS as to 100%
51320510	5.713	0.483	Roll, whole wheat, NS as to 100%, toasted
51320530	5.987	0.507	Roll, whole wheat, other than 100% or NS as to 100%, made from home r
51320540	6.584	0.557	Roll, whole wheat, other than 100% or NS as to 100%, made from home r
51401010	1.634	0.138	Bread, rye
51401020	1.782	0.151	Bread, rye, toasted
51401030	1.634	0.138	Bread, marble rye and pumpernickel
51401040	1.787	0.151	Bread, marble rye and pumpernickel, toasted
51401060	1.043	0.088	Bread, rye, reduced calorie and/or high fiber
51401070	1.143	0.097	Bread, rye, reduced calorie and/or high fiber, toasted
51404010	1.635	0.138	Bread, pumpernickel
51404020	1.793	0.152	Bread, pumpernickel, toasted
51407010	1.635	0.138	Bread, black
51407020	1.793	0.152	Bread, black, toasted
51420000	2.009	0.170	Roll, rye
51421000	1.396	0.118	Roll, pumpernickel
51421100	1.53	0.129	Roll, pumpernickel, toasted
51501010	2.542	0.215	Bread, oatmeal
51501020	2.774	0.235	Bread, oatmeal, toasted
51501040	2.976	0.252	Bread, oat bran
51501050	2.928	0.248	Bread, oat bran, toasted
51501060	2.074	0.175	Bread, oat bran, reduced calorie and/or high fiber
51501070	2.462	0.208	Bread, oat bran, reduced calorie and/or high fiber, toasted
51502010	4.278	0.362	Roll, oatmeal
51503000	1.407	0.119	Muffin, English, oat bran
51503010	1.801	0.152	Muffin, English, oat bran, toasted
51601010	2.564	0.217	Bread, multigrain, toasted
51601020	2.377	0.201	Bread, multigrain
51601210	1.749	0.148	Bread, multigrain, with raisins
51601220	1.925	0.163	Bread, multigrain, with raisins, toasted
51620000	4.845	0.410	Roll, multigrain
51620010	5.321	0.450	Roll, multigrain, toasted
51630200	0.212	0.018	Muffin, English, multigrain
51630210	0.224	0.019	Muffin, English, multigrain, toasted
51801010	1.878	0.159	Bread, barley

51802010	2.045	0.173	Bread, triticale
51805010	3.399	0.288	Bread, sunflower meal
51806020	3.041	0.257	Bread, rice, toasted
52101000	13.853	1.172	Biscuit, baking powder or buttermilk type, NS as to made from mix, re
52101030	13.663	1.156	Biscuit dough, fried
52101030	3.96	0.335	Biscuit dough, fried
52101030	13.663	1.156	Biscuit dough, fried
52101100	10.257	0.868	Biscuit, baking powder or buttermilk type, made from mix
52101150	4.716	0.399	Biscuit, baking powder or buttermilk type, made from refrigerated dou
52102040	14.128	1.195	Biscuit, baking powder or buttermilk type, made from refrigerated dou
52103000	15.974	1.351	Biscuit, baking powder or buttermilk type, commercially baked
52104010	15.072	1.275	Biscuit, baking powder or buttermilk type, made from home recipe
52104040	9.676	0.819	Biscuit, whole wheat
52104100	13.766	1.165	Biscuit, cheese
52104200	12.092	1.023	Biscuit, cinnamon-raisin
52105100	5.794	0.490	Scone
52105200	5.209	0.441	Scone, with fruit
52201000	5.138	0.435	Cornbread, prepared from mix
52201000	5.135	0.434	Cornbread, prepared from mix
52202060	7.132	0.603	Cornbread, made from home recipe
52202060	7.12	0.602	Cornbread, made from home recipe
52204000	5.796	0.490	Cornbread stuffing
52206010	6.606	0.559	Cornbread muffin, stick, round
52206020	6.953	0.588	Cornbread muffin, stick, round, toasted
52206060	7.644	0.647	Cornbread muffin, stick, round, made from home recipe
52208010	3.463	0.293	Corn pone, baked
52208760	9.47	0.801	Gordita/sope shell, plain, no filling, fried in oil
52209010	11.674	0.988	Hush puppy
52213010	2.004	0.170	Spoonbread
52215000	3.181	0.269	Tortilla, NFS
52215200	6.362	0.538	Tortilla, flour (wheat)
52215300	19.53	1.652	Taco shell, corn
52215350	26.139	2.211	Taco shell, flour
52301000	6.083	0.515	Muffin, NFS
52302010	5.285	0.447	Muffin, fruit and/or nuts
52302500	7.709	0.652	Muffin, chocolate chip
52302600	7.87	0.666	Muffin, chocolate
52303010	9.182	0.777	Muffin, whole wheat

52303500	9.114	0.771	Muffin, wheat
52304010	7.661	0.648	Muffin, wheat bran
52304040	3.996	0.338	Muffin, bran with fruit, lowfat
52304100	3.987	0.337	Muffin, oatmeal
52304150	4.824	0.408	Muffin, oat bran
52304200	4.338	0.367	Muffin, oat bran with fruit and/or nuts
52306010	8.569	0.725	Muffin, plain
52306300	7.623	0.645	Muffin, cheese
52306500	5.864	0.496	Muffin, pumpkin
52306550	16.878	1.428	Muffin, zucchini
52306700	10.372	0.877	Muffin, carrot
52307020	5.81	0.492	Muffin, multigrain, with nuts
52308010	19.081	1.614	Matzo, fritters
52311010	3.522	0.298	Popover
52320110	9.123	0.772	Toaster muffin, fruit, toasted
52405010	9.084	0.769	Bread, fruit, without nuts
52405100	11.905	1.007	Bread, fruit and nut
52406010	6.6	0.558	Bread, whole wheat, with nuts
52407000	16.878	1.428	Bread, zucchini
52408000	3.744	0.317	Bread, Irish soda
53100050	8.73	0.739	Cake batter, raw, chocolate
53100070	7.032	0.595	Cake batter, raw, not chocolate
53100100	11.194	0.947	Cake, NS as to type, with or without icing
53101250	0.056	0.005	Cake, angel food, with fruit and icing or filling
53102000	10.792	0.913	Cake, applesauce, NS as to icing
53102100	12.285	1.039	Cake, applesauce, without icing
53102200	10.792	0.913	Cake, applesauce, with icing
53102500	6.398	0.541	Cake, banana, NS as to icing
53102600	5.348	0.452	Cake, banana, without icing
53102700	6.398	0.541	Cake, banana, with icing
53102800	8.289	0.701	Cake, black forest (chocolate-cherry)
53103000	6.628	0.561	Cake, Boston cream pie
53103550	5.559	0.470	Cake, butter, without icing
53103600	6.093	0.515	Cake, butter, with icing
53104000	17.483	1.479	Cake, carrot, NS as to icing
53104100	21.436	1.813	Cake, carrot, without icing
53104260	17.483	1.479	Cake, carrot, with icing
53104300	5.411	0.458	Cake, carrot, diet
53104400	7.951	0.673	Cake, coconut, with icing
53104500	6.811	0.576	Cheesecake
53104520	2.6	0.220	Cheesecake, diet
53104550	4.761	0.403	Cheesecake with fruit
53104570	2.367	0.200	Cheesecake, diet, with fruit
53104600	4.961	0.420	Cheesecake, chocolate
53105000	9.524	0.806	Cake, chocolate, devil's food, or fudge,

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			standard-type mix (eggs and
53105050	9.066	0.767	Cake, chocolate, devil's food, or fudge, made from home recipe or pur
53105100	9.192	0.778	Cake, chocolate, devil's food, or fudge, standard-type mix (eggs and
53105160	10.297	0.871	Cake, chocolate, devil's food, or fudge, without icing or filling, ma
53105200	8.199	0.694	Cake, chocolate, devil's food, or fudge, standard-type mix (eggs and
53105260	9.066	0.767	Cake, chocolate, devil's food, or fudge, with icing, coating, or fill
53105300	12.304	1.041	Cake, German chocolate, with icing and filling
53105500	4.968	0.420	Cake, chocolate, with icing, diet
53105600	9.537	0.807	Cake, chocolate, devil's food, or fudge, pudding-type mix, made by "L
53105750	9.691	0.820	Cake, chocolate, devil's food, or fudge, pudding type mix, made by "c
53105900	12.509	1.058	Cake, chocolate, devil's food, or fudge, pudding-type mix (oil, eggs,
53106000	15.806	1.337	Cake, chocolate, devil's food, or fudge, pudding-type mix (oil, eggs,
53106050	12.509	1.058	Cake, chocolate, devil's food, or fudge, pudding-type mix (oil, eggs,
53107000	8.044	0.681	Cake, cupcake, NS as to type or icing
53107100	9.396	0.795	Cake, cupcake, NS as to type, without icing
53107200	8.068	0.683	Cake, cupcake, NS as to type, with icing
53108000	6.952	0.588	Cake, cupcake, chocolate, NS as to icing
53108100	6.976	0.590	Cake, cupcake, chocolate, without icing or filling
53108200	10.632	0.899	Cake, cupcake, chocolate, with icing or filling
53109000	8.696	0.736	Cake, cupcake, not chocolate, NS as to icing
53109100	7.812	0.661	Cake, cupcake, not chocolate, without icing or filling
53109200	8.439	0.714	Cake, cupcake, not chocolate, with icing or filling
53109210	5.291	0.448	Cake, cupcake, not chocolate, with icing or filling, lowfat, choleste
53109250	7.949	0.672	Cake, cupcake, not chocolate, with fruit and cream filling
53109300	9.103	0.770	Cake, Dobos Torte (non-chocolate layer cake with chocolate filling an
53110000	2.981	0.252	Cake, fruit cake, light or dark, holiday type

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			cake
53110100	0.561	0.047	Cake, plum pudding
53111000	9.022	0.763	Cake, gingerbread, without icing
53112000	6.286	0.532	Cake, ice cream and cake roll, chocolate
53112100	6.417	0.543	Cake, ice cream and cake roll, not chocolate
53112160	5.966	0.505	Cake, frozen yogurt and cake layer, chocolate, with icing
53113950	5.329	0.451	Cake, lemon, NS as to icing
53114000	15.976	1.352	Cake, lemon, without icing
53114100	7.592	0.642	Cake, lemon, with icing
53114200	6.578	0.556	Cake, lemon, lowfat, without icing
53114250	6.866	0.581	Cake, lemon, lowfat, with icing
53115000	6.983	0.591	Cake, marble, NS as to icing
53115100	8.983	0.760	Cake, marble, without icing
53115200	6.983	0.591	Cake, marble, with icing
53115300	12.039	1.018	Cake, nut, NS as to icing
53115310	13.721	1.161	Cake, nut, without icing
53115320	11.518	0.974	Cake, nut, with icing
53115410	10.913	0.923	Cake, oatmeal, with icing
53115450	5.89	0.498	Cake, peanut butter, with icing
53115600	12.844	1.087	Cake, poppyseed, without icing
53116000	9.074	0.768	Cake, pound, without icing
53116020	8.729	0.738	Cake, pound, with icing
53116270	10.961	0.927	Cake, pound, chocolate
53116390	6.496	0.550	Cake, pound, reduced fat, cholesterol free
53116490	10.65	0.901	Cake, pumpkin, NS as to icing
53116500	7.764	0.657	Cake, pumpkin, without icing
53116510	10.65	0.901	Cake, pumpkin, with icing
53116550	8.85	0.749	Cake, raisin-nut, without icing
53116570	4.985	0.422	Cake, Ravani (made with farina)
53116650	8.358	0.707	Cake, Quezadilla, El Salvadorian style
53117000	8.925	0.755	Cake, spice, NS as to icing
53117100	10.1	0.854	Cake, spice, without icing
53117200	8.925	0.755	Cake, spice, with icing
53118200	2.477	0.210	Cake, sponge, with icing
53118310	0.415	0.035	Cake, sponge, chocolate, with icing
53118500	6.961	0.589	Cake, torte
53118700	10.411	0.881	Cake, chiffon, without icing
53119000	9.656	0.817	Cake, upside down (all fruits)
53120000	8.143	0.689	Cake, white, standard-type mix (egg whites and water added), NS as to
53120060	11.45	0.969	Cake, white, made from home recipe or purchased ready-to-eat, NS as t
53120100	8.061	0.682	Cake, white, standard-type mix (egg whites and water added to mix), w

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53120160	15.042	1.273	Cake, white, without icing, made from home recipe or purchased ready-
53120200	7.563	0.640	Cake, white, standard-type mix (egg whites and water added to mix), w
53120260	11.45	0.969	Cake, white, with icing, made from home recipe or purchased ready-to-
53120300	11.7	0.990	Cake, white, pudding-type mix (oil, egg whites, and water added to dr
53120330	14.502	1.227	Cake, white, pudding-type mix (oil, egg whites, and water added to dr
53120350	11.699	0.990	Cake, white, pudding-type mix (oil, egg whites, and water added to dr
53120400	6.559	0.555	Cake, white, eggless, lowfat
53121000	7.431	0.629	Cake, yellow, standard-type mix (eggs and water added to dry mix), NS
53121060	8.966	0.759	Cake, yellow, made from home recipe or purchased ready-to- eat, NS as
53121100	7.812	0.661	Cake, yellow, standard-type mix (eggs and water added to dry mix), wi
53121160	10.35	0.876	Cake, yellow, without icing, made from home recipe or purchased ready
53121200	7.431	0.629	Cake, yellow, standard-type mix (eggs and water added to dry mix), wi
53121260	8.967	0.759	Cake, yellow, with icing, made from home recipe or purchased ready-to
53121280	11.39	0.964	Cake, yellow, pudding-type mix (oil, eggs, and water added to dry mix
53121300	13.946	1.180	Cake, yellow, pudding-type mix (oil, eggs, and water added to dry mix
53121330	11.39	0.964	Cake, yellow, pudding-type mix (oil, eggs, and water added to dry mix
53122070	6.689	0.566	Cake, shortcake, biscuit type, with whipped cream and fruit
53122080	7.843	0.664	Cake, shortcake, biscuit type, with fruit
53124110	16.779	1.420	Cake, zucchini, without icing
53124120	14.178	1.199	Cake, zucchini, with icing
53200100	20.862	1.765	Cookie, batter or dough, raw, not chocolate
53201000	19.248	1.628	Cookie, NS as to type
53202000	18.735	1.585	Cookie, almond
53203000	10.345	0.875	Cookie, applesauce
53203500	5.883	0.498	Cookie, biscotti (Italian sugar cookie)
53204000	9.878	0.836	Cookie, brownie, NS as to icing
53204000	9.826	0.831	Cookie, brownie, NS as to icing
53204010	9.878	0.836	Cookie, brownie, without icing
53204100	12.734	1.077	Cookie, brownie, with icing

53204500	8.126	0.687	Cookie, brownie, with cream cheese filling, without icing
53204600	10.861	0.919	Cookie, brownie, with peanut butter fudge icing
53204800	10.398	0.880	Cookie, brownie, diet, NS as to icing
53204830	4.995	0.423	Cookie, brownie, lowfat, with icing
53204840	3.896	0.330	Cookie, brownie, lowfat, without icing
53205250	17.199	1.455	Cookie, butterscotch, brownie
53205500	17.979	1.521	Cookie, butterscotch chip
53205600	19.697	1.666	Cookie, caramel coated, with nuts
53205750	17.594	1.488	Cookie, carob
53206000	16.954	1.434	Cookie, chocolate chip
53206010	15.844	1.340	Cookie, chocolate chip, with raisins
53206020	13.951	1.180	Cookie, chocolate chip, made from home recipe or purchased at a bakery
53206030	9.499	0.804	Cookie, chocolate chip, reduced fat
53206050	26.696	2.258	Cookie, rich, chocolate chip, with chocolate filling
53206100	19.539	1.653	Cookie, chocolate chip sandwich
53206550	9.458	0.800	Cookie, chocolate, made with oatmeal and coconut (no-bake)
53207000	11.009	0.931	Cookie, chocolate fudge, with/without nuts
53208000	15.675	1.326	Cookie, chocolate-covered marshmallow
53208200	15.675	1.326	Cookie, marshmallow pie, chocolate covered
53209000	19.519	1.651	Cookie, chocolate, chocolate sandwich or chocolate-coated or striped
53209010	12.648	1.070	Cookie, chocolate-covered, sugar wafer, creme- or caramel-filled
53209020	5.15	0.436	Cookie, chocolate sandwich, reduced fat
53209050	24.37	2.062	Cookie, chocolate-covered, chocolate sandwich
53209100	24.523	2.075	Cookie, chocolate, sandwich, with extra filling
53209500	19.539	1.653	Cookie, chocolate and vanilla sandwich
53210000	11.009	0.931	Cookie, chocolate wafer
53210900	11.996	1.015	Cookie, graham cracker sandwich with chocolate and marshmallow filling
53211000	8.241	0.697	Cookie bar, with chocolate, nuts, and graham crackers
53215500	14.314	1.211	Cookie, coconut
53220000	11.013	0.932	Cookie, fruit-filled bar
53220020	6.387	0.540	Cookie, date bar
53220030	6.387	0.540	Cookie, fig bar
53222010	2.07	0.175	Cookie, fortune

53222020	6.147	0.520	Cookie, cone shell, ice cream type, wafer or cake
53222100	3.092	0.262	Cookie, cone shell, ice cream type, brown sugar
53223000	9.315	0.788	Cookie, gingersnaps
53224250	11.517	0.974	Cookie, lemon bar
53226000	15.675	1.326	Cookie, marshmallow, with coconut
53226500	6.709	0.568	Cookie, marshmallow, with rice cereal (no-bake)
53226500	4.734	0.400	Cookie, marshmallow, with rice cereal (no-bake)
53226550	4.472	0.378	Cookie, marshmallow, with rice cereal and chocolate chips
53226600	4.278	0.362	Cookie, marshmallow and peanut butter, with oat cereal (no-bake)
53227000	15.675	1.326	Cookie, marshmallow pies, non-chocolate coating
53230000	12.304	1.041	Cookie, molasses
53233000	17.617	1.490	Cookie, oatmeal
53233010	16.811	1.422	Cookie, oatmeal, with raisins
53233020	14.971	1.267	Cookie, oatmeal, with fruit filling
53233040	4.119	0.348	Cookie, oatmeal, reduced fat, with raisins
53233050	20.767	1.757	Cookie, oatmeal sandwich, with creme filling
53233060	20.965	1.774	Cookie, oatmeal, with chocolate chips
53233100	9.256	0.783	Cookie, oatmeal, with chocolate and peanut butter (no-bake)
53233500	11.106	0.940	Cookie, oat bran
53234000	13.791	1.167	Cookie, peanut butter
53234010	11.701	0.990	Cookie, peanut butter, with oatmeal
53234100	11.722	0.992	Cookie, peanut butter, with chocolate
53234250	5.867	0.496	Cookie, peanut butter with rice cereal (no-bake)
53235000	13.791	1.167	Cookie, peanut
53235500	22.766	1.926	Cookie, with peanut butter filling, chocolate-coated
53236000	12.69	1.074	Cookie, pizzelle (Italian style wafer)
53236100	9.831	0.832	Cookie, pumpkin
53237000	12.098	1.023	Cookie, raisin
53237010	19.319	1.634	Cookie, raisin sandwich, cream-filled
53237500	4.676	0.396	Cookie, rum ball (no-bake)
53238000	19.559	1.655	Cookie, sandwich-type, not chocolate or vanilla
53239000	22.535	1.906	Cookie, shortbread
53239010	14.378	1.216	Cookie, shortbread, reduced fat
53239050	18.028	1.525	Cookie, shortbread, with chocolate filling

53241500	14.209	1.202	Cookie, butter or sugar cookie
53241600	3.524	0.298	Cookie, butter or sugar cookie, with fruit and/or nuts
53242000	23.961	2.027	Cookie, sugar wafer
53242500	16.954	1.434	Cookie, toffee bar
53243000	19.559	1.655	Cookie, vanilla sandwich
53243050	5.671	0.480	Cookie, vanilla sandwich, reduced fat
53243100	26.696	2.258	Cookie, rich, all chocolate, with chocolate filling or chocolate chips
53244010	5.4	0.457	Cookie, butter or sugar, with chocolate icing or filling
53244020	9.503	0.804	Cookie, butter or sugar, iced, with icing other than chocolate
53245000	23.961	2.027	Cookie, vanilla waffle creme
53247000	13.53	1.145	Cookie, vanilla wafer
53247050	10.092	0.854	Cookie, vanilla wafer, reduced fat
53247500	20.132	1.703	Cookie, vanilla with caramel, coconut, and chocolate coating
53251100	17.107	1.447	Cookie, rugelach
53260000	22.105	1.870	Cookie, dietetic, NFS
53260030	12.647	1.070	Cookie, dietetic, chocolate chip
53260150	3.092	0.262	Cookie, lemon wafer, lowfat
53260200	16.744	1.417	Cookie, dietetic, oatmeal with raisins
53260300	21.596	1.827	Cookie, dietetic, sandwich type
53260400	12.549	1.062	Cookie, dietetic, sugar or plain
53300100	9.266	0.784	Pie, NFS
53300170	15.404	1.303	Pie, individual size or tart, NFS
53301000	9.266	0.784	Pie, apple, two crust
53301070	15.218	1.287	Pie, apple, individual size or tart
53301080	21.968	1.858	Pie, apple, fried pie
53301500	8.86	0.750	Pie, apple, one crust
53301750	4.903	0.415	Pie, apple, diet
53302000	12.155	1.028	Pie, apricot, two crust
53302080	20.928	1.771	Pie, apricot, fried pie
53303000	11.703	0.990	Pie, blackberry, two crust
53303500	13.072	1.106	Pie, berry, not blackberry, blueberry, boysenberry, huckleberry, rasp
53303510	9.51	0.805	Pie, berry, not blackberry, blueberry, boysenberry, huckleberry, rasp
53303570	14.859	1.257	Pie, berry, not blackberry, blueberry, boysenberry, huckleberry, rasp
53304000	8.27	0.700	Pie, blueberry, two crust
53304050	8.322	0.704	Pie, blueberry, one crust
53304070	13.366	1.131	Pie, blueberry, individual size or tart
53305000	9.313	0.788	Pie, cherry, two crust
53305010	8.165	0.691	Pie, cherry, one crust

53305070	10.811	0.915	Pie, cherry, individual size or tart
53305080	18.638	1.577	Pie, cherry, fried pie
53305700	12.965	1.097	Pie, lemon (not cream or meringue)
53305720	14.407	1.219	Pie, lemon (not cream or meringue), individual size or tart
53306000	10.437	0.883	Pie, mince, two crust
53306070	13.584	1.149	Pie, mince, individual size or tart
53307000	8.789	0.744	Pie, peach, two crust
53307050	7.522	0.636	Pie, peach, one crust
53307070	13.32	1.127	Pie, peach, individual size or tart
53307080	20.711	1.752	Pie, peach, fried pie
53308000	11.853	1.003	Pie, pineapple, two crust
53308070	13.555	1.147	Pie, pineapple, individual size or tart
53308300	13.429	1.136	Pie, plum, two crust
53308500	9.446	0.799	Pie, prune, one crust
53309000	10.745	0.909	Pie, raisin, two crust
53309070	13.277	1.123	Pie, raisin, individual size or tart
53310000	8.551	0.723	Pie, raspberry, one crust
53310050	12.514	1.059	Pie, raspberry, two crust
53311000	15.105	1.278	Pie, rhubarb, two crust
53311050	10.466	0.885	Pie, rhubarb, one crust
53312000	9.251	0.783	Pie, strawberry, one crust
53313000	14.02	1.186	Pie, strawberry-rhubarb, two crust
53314000	12.164	1.029	Pie, strawberry, individual size or tart
53340500	4.465	0.378	Pie, cherry, made with cream cheese and sour cream
53341000	11.12	0.941	Pie, banana cream
53341500	16.359	1.384	Pie, buttermilk
53341750	12.384	1.048	Pie, chess
53342000	7.215	0.610	Pie, chocolate cream
53342000	7.197	0.609	Pie, chocolate cream
53342070	9.75	0.825	Pie, chocolate cream, individual size or tart
53343000	11.832	1.001	Pie, coconut cream
53343070	8.78	0.743	Pie, coconut cream, individual size or tart
53344000	8.851	0.749	Pie, custard
53344070	3.103	0.263	Pie, custard, individual size or tart
53345000	8.355	0.707	Pie, lemon cream
53345070	10.24	0.866	Pie, lemon cream, individual size or tart
53346000	6.381	0.540	Pie, peanut butter cream
53346500	5.994	0.507	Pie, pineapple cream
53347000	7.68	0.650	Pie, pumpkin
53347600	6.065	0.513	Pie, squash
53348000	4.495	0.380	Pie, strawberry cream
53360000	7.27	0.615	Pie, sweetpotato
53365000	11.454	0.969	Pie, vanilla cream

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53366000	5.275	0.446	Pie, yogurt, frozen
53370000	8.467	0.716	Pie, chiffon, not chocolate
53381000	7.51	0.635	Pie, lemon meringue
53382000	6.071	0.514	Pie, chocolate-marshmallow
53385000	9.116	0.771	Pie, pecan
53385070	10.163	0.860	Pie, pecan, individual size or tart
53385500	11.458	0.969	Pie, oatmeal
53385600	8.289	0.701	Pie, praline mousse, with nuts
53386000	8.816	0.746	Pie, pudding, flavors other than chocolate
53386050	5.384	0.455	Pie, pudding, flavors other than chocolate, individual size or tart
53386250	4.862	0.411	Pie, pudding, chocolate, with chocolate coating, individual size
53386500	5.06	0.428	Pie, pudding, flavors other than chocolate, with chocolate coating, i
53387000	25.018	2.117	Pie, Toll house chocolate chip
53390000	10.004	0.846	Pie, shoo-fly
53391000	9.624	0.814	Pie shell
53400200	2.555	0.216	Blintz, cheese-filled
53400200	4.416	0.374	Blintz, cheese-filled
53410100	4.537	0.384	Cobbler, apple
53410300	5.491	0.465	Cobbler, berry
53410500	4.706	0.398	Cobbler, cherry
53410800	4.122	0.349	Cobbler, peach
53410860	4.186	0.354	Cobbler, pineapple
53415100	2.322	0.196	Crisp, apple, apple dessert
53415120	20.184	1.708	Fritter, apple
53415200	17.715	1.499	Fritter, banana
53415300	6.883	0.582	Crisp, blueberry
53415400	8.866	0.750	Crisp, cherry
53415500	4.324	0.366	Crisp, peach
53415600	4.447	0.376	Crisp, rhubarb
53420000	7.085	0.599	Cream puff, eclair, custard or cream filled, NS as to icing
53420100	7.251	0.613	Cream puff, eclair, custard or cream filled, not iced
53420200	7.085	0.599	Cream puff, eclair, custard or cream filled, iced
53420210	5.495	0.465	Cream puff, eclair, custard or cream filled, iced, reduced fat
53420300	8.552	0.723	Air filled fritter or fried puff, without syrup, Puerto Rican style (
53420400	19.179	1.623	Sopaipilla, without syrup or honey
53430200	3.133	0.265	Crepe, dessert type, fruit-filled
53430200	3.14	0.266	Crepe, dessert type, fruit-filled
53430700	11.657	0.986	Tamale, sweet

53430750	7.809	0.661	Tamale, sweet, with fruit
53440000	9.666	0.818	Strudel, apple
53440300	3.895	0.330	Strudel, berry
53440500	3.104	0.263	Strudel, cherry
53440600	2.795	0.236	Strudel, cheese
53441110	13.85	1.172	Baklava
53450000	17.688	1.496	Turnover or dumpling, apple
53450300	17.523	1.482	Turnover or dumpling, berry
53450500	14.679	1.242	Turnover or dumpling, cherry
53450800	13.88	1.174	Turnover or dumpling, lemon
53451000	15.641	1.323	Turnover or dumpling, peach
53451500	15.187	1.285	Turnover, guava
53452100	12.075	1.022	Pastry, fruit-filled
53452120	2.396	0.203	Pastry, Oriental, made with bean or lotus seed paste filling (baked)
53452130	2.006	0.170	Pastry, Oriental, made with bean paste and salted egg yolk filling (b
53452200	3.046	0.258	Pastry, Italian, with cheese
53452400	37.47	3.170	Pastry, puff
53452420	20.984	1.775	Pastry, puff, custard or cream filled, iced or not iced
53452500	16.534	1.399	Pastry, mainly flour and water, fried
53453170	9.654	0.817	Empanada, Mexican turnover, pumpkin
53500100	21.009	1.777	Breakfast pastry, NFS
53510000	21.009	1.777	Danish pastry, plain or spice
53510100	17.011	1.439	Danish pastry, with fruit
53510200	17.856	1.511	Danish pastry, with nuts
53511000	16.515	1.397	Danish pastry, with cheese
53530000	9.663	0.817	Breakfast tart
53530010	5.499	0.465	Breakfast tart, lowfat
53610000	7.667	0.649	Coffee cake, NFS
53610100	7.667	0.649	Coffee cake, crumb or quick-bread type
53610120	1.992	0.169	Coffee cake, crumb or quick-bread type, reduced fat, cholesterol free
53610150	7.303	0.618	Coffee cake, crumb or quick-bread type, with icing
53610170	6.879	0.582	Coffee cake, crumb or quick-bread type, with fruit
53610200	5.524	0.467	Coffee cake, crumb or quick-bread type, cheese-filled
53610250	6.182	0.523	Coffee cake, crumb or quick-bread type, custard filled
54001000	24.615	2.082	Crackers, NS as to sweet or nonsweet
54101010	13.227	1.119	Cracker, animal
54102010	9.311	0.788	Crackers, graham
54102020	6.305	0.533	Crackers, graham, chocolate covered

54102030	9.311	0.788	Cracker, graham, sugar-honey coated, cinnamon crisps
54102050	16.103	1.362	Crackers, oatmeal
54102060	6.1	0.516	Crackers, Cuban
54102090	16.42	1.389	Crackers, graham, higher fat
54102100	4.077	0.345	Crackers, graham, lowfat
54102200	13.7	1.159	Crackers, graham, sandwich-type, with filling
54202010	10.95	0.926	Crackers, saltine, low sodium
54203010	16.77	1.419	Crackers, toast thins (rye, wheat, white flour), low sodium
54204010	15.519	1.313	Cracker, 100% whole wheat, low sodium
54205010	24.615	2.082	Cracker, snack, low sodium
54205030	20.959	1.773	Cracker, cheese, low sodium
54205100	10.1	0.854	Cracker, snack, lowfat, low sodium
54301000	24.615	2.082	Cracker, snack
54301100	2.167	0.183	Cracker, snack, reduced fat
54304000	20.959	1.773	Cracker, cheese
54304100	5.613	0.475	Cracker, cheese, reduced fat
54305500	5.205	0.440	Crispbread, wheat or rye, extra crispy
54308000	14.96	1.266	Crackers, milk
54309000	11.228	0.950	Crackers, oat
54313000	10.95	0.926	Crackers, oyster
54318500	0.17	0.014	Rice cake, cracker-type
54319000	5.095	0.431	Crackers, rice
54325000	10.95	0.926	Crackers, saltine
54325050	12.262	1.037	Crackers, saltine, whole wheat
54327950	10.633	0.900	Crackers, cylindrical, peanut-butter filled
54328000	10.905	0.923	Crackers, sandwich-type, NFS
54328100	10.736	0.908	Cracker, sandwich-type, peanut butter filled
54328200	21.524	1.821	Cracker, sandwich-type, cheese-filled
54334000	16.794	1.421	Crackers, toast thins (rye, pumpernickel, white flour)
54336000	11.113	0.940	Crackers, water biscuits
54337000	15.519	1.313	Cracker, 100% whole wheat
54337050	8.577	0.726	Cracker, 100% whole wheat, reduced fat
54338000	19.445	1.645	Crackers, wheat
54338100	10.693	0.905	Crackers, wheat, reduced fat
54403090	24.956	2.111	Popcorn, popped in oil, unsalted
54403110	8.05	0.681	Popcorn, sugar syrup or caramel-coated
54403150	0.695	0.059	Popcorn, sugar syrup or caramel-coated, fat free
54408000	2.491	0.211	Pretzels, NFS
54408010	2.491	0.211	Pretzels, hard
54408020	2.206	0.187	Pretzels, soft

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54408030	2.784	0.236	Pretzel, hard, unsalted
54408050	3.289	0.278	Pretzel, oatbran, hard
54408200	1.792	0.152	Pretzel, hard, chocolate-coated
54408250	1.181	0.100	Pretzel, yogurt-covered
54408300	11.74	0.993	Pretzels, cheese-filled
54420010	4.608	0.390	Multigrain mixture, pretzels, cereal and/or crackers, nuts
54420100	9.192	0.778	Oriental party mix, with peanuts, sesame sticks, chili rice crackers
54420200	21.035	1.780	Multigrain mixture, bread sticks, sesame nuggets, pretzels, rye chips
54440010	8.148	0.689	Bagel chip
55101000	1.687	0.143	Pancakes, plain
55101010	1.998	0.169	Pancakes, reduced calorie, high fiber
55103000	3.258	0.276	Pancakes, with fruit
55103000	3.261	0.276	Pancakes, with fruit
55103000	3.243	0.274	Pancakes, with fruit
55105000	3.144	0.266	Pancakes, buckwheat
55105100	4.095	0.346	Pancakes, cornmeal
55105200	7.022	0.594	Pancakes, whole wheat
55105300	5.076	0.429	Pancakes, sour dough
55201000	6.696	0.566	Waffle, plain
55202000	7.796	0.660	Waffle, wheat, bran, or multigrain
55203000	5.727	0.485	Waffle, fruit
55203500	10.613	0.898	Waffle, nut and honey
55205000	7.148	0.605	Waffle, 100% whole wheat or 100% whole grain
55206000	8.99	0.761	Waffle, oat bran
55207000	10.476	0.886	Waffle, multi-bran
55211050	1.491	0.126	Waffle, plain, lowfat
55301000	5.307	0.449	French toast, plain
55301000	5.049	0.427	French toast, plain
55301000	5.751	0.487	French toast, plain
55301000	9.214	0.780	French toast, plain
55301000	4.837	0.409	French toast, plain
55301000	5.63	0.476	French toast, plain
55301000	5.557	0.470	French toast, plain
55301000	5.309	0.449	French toast, plain
55301000	4.836	0.409	French toast, plain
55301000	5.927	0.501	French toast, plain
55301000	5.379	0.455	French toast, plain
55301000	1.341	0.113	French toast, plain
55301000	5.676	0.480	French toast, plain
55301000	5.674	0.480	French toast, plain
55301000	5.36	0.453	French toast, plain
55301000	3.933	0.333	French toast, plain

55301000	5.305	0.449	French toast, plain
55301000	1.145	0.097	French toast, plain
55301000	1.145	0.097	French toast, plain
55301000	6.008	0.508	French toast, plain
55301000	4.983	0.422	French toast, plain
55301000	1.144	0.097	French toast, plain
55301000	5.304	0.449	French toast, plain
55301000	6.005	0.508	French toast, plain
55301000	1.192	0.101	French toast, plain
55301000	1.19	0.101	French toast, plain
55301000	1.587	0.134	French toast, plain
55301000	5.301	0.448	French toast, plain
55301050	18.864	1.596	French toast sticks, plain
55401000	6.149	0.520	Crepe, plain
55801000	12.663	1.071	Funnel cake

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Appendix B

Margarine and Spreads

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Food items in "margarine and spread" category

Foodcode	Foodname
81102000	Margarine, NFS
81102010	Margarine, stick, salted
81102020	Margarine, tub, salted
81102030	Margarine, liquid, salted
81103020	Margarine, whipped, tub, salted
81103030	Margarine, stick, unsalted
81103040	Margarine-like spread, stick, salted
81103050	Margarine, whipped, stick, salted
81103060	Margarine, tub, unsalted
81103070	Margarine, whipped, tub, unsalted
81103080	Margarine-like spread, tub, salted
81103090	Margarine-like spread, liquid, salted
81103100	Margarine-like spread, stick, unsalted
81103120	Margarine-like spread, tub, unsalted
81103130	Margarine-like spread, whipped, tub, salted
81103140	Margarine-like spread, tub, sweetened
81104010	Margarine-like spread, reduced calorie, about 40% fat, tub, salted
81104020	Margarine-like spread, reduced calorie, about 40% fat, stick, salted
81104050	Margarine-like spread, reduced calorie, about 20% fat, tub, salted
81104070	Margarine-like spread, reduced calorie, about 20% fat, tub, unsalted
81104100	Margarine-like spread, fat free, tub, salted
81104110	Margarine-like spread, fat free, liquid, salted
81104500	Vegetable oil-butter spread, stick, salted
81104510	Vegetable oil-butter spread, tub, salted
81104550	Vegetable oil-butter spread, reduced calorie, stick, salted
81104560	Vegetable oil-butter spread, reduced calorie, tub, salted
81105010	Butter-margarine blend, stick, salted
81105020	Butter-margarine blend, tub, salted
81105030	Butter-margarine blend, stick, unsalted
81105500	Butter-vegetable oil blend
81204000	Ghee, clarified butter
81302040	Sandwich spread
81302050	Tartar sauce
81312000	Tartar sauce, low calorie
81322000	Honey butter

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Appendix C

Salad Dressings

000058

Food items in "salad dressing" category

foodcode	Foodname
83100100	Salad dressing, NFS
83101000	Blue or roquefort cheese dressing
83101500	Bacon dressing (hot)
83101600	Bacon and tomato dressing
83102000	Caesar dressing
83103000	Coleslaw dressing
83103500	Feta Cheese Dressing
83104000	French dressing
83105000	Fruit dressing, made with fruit juice and cream
83105100	Fruit dressing, made with honey, oil, and water
83105500	Honey mustard dressing
83106000	Italian dressing, made with vinegar and oil
83109000	Russian dressing
83110000	Mayonnaise-type salad dressing
83110010	Mayonnaise-type salad dressing, cholesterol-free
83111000	Boiled, cooked-type dressing
83112000	Green Goddess dressing
83112500	Creamy dressing, made with sour cream and/or buttermilk and oil
83112600	Cream cheese dressing
83112900	Milk, vinegar, and sugar dressing
83112950	Poppy seed dressing
83112960	Peppercorn Dressing
83112980	Celery seed dressing
83112990	Sesame dressing
83113000	Sweet and sour dressing
83114000	Thousand Island dressing
83115000	Yogurt dressing
83200100	Salad dressing, low-calorie, NFS
83200500	Bacon and tomato dressing, low calorie
83201000	Blue or roquefort cheese dressing, low-calorie
83201050	Blue or roquefort cheese dressing, reduced calorie
83201200	Blue or roquefort cheese dressing, reduced calorie, fat-free, cholesterol-free
83201400	Coleslaw dressing, reduced calorie
83202000	French dressing, low-calorie
83202010	French dressing, reduced calorie, fat-free, cholesterol-free
83202020	French dressing, reduced calorie
83203000	Caesar dressing, low-calorie
83203250	Mayonnaise-type salad dressing, fat-free
83204050	Mayonnaise-type salad dressing, low-calorie or diet
83204060	Mayonnaise-type salad dressing, low-calorie or diet, cholesterol-

	free
83205000	Italian dressing, low calorie
83205450	Italian dressing, reduced calorie
83205500	Italian dressing, reduced calorie, fat-free
83206000	Russian dressing, low-calorie
83207000	Thousand Island dressing, low-calorie
83207100	Thousand Island dressing, reduced calorie, fat-free, cholesterol-free
83208000	Vinegar, sugar, and water dressing
83208500	Korean dressing or marinade
83209000	Milk, vinegar, and artificial sweetener dressing
83210000	Creamy dressing, made with sour cream and/or buttermilk and oil, diet, NS as to low or reduced calorie
83210050	Creamy dressing made with sour cream and/or buttermilk and oil, low calorie
83210100	Creamy dressing, made with sour cream and/or buttermilk and oil, reduced calorie
83210200	Creamy dressing, made with sour cream and/or buttermilk and oil, reduced calorie, fat-free, cholesterol-free
83210250	Creamy dressing, made with sour cream and/or buttermilk and oil, reduced calorie, cholesterol-free
83220000	Salad dressing, low calorie, oil-free

Appendix D

Pizza

000061

Food items in "pizza" category

Foodcode	Foodname
58106210	Pizza, cheese, NS as to type of crust
58106220	Pizza, cheese, thin crust
58106230	Pizza, cheese, thick crust
58106310	Pizza, cheese, with vegetables, NS as to type of crust
58106320	Pizza, cheese, with vegetables, thin crust
58106330	Pizza, cheese, with vegetables, thick crust
58106360	Pizza, cheese, with fruit, thick crust
58106510	Pizza with meat, NS as to type of crust
58106520	Pizza with meat, thin crust
58106530	Pizza with meat, thick crust
58106710	Pizza with meat and vegetables, NS as to type of crust
58106720	Pizza with meat and vegetables, thin crust
58106730	Pizza with meat and vegetables, thick crust
58106740	Pizza with meat and fruit, NS as to type of crust
58106750	Pizza with meat and fruit, thin crust
58106760	Pizza with meat and fruit, thick crust
58106780	Pizza with meat and vegetables, lowfat, thin crust
58106810	Pizza with beans and vegetables, NS as to type of crust
58106820	Pizza with beans and vegetables, thin crust
58106830	Pizza with beans and vegetables, thick crust
58106900	Pizza with seafood, NS as to type of crust
58106910	Pizza with seafood, thin crust
58106920	Pizza with seafood, thick crust
58107000	Ground beef with tomato sauce on a pizza crust
58107030	Pizza, no cheese, NS as to type of crust
58107050	Pizza, no cheese, thin crust
58107100	Pizza, no cheese, thick crust

Appendix E

Mayonnaise

000063

Food Items in "Mayonnaise" Category

Foodcode	Foodname
83107000	Mayonnaise, regular
83107100	Mayonnaise, made with yogurt
83107200	Mayonnaise, made with tofu
83108000	Mayonnaise, imitation
83108100	Mayonnaise, imitation, cholesterol free
83204000	Mayonnaise, low-calorie or diet
83204010	Mayonnaise, low-calorie or diet, low sodium
83204020	Mayonnaise, reduced calorie or diet, cholesterol-free
83204050	Mayonnaise-type salad dressing, low-calorie or diet
83204060	Mayonnaise-type salad dressing, low-calorie or diet, cholesterol-free

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Appendix F

Breakfast/Snack/Power Bars

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Food Items in "Breakfast/Snack/Power Bars" Category

Foodcode	Foodname
53540000	Breakfast bar, NFS
53540100	Breakfast bar, cake-like
53540200	Breakfast bar, cereal crust with fruit filling, lowfat
53540250	Breakfast bar, cereal crust with fruit filling, fat free
53540500	Breakfast bar, date, with yogurt coating
53541100	Breakfast bar, diet meal type
53541200	Meal replacement bar
53542100	Granola bar, oats, sugar, raisins, coconut
53542200	Granola bar, oats, fruit and nuts, lowfat
53542210	Granola bar, nonfat
53543100	Granola bar, peanuts, oats, sugar, wheat germ
53544100	Granola bar, with nougat
53544200	Granola bar, chocolate-coated
53544210	Granola bar, with coconut, chocolate-coated
53544220	Granola bar with nuts, chocolate-coated
53544250	Granola bar, coated with non-chocolate coating
53544300	Granola bar, high fiber, coated with non-chocolate yogurt coating
53544400	Granola bar, with rice cereal
53544450	PowerBar (fortified high energy bar)

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Appendix G

Soups and Gravies

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Food Items in "Soup and Gravies" Category

Foodcode	Foodname
28310150	Oxtail soup
28310160	Beef broth, with tomato, home recipe
28310170	Beef broth, without tomato, home recipe
28310210	Chili beef soup
28310220	Chili beef soup, chunky style
28310230	Meatball soup, Mexican style (Sopa de Albondigas)
28310320	Beef noodle soup, Puerto Rican style (Sopa de carne Y fideos)
28310330	Beef and rice noodle soup, Oriental style (Vietnam Se Pho Bo
28310420	Beef and rice soup, Puerto Rican style
28311010	Pepperpot (tripe) soup
28315100	Beef vegetable soup with potato, stew type
28315110	Beef noodle soup, chunky style
28315120	Beef vegetable soup with noodles, stew type, chunky style
28315130	Beef vegetable soup with rice, stew type, chunky style
28315140	Beef vegetable soup, Mexican style (Sopa / caldo de res)
28315150	Meat and corn hominy soup, Mexican style (Pozole)
28316020	Beef and mushroom soup, canned, low sodium
28317010	Beef stroganoff soup, chunky style
28320110	Pork and rice soup, stew type, chunky style
28320120	Pork vegetable soup with noodles, stew type, chunky style
28320130	Ham, rice, and potato soup, Puerto Rican style
28320140	Ham, noodle, and vegetable soup, Puerto Rican style
28320150	Pork, vegetable soup with potatoes, stew type
28320300	Pork with vegetable (excluding carrots, broccoli and/or dark-green leafy) soup, Oriental Style
28321130	Bacon soup, cream of, prepared with water
28330110	Scotch broth (lamb, vegetables, and barley)
28331110	Lamb, pasta, and vegetable soup, Puerto Rican style
28340210	Chicken rice soup, Puerto Rican style (Sopa de pollo con arroz)
28340220	Chicken soup with noodles and potatoes, Puerto Rican style
28340310	Chicken gumbo soup
28340510	Chicken noodle soup, chunky style
28340520	Chicken soup, canned, undiluted
28340530	Chicken soup
28340550	Sweet and sour soup
28340580	Chicken soup with vegetables (broccoli, carrots, celery, potatoes and onions), Oriental style
28340590	Chicken corn soup, home recipe
28340610	Chicken or turkey vegetable soup, stew type
28340620	Turkey noodle soup, chunky style

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28340630	Chicken vegetable soup with rice, stew type, chunky style
28340640	Chicken vegetable soup with noodles, stew type, chunky style
28340650	Chicken vegetable soup with rice, stew type, chunky style, prepared with milk
28340660	Chicken or turkey vegetable soup, home recipe
28340670	Chicken vegetable soup with rice, Mexican style (So Pa / Caldo de Pollo
28340690	Chicken vegetable soup with potato and cheese, chunky style
28340700	Bird's nest soup (chicken, ham, and noodles)
28340750	Hot and sour soup
28340800	Chicken soup with vegetables and fruit, Oriental Style
28345010	Chicken or turkey soup, cream of, canned, NS as to made with milk or water, reduced sodium
28345020	Chicken or turkey soup, cream of, canned, made with milk, reduced sodium
28345030	Chicken or turkey soup, cream of, canned, made with Water, reduced sodium
28345040	Chicken or turkey soup, cream of, canned, undiluted, reduced sodium
28345110	Chicken or turkey soup, cream of, NS as to prepared With milk or water
28345120	Chicken or turkey soup, cream of, prepared with milk
28345130	Chicken or turkey soup, cream of, prepared with water
28345140	Chicken or turkey soup, cream of, canned, undiluted
28345160	Chicken and mushroom soup, cream of, prepared with Milk
28345170	Duck soup
28350040	Fish stock, home recipe
28350050	Fish chowder
28350110	Crab soup, NS as to tomato-base or cream style
28350120	Crab soup, tomato-base
28350210	Clam chowder, NS as to Manhattan or New England style
28350220	Clam chowder, Manhattan
28350310	Turtle and vegetable soup
28351110	Fish and vegetable soup, no potatoes (Sopa de pescado)
28351120	Fish soup, with potatoes (Sopa de Pescado)
28351160	Codfish, rice, and vegetable soup, Puerto Rican style
28351170	Codfish soup with noodles, Puerto Rican style
28355110	Clam chowder, New England, NS as to prepared with water or milk
28355120	Clam chowder, New England, prepared with milk
28355130	Clam chowder, New England, prepared with water
28355140	Clam chowder, New England, canned, reduced sodium, ready-to-serve
28355210	Crab soup, cream of, prepared with milk
28355250	Lobster bisque
28355260	Lobster gumbo
28355310	Oyster stew

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28355350	Salmon soup, cream style
28355410	Shrimp soup, cream of, NS as to prepared with milk or water
28355420	Shrimp soup, cream of, prepared with milk
28355430	Shrimp soup, cream of, prepared with water
28355440	Shrimp gumbo
28355450	Seafood soup with potatoes and vegetables (including carrots, broccoli, and/or dark-green leafy)
28355460	Seafood soup with potatoes and vegetables (excluding carrots, broccoli, and dark-green leafy))
28355470	Seafood soup with vegetables (including carrots, broccoli, and/or dark-green leafy (no potatoes))
28355480	Seafood soup with vegetables (excluding carrots, broccoli, and dark-green leafy (no potatoes))
28360100	Meat broth, Puerto Rican style (Caldo)
28360210	Spanish vegetable soup, Puerto Rican style (Caldo gallego)
28500000	Gravy, poultry
28500010	Gravy, meat or poultry, with wine
28500020	Gravy, meat, with fruit
28500030	Gravy, poultry, low sodium
28500040	Gravy, beef or meat
28500050	Gravy, giblet
28500060	Gravy, beef or meat, low sodium
28500100	Gravy, mushroom
28500150	Gravy, redeye
28501010	Gravy, beef or meat, fat free
28501110	Gravy, poultry, fat free
28510010	Gravy or sauce, poultry-based from Puerto Rican-style chicken fricasse
28510020	Gravy, meat-based, from Puerto-Rican style stuffed pot roast
28510030	Gravy, meat-based, from Puerto-Rican style beef stew
28520000	Gravy or sauce, Chinese (soy sauce, stock or bouillon, cornstarch)
28520100	Oyster-flavored sauce
28522000	Mole poblano (sauce)
28522050	Mole verde (sauce)
32301100	Garlic egg soup, Puerto Rican style (Sopa de ajo)
41601010	Bean soup, NFS
41601020	Bean with bacon or pork soup
41601030	Black bean soup
41601040	Lima bean soup
41601050	Soybean soup, made with milk
41601060	Bean soup, with macaroni and meat
41601070	Soybean soup, miso broth
41601080	Pinto bean soup
41601090	Bean soup, with macaroni
41601100	Portuguese bean soup
41601110	Bean and ham soup, chunky style

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41601120	Bean soup with vegetables, rice, and pork
41601130	Bean soup, mixed beans
41601140	Bean soup, home recipe
41601150	Bean soup with vegetables and rice, canned, reduced sodium, prepared with water or ready-to-serve
41601160	Bean and ham soup, canned, reduced sodium, prepared with water or ready-to-serve
41601170	Bean and rice soup
41601180	Bean and ham soup, home recipe
41601200	Liquid from stewed kidney beans, Puerto Rican style
41602010	Chunky pea and ham soup
41602020	Garbanzo or chickpea soup
41602030	Split pea and ham soup
41602040	Pea soup, instant type
41602050	Split pea soup
41602060	Pigeon pea asopao
41602070	Split pea soup, canned, reduced sodium, prepared with water or ready-to-serve
41602090	Split pea and ham soup, canned, reduced sodium, prepared with water or ready-to-serve
41603010	Lentil soup
41610100	White bean soup, Puerto Rican style (Sopon de habic huelas blancas
41811950	Swiss steak, with gravy, meatless
58407030	Soup, mostly noodles
58408010	Won ton (wonton) soup
58408500	Noodle soup with vegetables, Oriental style
58409000	Noodle soup, with fish ball, shrimp, and dark green leafy vegetable
58410100	Rice soup, made with tea
58421000	Sopa seca (dry soup), Mexican style, NFS
58421010	Sopa Seca de Fideo, Mexican style, made with dry noodles
58421060	Sopa seca de arroz (dry rice soup), Mexican style
58450300	Noodle soup, made with milk

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Appendix H

Frozen Dinner Entres

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Food Items in "Frozen Dinner & Entrees" Category

Foodcode	Foodname
28101000	Frozen dinner, NFS
28110000	Beef dinner, NFS (frozen meal)
28110110	Beef with potatoes (frozen meal)
28110120	Beef with potatoes (frozen meal, large meat portion)
28110150	Beef with vegetable (diet frozen meal)
28110200	Sirloin, chopped, dinner, NFS (frozen meal)
28110220	Sirloin, chopped, with gravy, mashed potatoes, vegetable (frozen meal)
28110230	Sirloin, chopped, or swiss steak with gravy, vegetable, potatoes, dessert or muffin (frozen meal)
28110250	Sirloin tips with gravy, potatoes, vegetable (frozen meal)
28110260	Sirloin tips, potato, vegetable, fruit (diet frozen meal)
28110270	Sirloin beef with gravy, potatoes, vegetable (frozen meal)
28110280	Sirloin enchilada with tomatoes, zucchini and chilies (diet frozen entree)
28110290	Sirloin tips and mushrooms in wine sauce with rotini (diet frozen entree)
28110300	Salisbury steak dinner, NFS (frozen meal)
28110310	Salisbury steak with gravy, potatoes, vegetable (frozen meal)
28110330	Salisbury steak with gravy, whipped potatoes, vegetable, dessert (frozen meal)
28110340	Salisbury steak with gravy, potatoes, vegetable, soup or macaroni and cheese, dessert (frozen meal)
28110350	Salisbury steak with gravy, potatoes, vegetable, dessert (frozen meal, large meat portion)
28110370	Salisbury steak with gravy, macaroni and cheese, vegetable (frozen meal)
28110380	Salisbury steak with gravy, macaroni and cheese (frozen meal)
28110390	Salisbury steak, potatoes, vegetable, dessert (diet frozen meal)
28110410	Broiled steak with potatoes, vegetable (frozen meal)
28110500	Beef, sliced, with gravy, barley and wild rice, vegetables (diet frozen meal)
28110510	Beef, sliced, with gravy, potatoes, vegetable (frozen meal)
28110520	Beef, sliced, with gravy, potatoes, vegetable, dessert (frozen meal)
28110530	Beef, sliced, with gravy, hash brown potatoes, vegetable, soup, dessert (frozen meal)
28110540	Beef, sliced, with vegetable in sauce, au gratin potatoes (frozen meal)
28110550	Beef sirloin tips with gravy, potatoes, vegetable in cheese sauce (frozen meal)

28110600	Beef with noodles, vegetable (frozen meal)
28110620	Beef short ribs, boneless, with barbecue sauce, potatoes, vegetable (frozen meal)
28110640	Meatballs, Swedish, in sauce, with noodles (frozen meal)
28110650	Meatballs, Swedish, in sauce, with noodles and vegetable medley (frozen meal)
28110660	Meatballs, Swedish, in gravy, with noodles (diet frozen meal)
28111010	Corned beef hash with apple slices, vegetable (frozen meal)
28113010	Beef, oriental style, with vegetable, rice (diet frozen meal)
28113040	Beef, oriental style, with vegetable, rice, and fruit dessert (diet frozen meal)
28113050	Salisbury steak with vegetables in tomato-based sauce, noodles (diet frozen meal)
28113110	Salisbury steak, baked, with tomato sauce, vegetable (diet frozen meal)
28113140	Beef with spaetzle or rice, vegetable (frozen meal)
28113150	Beef steak with rice, vegetable (diet frozen meal)
28113160	Beef steak, with noodles and vegetables in soy-based sauce (diet frozen meal)
28113180	Beef chop suey with rice (frozen meal)
28116050	Beef with barbecue sauce, potatoes (shelf-stable meal)
28120210	Pork, sliced, with sweetpotatoes, vegetable, dessert (frozen meal)
28120230	Pork, sliced, with gravy, mashed potatoes, vegetable, dessert (frozen meal)
28120310	Pork with rice, vegetable, in soy-based sauce (diet frozen meal)
28122100	Ham, glazed, with sweetpotatoes, vegetable (frozen meal)
28130000	Veal dinner, NFS (frozen meal)
28133110	Veal, breaded, with spaghetti, in tomato sauce (frozen meal)
28133210	Veal parmigiana with vegetable (diet frozen meal)
28133220	Veal with peppers in sauce, rice (diet frozen meal)
28133240	Veal with vegetable, potato wedges (diet frozen meal)
28133310	Veal parmigiana with vegetable, muffin, dessert (frozen meal)
28133340	Veal parmigiana with vegetable, fettuccine alfredo, dessert (frozen meal)
28133360	Veal parmigiana with vegetable, tortellini in butter sauce (frozen meal)
28133380	Veal parmigiana with vegetable spaghetti in butter sauce frozen meal
28133410	Veal parmigiana with potatoes, vegetable (frozen meal)
28140100	Chicken dinner, NFS (frozen meal)
28140150	Chicken divan (frozen meal)
28140210	Chicken, boneless, with gravy, potatoes, vegetable, dessert (frozen meal, large meat portion)
28140250	Chicken, boneless, with gravy, dressing, rice, vegetable, dessert (frozen meal, large meat portion)
28140320	Chicken and noodles with vegetable, dessert (frozen meal)

28140610	Chicken, fried, with potatoes (frozen meal)
28140620	Chicken, fried, with potatoes (frozen meal, large meat portion)
28140710	Chicken, fried, with potatoes, vegetable (frozen meal)
28140720	Chicken patty, or nuggets, boneless, breaded, potatoes, vegetable (frozen meal)
28140730	Chicken patty, breaded, with tomato sauce and cheese, fettuccine alfredo, vegetable (frozen meal)
28140740	Chicken patty, or nuggets, boneless, breaded, with pasta and tomato sauce, fruit, dessert (frozen meal)
28140810	Chicken, fried, with potatoes, vegetable, dessert (frozen meal)
28140830	Chicken with barbecue sauce, beans, vegetable, dessert (frozen meal)
28140910	Chicken, fried, with potatoes, vegetable, cornbread, dessert (frozen meal)
28140920	Chicken, fried, with potatoes, vegetable, vegetable soup, dessert (frozen meal)
28141010	Chicken, fried, with potatoes, vegetable, dessert (frozen meal, large meat portion)
28141050	Chicken patty parmigiana, breaded, with vegetable (diet frozen meal)
28141060	Chicken patty with vegetable (diet frozen meal)
28141200	Chicken teriyaki with rice, vegetable (frozen meal)
28141210	Chicken, fried in honey sauce, with Oriental style rice and vegetables, in soy-based sauce (frozen meal)
28141250	Chicken with rice-vegetable mixture (diet frozen meal)
28141300	Chicken with rice and vegetable, reduced fat and sodium (diet frozen meal)
28141600	Chicken a la king with rice (frozen meal)
28141610	Chicken and vegetables in cream or white sauce (diet frozen meal)
28141620	Chicken cordon bleu with vegetables (diet frozen meal)
28141630	Chicken cordon bleu with vegetable, rice (frozen meal)
28141640	Chicken kiev with rice-vegetable mixture (frozen meal)
28141650	Chicken and vegetables au gratin with rice-vegetable mixture (diet frozen entree)
28142000	Chicken in cream sauce, with brown and wild rice, vegetable, and fruit dessert (diet frozen meal)
28143010	Chicken and vegetable entree with rice, Oriental (frozen meal)
28143020	Chicken and vegetable entree with rice, Oriental (diet frozen meal)
28143030	Chicken and vegetable entree, oriental (diet frozen meal)
28143040	Chicken chow mein with rice (diet frozen meal)
28143050	Chicken chow mein with rice, reduced fat and sodium (diet frozen meal)
28143080	Chicken with noodles and cheese sauce (diet frozen meal)
28143110	Chicken cacciatore with noodles (diet frozen meal)
28143130	Chicken and vegetable entree with noodles (frozen meal)
28143150	Chicken and vegetable entree with noodles (diet frozen meal)

28143170	Chicken in cream sauce with noodles and vegetable (frozen meal)
28143180	Chicken in butter sauce with potatoes and vegetable (diet frozen meal)
28143190	Chicken in mushroom sauce, white and wild rice, vegetable (frozen meal)
28143200	Chicken in soy-based sauce, rice and vegetables (frozen meal)
28143210	Chicken in orange sauce with almond rice (diet frozen meal)
28143220	Chicken in barbecue sauce, with rice, vegetable and dessert, reduced fat and sodium (diet frozen meal)
28144100	Chicken and vegetable entree with noodles and cream sauce (frozen meal)
28145000	Turkey dinner, NFS (frozen meal)
28145010	Turkey with dressing, gravy, potato (frozen meal)
28145020	Turkey with dressing, gravy, potato (frozen meal, large meat portion)
28145100	Turkey with dressing, gravy, vegetable and fruit (diet frozen meal)
28145110	Turkey with vegetable, stuffing (diet frozen meal)
28145120	Turkey and vegetables, in sauce (diet frozen meal)
28145210	Turkey with gravy, dressing, potatoes, vegetable (frozen meal)
28145310	Turkey with gravy, dressing, potatoes, vegetable, dessert (frozen meal)
28145410	Turkey with gravy, dressing, potatoes, vegetable, cream of tomato soup, dessert (frozen meal)
28145610	Turkey with gravy, dressing, potatoes, vegetable, dessert (frozen meal, large meat portion)
28145710	Turkey tetrazzini (frozen meal)
28145810	Turkey breast with gravy, long-grain and wild rice, vegetable (frozen meal)
28150000	Fish dinner, NFS (frozen meal)
28150050	Fish parmesan (frozen meal)
28150110	Fish and chips (frozen meal)
28150120	Fish and chips (frozen meal, large portion)
28150210	Haddock with chopped spinach (diet frozen meal)
28150220	Flounder with chopped broccoli (diet frozen meal)
28150230	Turbot with vegetable (diet frozen meal)
28150240	Sole with vegetable (diet frozen meal)
28150350	Cod with vegetable (diet frozen meal)
28150360	Cod in cheese sauce with vegetable (diet frozen meal)
28150370	Flounder in cream sauce with potatoes, carrots (diet frozen meal)
28150410	Fish and chips with vegetable, potatoes, tomatoes (frozen meal)
28150510	Fish in lemon-butter sauce with starch item, vegetable (frozen meal)
28150610	Fish, batter-dipped or fish cake, with vegetable, potatoes (frozen meal)
28150620	Fish, batter-dipped, or fish cake, with vegetable, potatoes, dessert (frozen meal)
28150650	Fish, breaded, or fish sticks, with pasta, vegetable and dessert

	(frozen meal)
28150810	Scallops with potatoes, vegetable (frozen meal)
28150910	Shrimp with potatoes, vegetable (frozen meal)
28151010	Shrimp chow mein with egg rolls, pepper oriental (frozen meal)
28151030	Shrimp creole with rice, peppers (diet frozen meal)
28152010	Seafood platter with fish cake, fish fillet, scallops, shrimp, potatoes (frozen meal)
28152030	Seafood newburg with rice, vegetable (frozen meal)
28152050	Shrimp with rice, vegetable (frozen meal)
28153010	Shrimp and clams in tomato-based sauce, with noodles (frozen meal)
28153050	Shrimp and noodles in tomato-based sauce, with vegetable and fruit dessert (diet frozen meal)
28154010	Shrimp and vegetables in sauce with noodles (diet frozen meal)
28160300	Meat loaf dinner, NFS (frozen meal)
28160310	Meat loaf in tomato sauce with potatoes, vegetable (frozen meal)
28160410	Meat loaf with tomato sauce, vegetable, potatoes, dessert (frozen meal)
28160510	Meat loaf with tomato sauce, vegetable, applesauce (frozen meal)
28160650	Stuffed green pepper (frozen meal)
28160660	Stuffed green pepper (diet frozen meal)
28160710	Stuffed cabbage, with meat and tomato sauce (diet frozen meal)
28160810	Livers, chicken, with vegetable (diet frozen meal)
28160910	Vegetable and beef in soy-based sauce, reduced fat and sodium (diet frozen meal)

Appendix I

Meal Replacements

000078

Food Items in "Meal Replacement" Category

Foodcode	Foodname
11611000	Instant breakfast, fluid, canned
11612000	Instant breakfast, powder, milk added
11613000	Instant breakfast, powder, sweetened with low calorie sweetener, milk added
11621000	Diet beverage, liquid, canned
11622000	Diet beverage, powder, milk added
11622010	Diet beverage, powder, reconstituted with skim milk
11623000	Meal supplement or replacement, commercially prepared, ready-to-drink
11631000	High calorie beverage, canned or powdered, reconstituted
11641000	Meal supplement or replacement, milk-based, high protein, liquid
11651010	Meal replacement formula, Cambridge diet, reconstituted, all flavors
11830800	Instant breakfast, powder, not reconstituted
11830810	Instant breakfast, powder, sweetened with low calorie sweetener, not reconstituted
11830850	High calorie milk beverage, powder, not reconstituted
11830900	Protein supplement, milk-based, powdered, not reconstituted
11830940	Meal replacement, high protein, milk based, fruit juice mixable formula, powdered, not reconstituted
11830950	Nutrient supplement, milk-based, powdered, not reconstituted
11830960	Protein supplement, milk-based, sodium controlled, powdered, not reconstituted
11830970	Meal replacement, protein type, milk-based, powdered, not reconstituted
11830980	Protein supplement, milk-based, powdered, not reconstituted
11830990	Nutrient supplement, milk-based, powdered, not reconstituted
11831500	Nutrient supplement, milk-based, high protein, powdered, not reconstituted
11832000	Meal replacement, protein type, milk- and soy-based, powdered, not reconstituted
11832500	Meal replacement, protein type, milk-based, with sugar and artificial sweetener, not reconstituted
11835000	Meal replacement or nutritional supplement, Cambridge diet formula, powdered, nonfat milk solids base, dry, not recon- stituted
11835100	Meal replacement, Amway's Nutrilite brand Positrim Drink Mix, powdered nonfat dry milk-based, dry, not reconstituted
11835150	Dynatrim, meal replacement, powder
11835200	Lose-it (Nanci), meal replacement, powder
28401000	Meal supplement or replacement, gelatin-based, powder, not reconstituted

28401010	Meal supplement or replacement, gelatin-based, powder, reconstituted
41430000	Protein powder, NFS
41430010	Protein supplement, powdered
41430100	Formulated diet meal, powdered, soy protein isolate, with herbs
41430200	Meal replacement or supplement, soy- and milk-base, powder, reconstituted with water
41430210	Protein supplement, tablet
41430310	Protein diet powder with soy and casein
41435010	High protein bar, soy base
41435110	High protein bar, candy-like, soy and milk base
41435200	High protein bar, cookie type, soy and milk base
41440000	Textured vegetable protein, dry
41440010	Meal replacement or supplement, liquid, soy-base, high protein
41440020	Ensure with fiber, liquid
41440050	Ensure Plus liquid nutrition
41440100	Meal replacement or supplement, liquid, soy-based
41450010	Meal replacement or supplement, liquid, predigested protein

Appendix J

Edible (Cooking) Oil

000081

Food Items in "Edible Oil" Category Used in Original GRAS Determination

Foodcode	Foodname
21003000	Beef, NS as to cut, fried, NS to fat eaten
21103110	Beef steak, breaded or floured, baked or fried, NS as to fat eaten
21103120	Beef steak, breaded or floured, baked or fried, lean and fat eaten
21103130	Beef steak, breaded or floured, baked or fried, lean only eaten
22000300	Pork, NS as to cut, breaded or floured, fried, NS as to fat eaten
22000310	Pork, NS as to cut, breaded or floured, fried, lean and fat eaten
22000320	Pork, NS as to cut, breaded or floured, fried, lean only eaten
22002100	Pork, ground or patty, breaded, cooked
22101300	Pork chop, breaded or floured, fried, NS as to fat eaten
22101310	Pork chop, breaded or floured, fried, lean and fat eaten
22101320	Pork chop, breaded or floured, fried, lean only eaten
22201400	Pork steak or cutlet, breaded or floured, fried, NS as to fat eaten
22201410	Pork steak or cutlet, breaded or floured, fried, lean and fat eaten
22201420	Pork steak or cutlet, breaded or floured, fried, lean only eaten
22210310	Pork, tenderloin, breaded, fried
22300120	Ham, fried, NS as to fat eaten
22300130	Ham, fried, lean and fat eaten
22300140	Ham, fried, lean only eaten
22300150	Ham, breaded or floured, fried, NS as to fat eaten
22300160	Ham, breaded or floured, fried, lean and fat eaten
22300170	Ham, breaded or floured, fried, lean only eaten
22709010	Pork skin, rinds, deep-fried
23321250	Venison/deer steak, breaded or floured, cooked, NS as to cooking method
24156250	Chicken, thigh, with or without bone, breaded, baked or fried, prepared skinless, coating eaten
24198710	Chicken patty with cheese, breaded, cooked
24198840	Chicken crackling, Puerto Rican style (Chicharron de pollo)
24302010	Duck, pressed, Chinese
25120150	Heart, fried
25150210	Brains and eggs, cooked
25160130	Tongue pot roast, Puerto Rican style (Lengua al caldero)
26129150	Pike, battered, fried
26131150	Pompano, battered, fried
26133150	Porgy, battered, fried
27111000	Beef with tomato-based sauce (mixture)
27111050	Spaghetti sauce with beef or meat other than lamb or mutton, homemade-style
27111200	Beef burgundy

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27111300	Mexican style beef stew, no potatoes, tomato-based sauce (mixture) (Carne guisada sin papas)
27111310	Mexican style beef stew, no potatoes, with chili peppers, tomato-based sauce (mixture) (Carne guisada con chile)
27115000	Beef with soy-based sauce (mixture)
27115100	Steak teriyaki with sauce (mixture)
27116300	Beef with sweet and sour sauce (mixture)
27118110	Meatballs, Puerto Rican style (Albondigas)
27118120	Stewed seasoned ground beef, Puerto Rican style (Picadillo guisado, picadillo de carne)
27118130	Stewed dried beef, Puerto Rican style (Tasajo guisado, carne cecina guisada)
27118140	Stuffed pot roast, Puerto Rican style, NFS (assume with gravy and stuffing)
27118180	Puerto Rican style beef stew, meat with gravy (potatoes reported separately)
27120080	Ham stroganoff
27120100	Ham or pork with tomato-based sauce (mixture)
27121010	Stewed pork, Puerto Rican style
27130040	Spaghetti sauce with lamb or mutton, homemade-style
27130100	Lamb curry
27141000	Chicken or turkey cacciatore
27141050	Stewed chicken with tomato-based sauce, Mexican style (mixture) (Pollo guisado con tomate)
27146050	Chicken wing with hot pepper sauce
27146300	Chicken or turkey parmigiana
27150140	Clam sauce, white
27150250	Fish moochim (Korean style), dried fish with soy sauce
27151040	Crabs in tomato-based sauce, Puerto Rican style (mixture) (Salmorejo de jueyes)
27151050	Shrimp in garlic sauce, Puerto Rican style (mixture) (Camarones al ajillo)
27151070	Stewed codfish, Puerto Rican style
27161010	Puerto Rican style meat loaf (Albondigon)
27162050	Spaghetti sauce with combination of meats, homemade-style
27211110	Mexican style beef stew with potatoes, tomato-based sauce (mixture) (Carne guisada con papas)
27211300	Beef (roast) hash
27212350	Beef stroganoff with noodles
27214300	Beef wellington
27218110	Puerto Rican style stuffed pot roast (larded meat) (Carne mechada con papas boliche)
27218210	Puerto-Rican style beef stew (Carne guisada con papas)
27218310	Stewed corned beef, Puerto Rican style ("Corned beef" guisado)
27221100	Stewed pig's feet, Puerto Rican style (Patitas de cerdo guisadas)
27221110	Pork roast, stuffed, Puerto Rican style

27221150	Mexican style pork stew, with potatoes, tomato-based sauce (mixture) (cerdo guisado con papas)
27250820	Fish and rice with cream sauce
27250950	Shellfish mixture and noodles, tomato-based sauce (mixture)
27251010	Stewed salmon, Puerto Rican style (Salmon guisado)
27260050	Meatballs, with breading, NS as to type of meat, with gravy
27261000	Breaded brains, Puerto Rican style (Sesos rebosados)
27313150	Beef, noodles, and vegetables (including carrots, broccoli, and/or dark-green leafy), soy-based sauce (mixture)
27313160	Beef, noodles, and vegetables (excluding carrots, broccoli, and dark-green leafy), soy-based sauce (mixture)
27315270	Stuffed grape leaves with beef and rice
27315510	Beef, rice, and vegetables (including carrots, broccoli, and/or dark-green leafy), soy-based sauce (mixture)
27315520	Beef, rice, and vegetables (excluding carrots, broccoli, and dark-green leafy), soy-based sauce (mixture)
27320080	Sausage, noodles, and vegetables (excluding carrots, broccoli, and dark-green leafy), tomato-based sauce
27320090	Sausage, noodles, and vegetables (including carrots, broccoli, and/or dark-green leafy), tomato-based sauce
27320310	Pork chow mein or chop suey with noodles
27330170	Stuffed grape leaves with lamb and rice
27330210	Lamb or mutton stew with potatoes and vegetables (including carrots, broccoli, and/or dark-green leafy), tomato-based sauce
27331150	Veal fricassee, Puerto Rican style (ternera en fricase)
27335500	Stewed rabbit, Puerto Rican style (Fricase de conejo)
27343910	Chicken or turkey chow mein or chop suey with noodles
27348100	Chicken fricassee, Puerto Rican style (Fricase de pollo)
27350020	Paella with seafood
27350110	Bouillabaisse
27351010	Codfish with starchy vegetables, Puerto Rican style (Serenata de bacalao) (mixture)
27351020	Codfish salad, Puerto Rican style (Gazpacho de bacalao)
27351030	Stewed codfish, Puerto Rican style (Bacalao guisado)
27351040	Biscayne codfish, Puerto Rican style (Bacalao a la Vizcaina)
27351050	Codfish salad, Puerto Rican style (Ensalada de bacalao)
27360090	Paella, NFS
27360100	Brunswick stew
27362000	Stewed tripe, Puerto Rican style, with potatoes (Mondongo)
27411120	Swiss steak
27415100	Beef and vegetables (including carrots, broccoli, and/or dark-green leafy (no potatoes)), soy-based sauce (mixture)
27415120	Beef, tofu, and vegetables (including carrots, broccoli, and/or dark-green leafy (no potatoes)), soy-based sauce (mixture)
27416100	Beef and vegetables, Hawaiian style (mixture)
27416150	Pepper steak

27418110	Seasoned shredded soup meat (Ropa vieja, sopa de carne ripiada)
27418210	Puerto-Rican style beef stew (Carne a la Judia)
27418310	Corned beef with tomato sauce and onion, Puerto Rican style (mixture)
27418410	Beef steak with onions, Puerto Rican style (mixture) (Biftec encebollado)
27420110	Pork and vegetables, Hawaiian style (mixture)
27420120	Pork and watercress with soy-based sauce (mixture)
27420170	Pork and onions with soy-based sauce (mixture)
27420500	Pork and vegetables (including carrots, broccoli, and/or dark-green leafy), soy-based sauce (mixture)
27420510	Pork and vegetables (excluding carrots, broccoli, and dark- green leafy), soy-based sauce (mixture)
27421010	Stuffed christophine, Puerto Rican style (Chayote relleno)
27422010	Pork chop stewed with vegetables, Puerto Rican style (mixture) (Chuletas a la jardinera)
27445110	Chicken or turkey and vegetables (including carrots, broccoli, and/or dark-green leafy (no potatoes)), soy-based sauce (mixture)
27445120	Chicken or turkey and vegetables (excluding carrots, broccoli, and dark-green leafy (no potatoes)), soy-based sauce (mixture)
27445150	General Tso (General Gau) chicken
27448010	Chicken or turkey fricassee, no potatoes, Puerto Rican style, NFS (assume with sauce)
27448020	Chicken or turkey fricassee, with sauce, no potatoes, Puerto Rican style (potatoes reported separately)
27448030	Chicken or turkey fricassee, no sauce, no potatoes, Puerto Rican style (sauce and potatoes reported separately)
27450080	Seafood salad
27450410	Shrimp and vegetables (including carrots, broccoli, and/or dark-green leafy (no potatoes)), soy-based sauce (mixture)
27450420	Shrimp and vegetables (excluding carrots, broccoli, and dark-green leafy (no potatoes)), soy-based sauce (mixture)
27450600	Shellfish mixture and vegetables (including carrots, broccoli, and/or dark-green leafy (no potatoes)), soy-based sauce
27450610	Shellfish mixture and vegetables (excluding carrots, broccoli, and dark-green leafy (no potatoes)), soy-based sauce
27450740	Fish and vegetables (including carrots, broccoli, and/or dark-green leafy (no potatoes)), soy-based sauce (mixture)
27450750	Fish and vegetables (excluding carrots, broccoli, and dark-green leafy (no potatoes)), soy-based sauce (mixture)
27451010	Fish a la creole, Puerto Rican style (Pescado frito con mojo)
27451030	Lobster creole, Puerto Rican style (Langosta a la criolla)
27451070	Codfish salad, Puerto Rican style (Serenata)
27461010	Stewed seasoned ground beef, Puerto Rican style (Picadillo para relleno)
27462000	Stewed chitterlings, Puerto Rican style (cuajo guisado)

28350310	Turtle and vegetable soup
28351110	Fish and vegetable soup, no potatoes (Sopa de pescado)
28351120	Fish soup, with potatoes (Sopa de Pescado)
28351160	Codfish, rice, and vegetable soup, Puerto Rican style
28351170	Codfish soup with noodles, Puerto Rican style
28510010	Gravy or sauce, poultry-based from Puerto Rican-style chicken fricasse
28510020	Gravy, meat-based, from Puerto-Rican style stuffed pot roast
32105180	Huevos rancheros
32105310	Ripe plantain omelet, Puerto Rican style (Tortilla de amarillo)
32105330	Scrambled eggs with jerked beef, Puerto Rican style (Revoltillo de tasajo)
32301100	Garlic egg soup, Puerto Rican style (Sopa de ajo)
35001000	Scrambled eggs, sausage, hash brown potatoes (frozen meal)
41205050	Bean dip, made with refried beans
41205100	Black bean sauce
41209000	Falafil
41210100	Stewed dry red beans, Puerto Rican style (Habichuelas coloradas guisadas)
41210110	Stewed dry lima beans, Puerto Rican style
41210120	Stewed white beans, Puerto Rican style
41210150	Stewed pink beans with viandas, ham, Puerto Rican style
41210160	Stewed pink beans with pig's feet, Puerto Rican style
41210170	Stewed red beans with pig's feet, Puerto Rican style
41210180	Stewed white beans with pig's feet, Puerto Rican style
41210190	Stewed red beans with pig's feet and potatoes, Puerto Rican style
41210200	Black beans, Cuban style (Habichuelas negras guisadas a la Cubana)
41303500	Stewed green peas, Puerto Rican style (Habichuelas del pais)
41303550	Stewed green peas with pig's feet and potatoes, Puerto Rican style
41306000	Loaf, lentil
41310100	Stewed pigeon peas, Puerto Rican style (Gandules guisados, Gandur, Gandules)
41310150	Stewed chickpeas, Puerto Rican style
41310160	Stewed chickpeas, with potatoes, Puerto Rican style
41310200	Chickpeas stewed with pig's feet, Puerto Rican style (Garbanzos guisados con patitos de cerdo)
41310210	Stewed chickpeas with Spanish sausages, Puerto Rican style (Garbanzos guisados con chorizos)
41601050	Soybean soup, made with milk
41601070	Soybean soup, miso broth
41601090	Bean soup, with macaroni
41601110	Bean and ham soup, chunky style
41602060	Pigeon pea asopao
41610100	White bean soup, Puerto Rican style (Sopon de habichuelas blancas)

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41811950	Swiss steak, with gravy, meatless
41812850	Vegetarian stroganoff (made with meat substitute)
55310100	Bread fritters, Puerto Rican style (Torrejas, Galician fritters)
55601000	Flour and milk patty
56205200	Rice, frozen dessert, nondairy, flavors other than chocolate
56205410	Rice, white, cooked with (fat) oil, Puerto Rican style (Arroz blanco)
58100150	Burrito with beef and potato, no beans
58100360	Chilaquiles, tortilla casserole with salsa, cheese, and egg
58100370	Chilaquiles, tortilla casserole with salsa and cheese, no egg
58101930	Taco or tostada salad with beef and cheese, fried flour tortilla
58109000	Italian pie, meatless
58109010	Italian pie with meat
58112510	Dumpling, steamed, filled with meat, poultry, or seafood
58115110	Tamale casserole, Puerto Rican style (Tamales en cazuela)
58115150	Tamal in a leaf, Puerto Rican style (Tamales en hoja)
58115210	Taco with crab meat, Puerto Rican style (Taco de jueye)
58116110	Meat turnover, Puerto Rican style (Pastelillo de carne; Empanadilla)
58116310	Cheese turnover, Puerto Rican style (Pastelillo de queso; Empanadilla)
58117210	Cornmeal stick, Puerto Rican style (Surullo)
58117510	Hallaca, Puerto Rican style (hominy, pork or ham, vegetables)
58123110	Manapua, filled with meat
58123120	Manapua, filled with bean paste, meatless
58124250	Spanakopitta
58132800	Spaghetti with clam sauce, NS as to red or white
58132810	Spaghetti with red clam sauce
58132820	Spaghetti with white clam sauce
58134630	Tortellini, cheese-filled, meatless, with vegetables and vinaigrette dressing
58134640	Tortellini, cheese-filled, meatless, with vinaigrette dressing
58134810	Cannelloni, cheese- and spinach-filled, no sauce
58135110	Chow fun noodles with meat and vegetables
58135120	Chow fun noodles with vegetables, meatless
58140110	Spaghetti with corned beef, Puerto Rican style
58145110	Macaroni or noodles with cheese
58147100	Pasta with pesto sauce
58150110	Rice, fried, meatless
58150310	Rice, fried, NFS
58150510	Rice, fried, with shrimp
58155210	Stuffed rice with chicken, Dominican style (Arroz relleno Dominicano)
58155310	Paella, Valenciana style, with meat (Paella Valenciana)
58155320	Seafood paella, Puerto Rican style (Paella a la marinera)
58155410	Soupy rice with chicken, Puerto Rican style (Asopao de pollo)
58155910	Rice with squid, Puerto Rican style (arroz con calamares)
58156110	Fried rice, Puerto Rican style (arroz frito)

58156710	Rice with stewed beans, Puerto Rican style
58161510	Grape leaves stuffed with rice
58175110	Tabbouleh (bulgar with tomatoes and parsley)
58404500	Matzo ball soup
58407030	Soup, mostly noodles
58408010	Won ton (wonton) soup
58408500	Noodle soup with vegetables, Oriental style
58409000	Noodle soup, with fish ball, shrimp, and dark green leafy vegetable
58410100	Rice soup, made with tea
58421000	Sopa seca (dry soup), Mexican style, NFS
58421010	Sopa Seca de Fideo, Mexican style, made with dry noodles
58421060	Sopa seca de arroz (dry rice soup), Mexican style
58450300	Noodle soup, made with milk
59003000	Meat substitute, cereal- and vegetable protein-based, fried
71403000	White potato, home fries
71703000	Stewed potatoes, Mexican style (Papas guisadas)
71703040	Stewed potatoes with tomatoes, Mexican style (Papas guisadas con tomate)
71704000	Stewed potatoes with tomatoes
71900200	Plantain, fried, NS as to green or ripe
71901110	Fried green plantain, Puerto Rican style (Tostones)
71905110	Fried ripe plantain, Puerto Rican style (Platano maduro frito)
71905120	Plantain, ripe, rolled in flour, fried
71931010	Cassava with creole sauce, Puerto Rican style (Yuca al mojo)
72202030	Broccoli, batter-dipped and fried
72308500	Dark-green leafy vegetable soup, meatless, Oriental style
73111400	Carrots in tomato sauce
74410110	Sofrito, Puerto Rican seasoning
74415110	Tomato and sofrito stewing sauce, Puerto Rican style
74420110	Puerto Rican ground seasoning
75142550	Cucumber salad made with cucumber, oil, and vinegar
75201030	Artichoke salad in oil
75208520	Breadfruit, fried
75226040	Peppers, red, cooked, NS as to fat added in cooking
75226110	Peppers, hot, cooked, NS as to form, fat added in cooking
75316050	Ratatouille
75340300	Pinacbet (eggplant with tomatoes, bitter melon, etc.)
75400500	Artichokes, stuffed
75409020	Cauliflower, batter-dipped, fried
75412030	Eggplant dip
75418010	Squash, summer, yellow or green, breaded or battered, fried
75439500	Chop suey, meatless
75440400	Vegetables, dipped in chick-pea flour batter, (pakora), fried
75506100	Mustard sauce
77121010	Fried stuffed potatoes, Puerto Rican style (Rellenos de papas)
77121110	Potato and ham fritters, Puerto Rican style (Frituras de papa y

	jamon)
77141010	Potato chicken pie, Puerto Rican style (Pastelon de pollo)
77201210	Green plantain with cracklings, Puerto Rican style (Mofongo)
77205110	Ripe plantain fritters, Puerto Rican style (Pionono)
77205610	Ripe plantain meat pie, Puerto Rican style (Pinon)
77230210	Cassava Pasteles, Puerto Rican style (Pasteles de yuca)
77230510	Cassava pie stuffed with crab meat, Puerto Rican style (Empanada de jueyes)
77250110	Stuffed tannier fritters, Puerto Rican style (Alcapurrias)
77250710	Tannier fritters, Puerto Rican style (Frituras de yautia)
77272010	Puerto Rican pasteles (Pasteles de masa)
77316010	Stuffed cabbage, with meat, Puerto Rican style (Repollo relleno con carne)
77316510	Stuffed cabbage, with meat and rice, Syrian dish, Puerto Rican style (Repollo relleno con carne y con arroz; Arabe Mihsy Melful)
77316600	Eggplant and meat casserole
77563010	Puerto Rican stew (Sancocho)
81302040	Sandwich spread
81302070	Pesto sauce
82101000	Vegetable oil, NFS
82101300	Almond oil
82101500	Coconut oil
82102000	Corn oil
82102500	Corn and canola oil
82103000	Cottonseed oil
82103500	Flaxseed oil
82104000	Olive oil
82105000	Peanut oil
82105500	Rapeseed oil
82105750	Canola and soybean oil
82105800	Canola, soybean and sunflower oil
82106000	Safflower oil
82107000	Sesame oil
82108000	Soybean oil
82108250	Soybean and sunflower oil
82108500	Sunflower oil
82108700	Walnut oil
82109000	Wheat germ oil

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Appendix K

Repetitive Fried Food and Popcorn

000090

Food Items in "Repetitive Fried Food and Popcorn" Category

Foodcode	Foodname
24198740	Chicken nuggets
24198770	Chicken nuggets, lowfat
24208000	Turkey, nuggets
51140100	Bread, dough, fried
52209010	Hush puppy
53420400	Sopaipilla, without syrup or honey
53520000	Doughnut, NS as to cake or yeast
53520110	Doughnut, cake type
53520120	Doughnut, cake type, chocolate
53520140	Doughnut, cake type, chocolate covered
53520150	Doughnut, cake type, chocolate covered, dipped in peanuts
53520160	Doughnut, cake type, chocolate, with chocolate icing
53520200	Churros
53520500	Doughnut, oriental
53520600	Cruller, NFS
53520700	French cruller
53521100	Doughnut, raised or yeast, chocolate, with chocolate icing
53521110	Doughnut, raised or yeast
53521120	Doughnut, raised or yeast, chocolate
53521130	Doughnut, raised or yeast, chocolate covered
53521140	Doughnut, jelly
53521210	Doughnut, custard-filled
53521220	Doughnut, chocolate cream-filled
53521230	Doughnut, custard-filled, with icing
53521250	Doughnut, wheat
53521300	Doughnut, wheat, chocolate covered
53521400	Doughnut, eggless, carob-covered, raised or yeast
54401010	Salty snacks, corn or cornmeal base, nuts or nuggets, toasted
54401020	Salty snacks, corn or cornmeal base, corn chips, corn-cheese chips
54401050	Salty snacks, corn or cornmeal base, corn puffs and twists; corn-cheese puffs and twists
54401080	Salty snacks, corn or cornmeal base, tortilla chips
54401090	Salty snacks, corn or cornmeal base, corn chips, corn-cheese chips, unsalted
54401100	Salty snacks, corn or cornmeal base, tortilla chips, light (baked with less oil)
54401200	Salty snacks, corn or cornmeal base, with oat bran, tortilla chips
54401210	Salty snacks, corn based puffs and twists, cheese puffs and twists, lowfat

54402080	Salty snacks, corn or cornmeal base, tortilla chips, unsalted
54402200	Salty snack mixture, mostly corn or cornmeal based, with pretzels, without nuts
54402500	Salty snacks, wheat- and corn-based chips
54402600	Salty snacks, multigrain, chips
54403000	Popcorn, popped in oil, unbuttered
54403010	Popcorn, air-popped (no butter or no oil added)
54403020	Popcorn, popped in oil, buttered
54403030	Popcorn, with cheese
54403040	Popcorn, air-popped, buttered
54403050	Popcorn, flavored
54403060	Popcorn, popped in oil, lowfat, low sodium
54403070	Popcorn, popped in oil, lowfat
54403090	Popcorn, popped in oil, unsalted
54403110	Popcorn, sugar syrup or caramel-coated
54403120	Popcorn, sugar syrup or caramel-coated, with nuts
54403150	Popcorn, sugar syrup or caramel-coated, fat free
54406010	Onion-flavored rings
54406200	Shrimp chips (tapioca base)
71201010	White potato, chips
71201050	White potato, chips, reduced fat
71201080	White potato, chips, fat free
71201100	White potato, chips, restructured
71201200	White potato, chips, restructured, reduced fat and reduced sodium
71201250	White potato, chips, restructured, baked
71201300	Potato based snacks, reduced fat, low sodium, all flavors
71202000	White potato, chips, unsalted
71202100	White potato, chips, unsalted, reduced fat
71205000	White potato, sticks
71211000	White potato skins, chips
71401000	White potato, french fries, NS as to from fresh or frozen
71401010	White potato, french fries, from fresh, deep fried
71401020	White potato, french fries, from frozen, oven baked
71401030	White potato, french fries, from frozen, deep fried
71402040	White potato, french fries, breaded or battered
71403000	White potato, home fries
71403500	White potato, home fries, with green or red peppers and onions
71405000	White potato, hash brown, NS as to from fresh, frozen, or dry mix
71405010	White potato, hash brown, from fresh
71405020	White potato, hash brown, from frozen
71405030	White potato, hash brown, from dry mix
71405100	White potato, hash brown, with cheese
71410000	White potato skins, with adhering flesh, fried
71410500	White potato skins, with adhering flesh, fried, with cheese

Submission End