

### Third Cumulative Series

# Consumption Ratio and Food Predominance of Flavoring Materials

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**T**he Consumption Ratio was introduced in 1981.<sup>1</sup> It was discussed in detail in papers in this journal<sup>2</sup> and in *Food and Chemicals Toxicology*.<sup>3</sup> The purpose of the Consumption Ratio is to put the need for safety evaluation of flavoring substances in proper perspective against the assumed safety of traditional food consumption.

The Consumption Ratio compares the average intake of added flavoring materials to the quantities consumed as unavoidable components of traditional foods. The Consumption Ratio is defined as the ratio between the quantity of a flavoring material consumed as an ingredient of basic and traditional foods, and the quantity of the same flavoring material consumed as a food additive by the same population over the same

period. The Consumption Ratio is a number between 0 (for flavoring materials not occurring in food) and infinity (for flavoring materials which occur in food and are not used as additives).

If the Consumption Ratio of a flavoring material is more than 1, this substance is consumed predominantly as an ingredient of traditional foods, and it can be called "Food Predominant." This has been indicated by a + in the tables. If the Consumption Ratio is over 10, then the use as added flavor adds on average less than 10% to the total intake of the substance, an almost insignificant increase. In this case the Food Predominance has been marked as ++.

For the calculation of the Consumption Ratio data are needed on:

1. the quantitative occurrence of individual flavoring materials in traditional foods
2. the average per capita annual consumption of these foods
3. the quantity of these flavoring materials used as added flavor, in most cases via the products of the flavor industry.

The data on quantitative occurrence of flavoring materials in foods used in this third cumulative series have largely been derived from five literature search reports by CIVO in the Netherlands.<sup>4-8</sup> This literature search has been financially supported by the International Organization of the Flavour Industry, IOFI. Additional quantitative data were published by Dr. de Vincenzi et al., of the Instituto Superiore de Sanita, in two reports, of which one has been published in a journal.<sup>9</sup> The Commission of the European Economic Community has provided financial support for this literature search. Data have also been contributed by the Subcommittee on Natural Occurrence of FEMA, the Flavor and Extract Manufacturers' Association of the U.S. Several flavor manufacturers have contributed data from their research. If several quantitative data have been reported for the same substance, the lowest and highest value have been listed, and the average of these two values has been used for the calculation. If no usage as added flavoring material has been reported, the Consumption Ratio has been given as: >999,999.

The average consumption of various foods was obtained from trade and growers associations, statistical and economic services of the U.S. Department of Agriculture and of Commerce or personal communication from experts. The annual per capita human consumption of foods used for the calculations are listed in Table I.

The annual quantities used by the flavor industry were derived from a U.S. survey. A joint survey was organized by the National Academy of Sciences and the FEMA for the year 1982, and published in the report on the use of food additives by the National Research Council/National Academy of Sciences.<sup>10</sup>

As data for these three factors are updated, the Consumption Ratio will be updated. Additional quantitative data on the occurrence of flavoring materials in food are being published regularly. A new survey on the quantities of added flavoring materials used in the U.S. is planned for the year 1987.

The first series of Consumption Ratios was published in 1983, covering 93 flavoring materials.<sup>11</sup> This third series contains Consumption



Ratios for 499 substances, of which 106 are Food Predominant +, and 309 are ++.

Since data on the quantities of flavoring materials used as additives are only available in the U.S., Consumption Ratios can only be calculated for materials used in the U.S. Such materials occur on the FEMA/GRAS list, or are permitted in the Code of Federal Regulations. In addition, the FEMA GRAS list includes 409 flavoring materials which have not yet been identified in food, and which, therefore, have a Consumption Ratio of 0.

The five CIVO reports list quantitative occurrence in food for an additional 792 flavoring materials.

Moreover, it is known from qualitative data on the occurrence of flavoring materials in food in another series of reports by CIVO, also supported by IOFI, that, so far, close to 5000 flavoring materials have been identified in food.<sup>12</sup>

The quantity of the 500 flavoring materials reported in this third cumulative series, used annually as added flavoring, represents more than 99% by weight of total quantity of all nature identical flavoring used annually.

In most countries other than the U.S., all nature-identical flavoring materials may be used. It is quite likely that many of these several thousand generally known materials are indeed being used, probably in relatively small quantities. Moreover, it is to be expected that flavor companies, as a result of their own research, are aware of the existence of many more nature-identical flavoring materials. Even though the individual and total quantities of such substances used can be assumed to be relatively small, a Consumption Ratio could only be calculated for them if the quantity used is known.

As explained in the introduction to the Second Cumulative Series,<sup>13</sup> lemon oil has been considered a food for the purpose of the calculation. The same status has been assigned to spearmint oil and peppermint oil. Several major spices have also been included.

The calculation of the Consumption Ratio has been carried out by dividing the total annual consumption of a flavoring material as a component of foods in the U.S. by the annual quantity used in the U.S. as added flavor. In the case of olive oil and green tea, the quantities consumed as food by a population of 230 million are theoretical values, since they are based on the per capita consumption of these foods respectively in France, Italy and Greece (combined) for olive oil and in Japan for green tea.

No consumption has been calculated for acetic



acid, since its main consumption is in the form of natural or synthetic vinegar.

The Consumption Ratio of limonene has only limited significance, since the d-limonene used as "added flavoring" is also a natural material, isolated from oranges by distillation.

The Consumption Ratio has been generally accepted as a valuable tool for the setting of priorities for the safety evaluation of flavoring substances. The general understanding of its significance is inspiring flavor researchers to publish the results of their work in a form which clearly relates the quantity of the substances identified to the food. A recent publication of Nouleau and Toulemonde is an excellent example of this fortunate tendency.<sup>14</sup>

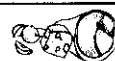
#### Acknowledgement

The authors would like to thank all those who have supported them in their efforts to obtain, calculate and present data related to the Consumption Ratio. They are especially grateful for the contributions made by R. Heinze, Chairman of the Subcommittee on Natural Occurrence of FEMA and its members, in particular Dr. W. Zeiger. They also want to thank M. Ahrenholz for her assistance in sorting and organizing the data for computerization.

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Table I. Annual Per Capita Food Consumption in the United States

Food	Annual Consumption in kg	Reference	Food	Annual Consumption in kg	Reference
almond, roasted	0.61	22	lemon oil	0.003	10
apple juice	3.20	25	lentils	0.35	37
apples	8.10	25	lobster	0.115	51
artichokes	0.20	22	loganberry	0.22	34
asparagus	0.317	50	maize	12.35	21
avocados	0.70	47	mango	0.160	97
bacon	4.20	22	melons (musk)	9.50	22
banana	10.20	27	melons, honeydew	0.90	22
beans	2.20	37	milk	102.00	28
beef, roasted	34.90	15	mushroom, fresh	0.93	28
beer	94.00	27	mushroom, dried	0.004	22
blackberry	0.22	34	mustard, brown & black	0.025	23
blueberry	0.22	34	nutmeg	0.010	22
brandy, grape	0.27	48	olive oil*	9.30	17
bread, white	24.70	31	onion	5.20	21
bread, dark	3.80	46	orange juice	16.00	25
brussel sprouts	0.20	22	oregano	0.017	44
butter	2.00	19	peaches	3.50	25
cabbage	4.70	21	peanut, roasted	3.10	22
carrots	3.35	21	peanut oil	0.46	41
cauliflower	1.60	22	pear	1.20	22
celery leaves	3.36	37	peas	0.68	37
cheese, blue	0.09	22	pepper	0.163	42
cheese, cheddar	3.90	29	peppers, bell	1.60	22
cheese, swiss	2.87	20	peppermint oil	0.002	45
cherry	0.70	34	pineapple	2.10	25
chicken	25.20	22	pork	29.20	38
chocolate	0.95	43	potato chips	1.90	26
cinnamon	0.008	52	potato	57.00	21
cloves	0.004	44	potato, sweet	2.80	37
cocoa	1.22	30	raisin	0.90	22
cocoa butter	0.524	43	raspberry	0.22	34
coconut	0.18	22	rice, cooked	5.00	24
coffee roasted	4.85	18	rum	0.410	27
crab	0.041	51	spearmint oil	0.001	45
cranberries	0.67	47	strawberry	1.60	25
cucumbers	4.30	21	tea, black	0.33	22
figs, dried	0.06	22	tea, green**	0.80	53
filberts, roasted	1.18	28	tomato	30.80	21
fish	5.90	32	vanilla	0.004	16
grape	4.00	34	whiskey	1.18	27
grape, concord	1.00	39	wine, red	3.90	36
grape muscat	0.05	40	wine, table	5.10	36
grapefruit juice	1.20	25	wine, white	1.20	36
hazelnuts	1.18	28	yogurt	1.20	33
horseradish	0.10	22			
kiwifruit	0.08	47			
lamb	0.71	38			
lamb fat	0.06	35			

\* consumption data for Greece, France and Italy  
combined

\*\* consumption data for Japan



Consumption Ratio and Food Predominance of Flavoring Materials

FLAVORING MATERIAL:	FEMA NO.	OCCURRING IN:	ANN CONS KG	ANN CONS KG	ANN CONS KG	CONSUMPTION RATIO	FOOD PRE-DOMINANT
			VIA THIS FD	VIA FOOD	AS ADDED FLAV		
ACETAL	2002	BRANDY, GRAPE	2,297.7				
		RUM	30,176.0				
		WHISKEY	7,070.0				
				39,543.7	597	66.238	++
ACETALDEHYDE	2003	APPLE	754.6				
		APPLE JUICE	3,643.2				
		BEANS	1,138.5				
		BEER	265,926.0				
		BRANDY, GRAPE	2,359.8				
		BREAD, WHITE	40,221.5				
		BUTTER	109.5				
		CARROT	8,533.2				
		CHEESE, CHEDDAR	3,408.6				
		CHEESE, SWISS	924.1				
		CHICKEN, HEATED	1,246.1				
		CUCUMBER	1,087.9				
		FILBERTS, ROASTED	1357.0				
		FISH	3,392.5				
		GRAPEFRUIT JUICE	6,941.4				
		LENTILS	120.8				
		LOGANBERRY	67.4				
		MAIZE	5,965.1				
		MANGO	1.4				
		MILK	293.3				
		ORANGE JUICE	11,040.0				
		PEANUT, ROASTED	49.9				
		PEAR	1,932.0				
		PEAS	31,373.8				
		PINEAPPLE	483.0				
		PORK	80.5				
		POTATO	1,638.8				
		RICE COOKED	46.0				
		RUM	3418.4				
		STRAWBERRY	1,288.0				
		TEA, BLACK	19.1				
		TOMATO	32,586.4				
		WHISKY	14,886.3				
		WINE, RED	55,165.5				
		WINE, TABLE	81,288.9				
		WINE, WHITE	20,603.4				
		YOGURT	10,584.6				
				613,976.3	147,678	4.157	+
ACETOIN	2008	APPLE	354.0				
		BANANA	23.5				
		BEER	101,614.0				
		BREAD, WHITE	4,544.8				
		BUTTER	460.0				
		CARROT	3.9				
		CHEESE, CHEDDAR	18,388.5				
		CHICKEN, HEATED	6,955.9				
		COCOA	144.2				
		COFFEE ROASTED	5,466.0				
		ORANGE JUICE	18.4				
		PEAS	17,829.6				
		PORK	33.6				
		RASPBERRY	126.7				
		STRAWBERRY	3.7				
		WINE, RED	26,461.5				
		WINE, WHITE	6,886.2				
				189,314.5	7,882	24.017	++
ACETOPHENONE	2009	BEANS	202.4				
		BEEF ROASTED	401.4				
		COCOA	575.2				
		CRANBERRIES	7.4				
		GRAPE, CONCORD	2.3				
		LENTILS	.9				
		OLIVE OIL	2.1				



CONSUMPTION RATIO AND FOOD PREDOMINANCE OF FLAVORING MATERIALS (continued)

FLAVORING MATERIAL:	FEMA NO.	OCCURRING IN:	ANN CONS KG VIA THIS FD	ANN CONS KG VIA FOOD	ANN CONS KG AS ADDED FLAV	CONSUMPTION RATIO	FOOD PRE DOMINANT
		PEAS	56.4				
		RASPBERRY	1.4				
		STRAWBERRIES	11.0				
		TEA, GREEN	101.2				
				1,361.7	258	5.277	+
ALLYL ISO THIOCYANATE	2034	BRUSSELS SPROUTS	4.6				
		CABBAGE	3,243.0				
		CAULIFLOWER	27.6				
		HORSERADISH	31,050.0				
		MUSTARD BR. & BL.	57,500.0				
				91,825.2	15,311	5.997	+
ALLYL MERCAPTAN	2035	ONION	478.4				
				478.4	7.2	66.444	++
ISO AMYL ACETATE	2055	APPLE	3,735.4				
		APPLE JUICE	2,392.0				
		BANANA	43,401.0				
		BEER	76,751.0				
		BRANDY, GRAPE	211.1				
		BUTTER	230.0				
		COCOA	56.1				
		GRAPE, MUSCAT	9.9				
		MANGO	5				
		PEACH	434.7				
		RUM	518.7				
		STRAWBERRY	75.4				
		TEA, BLACK	98.7				
		WHISKEY	4,111.7				
		WINE, RED	3,588.0				
		WINE, TABLE	5,630.4				
		WINE, WHITE	1,462.8				
				142,707.4	73,839	1.933	+
1-PENTANOL	2056	APPLE	754.6				
		APPLE JUICE	1,122.4				
		BEANS	9.2				
		CHICKEN, HEATED	611.6				
		COCOA	113.6				
		CRANBERRIES	10.8				
		GRAPE	3,634.0				
		GRAPE, CONCORD	11.5				
		GRAPE, MUSCAT	3.5				
		LENTILS	7.6				
		MUSHROOM, DRIED	2				
		OLIVE OIL	4.4				
		PEANUT, ROASTED	7				
		PEAS	42.8				
		POTATO CHIPS	26.2				
		RASPBERRY	12.7				
		RICE COOKED	46.0				
		RUM	235.8				
		STRAWBERRY	46.0				
		TEA, BLACK	379.5				
		TEA, GREEN	2,033.2				
		TOMATO	7,438.2				
		WINE, RED	2,332.2				
		WINE, WHITE	248.4				
				19,125.1	407	46.991	++
ISO AMYL ALCOHOL	2057	APPLE	1,350.8				
		APPLE JUICE	7,580.8				
		BANANA	2,756.6				
		BEER	1,059,380.0				
		BUTTER	2.3				
		COCOA	168.4				
		COFFEE ROASTED	3,904.3				
		CRANBERRIES	30.8				
		GRAPE, MUSCAT	18.9				

CONSUMPTION RATIO AND FOOD PREDOMINANCE OF FLAVORING MATERIALS (continued)

FLAVORING MATERIAL:	FEMA NO.	OCCURRING IN:	ANN CONS KG VIA THIS FD	ANN CONS KG VIA FOOD	ANN CONS KG AS ADDED FLAV	CONSUMPTION RATIO	FOOD PRE DOMINANT
		GRAPE, MUSCAT	1.6				
		MUSHROOM, DRIED	.2				
		MUSHROOM, FRESH	181.9				
		OLIVE OIL	320.9				
		ORANGE JUICE	883.2				
		POTATO CHIPS	2.3				
		RASPBERRY	182.9				
		RUM	45,641.2				
		STRAWBERRY	123.3				
		TEA, BLACK	220.1				
		TEA, GREEN	2,392.0				
		WHISKEY	243,852.9				
		WINE, RED	121,543.5				
		WINE, WHITE	55,513.3				
				1,546,052.2	16,308	94.803	++
ISO AMYL BENZOATE	2058	BEER	216.2				
				216.2	8.1	26.691	++
AMYL BUTYRATE	2059	APPLE JUICE	25.8				
		GRAPE	237.4				
				263.2	6,659	.040	-
ISO AMYL BUTYRATE	2060	APPLE	5.5				
		BANANA	117.3				
		GRAPE, MUSCAT	1.2				
		MANGO	.9				
		PEACHES	1,368.5				
		RUM	141.5				
		STRAWBERRY	11.0				
		TOMATO	1,416.8				
				3,062.7	13,592	.224	-
ISO AMYL FORMATE	2069	RUM	188.6				
				188.6	416	.453	-
AMYL HEXANOATE	2074	APPLE JUICE	1.4				
				1.4	190	.007	-
ISO AMYL HEXANOATE	2075	APPLE	5.5				
		BEER	4,432.1				
		GRAPE	282.0				
		GRAPEFRUIT JUICE	.0				
		RUM	94.3				
		WHISKEY	108.6				
		WINE, RED	1,166.1				
		WINE, WHITE	248.4				
				6,337.0	308	20.575	++
ISO AMYL LAURATE	2077	BEER	216.2				
		GRAPE, MUSCAT	18.4				
		RUM	94.3				
				328.9	.1	3,289.000	++
AMYL OCTANOATE	2079	APPLE JUICE	25.3				
				25.3	14	1.807	+
ISO AMYL OCTANOATE	2080	APPLE	15.0				
		BEER	17,296.0				
		GRAPE, MUSCAT	1.8				
		RUM	94.3				
		WHISKEY	219.9				
		WINE, WHITE	1.6				
				17,628.6	24	734.526	++
ISO AMYL PROPIONATE	2082	BEER	432.4				
		RUM	9.4				
				441.8	11,370	.039	-
ISO AMYL SALICYLATE	2084	GRAPE	14,283.9				
		GRAPE, MUSCAT	2.3				
				14,286.2	81	176.372	++

# Consumption Ratio



CONSUMPTION RATIO AND FOOD PREDOMINANCE OF FLAVORING MATERIALS (continued)

FLAVORING MATERIAL:	FEMA NO.	OCCURRING IN:	ANN CONS KG VIA THIS FD	ANN CONS KG VIA FOOD	ANN CONS KG AS ADDED FLAV	CONSUMPTION RATIO	FOOD PRE-DOMINANT
ISO AMYL ISO VALERATE	2045	BEER WHISKEY	864.8 68.3	933.1	4,983	.188	-
BENZALDEHYDE	2127	ALMOND, ROASTED APPLE APPLE JUICE BEANS BEER BRANDY, GRAPE BREAD, WHITE BUTTER CHERRY CHICKEN, HEATED COCOA COFFEE ROASTED CRANBERRIES FIGS, DRIED GRAPE, MUSCAT KIWI/FRUIT LENTILS MANGO MUSHROOM, FRESH OLIVE OIL PEACHES PEAS POTATO CHIPS RASPBERRY RICE COOKED RUM STRAWBERRY TEA, BLACK TEA, GREEN TOMATO WINE, WHITE	561.2 46.7 294.4 16.8 216.2 18.6 40,903.2 .9 144.9 463.7 757.6 2,007.9 50.6 1.2 1.6 .0 .2 .5 1,691.9 2.1 925.8 16.1 196.7 15.2 23.0 188.6 38.6 155.7 690.0 8,500.8 15.2	57,945.9	156,738	.368	-
BENZOPHENONE	2134	GRAPE, MUSCAT	1.2	1.2	27	.044	-
BENZYL ACETATE	2135	APPLE APPLE JUICE COCOA CRANBERRIES GRAPE, MUSCAT MELONS (HONEYDEW) MELONS (MUSK) OLIVE OIL PEACHES RICE COOKED STRAWBERRY TEA, BLACK WINE, RED	9.4 3.7 14.0 8.1 .9 18.2 218.5 641.7 450.8 .0 20.2 318.8 1,749.2	3,453.5	8,471	.407	-
BENZYL ALCOHOL	2137	APPLE APPLE JUICE BRANDY, GRAPE CHICKEN, HEATED CRANBERRIES GRAPE, CONCORD GRAPE, MUSCAT GRAPE/FRUIT JUICE MUSHROOM, FRESH PEACHES RASPBERRY STRAWBERRY TEA, BLACK TEA, GREEN WINE, RED WINE, WHITE	12.2 2,135.1 1.2 .7 84.9 2.3 21.9 1.6 397.9 354.2 129.0 20.2 607.2 2,852.0 403.7 74.5	7,098.6	71,121	.100	-

CONSUMPTION RATIO AND FOOD PREDOMINANCE OF FLAVORING MATERIALS (continued)

FLAVORING MATERIAL:	FEMA NO.	OCCURRING IN:	ANN CONS KG VIA THIS FD	ANN CONS KG VIA FOOD	ANN CONS KG AS ADDED FLAV	CONSUMPTION RATIO	FOOD PRE-DOMINANT
BENZYL BENZOATE	2138	CRANBERRIES	107.9	107.9	2,872	.038	-
BENZYL ETHYL ETHER	2144	CRANBERRIES	15.4	15.4	.0	>999,999	++
BENZYL FORMATE	2145	CRANBERRIES	12.4	12.4	262	.047	-
BORNEOL	2157	CARROT	863.0	863.0	54	15.981	++
BORNYL ACETATE	2159	CARROT	423.9	423.9	81	5.233	+
2-BUTANONE	2170	APPLE JUICE BEANS BREAD, WHITE BUTTER CARROT CHEESE, CHEDDAR CHEESE, SWISS CHICKEN, HEATED FISH LENTILS MILK OLIVE OIL PEANUT OIL PEANUT, ROASTED PEAR PEAS POTATO CHIPS RUM TOMATO YOGURT	84.6 102.1 70,132.1 73.6 154.1 30,139.2 264.0 281.1 81.4 4.1 961.9 12.9 7.4 71.3 234.6 359.7 30.6 2.8 31,878.0 1,104.0	135,979.5	326	417.119	++
BUTYL ACETATE	2174	APPLE APPLE JUICE BANANA BEER BUTTER GRAPE, CONCORD GRAPE, MUSCAT RUM STRAWBERRY	27,525.9 820.6 8,211.0 2,270.1 9.2 2.5 .9 .9 20.2	38,861.3	6,930	5.607	+
ISO BUTYL ACETATE	2175	APPLE JUICE BANANA BEER BRANDY, GRAPE GRAPE, MUSCAT MANGO RUM STRAWBERRY WHISKEY WINE, RED WINE, TABLE WINE, WHITE	184.0 4,692.0 3,567.3 99.4 3.0 3.7 141.5 18.4 169.6 547.2 176.0 73.1	9,671.2	13,454	.718	-
BUTYL ALCOHOL	2178	ALMOND, ROASTED APPLE APPLE JUICE BEANS BEER BUTTER CHEESE, SWISS CHICKEN, HEATED GRAPE, CONCORD GRAPE, MUSCAT	2,104.5 52,825.5 15,088.0 3.5 24,863.0 46.0 561.2 7,534.8 16.1 1.8				

# Consumption Ratio



CONSUMPTION RATIO AND FOOD PREDOMINANCE OF FLAVORING MATERIALS (continued)

FLAVORING MATERIAL:	FEMA NO.	OCCURRING IN:	ANN CONS KG VIA THIS FD	ANN CONS KG VIA FOOD	ANN CONS KG AS ADDED FLAV	CONSUMPTION RATIO	FOOD PRE-DOMINANT
		LENTILS	9.7				
		MUSHROOM, FRESH	2.1				
		OLIVE OIL	2.1				
		ORANGE JUICE	5,520.0				
		PEAS	21.9				
		RASPBERRY	4.1				
		RUM	1,886.0				
		STRAWBERRY	20.2				
		TEA, BLACK	3,833.0				
		TEA, GREEN	1,748.0				
		TOMATO	2,833.6				
		WHISKEY	814.2				
		WINE, RED	1,704.3				
		WINE, WHITE	690.0				
				122,133.6	1,467	83.255	++
ISO BUTYL ALCOHOL	2179	APPLE	1,105.6				
		APPLE JUICE	7,360.0				
		BEANS	81.4				
		BEER	929,660.0				
		BREAD, WHITE	46,016.1				
		CRANBERRIES	12.4				
		GRAPE	519.8				
		LENTILS	8.1				
		MUSHROOM, DRIED	.2				
		PEAS	19.8				
		RASPBERRY	55.7				
		RUM	18,011.3				
		WHISKEY	99,739.5				
		WINE, RED	57,408.0				
		WINE, WHITE	21,597.0				
				1,181,594.9	1,938	609.697	++
BUTYL BUTYRATE	2186	APPLE	372.6				
		APPLE JUICE	20.9				
		MANGO	.7				
		ORANGE JUICE	18.4				
		STRAWBERRY	16.6				
				429.2	326	1.316	+
ISO BUTYL BUTYRATE	2187	BRANDY, GRAPE	.7				
		MANGO	.9				
				1.6	72	.023	-
BUTYL ISO BUTYRATE	2188	APPLE	245.9				
				245.9	35	7.026	+
BUTYL FORMATE	2196	APPLE JUICE	1.2				
		BUTTER	9.2				
				10.4	.4	26.000	++
ISO BUTYL FORMATE	2197	BEER	17,296.0				
				17,296.0	4.0	4,324.000	++
BUTYL HEPTANOATE	2199	APPLE	15.0				
		APPLE JUICE	1.8				
				16.8	37	.454	-
BUTYL HEXANOATE	2201	MANGO	.5				
		STRAWBERRY	1.8				
				2.3	11	.209	-
ISO BUTYL HEXANOATE	2202	BEER	432.4				
				432.4	25	17.296	++
BUTYL LAURATE	2206	APPLE JUICE	2.5				
				2.5	.4	6.250	+
BUTYL PROPIONATE	2211	APPLE	28.1				
				28.1	23	1.222	+

CONSUMPTION RATIO AND FOOD PREDOMINANCE OF FLAVORING MATERIALS (continued)

FLAVORING MATERIAL:	FEMA NO.	OCCURRING IN:	ANN CONS KG VIA THIS FD	ANN CONS KG VIA FOOD	ANN CONS KG AS ADDED FLAV	CONSUMPTION RATIO	FOOD PRE-DOMINANT
ISO BUTYL PROPIONATE	2212	RUM	47.2				
				47.2	22	2.145	+
BUTYL ISO VALERATE	2218	STRAWBERRY	1.8				
				1.8	1,449	.001	-
BUTYRALDEHYDE	2219	APPLE JUICE	257.6				
		BEER	2,162.0				
		BREAD, WHITE	146,115.3				
		BUTTER	20.7				
		CARROT	115.7				
		CHICKEN, HEATED	753.5				
		PEANUT OIL	.0				
		PEANUT, ROASTED	142.6				
		PEAR	386.4				
		PEAS	20.2				
		RICE COOKED	230.0				
				150,204.0	339	443.081	++
ISO BUTYRALDEHYDE	2220	APPLE JUICE	2.3				
		BEANS	52.7				
		BEER	5,405.0				
		BREAD, WHITE	19,769.9				
		CARROT	50.1				
		FISH	3,256.8				
		LENTILS	2.3				
		OLIVE OIL	49.2				
		PEANUT OIL	396.8				
		PEANUT, ROASTED	1,051.8				
		PEAS	17.0				
		PORK	204.9				
		POTATO CHIPS	43.7				
		RUM	23.7				
		TEA, BLACK	7.6				
		WHISKEY	2,035.5				
				32,369.3	330	98.089	++
BUTYRIC ACID	2221	APPLE JUICE	2,907.2				
		BEER	39,997.0				
		BREAD, WHITE	43,175.6				
		BUTTER	11,513.8				
		CHEESE, BLUE	27,075.6				
		CHEESE, CHEDDAR	124,683.0				
		CHEESE, SWISS	603,661.5				
		COFFEE ROASTED	70,220.8				
		FISH	4,071.0				
		MILK	156,009.0				
		MUSHROOM, DRIED	1.8				
		RASPBERRY	40.5				
		RUM	358.3				
		STRAWBERRY	901.6				
		TEA, BLACK	75.9				
		WHISKEY	2,131.9				
		WINE, WHITE	157.3				
		YOGURT	4,360.8				
				1,091,342.6	26,636	40.973	++
ISO BUTYRIC ACID	2222	BEER	42,159.0				
		MUSHROOM, DRIED	3.9				
		RUM	47.2				
		STRAWBERRY	371.7				
		WHISKEY	1,049.0				
		WINE, RED	1,300.7				
		WINE, WHITE	291.2				
				45,222.7	751	60.217	++
CAMPHERE	2229	CARROT	6,337.2				
		LEMON OIL	1,828.5				
		NUTMEG	11,730.0				
		OREGANO	234.6				
		PEPPER	7,029.5				
		RASPBERRY	189.8				
				27,349.6	113	242.031	++



CONSUMPTION RATIO AND FOOD PREDOMINANCE OF FLAVORING MATERIALS (continued)

FLAVORING MATERIAL:	FEMA NO.	OCCURRING IN:	ANN CONS KG VIA THIS FD	ANN CONS KG VIA FOOD	ANN CONS KG AS ADDED FLAV	CONSUMPTION RATIO	FOOD PRE DOMINANT
D-CAMPBOL	2230	NUTMEG OREGANO RASPBERRY	3,450.0 156.4 1.4	3,607.8	19,075	.189	-
CARVACROL	2245	BEER OREGANO	23,782.0 56,421.3	80,203.3	8.6	9,325.965	++
CARVEOL	2247	CELERY LEAVES GRAPEFRUIT JUICE MANGO SPEARMINT OIL	1,043.3 233.2 1.6 1,150.9	2,428.1	95	25.559	++
4-CARVOMETHENOL	2248	APPLE APPLE JUICE CARROT GRAPEFRUIT JUICE LEMON OIL NUTMEG ORANGE JUICE OREGANO PEPPER RASPBERRY	16.8 20.2 493.1 35.9 1,242.0 31,050.0 2,097.6 1,837.7 2,155.8 19.1	38,968.2	163	239.069	++
CARVONE	2249	CELERY LEAVES GRAPEFRUIT JUICE LEMON OIL ORANGE JUICE SPEARMINT OIL	772.8 29.0 158.7 36.8 155,480.0	156,477.3	20,702	7.558	+
CARVYL ACETATE	2250	CELERY LEAVES SPEARMINT OIL	1,468.3 4,600.0	6,068.3	90	67.425	++
BETA CARYOPHYLLENE	2252	CARROT CLOVES GRAPEFRUIT JUICE LEMON OIL NUTMEG ORANGE JUICE OREGANO PEPPER RASPBERRY TEA, GREEN	18,607.7 15,732.0 5,216.4 1,759.5 2,300.0 36.8 4,770.2 230,563.5 86.0 515.2	279,587.3	1,839	152.033	++
CINNAMALDEHYDE	2286	CINNAMON CHAMBERRIES	38,640.0 1.6	38,641.6	141,336	.273	-
CINNAMIC ACID	2288	BRANDY, GRAPE GRAPE, CONCORD STRAWBERRY	9.4 4.6 169.3	183.3	366	.502	-
CINNAMYL ALCOHOL	2294	CINNAMON CHAMBERRIES STRAWBERRY	147.2 1.6 22.1	170.9	946	.181	-
CITRAL	2303	LEMON OIL ORANGE JUICE TOMATO	16,215.0 570.4 21,287.4	38,072.8	58,890	.646	-
CITRONELLAL	2307	LEMON OIL	793.5				

CONSUMPTION RATIO AND FOOD PREDOMINANCE OF FLAVORING MATERIALS (continued)

FLAVORING MATERIAL:	FEMA NO.	OCCURRING IN:	ANN CONS KG VIA THIS FD	ANN CONS KG VIA FOOD	ANN CONS KG AS ADDED FLAV	CONSUMPTION RATIO	FOOD PRE DOMINANT
DL-CITRONELLLOL	2309	MANGO ORANGE JUICE BEER GRAPE ORANGE JUICE TEA, BLACK	147.2 147.2 216.2 722.2 184.0 455.4	1,087.9	7,972	.136	-
CITRONELLYL ACETATE	2311	GRAPEFRUIT JUICE LEMON OIL ORANGE JUICE	2.8 724.5 36.8	1,577.8	507	3.111	+
CITRONELLYL BUTYRATE	2312	TOMATO	63,756.0	63,756.0	249	256.048	++
CITRONELLYL PROPIONATE	2316	TOMATO	127,512.0	127,512.0	7.7	16,560.000	++
P-CRESOL	2337	BUTTER CHICKEN, HEATED COFFEE ROASTED OLIVE OIL RUM TEA, GREEN WHISKY WINE, RED	1.2 .7 7,529.7 427.8 9.4 18.4 6.9 .9	7,995.0	17	470.295	++
P-CYHENE	2356	BUTTER CARROT LEMON OIL NUTMEG ORANGE JUICE OREGANO RASPBERRY	.2 8,367.6 4,899.0 4,945.0 36.8 10,987.1 65.8	29,301.5	1,408	20.810	++
GAMMA DECALACTONE	2360	BEER BUTTER COCONUT MANGO PEACHES RUM STRAWBERRY	2,270.1 299.0 4.1 1.6 764.8 1.8 185.8	3,527.2	647	5.451	+
DELTA DECALACTONE	2361	BUTTER COCONUT MANGO PEACHES RASPBERRY RUM STRAWBERRY WINE, WHITE	3,461.5 2,010.0 .7 56.4 35.7 1.8 36.8 16.6	5,619.5	4,801	1.170	+
DECANAL	2362	ALMOND, ROASTED AVOCADO BEER BUTTER CHICKEN, HEATED COCONUT CHAMBERRIES GRAPEFRUIT JUICE LEMON OIL MILK ORANGE JUICE	561.2 .9 216.2 184.0 3.0 2.1 13.8 110.4 759.0 7.1 294.4				

# Consumption Ratio



CONSUMPTION RATIO AND FOOD PREDOMINANCE OF FLAVORING MATERIALS (continued)

FLAVORING MATERIAL:	FEMA NO.	OCCURRING IN:	ANN CONS KG VIA THIS FD	ANN CONS KG VIA FOOD	ANN CONS KG AS ADDED FLAV	CONSUMPTION RATIO	FOOD PRE-DOMINANT
		PEANUT OIL	36.6				
		PEANUT, ROASTED	178.3				
		RAISINS	12.4				
		RICE COOKED	11.5				
		STRAWBERRY	276.0				
		TOMATO	7,792.4				
CAPRIC ACID	2364	BEER	44,321.0	10,459.3	987	10.598	++
		BUTTER	41,147.0				
		CHEESE, BLUE	26,289.0				
		CHEESE, CHEDDAR	48,886.5				
		CHEESE, SWISS	75,911.5				
		COCONUT	41.4				
		COFFEE ROASTED	19,075.1				
		GRAPE	64.4				
		GRAPE, CONCORD	9.2				
		GRAPEFRUIT JUICE	19.3				
		LAMB	326,600.0				
		MILK	199,410.0				
		PORK	151,110.0				
		RUM	485.8				
		STRAWBERRY	12.9				
		TEA, GREEN	18.4				
		WHISKEY	7,205.7				
		WINE, WHITE	712.1				
		YOGURT	8,155.8				
			949,475.1	4,530		209.597	++
DECANOL	2365	APPLE JUICE	1,656.0				
		CRANBERRIES	12.4				
		GRAPEFRUIT JUICE	8.3				
		ORANGE JUICE	368.0				
		RASPBERRY	2.8				
		WHISKEY	51.5	2,099.0	95	22.095	++
2-DECENAL	2366	BEEF ROASTED	481.6				
		CARROT	269.8				
		CHICKEN, HEATED	1,101.2				
		MILK	1.4				
		OLIVE OIL	32,085.0				
		PEANUT OIL	8.1				
		PEANUT, ROASTED	107.0				
		POTATO CHIPS	56.8	34,110.9	24	1,421.288	++
DECYL ACETATE	2367	GRAPEFRUIT JUICE	13.8				
		LEMON OIL	345.0				
		STRAWBERRY	1.8	360.6	7.2	50.084	++
DECYL BUTYRATE	2368	STRAWBERRY	7.4	7.4	5.4	1.370	+
DIACETYL	2370	AVOCADO	.0				
		BANANA	70.4				
		BEER	6,702.2				
		BRANDY, GRAPE	43.5				
		BREAD, WHITE	3,493.9				
		BUTTER	552.0				
		CHEESE, CHEDDAR	2,108.0				
		CHEESE, SWISS	594.1				
		CHICKEN, HEATED	2,898.0				
		COFFEE ROASTED	3,011.9				
		CRANBERRIES	2.3				
		GRAPE	18.4				
		MILK	176.0				
		PORK	67.2				
		POTATO CHIPS	2.3				
		RASPBERRY	3.5				
		RUM	208.8				

CONSUMPTION RATIO AND FOOD PREDOMINANCE OF FLAVORING MATERIALS (continued)

FLAVORING MATERIAL:	FEMA NO.	OCCURRING IN:	ANN CONS KG VIA THIS FD	ANN CONS KG VIA FOOD	ANN CONS KG AS ADDED FLAV	CONSUMPTION RATIO	FOOD PRE-DOMINANT
		STRAWBERRY	38.6				
		TEA, BLACK	8.1				
		TOMATO	3,542.0				
		WHISKEY	139.8				
		WINE, RED	1,973.4				
		WINE, WHITE	193.2				
		YOGURT	2,525.4				
				28,373.0	25,368	1.121	+
DIETHYL MALATE	2374	BRANDY, GRAPE	12.4				
		GRAPE	8,280.0				
		WINE, RED	4,081.4				
		WINE, WHITE	110.4	12,484.2	113	110.480	++
DIETHYL MALONATE	2375	WINE, RED	26.9				
		WINE, WHITE	2.8	29.7	1,744	.017	-
DIETHYL SUCCINATE	2377	APPLE JUICE	21,785.6				
		RASPBERRY	60.7				
		WHISKEY	135.7				
		WINE, RED	13,858.7				
		WINE, WHITE	1,656.0	37,496.7	1,141	32.862	++
DIHYDROCARVYL ACETATE	2380	CELERY LEAVES	77.3				
		SPEARMINT OIL	3,220.0				
				3,297.3	1.3	2,536.385	++
3,7 DIMETHYL-1-OCTANOL	2391	LEMON OIL	690.0	690.0	14	49.286	++
GAMMA DODECALACTONE	2400	BUTTER	437.0				
		COCONUT	2.1				
		PEACHES	120.8				
		RUM	1.8				
		STRAWBERRY	47.8	609.5	385	1.583	+
DELTA DODECALACTONE	2401	BUTTER	8,636.5				
		COCONUT	1,244.1				
		PEACHES	201.3				
		RASPBERRY	15.2				
		RUM	1.8				
		STRAWBERRY	101.2	10,200.1	5,753	1.773	+
2-DODECENAL	2402	MILK	14.0				
		PEANUT OIL	3.2				
		PEANUT, ROASTED	46.5	63.7	22	2.893	+
ESTRAGOLE	2411	APPLE JUICE	10.6				
		OREGANO	156.4	167.0	154	1.085	+
ETHYL ACETATE	2414	APPLE JUICE	846.4				
		BAHAMA	198,237.0				
		BEER	735,080.0				
		BUTTER	575.0				
		CHEESE, CHEDDAR	448.5				
		CHICKEN, HEATED	811.4				
		COFFEE ROASTED	223.1				
		CRANBERRIES	12.4				
		GRAPE, MUSCAT	50.6				
		OLIVE OIL	42.8				
		RASPBERRY	404.8				
		RUM	170,683.0				
		STRAWBERRY	130.6				



CONSUMPTION RATIO AND FOOD PREDOMINANCE OF FLAVORING MATERIALS (continued)

FLAVORING MATERIAL:	FEMA NO.	OCCURRING IN:	AMN CONS KG VIA THIS FD	AMN CONS KG VIA FOOD	AMN CONS KG AS ADDED FLAV	CONSUMPTION RATIO	FOOD PRE-DOMINANT
		TOMATO	31,878.0				
		WHISKY	109,645.6				
		WINE, RED	119,301.0				
		WINE, WHITE	20,720.7				
ETHYL ACETOACETATE	2415	STRAWBERRY	3.7	1,389,090.9	14,405	96.432	++
		WINE, RED	.0				
ETHYL ACRYLATE	2418	PINEAPPLE	386.4	386.4	.1	3,864.000	++
ETHYL ANTHRANILATE	2421	GRAPE, CONCORD	6.9	6.9	117	.059	-
ETHYL BENZOATE	2422	BEER	216.2				
		COCOA	154.3				
		CRAWBERRIES	6.4				
		CRAWBERRIES	10.1				
		KIWIFRUIT	2.8				
		MUSHROOM, FRESH	32.2				
		PEACHES	587.7				
		RASPBERRY	6.0				
		RUM	47.2				
		STRAWBERRY	7.4				
				1,070.3	579	1.848	+
ETHYL BUTYRATE	2427	APPLE	512.4				
		APPLE JUICE	1,475.7				
		BANANA	398.8				
		BEER	4,648.3				
		BRANDY, GRAPE	62.1				
		BUTTER	4.6				
		CHEESE, CHEDDAR	627.9				
		CHEESE, SWISS	363.2				
		GRAPE	110.4				
		GRAPE, CONCORD	23.0				
		KIWIFRUIT	66.7				
		MANGO	154.4				
		MELON (HONEYDEW)	14.6				
		ORANGE JUICE	699.2				
		RUM	20,746.0				
		STRAWBERRY	938.4				
		WHISKY	176.4				
		WINE, RED	852.2				
		WINE, TABLE	410.6				
		WINE, WHITE	189.1				
				32,478.0	137,259	.236	-
ETHYL ISO BUTYRATE	2428	APPLE JUICE	9.9				
		BEER	6,486.0				
		GRAPE	181.2				
		GRAPE, MUSCAT	3.0				
		KIWIFRUIT	.5				
		MANGO	2.8				
		RUM	754.4				
		WINE, WHITE	46.9				
				7,484.7	1,839	4.071	+
ETHYL CINNAMATE	2430	BEER	108.1				
		COCOA	154.3				
		STRAWBERRY	12.9				
		WINE, WHITE	16.6				
				291.9	289	1.010	+
ETHYL DECANOATE	2432	APPLE JUICE	22.1				
		BEER	3,351.1				
		BRANDY, GRAPE	3,042.9				
		BUTTER	4.6				

CONSUMPTION RATIO AND FOOD PREDOMINANCE OF FLAVORING MATERIALS (continued)

FLAVORING MATERIAL:	FEMA NO.	OCCURRING IN:	AMN CONS KG VIA THIS FD	AMN CONS KG VIA FOOD	AMN CONS KG AS ADDED FLAV	CONSUMPTION RATIO	FOOD PRE-DOMINANT
		COCOA	140.3				
		GRAPE	1,683.6				
		GRAPE, CONCORD	2.3				
		GRAPE, MUSCAT	.5				
		MANGO	1.4				
		RUM	1,178.8				
		STRAWBERRY	5.5				
		WHISKY	7,992.7				
		WINE, RED	224.3				
		WINE, TABLE	164.2				
		WINE, WHITE	289.8				
				18,104.1	1,748	10.356	++
ETHYL FORMATE	2434	BEER	21,836.2				
		BUTTER	365.7				
		GRAPE	197.8				
		PINEAPPLE	29,704.5				
		RASPBERRY	108.8				
		RUM	528.1				
		WHISKY	1,302.7				
		WINE, RED	3,812.3				
		WINE, WHITE	621.0				
				58,477.1	7,701	7.594	+
4-ETHYLGLUCALCOL	2436	BEER	108.1				
		BRANDY, GRAPE	31.1				
		COFFEE ROASTED	1,506.0				
		CRAWBERRIES	1.6				
		GRAPEFRUIT JUICE	.2				
		OLIVE OIL	623,070.0				
		RUM	84.9				
		WHISKY	49.2				
		WINE, RED	184.0				
				625,035.1	466	1,341.277	++
ETHYL HEPTANOATE	2437	BEER	648.6				
		BRANDY, GRAPE	2.5				
		GRAPEFRUIT JUICE	.2				
		RUM	235.8				
				887.1	906	.979	-
ETHYL CAPROATE	2439	APPLE	111.8				
		APPLE JUICE	1,251.2				
		BEER	11,891.0				
		BRANDY, GRAPE	195.7				
		BUTTER	9.2				
		GRAPE	27.6				
		KIWIFRUIT	.7				
		MANGO	.7				
		MELON (HONEYDEW)	8.3				
		ORANGE JUICE	73.6				
		PINEAPPLE	386.4				
		STRAWBERRY	929.2				
		WINE, RED	1,524.9				
		WINE, TABLE	656.9				
		WINE, WHITE	179.4				
				17,246.6	3,121	5.527	+
ETHYL LACTATE	2440	BEER	216.2				
		BRANDY, GRAPE	8,942.4				
		RUM	2,923.3				
		WINE, RED	182,091.0				
		WINE, WHITE	52,187.5				
				246,360.4	7,021	35.089	++
ETHYL LAURATE	2441	APPLE JUICE	294.4				
		BEER	5,415.8				
		BRANDY, GRAPE	192.5				
		COCOA	56.1				
		COCONUT	2.1				



CONSUMPTION RATIO AND FOOD PREDOMINANCE OF FLAVORING MATERIALS (continued)

FLAVORING MATERIAL:	FEMA NO.	OCCURRING IN:	ANN CONS KG VIA THIS FD	ANN CONS KG VIA FOOD	ANN CONS KG AS ADDED FLAV	CONSUMPTION RATIO	FOOD PRE-DOMINANT
ETHYL 2-METHYLBUTYRATE	2443	MANGO	3.7				
		RUM	707.3				
		WHISKEY	6,174.4				
		WINE, RED	3,184.4				
		WINE, WHITE	317.4				
				16,348.1	2,228	7.336	+
		APPLE	111.8				
		APPLE JUICE	15.2				
		BRANDY, GRAPE	3.7				
		GRAPE	9.2				
ETHYL MYRISTATE	2445	KIWI FRUIT	.0				
		MELON (HONEYDEW)	20.7				
		ORANGE JUICE	18.4				
		RUM	235.8				
		STRAWBERRY	185.8				
		WINE, WHITE	3.0				
				603.6	2,559	.236	-
		BRANDY, GRAPE	192.5				
		COCOA	2.1				
		MANGO	4.6				
ETHYL NONANOATE	2447	RUM	28.3				
				28.3	471	.060	-
ETHYL OCTANOATE	2449	BEER	25,944.0				
		BUTTER	18.4				
		ORANGE JUICE	18.4				
		STRAWBERRY	38.6				
		WINE, RED	1,794.0				
		WINE, WHITE	324.3				
				28,137.7	1,576	17.854	++
		BRANDY, GRAPE	93.2				
		GRAPEFRUIT JUICE	2.8				
		RUM	754.4				
ETHYL OLEATE	2450	WHISKEY	81.4				
				931.8	135	6.902	+
ETHYL PALMITATE	2451	BRANDY, GRAPE	406.9				
		COCOA	84.2				
		COCOA	2.1				
		GRAPEFRUIT JUICE	11.0				
		MANGO	1.8				
		RUM	2,357.5				
		TEA, GREEN	55.2				
		WHISKEY	5,007.3				
				7,926.0	8.2	968.585	++
ETHYL PHENYLACETATE	2452	BRANDY, GRAPE	1.2				
		COCOA	28.1				
		GRAPEFRUIT JUICE	.9				
		WINE, RED	9.0				
		WINE, WHITE	2.1				
				41.3	33	1.252	+
ETHYL 3-PHENYLPROPIONATE	2455	RUM	47.2				
				47.2	.1	472.000	++
ETHYL PROPIONATE	2456	APPLE JUICE	150.9				
		BEER	10,918.1				
		BRANDY, GRAPE	1,251.4				
		KIWI FRUIT	.9				
		RUM	4,715.0				
		STRAWBERRY	20.2				
		TOMATO	13,813.8				
		WHISKEY	817.0				
		WINE, RED	8,970.0				

CONSUMPTION RATIO AND FOOD PREDOMINANCE OF FLAVORING MATERIALS (continued)

FLAVORING MATERIAL:	FEMA NO.	OCCURRING IN:	ANN CONS KG VIA THIS FD	ANN CONS KG VIA FOOD	ANN CONS KG AS ADDED FLAV	CONSUMPTION RATIO	FOOD PRE-DOMINANT
ETHYL PYRUVATE	2457	WINE, WHITE	124.2				
				40,781.5	34,881	1.169	+
		WINE, WHITE	209.8				
				209.8	59	3.556	+
ETHYL SALICYLATE	2458	GRAPE, CONCORD	4.6				
		RASPBERRY	4.1				
				8.7	45	.193	-
ETHYL VALERATE	2462	RUM	3,772.0				
		WINE, RED	6,727.5				
		WINE, WHITE	358.8				
				10,858.3	462	23.504	++
ETHYL ISO VALERATE	2463	APPLE JUICE	1,619.2				
		BEER	216.2				
		BRANDY, GRAPE	6.2				
		GRAPE	391.0				
		PINEAPPLE	1,932.0				
		RUM	235.8				
		STRAWBERRY	57.0				
		WINE, RED	53.8				
		WINE, WHITE	9.7				
				4,520.9	2,899	1.560	+
EUCALYPTOL	2465	CRANBERRIES	4.6				
		GRAPEFRUIT JUICE	24.8				
		NUTMEG	6,900.0				
		OREGANO	4,261.9				
				11,191.3	3,969	2.819	+
EUGENOL	2467	BANANA	23.5				
		BRANDY, GRAPE	3.2				
		CARROT	215.7				
		CLOVES	138,184.0				
		MUSHROOM, DRIED	.0				
		NUTMEG	805.0				
		ORANGE JUICE	73.6				
		RUM	69.7				
		STRAWBERRY	12.9				
		WHISKEY	28.5				
ISO EUGENOL	2468	WINE, WHITE	5.5				
				139,421.6	14,043	9.927	+
		BEER	432.4				
		COFFEE ROASTED	111.6				
		NUTMEG	1,610.0				
		RUM	7.6				
				2,161.6	403	5.364	+
EUGENYL ACETATE	2469	CLOVES	19,228.0				
				19,228.0	407	47.243	++
EUGENYL METHYL ETHER	2475	GRAPEFRUIT JUICE	5.5				
		NUTMEG	1,150.0				
		ORANGE JUICE	147.2				
				1,302.7	185	7.042	+
ISO EUGENYL METHYL ETHER	2476	ORANGE JUICE	110.4				
				110.4	1,594	.069	-
FARNESOL	2478	BRANDY, GRAPE	146.1				
		GRAPEFRUIT JUICE	.9				
		RASPBERRY	96.1				
				243.1	1.3	187.000	++
FENCHYL ALCOHOL	2480	BEER	864.8				
		GRAPEFRUIT JUICE	8.3				
				873.1	67	13.031	++

CONSUMPTION RATIO AND FOOD PREDOMINANCE OF FLAVORING MATERIALS (continued)

FLAVORING MATERIAL:	FEMA NO.	OCCURRING IN:	ANN CONS KG VIA THIS PD	ANN CONS KG VIA FOOD	ANN CONS KG AS ADDED FLAV	CONSUMPTION RATIO	FOOD PRE- DOMINANT
		TOMATO WINE, RED	21,252.0 179.4				
GERANYL BUTYRATE	2512	TOMATO	21,252.0	25,810.6	1,762	14.647	++
GERANYL ISO BUTYRATE	2513	BEER CARROT	432.4 15.4	21,252.0	1,132	18.774	++
GLYCEROL	2525	BEER GRAPE WINE, WHITE	12,673,000.0 9,016,000.0 2,373,600.0	447.8	7.2	62.195	++
GUALACOL	2532	BEER BUTTER COCOA COFFEE ROASTED RUM WHISKEY WINE, RED	648.6 2.5 56.1 7,418.2 37.7 16.3 4.6	24,062,600.0	3,714,600	6.478	+
GAMMA HEPTALACTONE	2539	BEER BEEF ROASTED BEER PORK STRAWBERRY TEA, GREEN	7.4 80.3 432.4 1,679.0 3.7 55.2	8,184.0	67	122.149	++
HEPTANAL	2540	APPLE JUICE AVOCADO BEER BREAD, WHITE BUTTER CARROT CHICKEN, HEATED COCONUT FISH GRAPEFRUIT JUICE LEMON OIL MILK ORANGE JUICE PEANUT OIL PEANUT, ROASTED PORK POTATO CHIPS RICE, COOKED TEA, BLACK	441.6 .2 2,162.0 16,474.9 259.9 115.7 5.8 2.1 2.8 2.5 27.6 4.6 36.8 3.2 32.2 80.5 46.0 23.0 106.3	2,258.0	294	7.681	+
2-HEPTANONE	2544	BEER BREAD, WHITE BUTTER CHEESE, BLUE CHEESE, CHEDDAR CHEESE, SWISS COCONUT MILK MUSHROOM, FRESH PEANUT OIL PEANUT, ROASTED PEAR POTATO CHIPS RICE COOKED STRAWBERRY	2,162.0 43,175.6 749.8 727.7 3,274.1 511.5 1,656.0 235.8 4.4 3.2 46.5 303.6 6.7 23.0 38.6	19,827.7	49	404.644	++
				52,918.5	421	125.697	++

# Consumption Ratio



CONSUMPTION RATIO AND FOOD PREDOMINANCE OF FLAVORING MATERIALS (continued)

FLAVORING MATERIAL:	FEMA NO.	OCCURRING IN:	ANN CONS KG VIA THIS PD	ANN CONS KG VIA FOOD	ANN CONS KG AS ADDED FLAV	CONSUMPTION RATIO	FOOD PRE-DOMINANT
3-HEPTANONE	2545	COFFEE ROASTED	446.2	446.2	3.6	123.944	++
4-HEPTANONE	2546	COFFEE ROASTED	557.8	557.8	58	9.617	+
HEPTYL ACETATE	2547	APPLE BEER GRAPE GRAPE, MUSCAT	22.3 432.4 158.7 1.6	615.0	5.0	123.000	++
HEPTYL ALCOHOL	2548	APPLE APPLE JUICE ASPARAGUS, COOKED BRANDY, GRAPE CRANBERRIES GRAPE GRAPE, MUSCAT KIWIFRUIT OLIVE OIL RASPBERRY RICE COOKED STRAWBERRY TEA, GREEN WINE, RED	3.2 7.4 1.4 31.1 3.0 148.1 2.3 .0 4.4 1.4 11.5 38.6 55.2 44.9	352.5	26	13.557	++
1-HEXADECANOL	2554	MANGO WHISKEY	9.4 815.6	825.0	.9	916.666	++
CAMPA HEXALACTONE	2556	APPLE JUICE BEER MANGO PORK RASPBERRY STRAWBERRY	23.9 432.4 1.8 335.8 25.5 9.2	828.6	104	7.967	+
HEXANAL	2557	APPLE APPLE JUICE AVOCADO BANANA BEANS BREAD, WHITE BUTTER CARROT CHICKEN, HEATED COCONUT COFFEE ROASTED CRANBERRIES CUCUMBER FISH GRAPE, CONCORD GRAPE, MUSCAT LENTILS MILK MUSHROOM, FRESH OLIVE OIL ORANGE JUICE PEANUT OIL PEANUT, ROASTED PEAS PORK POTATO CHIPS RASPBERRY RICE COOKED STRAWBERRY TEA, BLACK	55.9 294.4 8.5 11,730.0 68.1 61,866.1 92.0 192.7 5,306.3 4.1 557.8 4.6 1,631.9 2.8 50.6 18.4 4.8 46.9 29.9 855.6 588.8 66.2 356.5 30.4 77.3 153.0 1.4 1,150.0 187.7 2,185.9				

CONSUMPTION RATIO AND FOOD PREDOMINANCE OF FLAVORING MATERIALS (continued)

FLAVORING MATERIAL:	FEMA NO.	OCCURRING IN:	ANN CONS KG VIA THIS PD	ANN CONS KG VIA FOOD	ANN CONS KG AS ADDED FLAV	CONSUMPTION RATIO	FOOD PRE-DOMINANT
		TOMATO	12,078.2	99,696.8	1,884	52.918	++
2,3-HEXANEDIONE	2558	COFFEE ROASTED	1,968.8	1,968.8	95	20.724	++
HEXANOIC ACID	2559	APPLE APPLE JUICE BEER BUTTER CHERSE, BLUE CHERSE, CHEDDAR CHERSE, SWISS COCONUT COFFEE ROASTED GRAPE GRAPE, CONCORD MILK MUSHROOM, DRIED ORANGE JUICE PORK RASPBERRY RUM STRAWBERRY TEA, GREEN WHISKEY WINE, WHITE YOGURT	1,117.8 5,372.8 279,979.0 10,198.2 19,044.0 43,504.5 39,606.0 12.4 5,633.4 59.8 6.9 178,296.0 6.7 368.0 735,402.0 298.5 712.1 307.3 119.6 2,271.7 789.4 6,665.4	1,329,771.5	5,390	246.707	++
2-HEXENAL	2560	APPLE APPLE JUICE AVOCADO BANANA BEER BUTTER CUCUMBERS FISH GRAPE, CONCORD GRAPEFRUIT JUICE OLIVE OIL PEANUT OIL PEANUT, ROASTED PORK POTATO CHIPS RASPBERRY RICE COOKED STRAWBERRY TEA, BLACK TEA, GREEN TOMATO	900.7 221.5 9.0 110,262.0 108.1 46.0 1,631.9 .5 213.9 19.3 427.8 3.0 363.6 23.5 17.5 1.4 11.5 2,769.2 1,009.5 1,840.0 35,455.4	155,335.3	1,726	89.998	++
CIS-3-HEXENAL	2561	AVOCADO BANANA KIWIFRUIT MANGO RASPBERRY TOMATO	.2 469.2 .0 36.8 12.9 1,062.6	1,581.7	307	5.152	+
2-HEXEN-1-OL	2562	APPLE APPLE JUICE BEER BUTTER GRAPE GRAPE, CONCORD ORANGE JUICE STRAWBERRY TEA, GREEN	1,358.2 445.3 432.4 46.0 18.4 4.6 18.4 570.4 2,208.0				



CONSUMPTION RATIO AND FOOD PREDOMINANCE OF FLAVORING MATERIALS (continued)

FLAVORING MATERIAL:	FEMA NO.	OCCURRING IN:	ANN CONS KG VIA THIS PD	ANN CONS KG VIA FOOD	ANN CONS KG AS ADDED FLAV	CONSUMPTION RATIO	FOOD PRE-DOMINANT
		TOMATO	2,869.0				
		WINE, RED	17.9	7,988.6	556	14.368	++
3-HEXEN-1-OL	2563	APPLE	223.6				
		BEER	648.6				
		BLACKBERRY	2.1				
		BLUEBERRY	12.7				
		CHERRY	1.6				
		CRANBERRIES	18.4				
		GRAPE	138.0				
		GRAPE, MUSCAT	1.2				
		OLIVE OIL	320.9				
		ORANGE JUICE	110.4				
		PEAS	21.9				
		RASPBERRY	249.3				
		STRAWBERRY	38.6				
		TOMATO	10,661.4	12,448.7	4,847	2.568	+
TRANS-2-HEXENYL ACETATE	2564	APPLE	35.4				
		APPLE JUICE	18.4				
		MANGO	.2				
		STRAWBERRY	369.8	423.8	217	1.953	+
HEXYL ACETATE	2565	APPLE	6,250.5				
		APPLE JUICE	294.4				
		BANANA	9,384.0				
		BEER	1,189.1				
		GRAPE	64.4				
		GRAPE, MUSCAT	.7				
		GRAPEFRUIT JUICE	.9				
		PEACHES	458.9				
		RASPBERRY	7.6				
		RUM	94.3				
		STRAWBERRY	187.7				
		TEA, BLACK	113.9				
		WINE, RED	2,242.5				
		WINE, WHITE	496.8	20,785.7	1,060	19.611	++
HEXYL ALCOHOL	2567	APPLE	12,584.7				
		BEANS	17.9				
		BEER	6,486.0				
		BLACKBERRY	17.7				
		BLUEBERRY	35.4				
		BUTTER	6.9				
		CAULIFLOWER	7.4				
		CHERRY	4.8				
		CHICKEN, HEATED	.7				
		CRANBERRIES	13.8				
		GRAPE	1,504.2				
		GRAPE, CONCORD	112.7				
		GRAPE, MUSCAT	19.6				
		GRAPEFRUIT JUICE	5.5				
		LENTILS	3.2				
		MUSHROOM, DRIED	.0				
		MUSHROOM, FRESH	87.6				
		ORANGE JUICE	92.0				
		PEANUT, ROASTED	5.8				
		PEAS	12.9				
		RASPBERRY	55.9				
		RICE COOKED	23.0				
		RUM	235.8				
		STRAWBERRY	165.6				
		TEA, BLACK	303.6				
		TEA, GREEN	1,128.0				
		TOMATO	10,661.4				
		WHISKEY	352.8				

CONSUMPTION RATIO AND FOOD PREDOMINANCE OF FLAVORING MATERIALS (continued)

FLAVORING MATERIAL:	FEMA NO.	OCCURRING IN:	ANN CONS KG VIA THIS PD	ANN CONS KG VIA FOOD	ANN CONS KG AS ADDED FLAV	CONSUMPTION RATIO	FOOD PRE-DOMINANT
		WINE, RED	5,830.5				
		WINE, WHITE	1,462.8	43,238.2	3,107	13.916	++
HEXYL BUTYRATE	2568	APPLE	2,263.7				
		APPLE JUICE	25.8				
		GRAPE, MUSCAT	2.1				
		GRAPE	6,808.0				
		GRAPE, CONCORD	2.3				
		STRAWBERRY	20.2	9,122.1	41	222.490	++
HEXYL FORMATE	2570	STRAWBERRY	12.9	12.9	108	.119	-
HEXYL HEXANOATE	2572	APPLE	2,151.9				
		APPLE JUICE	3.7				
		GRAPE, MUSCAT	6.4				
		STRAWBERRY	7.4	2,169.4	149	14.560	++
HEXYL OCTANOATE	2575	APPLE JUICE	.5				
		GRAPE	3,979.0				
		GRAPE, MUSCAT	1.8				
		STRAWBERRY	1.8				
		WINE, RED	2,646.2				
		WINE, WHITE	717.6	7,346.9	4.5	1,632.644	++
HEXYL ALCOHOL	2576	APPLE JUICE	7,028.8	7,028.8	3,107	2.262	+
4-(P-HYDROXYPHENYL)-2-BUTANONE	2588	RASPBERRY	111.3	111.3	5,073	.022	-
INDOLE	2593	BUTTER	34.3				
		CAULIFLOWER	7.4				
		COFFEE ROASTED	334.7				
		OLIVE OIL	213.9				
		TEA, GREEN	1,002.8	1,593.1	235	6.778	+
ALPHA IONONE	2594	ALMOND, ROASTED	70.2				
		BLUEBERRY	1.6				
		BRANDY, GRAPE	12.4				
		CARROT	1,017.1				
		CHEERY LEAVES	154.6				
		GRAPEFRUIT JUICE	.2				
		RASPBERRY	33.1				
		TEA, GREEN	128.8	1,418.0	1,970	.719	-
BETA IONONE	2595	ALMOND, ROASTED	.0				
		BEER	108.1				
		BRANDY, GRAPE	24.8				
		CARROT	6,903.7				
		MANGO	.2				
		MUSHROOM, FRESH	2.1				
		ORANGE JUICE	36.8				
		RASPBERRY	34.3				
		TEA, GREEN	625.6				
		WINE, WHITE	8.3	7,743.9	3,230	2.398	+
LACTIC ACID	2611	BEER	2,702,500.0				
		CHEESE, CHEDDAR	4,610,580.0				
		CHEESE, SWISS	623.8				
		COCOA	1,080,310.0				
		CRAB	9,618.6				
		WINE, RED	2,120,508.0				

# Consumption Ratio



CONSUMPTION RATIO AND FOOD PREDOMINANCE OF FLAVORING MATERIALS (continued)

FLAVORING MATERIAL:	FEMA NO.	OCCURRING IN:	ANN CONS KG VIA THIS PD	ANN CONS KG VIA FOOD	ANN CONS KG AS ADDED FLAV	CONSUMPTION RATIO	FOOD PRE-DOMINANT
		WINE, WHITE	153,594.0	10,677,734.4	1,395,240	7.653	+
LAURIC ACID	2614	BEER	12,972.0				
		BUTTER	26,105.0				
		CHEESE, BLUE	31,847.0				
		CHEESE, CHEDDAR	60,996.0				
		CHEESE, SWISS	126,739.2				
		COCONUT	103.5				
		GRAPE, CONCORD	62.1				
		GRAPEFRUIT JUICE	13.8				
		LAMB	244,950.0				
		MILK	251,022.0				
		PORK	3,760,960.0				
		RUM	174.6				
		STRAWBERRY	12.9				
		WHISKEY	3,609.6				
				4,519,567.7	3,592	1,258.233	++
LAURIC ALDEHYDE	2615	BEER	216.2				
		CARROT	912.6				
		GRAPEFRUIT JUICE	13.8				
		LEMON OIL	127.7				
		PEANUT OIL	3.0				
		PEANUT, ROASTED	25.1				
		TOMATO	56,672.0				
				57,970.4	285	203.405	++
LAURYL ALCOHOL	2617	WHISKEY	40.9				
				40.9	738	.055	-
D-LIMONENE	2633	CARROT	5,879.0				
		CELERY LEAVES	165,379.2				
		CHICKEN, HEATED	3.5				
		COFFEE ROASTED	1,896.4				
		CRANBERRIES	3.0				
		GRAPE, MUSCAT	1.2				
		GRAPEFRUIT JUICE	254,320.2				
		LEMON OIL	465,750.0				
		MANGO	736.0				
		NUTMEG	17,250.0				
		ORANGE JUICE	154,560.0				
		OREGANO	508.3				
		PEACHES	209.3				
		PEPPER	234,312.5				
		RASPBERRY	2.5				
		TEA, GREEN	184.0				
				1,300,995.1	68,403	19.020	++
LINALOOL	2635	APPLE JUICE	257.6				
		BEER	7,567.0				
		BUTTER	4.6				
		CARROT	28,970.8				
		CHICKEN, HEATED	.7				
		COCOA	28.1				
		CRANBERRIES	10.8				
		GRAPE	18.4				
		GRAPE, CONCORD	4.6				
		GRAPE, MUSCAT	18.4				
		GRAPEFRUIT JUICE	621.0				
		LEMON OIL	1,311.0				
		NUTMEG	12,650.0				
		ORANGE JUICE	8,924.0				
		OREGANO	977.5				
		PEPPER	3,842.8				
		RASPBERRY	28.1				
		SPEARMINT OIL	230.0				
		STRAWBERRY	132.5				
		TEA, BLACK	1,138.5				
		TEA, GREEN	4,636.8				

CONSUMPTION RATIO AND FOOD PREDOMINANCE OF FLAVORING MATERIALS (continued)

FLAVORING MATERIAL:	FEMA NO.	OCCURRING IN:	ANN CONS KG VIA THIS PD	ANN CONS KG VIA FOOD	ANN CONS KG AS ADDED FLAV	CONSUMPTION RATIO	FOOD PRE-DOMINANT
		WINE, RED	201.9				
		WINE, WHITE	44.2				
				71,619.3	10,353	6.918	+
LINALYL ACETATE	2636	GRAPE	1,518.0				
		GRAPEFRUIT JUICE	44.2				
		LEMON OIL	690.0				
		ORANGE JUICE	18.4				
		RASPBERRY	3.2				
		TOMATO	16,293.2				
				18,567.0	4,959	3.745	+
MALTOL	2656	BUTTER	2,300.0				
		COCOA	140.3				
		COFFEE ROASTED	36,253.8				
				38,694.1	4,524	8.553	+
MENTHOL	2665	PEPPERMINT OIL	210,680.0				
		SPEARMINT OIL	460.0				
				211,140.0	44,348	4.761	+
MENTHONE	2667	PEPPERMINT OIL	111,320.0				
				111,320.0	7,221	15.416	++
METHYL ACETATE	2668	PEPPERMINT OIL	16,100.0				
				16,100.0	2,092	7.696	+
MENTHYL ISO VALERATE	2669	NUTMEG	920.0				
				920.0	134	6.866	+
P-METHOXYBENZALDEHYDE	2670	CRANBERRIES	77.1				
				77.1	693	.111	-
2-METHOXY-4-METHYLPHENOL	2671	BEER	108.1				
		COFFEE ROASTED	111.6				
		RUM	4.8				
		WHISKEY	1.4				
				225.9	25	9.036	+
2-METHOXY-4-VINYLPHENOL	2675	BEER	7,567.0				
		CAULIFLOWER	7.4				
		COFFEE ROASTED	30,397.5				
		GRAPEFRUIT JUICE	44.2				
		STRAWBERRY	12.9				
		WINE, RED	9.0				
		WINE, WHITE	27.6				
				38,065.6	.4	95,164.000	++
METHYL ACETATE	2676	APPLE JUICE	2.3				
		BANANA	30,498.0				
		BEER	432.4				
		BUTTER	4.6				
		GRAPE	138,000.0				
		GRAPE, MUSCAT	2.3				
		OLIVE OIL	70.6				
				169,010.2	602	280.748	++
4'-METHYLACETOPHENONE	2677	CAULIFLOWER	7.4				
		MANGO	7.4				
				14.8	99	.150	-
METHYL ANISATE	2679	COCOA	33.1				
				33.1	4.5	7.356	+
METHYL ANTHRANILATE	2682	GRAPE	59,800.0				
		GRAPE, CONCORD	506.0				
		STRAWBERRY	7.4				
		WINE, RED	1,390.4				
		WINE, WHITE	27.6				
				61,731.4	27,768	2.223	+



CONSUMPTION RATIO AND FOOD PREDOMINANCE OF FLAVORING MATERIALS (continued)

FLAVORING MATERIAL:	FEMA NO.	OCCURRING IN:	ANN CONS KG VIA THIS FD	ANN CONS KG VIA FOOD	ANN CONS KG AS ADDED FLAV	CONSUMPTION RATIO	FOOD PRE-DOMINANT
METHYL BENZOATE	2683	CRANBERRIES KIWI FRUIT STRAWBERRY	8.5 13.8 3.7				
				26.0	4,847	.006	-
ALPHA METHYLBENZYL ALCOHOL	2685	COCOA	364.8	364.8	208	1.754	+
2-METHYLBUTYRALDEHYDE	2691	CHEESE, SWISS CHICKEN, HEATED OLIVE OIL PEANUT, ROASTED POTATO CHIPS RUM TEA, BLACK	118.9 579.6 32.2 962.6 590.0 141.5 68.3				
				2,493.1	67	37.211	++
3-METHYLBUTYRALDEHYDE	2692	AVOCADO BANANA BEEF ROASTED BEER CHICKEN, HEATED CHOCOLATE COCOA COFFEE ROASTED FILBERTS, ROASTED OLIVE OIL PEACHES PEANUT, ROASTED PORK POTATO CHIPS RICE COOKED RUM TEA, BLACK TOMATO WHISKEY	1.4 398.8 1,284.3 2,162.0 869.4 6,555.0 13,188.2 7,473.9 136.6 68.5 40.3 713.0 20.2 437.0 11.5 169.7 57.0 8,500.8 2,849.7				
				44,937.3	548	82.021	++
METHYL BUTYRATE	2693	APPLE JUICE BEEF ROASTED STRAWBERRY	1,843.7 401.4 923.7				
				3,168.8	289	10.965	++
METHYL ISO BUTYRATE	2694	APPLE JUICE KIWI FRUIT	772.8 .0				
				772.8	1,212	.637	-
2-METHYLBUTYRIC ACID	2695	BEER CHEESE, SWISS COCOA CRANBERRIES RUM STRAWBERRY	10,810.0 35,975.5 56.1 54.7 56.6 1,851.0				
				48,803.9	2,468	19.775	++
METHYL CINNAMATE	2698	STRAWBERRY	57.0	57.0	3,741	.015	-
METHYL CYCLOPENTANOLONE	2700	COFFEE ROASTED	31,791.8	31,791.8	3,719	8.548	+
5-METHYLPURPURAL	2702	ALMOND, ROASTED BEER COFFEE ROASTED POTATO CHIPS RUM TEA, GREEN	701.5 108.1 142,226.3 2.3 113.2 340.4				
				143,491.8	937	153.139	++
METHYL 2-FUROATE	2703	ALMOND, ROASTED	112.2				

CONSUMPTION RATIO AND FOOD PREDOMINANCE OF FLAVORING MATERIALS (continued)

FLAVORING MATERIAL:	FEMA NO.	OCCURRING IN:	ANN CONS KG VIA THIS FD	ANN CONS KG VIA FOOD	ANN CONS KG AS ADDED FLAV	CONSUMPTION RATIO	FOOD PRE-DOMINANT
		COFFEE, ROASTED KIWI FRUIT	780.9 .0				
				893.1	194	4.603	+
METHYL HEPTANOATE	2705	BUTTER CHEESE, SWISS CRANBERRIES	18.4 990.2 59.3				
				1,067.9	1.8	593.277	++
6-METHYLHEPT-5-ENE-2-ONE	2707	AVOCADO BEER CARROT COCOA LEMON OIL ORANGE JUICE RASPBERRY RICE COOKED TOMATO	.0 1,081.0 92.5 28.1 13.8 36.8 227.7 11.5 2,833.6				
				4,325.0	72	60.071	++
METHYL HEXANOATE	2708	APPLE CHEESE, SWISS KIWI FRUIT MANGO STRAWBERRY	4.6 1,452.2 1.2 .0 406.6				
				1,864.6	90	20.718	++
METHYL LAURATE	2715	APPLE COCONUT RUM STRAWBERRY	3.7 2.1 9.4 64.4				
				79.6	3.2	24.875	++
METHYL MERCAPTAN	2716	CHEESE, CHEDDAR MUSHROOM, DRIED POTATO	14.7 .0 786.6				
				801.3	13	61.639	++
METHYL O-METHOXYBENZOATE	2717	COCOA	25.3	25.3	344	.074	-
METHYL 3-METHYLTHIOPROPIONATE	2720	PINEAPPLE	4.8	4.8	117	.041	-
METHYL 4-METHYLVALERATE	2721	PINEAPPLE	676.2	676.2	.4	1,690.500	++
METHYL MYRISTATE	2722	APPLE COCONUT	7.4 2.1				
				9.5	597	.016	-
METHYL NONANOATE	2724	BUTTER	4.6	4.6	.1	46.000	++
METHYL OCTANOATE	2728	APPLE COCONUT PINEAPPLE RUM STRAWBERRY TEA, BLACK	3.7 4.1 386.4 9.4 20.2 417.5				
				841.3	.4	2,103.250	++
4-METHYL-2-PENTANONE	2731	BEER COFFEE ROASTED	2,594.4 7,250.8				
				9,845.2	3.2	3,076.625	++
METHYL PHENYLACETATE	2733	COCOA	54.7	54.7	43	1.272	+
METHYL PROPIONATE	2742	KIWI FRUIT	.0				



CONSUMPTION RATIO AND FOOD PREDOMINANCE OF FLAVORING MATERIALS (continued)

FLAVORING MATERIAL:	FEMA NO.	OCCURRING IN:	ANN CONS KG VIA THIS FD	ANN CONS KG VIA FOOD	ANN CONS KG AS ADDED FLAV	CONSUMPTION RATIO	FOOD PRE- DOMINANT
		RASPBERRY	5.5	5.5	15	.367	-
CYCLOHEXANOL	2743	NUTMEG	1,380.0	1,380.0	548	2.518	+
METHYL SALICYLATE	2745	COFFEE ROASTED GRAPE, CONCORD KIWIFRUIT PEACHES RUM STRAWBERRY TEA, BLACK TEA, GREEN TOMATO	1,561.7 2.3 .0 185.2 14.3 38.6 368.2 110.4 212.5		139,977	.018	-
METHYL SULFIDE	2746	BEANS BEER CHEESE, SWISS CORN, CANNED LENTILS MAIZE MUSHROOM, DRIED ONION ORANGE JUICE PEAS RUM TEA, BLACK TOMATO WINE, RED WINE, WHITE	10.1 2,270.1 66.0 940.5 2.5 24,570.4 .0 299.0 9.2 119.8 9.4 5.8 29,044.4 13.6 55.2	57,416.0	2,092	27.446	++
3-(METHYLTHIO)PROPIONALDEHYDE	2747	CHEESE, CHEDDAR CHICKEN, HEATED POTATO CHIPS TOMATO WHISKEY	89.7 17.5 174.8 354.2 .5	636.7	108	5.897	+
METHYL VALERATE	2752	PINEAPPLE	241.5	241.5	1.3	185.769	++
METHYL ISO VALERATE	2753	PEACHES PINEAPPLE	193.2 289.8	483.0	593	.815	-
MYRCENE	2762	CARROT COCOA COFFEE ROASTED GRAPE LEMON OIL NUTMEG ORANGE JUICE OREGANO PEPPER TEA, BLACK	1,849.2 2.8 747.5 561.2 10,005.0 6,440.0 220.8 1,955.0 44,988.0 72.2	66,841.7	258	259.076	++
MYRISTALDEHYDE	2763	CHICKEN, HEATED PEANUT OIL	405.7 10.1	415.8	742	.561	-
MYRISTIC ACID	2764	BEER CHEESE, BLUE CHEESE, CHEDDAR CHEESE, SWISS CHICKEN, HEATED COCONUT	27,565.5 117,658.8 109,882.5 403,981.2 59,119.2 8.3				

CONSUMPTION RATIO AND FOOD PREDOMINANCE OF FLAVORING MATERIALS (continued)

FLAVORING MATERIAL:	FEMA NO.	OCCURRING IN:	ANN CONS KG VIA THIS FD	ANN CONS KG VIA FOOD	ANN CONS KG AS ADDED FLAV	CONSUMPTION RATIO	FOOD PRE- DOMINANT
		GRAPE, CONCORD GRAPEFRUIT JUICE LAMB MILK NUTMEG PORK RUM STRAWBERRY WHISKEY	59.8 2.8 326,600.0 417,588.0 115.0 9,335,240.0 15.2 77.3 393.5	10,798,307.1	640	16,872.356	++
NEROL	2770	CRANBERRIES GRAPE, MUSCAT GRAPEFRUIT JUICE LEMON OIL ORANGE JUICE RASPBERRY TEA, GREEN WINE, WHITE	15.4 22.1 2.8 241.5 165.6 15.4 138.0 2.1	602.9	489	1.232	+
NEROLIDOL	2772	BEER GRAPEFRUIT JUICE ORANGE JUICE STRAWBERRY TEA, GREEN	1,189.1 11.0 55.2 386.4 1,030.4	2,672.1	53	50.419	++
NERYL ACETATE	2773	GRAPE, MUSCAT GRAPEFRUIT JUICE LEMON OIL ORANGE JUICE	31.7 2.3 3,105.0 73.6	3,212.6	276	11.640	++
2,6-NONADIEN-1-OL	2780	CUCUMBER	49.5	49.5	54	.917	-
GAMMA NONALACTONE	2781	ASPARAGUS, COOKED BEEF, HEATED BEER BRANDY, GRAPE BUTTER MANGO PORK RUM TEA, GREEN WINE, WHITE	.7 561.9 6,486.0 4.4 92.0 1.4 1,343.2 2.8 36.8 8.3	8,537.5	3,112	2.744	+
NONANAL	2782	AVOCADO BEER BREAD, WHITE BUTTER CARROT CAULIFLOWER CHICKEN, HEATED GRAPE, CONCORD GRAPEFRUIT JUICE LEMON OIL MILK OLIVE OIL ORANGE JUICE PEANUT OIL PEANUT, ROASTED POTATO CHIPS RICE COOKED TEA, GREEN TOMATO	.2 216.2 180,655.8 13.8 2,391.5 73.6 1,478.0 4.6 11.0 1,242.0 2.3 429.0 92.0 26.5 320.9 8.7 34.5 119.6 10,626.0	197,746.2	104	1,901.408	++
NONANOIC ACID	2784	BEER COFFEE ROASTED	6,486.0 12,828.3				

# Consumption Ratio



CONSUMPTION RATIO AND FOOD PREDOMINANCE OF FLAVORING MATERIALS (continued)

FLAVORING MATERIAL:	FEMA NO.	OCCURRING IN:	ANN CONS KG VIA THIS FD	ANN CONS KG VIA FOOD	ANN CONS KG AS ADDED FLAV	CONSUMPTION RATIO	FOOD PRE-DOMINANT
		GRAPE, CONCORD	9.2				
		GRAPEFRUIT JUICE	5.5				
		MUSHROOMS, DRIED	1.4				
		RASPBERRY	3.5				
		RUM	5.8				
		TEA, GREEN	128.8				
		WHISKEY	181.9				
2-BOMANONE	2785	BEER	648.6	19,650.4	158	124.370	++
		BUTTER	577.3				
		CHEESE, BLUE	918.2				
		CHEESE, CHEDDAR	852.2				
		COCOA	28.1				
		COCONUT	3,022.2				
		MILK	234.6				
		PEANUT OIL	3.2				
		PEANUT, ROASTED	17.9				
		POTATO CHIPS	4.4				
		RASPBERRY	1.4				
		RICE COOKED	11.5				
		STRAWBERRY	11.0				
				6,330.6	421	15.037	++
NONYL ACETATE	2788	BEER	108.1				
		GRAPE	92.0				
		GRAPES, MUSCAT	1.2				
		GRAPEFRUIT JUICE	5.5				
		LEMON OIL	75.9				
				282.7	45	6.282	+
NONYL ALCOHOL	2789	APPLE JUICE	441.6				
		CAULIFLOWER	14.7				
		GRAPE	188.6				
		GRAPE, MUSCAT	1.8				
		GRAPEFRUIT JUICE	2.5				
		MUSHROOM, DRIED	1.2				
		MUSHROOM, FRESH	11.3				
		ORANGE JUICE	73.6				
		PEANUT, ROASTED	1.2				
		RASPBERRY	1.4				
		STRAWBERRY	1.8				
		TEA, GREEN	110.4				
				849.1	13	65.314	++
GAMMA OCTALACTONE	2796	BEER	540.5				
		BRANDY, GRAPE	12.4				
		BUTTER	230.0				
		CHICKEN, HEATED	405.7				
		MANGO	9.2				
		PEACHES	531.3				
		PORK	2,686.4				
		RASPBERRY	17.0				
		STRAWBERRY	5.5				
				4,438.0	770	5.764	+
OCTANAL	2797	AVOCADO	1.2				
		BEER	4,324.0				
		BUTTER	36.8				
		CARROT	154.1				
		CHICKEN, HEATED	1,228.7				
		COCONUT	2.1				
		CRANBERRIES	10.1				
		GRAPEFRUIT JUICE	46.9				
		LEMON OIL	655.5				
		MILK	4.6				
		OLIVE OIL	1,069.5				
		ORANGE JUICE	570.4				
		PEANUT OIL	13.3				
		PEANUT, ROASTED	213.9				

CONSUMPTION RATIO AND FOOD PREDOMINANCE OF FLAVORING MATERIALS (continued)

FLAVORING MATERIAL:	FEMA NO.	OCCURRING IN:	ANN CONS KG VIA THIS FD	ANN CONS KG VIA FOOD	ANN CONS KG AS ADDED FLAV	CONSUMPTION RATIO	FOOD PRE-DOMINANT
		POTATO CHIPS	8.7				
		RICE COOKED	23.0				
				8,361.8	973	8.594	+
OCTANOIC ACID	2799	APPLE	745.2				
		BEER	183,770.0				
		BUTTER	2,967.0				
		CHEESE, BLUE	15,814.8				
		CHEESE, CHEDDAR	26,461.5				
		CHEESE, SWISS	264.0				
		COCONUT	12.4				
		COFFEE ROASTED	4,741.0				
		GRAPE	50.6				
		GRAPE, CONCORD	4.6				
		GRAPEFRUIT JUICE	8.3				
		MILK	270,963.0				
		MUSHROOM, DRIED	1.2				
		PORK	386,170.0				
		RUM	377.2				
		STRAWBERRY	12.9				
		TEA, GREEN	73.6				
		WHISKEY	6,377.9				
		WINE, WHITE	2,893.9				
		YOGURT	3,670.8				
				905,379.9	3,556	254.605	++
1-OCTANOL	2800	APPLE	106.3				
		APPLE JUICE	1,216.2				
		ASPARAGUS, COOKED	5.1				
		BRANDY, GRAPE	28.1				
		BUTTER	115.0				
		CAULIFLOWER	14.7				
		CHICKEN, HEATED	88.3				
		CRANBERRIES	6.2				
		GRAPE	73.6				
		GRAPEFRUIT JUICE	22.1				
		LEMON OIL	138.0				
		MUSHROOM, DRIED	1.4				
		MUSHROOM, FRESH	52.4				
		ORANGE JUICE	570.4				
		RASPBERRY	1.4				
		STRAWBERRY	20.2				
		TEA, BLACK	417.5				
		TEA, GREEN	386.4				
		WHISKEY	61.2				
		WINE, RED	287.0				
		WINE, WHITE	96.6				
				3,708.1	191	19.414	++
2-OCTANOL	2801	BEER	108.1				
		WINE, RED	26.9				
				135.0	.4	337.500	++
2-OCTANONE	2802	BANANA	18,768.0				
		BEER	432.4				
		BUTTER	49.0				
		COCOA	28.1				
		MILK	2.3				
		OLIVE OIL	12.9				
		PEANUT OIL	1.6				
		PEANUT, ROASTED	25.1				
		POTATO CHIPS	8.7				
		RICE COOKED	11.5				
				19,339.6	847	22.834	++
3-OCTANONE	2803	MUSHROOM, FRESH	932.7				
				932.7	28	33.311	++
1-OCTEN-3-OL	2805	BEER	648.6				
		BUTTER	11.5				



CONSUMPTION RATIO AND FOOD PREDOMINANCE OF FLAVORING MATERIALS (continued)

FLAVORING MATERIAL:	FEMA NO.	OCCURRING IN:	ANN CONS KG VIA THIS FD	ANN CONS KG VIA FOOD	ANN CONS KG AS ADDED FLAV	CONSUMPTION RATIO	FOOD PRE-DOMINANT
		CHICKEN, HEATED	440.5				
		GRAPE	138.0				
		MUSHROOM, DRIED	.5				
		MUSHROOM, FRESH	11,048.1				
		OLIVE OIL	2,352.9				
		RICE COOKED	11.5				
		STRAWBERRY	9.2				
		TEA, GREEN	18.4				
				14,679.2	144	101.939	++
OCTYL ACETATE	2806	APPLE	55.9				
		APPLE JUICE	1.2				
		BEER	432.4				
		GRAPE	786.6				
		GRAPE, MUSCAT	.9				
		GRAPEFRUIT JUICE	22.1				
		LEMON OIL	144.9				
		STRAWBERRY	16.6				
				1,460.6	249	5.867	+
OCTYL BUTYRATE	2807	STRAWBERRY	12.9				
				12.9	11	1.173	+
OLEIC ACID	2815	BEER	2,486.3				
		CHEESE, BLUE	238,236.3				
		CHEESE, CHEDDAR	418,899.0				
		CHEESE, SWISS	788,489.5				
		GRAPE, CONCORD	115.0				
		HAZELNUT	21,902.0				
		LAMB	311,903.0				
		MILK	1,292,646.0				
		PORK	7,540,320.0				
		RUM	5.3				
		WHISKEY	162.8				
				10,615,165.2	1,074	9,883.767	++
PALMITIC ACID	2832	BEER	6,486.0				
		CHEESE, BLUE	260,364.6				
		CHEESE, CHEDDAR	274,930.5				
		CHEESE, SWISS	1,213,923.9				
		CHICKEN, HEATED	489,762.0				
		COCOA	140.3				
		GRAPE, CONCORD	211.6				
		GRAPEFRUIT JUICE	30.4				
		HAZELNUT	1,384.1				
		LAMB	1,589,725.5				
		MILK	1,257,456.0				
		RUM	28.3				
		STRAWBERRY	371.7				
		WHISKEY	583.5				
				5,095,398.4	1,073	4,748.740	++
2,3-PENTANEDIONE	2841	BEER	2,270.1				
		BRANDY, GRAPE	.5				
		BUTTER	11.5				
		COFFEE ROASTED	4,462.0				
		RUM	30.6				
		WHISKEY	5.5				
		WINE, RED	448.5				
		WINE, WHITE	15.2				
				7,243.9	783	9.252	+
2-PENTANONE	2842	APPLE JUICE	18.4				
		BANANA	33,665.1				
		BEANS	73.4				
		BEER	432.4				
		BUTTER	250.7				
		CARROT	115.7				
		CHEESE, BLUE	425.3				
		CHEESE, CHEDDAR	1,152.8				
		CHEESE, SWISS	1,419.3				

CONSUMPTION RATIO AND FOOD PREDOMINANCE OF FLAVORING MATERIALS (continued)

FLAVORING MATERIAL:	FEMA NO.	OCCURRING IN:	ANN CONS KG VIA THIS FD	ANN CONS KG VIA FOOD	ANN CONS KG AS ADDED FLAV	CONSUMPTION RATIO	FOOD PRE-DOMINANT
		COFFEE ROASTED	5,019.8				
		LENTILS	2.3				
		MILK	591.1				
		OLIVE OIL	10.8				
		PEANUT OIL	2.1				
		PEANUT, ROASTED	14.3				
		PEAS	53.1				
		POTATO CHIPS	30.6				
		RUM	113.2				
		STRAWBERRY	1.8				
				43,392.2	330	131.491	++
ALPHA PHELLANDRENE	2856	CARROT	250.5				
		LEMON OIL	828.0				
		MANGO	5.5				
		NUTMEG	2,300.0				
		OREGANO	234.6				
		PEPPER	129,715.4				
				133,334.0	842	158.355	++
PHENETHYL ACETATE	2857	APPLE	3.7				
		BEER	19,458.0				
		COCOA	280.6				
		GRAPE	1,380.0				
		GRAPE, CONCORD	2.3				
		GRAPE, MUSCAT	1.2				
		RUM	94.3				
		STRAWBERRY	75.4				
		WHISKEY	2,632.6				
		WINE, RED	3,588.0				
		WINE, WHITE	2,553.0				
				30,069.1	104	289.126	++
PHENETHYL ALCOHOL	2858	APPLE	110.9				
		APPLE JUICE	1,840.0				
		BEER	624,818.0				
		CHICKEN, HEATED	310.3				
		COCOA	364.8				
		COFFEE ROASTED	4,015.8				
		CRANBERRIES	37.0				
		GRAPE	3,341.0				
		GRAPE, CONCORD	158.7				
		GRAPE, MUSCAT	4.1				
		MUSHROOM, FRESH	12.9				
		OLIVE OIL	427.8				
		ORANGE JUICE	36.8				
		RASPBERRY	83.5				
		RUM	47.2				
		STRAWBERRY	5.5				
		TEA, BLACK	751.4				
		TEA, GREEN	1,499.6				
		WHISKEY	5,380.6				
		WINE, RED	25,116.0				
		WINE, WHITE	27,434.4				
				695,796.3	638	1,090.592	++
PHENETHYL BUTYRATE	2861	BRANDY, GRAPE	1.2				
				1.2	185	.006	-
PHENETHYL FORMATE	2864	WHISKEY	13.6				
				13.6	.4	34.000	++
PHENETHYL PROPIONATE	2867	BEER	216.2				
				216.2	38	5.689	+
PHENETHYL ISO VALERATE	2871	BEER	432.4				
				432.4	72	6.006	+
2-PHENYLACETALDEHYDE	2874	BEANS	5.1				
		BEER	108.1				

# Consumption Ratio



CONSUMPTION RATIO AND FOOD PREDOMINANCE OF FLAVORING MATERIALS (continued)

FLAVORING MATERIAL:	FEMA NO.	OCCURRING IN:	ANN CONS KG VIA THIS PD	ANN CONS KG VIA FOOD	ANN CONS KG AS ADDED FLAV	CONSUMPTION RATIO	FOOD PRE-DOMINANT
		BREAD, WHITE	6,533.2				
		COCOA	1,501.2				
		GRAPEFRUIT JUICE	5.5				
		MUSHROOM, FRESH	42.8				
		PEANUT, ROASTED	2.1				
		PEAS	15.6				
		POTATO CHIPS	1,573.2				
		RICE COOKED	11.5				
		TEA, BLACK	148.1				
		TOMATO	708.4				
		WINE, WHITE	33.1				
				10,687.9	308	34.702	++
PHENYLACETIC ACID	2878	COCOA BUTTER	7.1				
		WINE, WHITE	276.0				
				283.1	579	.489	-
3-PHENYLPROPYL ACETATE	2890	COCOA	140.3				
				140.3	154	.911	-
ALPHA PINENE	2902	CARROT	2,369.2				
		CELERY LEAVES	850.1				
		CRAWBERRIES	.7				
		LEMON OIL	14,490.0				
		MANGO	2,060.8				
		NUTMEG	65,550.0				
		ORANGE JUICE	202.4				
		OREGANO	625.6				
		PEANUT, ROASTED	3.2				
		PEPPER	103,097.5				
		STRAWBERRY	3.7				
				189,253.2	10,419	18.163	++
BETA PINENE	2903	CARROT	1,579.6				
		LEMON OIL	69,000.0				
		NUTMEG	35,650.0				
		ORANGE JUICE	36.8				
		OREGANO	156.4				
		PEPPER	168,705.0				
				275,127.8	10,192	26.995	++
PIPERIDINE	2908	COFFEE ROASTED	1,115.5				
				1,115.5	86	12.971	++
PIPERINE	2909	PEPPER	1,762,030.0				
				1,762,030.0	.0	>999,999	++
D-PIPERITONE	2910	PEPPERMINT OIL	2,300.0				
		RASPBERRY	7.8				
				2,307.8	5.0	461.560	++
PROPIONALDEHYDE	2923	APPLE	33.6				
		APPLE JUICE	11.0				
		BEER	12,972.0				
		BREAD, WHITE	88,453.2				
		BUTTER	66.0				
		CARROT	38.6				
		CHEESE, CHEDDAR	2,332.2				
		CUCUMBER	1,087.9				
		FISH	1,628.4				
		GRAPE, MUSCAT	18.4				
		MILK	21.2				
		PEANUT OIL	1.2				
		PEANUT, ROASTED	60.7				
		PORK	45.3				
		RICE COOKED	34.5				
		RUM	.9				
		STRAWBERRY	1.8				
		TEA, BLACK	11.5				
		TOMATO	7,084.0				

CONSUMPTION RATIO AND FOOD PREDOMINANCE OF FLAVORING MATERIALS (continued)

FLAVORING MATERIAL:	FEMA NO.	OCCURRING IN:	ANN CONS KG VIA THIS PD	ANN CONS KG VIA FOOD	ANN CONS KG AS ADDED FLAV	CONSUMPTION RATIO	FOOD PRE-DOMINANT
		WHISKEY	325.7				
		WINE, RED	2,511.6				
		WINE, WHITE	138.0				
				116,877.7	253	461.966	++
PROPIONIC ACID	2924	BEER	44,321.0				
		CHEESE, BLUE	62.1				
		CHEESE, CHEDDAR	418,002.0				
		CHEESE, SWISS	1,511,801.5				
		COFFEE ROASTED	97,829.4				
		FISH	4,749.5				
		MILK	28,152.0				
		MUSHROOM, DRIED	4.1				
		RUM	292.3				
		STRAWBERRY	9.2				
		WHISKEY	860.4				
		WINE, WHITE	469.2				
		YOGURT	2,359.8				
				2,108,912.5	7,338	287.396	++
PROPYL ACETATE	2925	APPLE JUICE	114.1				
		BEER	118.9				
		GRAPE	202.4				
		GRAPE, MUSCAT	2.3				
		RUM	47.2				
		RUM	47.2				
		STRAWBERRY	1.8				
		TOMATO	4,250.4				
		WINE, TABLE	351.9				
				5,136.2	1,032	4.978	+
PROPYL ALCOHOL	2928	APPLE	4,843.8				
		APPLE JUICE	5,740.8				
		BEANS	9.2				
		BEER	529,690.0				
		BREAD, WHITE	9,657.7				
		BUTTER	13.8				
		CHEESE, CHEDDAR	5,157.8				
		CHEESE, SWISS	1,617.4				
		GRAPE	7,958.0				
		LENTILS	7.8				
		MUSHROOM, DRIED	.0				
		PEAS	62.6				
		RUM	151,233.7				
		TEA, BLACK	607.2				
		TOMATO	12,751.2				
		WHISKEY	52,923.0				
		WINE, RED	25,564.5				
		WINE, WHITE	7,907.4				
				815,745.9	534	1,527.617	++
ISO PROPYL ALCOHOL	2929	APPLE	242.2				
		BEANS	217.6				
		BEER	43,240.0				
		LENTILS	.0				
		PEAS	4.6				
		RASPBERRY	20.2				
		TOMATO	6,375.6				
				50,100.2	72,118	.694	-
PROPYL BUTYRATE	2934	APPLE JUICE	22.1				
		RUM	2.8				
				24.9	308	.081	-
ISO PROPYL BUTYRATE	2935	STRAWBERRY	20.2				
				20.2	.4	50.500	++
PROPYL HEXANOATE	2949	APPLE JUICE	7.4				
				7.4	6.8	1.088	+

# Consumption Ratio



CONSUMPTION RATIO AND FOOD PREDOMINANCE OF FLAVORING MATERIALS (continued)

FLAVORING MATERIAL:	FEMA NO.	OCCURRING IN:	ANN CONS KG VIA THIS FD	ANN CONS KG VIA FOOD	ANN CONS KG AS ADDED FLAV	CONSUMPTION RATIO	FOOD PRE-DOMINANT
PROPYL PROPIONATE	2958	APPLE JUICE RUM	4.4 18.9	23.3	131	.178	-
PULEGONE	2963	PEPPERMINT OIL	4,600.0	4,600.0	15	306.667	++
PYRIDINE	2966	BEEF ROASTED CHICKEN, HEATED COCOA COFFEE ROASTED MUSHROOM, DRIED	802.7 11.5 8,698.6 47,966.5 .9	57,480.2	95	605.054	++
PYRUVALDEHYDE	2969	BREAD, WHITE	3,096.3	3,096.3	10.9	284.064	++
PYRUVIC ACID	2970	BEER CHEESE, CHEDDAR WINE, TABLE	3,859,170.0 32,292.0 11,730.0	3,903,192.0	3,007	1,298.035	++
SALICYLALDEHYDE	3004	BREAD, WHITE GRAPE, MUSCAT WHISKEY	66,467.7 2.3 .2	66,470.2	358	185.671	++
SKATOLE	3019	BUTTER COFFEE ROASTED TEA, GREEN	75.4 1,896.4 18.4	1,990.2	.4	4,975.500	++
STEARIC ACID	3035	BEER CHEESE, BLUE CHEESE, CHEDDAR CHEESE, SWISS GRAPE, CONCORD GRAPEFRUIT JUICE LAMB MILK PORK RUM	6,486.0 81,237.2 154,284.0 1,030,416.1 207.0 11.0 941,097.9 572,424.0 21,558,360.0 3.2	24,344,526.4	79,728	305.345	++
ALPHA TERPINEOL	3045	APPLE APPLE JUICE BEER BRANDY, GRAPE CARROT CELERY LEAVES CHICKEN, HEATED CRANBERRIES GRAPE, MUSCAT GRAPEFRUIT JUICE LEMON OIL MANGO NUTMEG ORANGE JUICE OREGANO PEPPERMINT OIL POTATO CHIPS RASPBERRY SPEARMINT OIL STRAWBERRY TEA, BLACK TEA, GREEN WINE, RED WINE, WHITE	139.8 8.7 1,297.2 34.3 1,109.5 77.3 5.3 220.3 6.7 873.5 2,035.5 128.8 9,200.0 901.6 3,440.8 460.0 26.2 50.6 460.0 16.6 117.8 699.2 89.7 51.1	21,450.5	13,046	1.645	+

CONSUMPTION RATIO AND FOOD PREDOMINANCE OF FLAVORING MATERIALS (continued)

FLAVORING MATERIAL:	FEMA NO.	OCCURRING IN:	ANN CONS KG VIA THIS FD	ANN CONS KG VIA FOOD	ANN CONS KG AS ADDED FLAV	CONSUMPTION RATIO	FOOD PRE-DOMINANT
TERPINOLENE	3046	CARROT LEMON OIL NUTMEG ORANGE JUICE OREGANO PEPPER RASPBERRY	8,437.1 4,485.0 3,450.0 18.4 156.4 8,622.7 50.6	25,220.2	674	37.418	++
TERPINYL ACETATE	3047	GRAPEFRUIT JUICE TEA, GREEN	5.5 55.2	60.7	2,020	.030	-
THYMOL	3066	OREGANO	25,766.9	25,766.9	135	190.866	++
P-TOLYL ACETALDEHYDE	3071	BEER RUM WHISKEY	108.1 957.3 583.5	1,648.9	18	91.606	++
GAMMA UNDECALACTONE	3091	BUTTER	57.5	57.5	3,089	.019	-
UNDECANAL	3092	BUTTER CARROT CHICKEN, HEATED GRAPEFRUIT JUICE LEMON OIL MILK PEANUT OIL PEANUT, ROASTED	36.8 11.5 3.0 8.3 483.0 4.6 1.4 249.6	798.2	21	38.010	++
2-UNDECANONE	3093	BEER BUTTER CHEESE, BLUE CHEESE, CHEDDAR COCONUT GRAPEFRUIT JUICE MILK PEANUT OIL PEANUT, ROASTED STRAWBERRY	108.1 777.4 310.5 762.5 12,006.0 .2 703.8 7.4 25.1 3.7	14,704.7	181	81.240	++
VALERALDEHYDE	3098	APPLE JUICE AVOCADO BREAD, WHITE BUTTER CARROT CHICKEN, HEATED COCOA COCONUT CRANBERRIES FISH MILK OLIVE OIL PEANUT OIL PEANUT, ROASTED POTATO CHIPS RICE, COOKED STRAWBERRY	1,510.6 4.1 6,817.2 147.2 115.7 1,854.7 112.2 2.1 1.8 542.8 7.1 4.4 9.9 178.3 24.2 115.0 3.7	11,451.0	81	141.370	++
VALERIC ACID	3101	APPLE JUICE BEER BRANDY, GRAPE CHEESE, CHEDDAR CHEESE, SWISS	404.8 2,486.3 93.2 3,318.9 37,625.7				



CONSUMPTION RATIO AND FOOD PREDOMINANCE OF FLAVORING MATERIALS (continued)

FLAVORING MATERIAL:	FEMA NO.	OCCURRING IN:	ANN CONS KG VIA THIS FD	ANN CONS KG VIA FOOD	ANN CONS KG AS ADDED FLAV	CONSUMPTION RATIO	FOOD PRE-DOMINANT
		MILK	95,013.0				
		MUSHROOM, DRIED	.5				
		PORK	184,690.0				
		RUM	707.3				
		STRAWBERRY	294.4				
		WHISKEY	135.7				
		YOGURT	2,415.0				
				327,184.8	4,493	72.821	++
ISO VALERIC ACID	3102	BEER	42,159.0				
		BREAD, WHITE	24,428.3				
		CHEESE, BLUE	1,179.9				
		CHEESE, CHEDDAR	269.1				
		CHEESE, SWISS	8,911.4				
		COCOA	84.2				
		MILK	79,764.0				
		MUSHROOM, DRIED	12.0				
		RASPBERRY	3.5				
		RUM	37.7				
		WHISKEY	1,484.7				
		WINE, WHITE	236.0				
		YOGURT	2,263.2				
				160,833.0	607	264.965	++
GAMMA VALEROLACTONE	3103	BEER	34,592.0				
		PEACHES	362.3				
				34,954.3	81	431.535	++
VANILLIN	3107	BEER	108.1				
		BRANDY, GRAPE	105.6				
		COFFEE ROASTED	2,788.8				
		RUM	464.4				
		STRAWBERRY	14.7				
		VANILLA	16,261.9				
		WHISKEY	331.2				
				20,074.7	475,650	.042	-
ZINGERONE	3124	RASPBERRY	20.2				
				20.2	312	.065	-
ACETYLPIRAZINE	3126	ALMOND, ROASTED	420.9				
		BREAD, DARK	10.6				
		COFFEE ROASTED	1,450.2				
				1,881.7	58	32.443	++
BIPHENYL	3129	CARROT	400.7				
				400.7	235	1.705	+
2-ISOBUTYL-3-METHOXY PYRAZINE	3132	PEPPER, BELL	110.4				
				110.4	13	8.492	+
2-ISOBUTYL-3-METHYLPYRAZINE	3133	POTATO CHIPS	35.0				
		POTATO, BAKED	131.1				
				166.1	5.4	30.759	++
2-ISOBUTYLTHIAZOLE	3134	TOMATO	705.0				
				705.0	249	2.831	+
2,4-DECADIENAL	3135	ALMOND, ROASTED	70.2				
		BEEF ROASTED	80.3				
		CARROT	3.0				
		CHICKEN, HEATED	811.4				
		GRAPEFRUIT JUICE	.0				
		OLIVE OIL	1,711.2				
		ORANGE JUICE	184.0				
		PEANUT, ROASTED	142.6				
		POTATO CHIPS	677.4				
		RICE COOKED	23.0				
				3,703.1	54	68.576	++
3,4-DIMETHOXY-1-VINYLBENZENE	3138	COFFEE ROASTED	3,346.5				
				3,346.5	.1	33,465.000	++

CONSUMPTION RATIO AND FOOD PREDOMINANCE OF FLAVORING MATERIALS (continued)

FLAVORING MATERIAL:	FEMA NO.	OCCURRING IN:	ANN CONS KG VIA THIS FD	ANN CONS KG VIA FOOD	ANN CONS KG AS ADDED FLAV	CONSUMPTION RATIO	FOOD PRE-DOMINANT
P-ALPHA DIMETHYLSTYRENE	3144	GRAPEFRUIT JUICE	8.3				
				8.3	1.3	6.385	+
ETHYL T-2-C-4-DECADIENOATE	3148	BEER	432.4				
		GRAPE, CONCORD	23.0				
				455.4	4.5	101.200	++
2-ETHYL-3,5 OR 6-DIMETHYLPYRAZINE	3149	ALMOND, ROASTED	2,104.5				
		BEEF ROASTED	963.2				
		BEER	432.4				
		CHICKEN, HEATED	58.0				
		COCOA	420.9				
		COFFEE, ROASTED	2,454.1				
		PEANUT, ROASTED	3.2				
		POTATO CHIPS	590.0				
		RUM	18.9				
		TEA, GREEN	36.8				
				7,082.0	11	643.818	++
3-ETHYL-2,6-DIMETHYLPYRAZINE	3150	ALMOND, ROASTED	70.2				
		COCOA	280.6				
		COFFEE ROASTED	8,924.0				
		PEANUT, ROASTED	43.2				
		POTATO CHIPS	327.8				
		RUM	9.4				
				9,655.2	5.4	1,788.001	++
2-ETHYL-1-HEXANOL	3151	BRANDY, GRAPE	2.5				
		BUTTER	46.0				
		WINE, RED	71.8				
				120.3	81	1.485	+
2-ETHYL-5-METHYLPYRAZINE	3154	BEEF ROASTED	561.9				
		CHICKEN, HEATED	34.7				
		COCOA	77.3				
		COFFEE ROASTED	3,179.3				
		PEANUT, ROASTED	396.5				
		POTATO CHIPS	524.4				
		TEA, GREEN	18.4				
				4,792.5	3.6	1,331.250	++
3-ETHYL-2-METHYLPYRAZINE	3155	BREAD, DARK	11.7				
		BREAD, WHITE	1,647.5				
		COCOA	477.0				
		COFFEE ROASTED	15,617.0				
		PEANUT, ROASTED	155.0				
		POTATO CHIPS	142.1				
		RUM	23.7				
				18,074.0	72	251.029	++
P-ETHYLPHENOL	3156	BEER	1,081.0				
		OLIVE OIL	8,128.2				
		RUM	75.4				
		WHISKEY	53.1				
		WINE, RED	897.0				
				10,234.7	99	103.381	++
FURFURYL METHYL ETHER	3159	ALMOND, ROASTED	2,525.4				
		COFFEE ROASTED	557.8				
				3,083.2	.1	30,832.000	++
FURFURYL METHYL SULFIDE	3160	COFFEE ROASTED	1,840.7				
				1,840.7	1.3	1,415.923	++
2-FURYL METHYL KETONE	3163	BEEF ROASTED	481.6				
		BEER	1,945.8				
		CHICKEN, HEATED	5.8				
		COCOA	28.1				
		COFFEE ROASTED	23,090.9				
		POTATO CHIPS	43.7				



CONSUMPTION RATIO AND FOOD PREDOMINANCE OF FLAVORING MATERIALS (continued)

FLAVORING MATERIAL:	FEMA NO.	OCCURRING IN:	ANN CONS KG VIA THIS PD	ANN CONS KG VIA FOOD	ANN CONS KG AS ADDED FLAV	CONSUMPTION RATIO	FOOD PRE-DOMINANT
2,4-HEPTADIENAL	3164	RUM	113.2				
		TEA, GREEN	1,122.4				
		WINE, RED	44.9				
				26,876.4	294	91.417	++
		AVOCADO	.0				
TRANS-2-HEPTENAL	3165	CAULIFLOWER	11.0				
		CHICKEN, HEATED	.7				
		FISH	1.2				
		OLIVE OIL	855.6				
		PEANUT OIL	.0				
NOOTKATONE	3166	PEANUT, ROASTED	3.2				
				871.7	11	79.246	++
		AVOCADO	.5				
		CHICKEN, HEATED	753.5				
		OLIVE OIL	6,630.9				
DELTA HEXALACTONE	3167	PEANUT OIL	8.5				
		POTATO CHIPS	174.8				
		RICE COOKED	46.0				
				7,614.2	33	230.733	++
		GRAPEFRUIT JUICE	979.8				
3-HEXENOIC ACID	3170	LEMON OIL	34.5				
		ORANGE JUICE	36.8				
				1,051.1	43	24.444	++
		BUTTER	46.0				
		COCONUT	828.0				
CIS-3-HEXENYL ACETATE	3171	RASPBERRY	40.5				
		STRAWBERRY	12.9				
		TEA, GREEN	36.8				
				964.2	42	22.956	++
		COCOA BUTTER	1.2				
HEXYL ISO BUTYRATE	3172			1.2	9.0	.133	-
		APPLE JUICE	8.1				
		CELERY LEAVES	30.8				
		MANGO	12.9				
		STRAWBERRY	11.0				
4-HYDROXY-2,5-DIMETHYL-3(2H)-FURANONE	3174	TEA, BLACK	30.4				
				93.2	240	0.388	-
		APPLE	113.6				
		GRAPE, MUSCAT	2.1				
				115.7	17	6.806	+
GAMMA IONONE	3175	COFFEE ROASTED	41,831.3				
		PINEAPPLE	2,656.5				
		RASPBERRY	5.1				
		STRAWBERRY	1,107.7				
				45,600.6	2,718	16.777	++
P-MENTH-1-ENE-9-AL	3178			106.3	81	1.312	+
		TOMATO	106.3				
		GRAPEFRUIT JUICE	5.8				
				5.8	.2	29.000	++
		NUTMEG	1,150.0				
1-METHYL-2-ACETYLPIPERIDE	3184			1,150.0	.1	11,500.000	++
		COFFEE, ROASTED	5,633.4				
				5,633.4	.1	56,334.000	++
		BEANS	2.1				
		LENTILS	1.4				
1-METHYL NAPHTHALENE	3193	OLIVE OIL	213.9				
		PEAS	.7				
				218.1	.4	545.250	++

CONSUMPTION RATIO AND FOOD PREDOMINANCE OF FLAVORING MATERIALS (continued)

FLAVORING MATERIAL:	FEMA NO.	OCCURRING IN:	ANN CONS KG VIA THIS PD	ANN CONS KG VIA FOOD	ANN CONS KG AS ADDED FLAV	CONSUMPTION RATIO	FOOD PRE-DOMINANT
2-METHYL-2-PENTENAL	3194	ONIONS	855.1				
				855.1	6.8	125.750	++
JASMONE	3196	BEER	216.2				
		TEA, GREEN	754.4				
				970.6	38	25.542	++
5-METHYL-2-PHENYL-2-HEXENAL	3199	COCOA	206.3				
				206.3	45	4.584	+
METHYL PROPYL DISULFIDE	3201	ONIONS	13,156.0				
				13,156.0	81	162.420	++
METHYL 2-PYRROLIZYL KETONE	3202	ALMOND, ROASTED	70.2				
		BEEF ROASTED	2,809.5				
		BEER	30,268.0				
		COFFEE ROASTED	12,159.0				
		POTATO CHIPS	56.8				
		TEA, GREEN	220.8				
				45,584.3	.2	227,921.500	++
5-METHYL QUINOLALINE	3203	ALMONDS, ROASTED	140.3				
				140.3	2.7	51.963	++
2-METHYLTHIOACETALDEHYDE	3206	POTATO CHIPS	8.7				
				8.7	2.7	3.222	+
2-METHYL-5-VINYLPYRAZINE	3211	COFFEE ROASTED	3,235.0				
				3,235.0	2.3	1,406.522	++
2,4-NONADIENAL	3212	AVOCADO	.2				
		CHICKEN, HEATED	1.2				
		CRANBERRIES	3.0				
		PEANUT, ROASTED	35.7				
		POTATO CHIPS	17.5				
		POTATO, BAKED	131.1				
				188.7	21	9.011	+
2-NONENAL	3213	CARROT	2,592.8				
		CHICKEN, HEATED	344.8				
		CUCUMBERS	2,175.8				
		PEANUT OIL	6.7				
		PEANUT, ROASTED	213.9				
		POTATO CHIPS	87.9				
		RICE COOKED	11.5				
				5,413.4	18	300.744	++
DELTA OCTALACTONE	3214	BUTTER	616.4				
		COCONUT	1,057.8				
		RASPBERRY	50.6				
		RUM	.9				
		STRAWBERRY	12.9				
		WINE, WHITE	1.6				
				1,740.2	49	35.515	++
2-OCTENAL	3215	AVOCADO	.2				
		CHICKEN, HEATED	568.1				
		CRANBERRIES	15.4				
		MUSHROOM, FRESH	193.7				
		OLIVE OIL	213.9				
		PEANUT, ROASTED	107.0				
		POTATO CHIPS	46.0				
		POTATO, BAKED	524.4				
		RICE COOKED	23.0				
		TOMATO	354.2				
				2,045.9	389	5.260	+
2,4-PENTADIENAL	3217	PEANUTS, ROASTED	3.7				
				3.7	.9	4.111	+



CONSUMPTION RATIO AND FOOD PREDOMINANCE OF FLAVORING MATERIALS (continued)

FLAVORING MATERIAL:	FEMA NO.	OCCURRING IN:	ANN CONS KG VIA THIS PD	ANN CONS KG VIA FOOD	ANN CONS KG AS ADDED FLAV	CONSUMPTION RATIO	FOOD PRE-DOMINANT
2-PENTENAL	3218	AVOCADO	.7				
		BUTTER	1.8				
		KIWI FRUIT	.0				
		ORANGE JUICE	18.4				
		PEANUT OIL	.9				
		PEANUT, ROASTED	17.9				
		STRAWBERRY	20.2				
				59.9	212	.281	-
ISO PENTYLAMINE	3219	GRAPE	395.6				
		MUSHROOM, DRIED	82.8				
		TOMATO	991.8				
		WINE, RED	2.8				
		WINE, WHITE	32.2				
				1,505.2	.4	3,763.000	++
PHENETHYLAMINE	3220	BEER	21,666.0				
		CHOCOLATE	1,115.5				
		GRAPE	103.5				
		WINE, RED	77.3				
		WINE, WHITE	53.8				
			29.0				
				23,045.1	.4	57,612.750	++
PHENETHYL HEXANOATE	3221	BEER	1,729.6				
		GRAPE	4,002.0				
				5,731.6	10	573.160	++
PHENETHYL OCTANOATE	3222	BEER	3,243.0				
		RUM	9.4				
				3,252.4	10	325.240	++
PHENOL	3223	BEER	108.1				
		BUTTER	6.2				
		CHICKEN, HEATED	1.2				
		COFFEE ROASTED	40,046.5				
		MUSHROOM, DRIED	.0				
		RASPBERRY	4.1				
		RUM	9.0				
		TEA, BLACK	834.9				
		TEA, GREEN	128.8				
		WHISKEY	27.4				
		WINE, RED	26.9				
				41,193.1	2.3	17,910.045	++
2-PHENYL-2-BUTENAL	3224	ALMOND, ROASTED	140.3				
		COFFEE ROASTED	669.3				
		MUSHROOM, FRESH	21.4				
		PEANUT, ROASTED	71.3				
				902.3	21	42.966	++
PROPENYL PROPYL DISULFIDE	3227	ONIONS	6,039.8				
				6,039.8	40	150.995	++
PROPYL DISULFIDE	3228	ASPARAGUS, COOKED	.7				
		ONIONS	13,754.0				
				13,754.7	181	76.010	++
STYRENE	3233	BEANS	4.6				
		BEER	2,270.1				
		COFFEE ROASTED	401.6				
		LENTILS	.5				
		OLIVE OIL	171.1				
		PEAS	.2				
		STRAWBERRY	11.0				
		WINE, WHITE	.5				
				2,859.6	13	219.968	++
MENTHOPURAN	3235	PEPPERMINT OIL	5,520.0				
				5,520.0	25	220.800	++

CONSUMPTION RATIO AND FOOD PREDOMINANCE OF FLAVORING MATERIALS (continued)

FLAVORING MATERIAL:	FEMA NO.	OCCURRING IN:	ANN CONS KG VIA THIS PD	ANN CONS KG VIA FOOD	ANN CONS KG AS ADDED FLAV	CONSUMPTION RATIO	FOOD PRE-DOMINANT
2,3,5,6-TETRAMETHYL PYRAZINE	3237	COCOA	4,728.1				
		COFFEE ROASTED	3,011.9				
				7,740.0	17	455.295	++
4-THUJANOL	3239	NUTMEG	1,840.0				
				1,840.0	.3	6,133.333	++
TRIMETHYLAMINE	3241	BACON	58.0				
		MUSHROOM, DRIED	92.0				
		TOMATO	35.4				
				185.4	824	.225	-
P-ALPHA-ALPHA-TRIMETHYLBENZYL ALCOHOL	3242	GRAPEFRUIT JUICE	5.5				
		MANGO	27.6				
				33.1	3.6	9.195	+
2,3,5-TRIMETHYLPYRAZINE	3244	ALMOND, ROASTED	4,209.0				
		BEEF ROASTED	2,087.0				
		CHICKEN, HEATED	117.3				
		COCOA	2,553.5				
		COFFEE ROASTED	13,553.4				
		PEANUT, ROASTED	57.0				
		TEA, GREEN	73.6				
				22,650.8	95	238.429	++
UNDECANOIC ACID	3245	BEER	24,863.0				
		GRAPEFRUIT JUICE	2.8				
		MUSHROOM, DRIED	.9				
		WHISKEY	54.3				
				24,921.0	49	508.591	++
2,6-XYLENOL	3249	COFFEE ROASTED	557.8				
		WHISKEY	.2				
				558.0	54	10.334	++
2-ACETYLPIRIDINE	3251	COFFEE ROASTED	4,462.0				
				4,462.0	86	51.884	++
BENZOTHAZOLE	3256	ASPARAGUS, COOKED	1.4				
		MANGO	.2				
		WHISKEY	2.1				
				3.7	2.3	1.609	+
2,3-DIMETHYLPYRAZINE	3271	BREAD, WHITE	170.4				
		CHICKEN, HEATED	11.5				
		COCOA	126.3				
		COFFEE ROASTED	6,972.0				
		PEANUT, ROASTED	5.1				
		POTATO CHIPS	393.3				
				7,678.6	11	698.054	++
2,5-DIMETHYLPYRAZINE	3272	BEEF ROASTED	1,444.9				
		BEER	2,378.2				
		COCOA	743.6				
		COFFEE ROASTED	31,791.8				
		PEANUT, ROASTED	53.6				
		POTATO CHIPS	590.0				
		RUM	75.4				
				37,077.5	10	3,707.750	++
2,6-DIMETHYLPYRAZINE	3273	BEEF ROASTED	1,525.1				
		BEER	756.7				
		CHICKEN, HEATED	5.8				
		CHOCOLATE	2,075.8				
		COCOA	982.1				
		COFFEE ROASTED	41,831.3				
		PEANUT, ROASTED	69.2				
		POTATO CHIPS	174.8				
		RUM	141.5				
				47,562.3	2.7	17,615.667	++



CONSUMPTION RATIO AND FOOD PREDOMINANCE OF FLAVORING MATERIALS (continued)

FLAVORING MATERIAL:	FEMA NO.	OCCURRING IN:	ANN CONS KG VIA THIS FD	ANN CONS KG VIA FOOD	ANN CONS KG AS ADDED FLAV	CONSUMPTION RATIO	FOOD PRE- DOMINANT
DIMETHYL TRISULFIDE	3275	BEER CAULIFLOWER CHICKEN, HEATED ONIONS WHISKEY	10.8 7.4 58.0 2,870.4 1.6	2,968.2	.3	9,827.333	++
DIPROPYL TRISULFIDE	3276	ONIONS	15,847.0	15,847.0	38	417.026	++
2-ETHYL PYRAZINE	3281	BREAD, WHITE COFFEE ROASTED PEANUT, ROASTED POTATO CHIPS	1,136.2 20,079.0 299.5 174.8	21,689.5	.1	216,895.000	++
ETHYL THIOACETATE	3282	BEER WINE, RED WINE, WHITE	54.1 1.8 .2	56.1	.1	561.000	++
N-FURFURYLPIRRAOLE	3284	ALMOND, ROASTED BEER CHICKEN, HEATED COFFEE ROASTED	70.2 216.2 11.5 5,466.0	5,763.9	1.8	3,202.167	++
2-HEPTANOL	3288	BEER BUTTER CHEESE, BLUE COCOA STRAWBERRY	432.4 2.3 132.5 28.1 38.6	633.9	.4	1,584.750	++
4-HEPTENAL	3289	BUTTER FISH	.7 .2	.9	3.2	.282	-
3-HEXANONE	3290	BREAD, WHITE	1,817.9	1,817.9	15	121.193	++
4-HYDROXYBUTANOIC ACID LACTONE	3291	BEER COFFEE ROASTED WINE, WHITE	35,673.0 5,242.9 3,795.0	44,710.9	149	300.073	++
5-HYDROXYUNDECANOIC ACID LACTONE	3294	BUTTER	138.0	138.0	616	.224	-
METHYL PROPYL TRISULFIDE	3308	ONIONS	13,335.4	13,335.4	45	296.342	++
2-METHYLPYRAZINE	3309	ALMOND, ROASTED BEEF ROASTED BEER BREAD, WHITE CHICKEN, HEATED COCOA COFFEE ROASTED PEANUT, ROASTED POTATO CHIPS RUM	3,788.1 561.9 1,513.4 34,086.0 11.5 280.6 71,949.8 2,160.4 87.4 47.2	114,486.3	235	487.176	++
3-METHYLTHIOPROPYL ISOTHIOCYANATE	3312	CAULIFLOWER	110.4	110.4	117	.944	-
2-NONANOL	3315	APPLE BEER CHEESE, BLUE	7.4 216.2 70.4				

CONSUMPTION RATIO AND FOOD PREDOMINANCE OF FLAVORING MATERIALS (continued)

FLAVORING MATERIAL:	FEMA NO.	OCCURRING IN:	ANN CONS KG VIA THIS FD	ANN CONS KG VIA FOOD	ANN CONS KG AS ADDED FLAV	CONSUMPTION RATIO	FOOD PRE- DOMINANT
		CRANBERRIES MUSHROOM, DRIED STRAWBERRY	8.3 .2 11.0	313.5	.4	783.750	++
2-PENTANOL	3316	APPLE APPLE JUICE BUTTER CHEESE, BLUE COCOA GRAPE, CONCORD OLIVE OIL ORANGE JUICE RUM STRAWBERRY WINE, RED	568.3 331.9 46.0 21.9 336.7 2.3 2.1 18.4 47.2 20.2 40.5	1,435.5	25	57.420	++
2-PENTYLURAN	3317	AVOCADO CHICKEN, HEATED COFFEE ROASTED POTATO CHIPS RICE COOKED	.2 1,101.2 145.1 8.7 115.0	1,370.2	.1	13,702.000	++
2,4,5-TRIMETHYLTHIAZOLE	3325	BEEF ROASTED CHOCOLATE COCOA	1,043.5 11.0 14.0	1,068.5	.4	2,671.250	++
ACETONE	3326	APPLE APPLE JUICE AVOCADO BEANS BEER BREAD, WHITE BUTTER CARROT CHEESE, BLUE CHEESE, CHEDDAR CHEESE, SWISS CHICKEN, HEATED LENTILS MAIZE MILK PEANUT OIL PEANUT, ROASTED POTATO CHIPS RICE COOKED RUM STRAWBERRY TEA, BLACK TOMATO WHISKEY WINE, RED WINE, WHITE YOGURT	242.2 75.9 3.2 971.8 21,620.0 28,882.3 59.8 346.8 40.5 3,857.1 1,485.3 579.6 18.6 3,834.8 14,662.5 312.1 7.1 43.7 460.0 23.7 791.2 1.6 58,797.2 1,357.0 179.4 289.8 8,045.4	146,588.6	45	3,257.526	++
2-ACETYLTHIAZOLE	3328	COCOA	16.8	16.8	33	.509	-
BISBOLENE	3331	CARROT LEMON OIL PEPPER	3,602.0 5,520.0 24,743.4	33,865.4	249	136.006	++
3-N-BUTYLPHthalide	3334	CELERY LEAVES	2,318.4	2,318.4	2.3	1,008.000	++



CONSUMPTION RATIO AND FOOD PREDOMINANCE OF FLAVORING MATERIALS (continued)

FLAVORING MATERIAL:	FEMA NO.	OCCURRING IN:	ANN CONS KG VIA THIS FD	ANN CONS KG VIA FOOD	ANN CONS KG AS ADDED FLAV	CONSUMPTION RATIO	FOOD PRE DOMINANT
DIFURFURYL ETHER	3337	COFFEE ROASTED	2,007.9	2,007.9	.4	5,019.750	++
ETHYL 3-METHYLTHIOPROPIONATE	3343	BRANDY, GRAPE PINEAPPLE WHISKEY WINE, WHITE	1.8 4.8 1.2 .9	8.7	144	.060	-
FURFURYL PROPIONATE	3346	COFFEE ROASTED	1,227.1	1,227.1	3.6	340.861	++
HEPTANOIC ACID	3348	BEER COFFEE ROASTED GRAPE MUSHROOM, DRIED PORK RASPBERRY RUM TEA, GREEN WHISKEY	12,972.0 76,858.0 2,120.6 .7 426,466.0 10.1 118.5 73.6 122.1	518,741.6	20	25,937.080	++
3-HEXANOL	3351	COCOA TOMATO	112.2 17,710.0	17,822.2	33	540.067	++
DELTA NONALACTONE	3356	BUTTER WINE, WHITE	11.5 5.5	17.0	23	.739	-
2-METHOXY-3(566) ISOPROPYL PYRAZINE	3358	TOMATO	.7	.7	.2	3.500	+
METHYL FURFURYL DISULFIDE	3362	COFFEE ROASTED	429.4	429.4	.9	477.111	++
4-METHYL-3-PENTEN-2-ONE	3368	MUSHROOM, FRESH	8.5	8.5	.4	21.250	++
2-METHYL-2-TETRAHYDROFURAN-3-ONE	3373	ALMOND, ROASTED BEER POTATO CHIPS RUM	1,262.7 648.6 26.2 471.5	2,409.0	24	100.376	++
NONA-2-TRANS,6-CIS-DIENAL	3377	CUCUMBERS PEANUT, ROASTED	3,263.7 .7	3,264.4	7.7	423.948	++
TRANS-2-NONEN-1-OL	3379	ASPARAGUS, COOKED	1.4	1.4	.1	14.000	++
9,12-OCTADECADIENOIC ACID	3380-A	BEER CHEESE, BLUE CHEESE, CHEDDAR GRAPE, CONCORD MILK RUM WHISKEY	7,567.0 19,468.4 61,893.0 483.0 351,900.0 2.8 122.1	441,436.3	557	792.523	++
9,12,15-OCTADECATRIENOIC ACID	3380-B	BEER CHEESE, CHEDDAR	1,621.5 35,880.0	37,501.5	557	67.328	++
1-PENTEN-3-ONE	3382	KIWIFRUIT	3.9	3.9	3.6	1.083	+
2-PENTYL-PYRIDINE	3383	LAMB FAT	5.5	5.5	.1	55.000	++

CONSUMPTION RATIO AND FOOD PREDOMINANCE OF FLAVORING MATERIALS (continued)

FLAVORING MATERIAL:	FEMA NO.	OCCURRING IN:	ANN CONS KG VIA THIS FD	ANN CONS KG VIA FOOD	ANN CONS KG AS ADDED FLAV	CONSUMPTION RATIO	FOOD PRE DOMINANT
PYRROLE	3386	BEEF ROASTED CHICKEN, HEATED COFFEE ROASTED	160.5 34.7 2,119.5	2,314.7	.2	11,573.500	++
2-TRIDECANONE	3388	BUTTER CHEESE, BLUE CHEESE, CHEDDAR COCONUT GRAPEFRUIT JUICE	80.5 .9 1,121.3 5,713.2 .2	6,916.1	99	69.859	++
SAFRANAL	3389	GRAPEFRUIT JUICE TEA, GREEN	1.6 73.6	75.2	.0	>999,999	++
N-BUTYL-2-METHYLBUTYRATE	3393	APPLE STRAWBERRY	245.9 1.8	247.7	4.5	55.044	++
3-ETHYLPYRIDINE	3394	BEER LAMB FAT	4.4 .9	5.3	3.0	1.767	+
2-HEPTYLPURAN	3401	CHICKEN, HEATED	11.5	11.5	.0	>999,999	++
CIS-3-HEXENYL BUTYRATE	3402	MANGO STRAWBERRY TEA, GREEN	.5 5.5 223,008.0	223,014.0	12	18,584.500	++
CIS-3-HEXENYL HEXANAL	3403	TEA, GREEN	248.4	248.4	.2	1,242.000	++
TIGLIC ALDEHYDE	3407	BEEF ROASTED ONION	3,853.0 17.9	3,870.9	5.9	656.085	++
METHYL JASMONATE	3410	TEA, GREEN	36.8	36.8	.3	122.667	++
METHYL LINOLENATE	3411	GRAPEFRUIT JUICE	5.5	5.5	3.6	1.528	+
3-(METHYLTHIO)PROPANOL	3415	BEER WHISKEY WINE, WHITE	35,673.0 .5 96.6	35,770.1	7.2	4,968.069	++
3-OCTEN-2-ONE	3416	ASPARAGUS, COOKED AVOCADO	.7 .0	.7	.1	7.000	+
3-PENTEN-2-ONE	3417	MANGO POTATO CHIPS RUM	.2 2.3 660.1	662.6	24	27.608	++
DAMASCENONE	3420	BEER BRANDY, GRAPE GRAPE, CONCORD MANGO WINE, WHITE	108.1 6.2 1.4 .0 23.7	139.4	19	7.336	+
2,6,6-TIMETHYLCYCLOHEX-2-ENE-1,4-DIONE	3421	TEA, GREEN	18.4	18.4	126	.146	-
2,4-UNDECADIENAL	3422	MUSHROOM, FRESH	.7				

# Consumption Ratio



CONSUMPTION RATIO AND FOOD PREDOMINANCE OF FLAVORING MATERIALS (continued)

FLAVORING MATERIAL:	FEMA NO.	OCCURRING IN:	ANN CONS KG VIA THIS PD	ANN CONS KG VIA FOOD	ANN CONS KG AS ADDED FLAV	CONSUMPTION RATIO	FOOD PRE-DOMINANT
		PEANUT OIL	1.4				
		POTATO CHIPS	2.3				
2-UNDECENAL	3423	CHICKEN, HEATED	1,182.4		22	.201	-
		MILK	.9				
		OLIVE OIL	12,834.0				
		PEANUT OIL	8.5				
		PEANUT, ROASTED	107.0				
		POTATO CHIPS	35.0	14,167.8	.2	70,839.000	++
ETHYL 3-HYDROXYBUTYRATE	3428	GRAPE, CONCORD	23.0				
		MANGO	28.5				
		ORANGE JUICE	36.8				
		WINE, RED	224.3	312.6	389	.804	-
TRANS,TRANS-2,4-HEXADIENAL	3429	KIWIFRUIT	.0				
		PEANUT OIL	.0				
		PEANUTS, ROASTED	1.4	1.4	11	.127	-
3-METHYLPENTANOIC ACID	3437	COCOA BUTTER	33.8	33.8	3.6	9.389	+
2,2,4-TRIMETHYL-1,3-OXACYCLOPENTANE	3441	BEER	2,162.0				
		BRANDY, GRAPE	1.2				
		WINE, RED	94.3	2,257.5	.0	>999,999	++
FARNESYL ACETONE	3442	GRAPEFRUIT JUICE	.2				
		TOMATO	460.5	460.7	.2	2,303.500	++
VALENCENE	3443	GRAPEFRUIT JUICE	2.5				
		MANGO	.0				
		ORANGE JUICE	441.6	444.1	389	1.141	+
HEXYL PHENYLACETATE	3457	GRAPE, MUSCAT	32.2	32.2	5.4	5.963	+
ISO MENTHONE	3460	PEPPERMINT OIL	16,100.0				
		SPEARMINT OIL	230.0	16,330.0	18	907.222	++
4-METHYLPENTANOIC ACID	3463	RUM	8.5	8.5	344	.025	-
CIS-6-NONEN-1-OL	3465	CUCUMBERS	49.5	49.5	1.8	27.500	++
O-CRESOL	3480	BEER	108.1				
		COFFEE ROASTED	7,306.6				
		MUSHROOM, DRIED	.7				
		RUM	4.8				
		WHISKEY	12.4				
		WINE, RED	17.9	7,450.5	.1	74,505.000	++
ETHYL TRANS-2-BUTENOATE	3486	GRAPE, CONCORD	75.9				
		STRAWBERRY	20.2	96.1	25	3.844	+
ETHYL OCTADECANOATE	3490	BRANDY, GRAPE	34.3				
		COCOA	112.2				
		COCONUT	2.1				
		GRAPE, MUSCAT	1.4				
		GRAPEFRUIT JUICE	5.5				

CONSUMPTION RATIO AND FOOD PREDOMINANCE OF FLAVORING MATERIALS (continued)

FLAVORING MATERIAL:	FEMA NO.	OCCURRING IN:	ANN CONS KG VIA THIS PD	ANN CONS KG VIA FOOD	ANN CONS KG AS ADDED FLAV	CONSUMPTION RATIO	FOOD PRE-DOMINANT
		RUM	47.2				
		TEA, GREEN	18.4				
		WHISKEY	54.5	275.6	7.0	39.373	++
ETHYL UNDECANOATE	3492	RUM	9.4				
		WHISKEY	217.1	226.5	1.3	174.231	++
3-HEXENYL 2-METHYL BUTANOATE	3497	TEA, GREEN	18.4	18.4	43	.428	-
HEXYL-2-METHYLBUTANOATE	3499	APPLE	1,211.0				
		GRAPE	16.1				
		GRAPE, CONCORD	6.9	1,234.0	90	13.712	++
3-METHYLBUTYL 2-METHYLBUTANOATE	3505	WINE, RED	53.8	53.8	.1	538.000	++
3-METHYLBUTYL 2-METHYLPROPANOATE	3507	BEER	2,162.0				
		GRAPE	144.4				
		GRAPE, MUSCAT	1.8				
		WHISKEY	312.1				
		WINE, RED	53.8	2,674.1	9.1	293.857	++
METHYL 3-HYDROXYHEXANOATE	3508	ORANGE JUICE	110.4				
		STRAWBERRY	130.6	241.0	.1	2,410.000	++
2-METHYLTETRAHYDROTHIOPHEN-3-ONE	3512	BEER	108.1				
		COFFEE ROASTED	4,908.2				
		WHISKEY	4.1				
		WINE, WHITE	15.2	5,035.6	.4	12,589.000	++
1-OCTENE-3-ONE	3515	ARTICHOKE	2.8				
		MUSHROOM, DRIED	.0				
		MUSHROOM, FRESH	89.9	92.7	.1	927.000	++
PROPANETHIOL	3521	ONIONS	358.8	358.8	38	9.442	+
PYRROLIDINE	3523	COFFEE ROASTED	6,693.0	6,693.0	9.1	735.495	++
M-CRESOL	3530	BUTTER	2.5				
		COFFEE ROASTED	4,517.9				
		GRAPE, MUSCAT	.9				
		MUSHROOM, DRIED	.0				
		RUM	2.3				
		WHISKEY	5.5				
		WINE, RED	4.6	4,533.7	.4	11,334.250	++
DIMETHYL DISULFIDE	3536	BEER	118.9				
		BRANDY, GRAPE	.2				
		CABBAGE	10.8				
		COCOA	140.3				
		LOBSTER	13.3				
		OLIVE OIL	4.4				
		ONION	1,034.5				
		PORK	9.0				
		WHISKEY	24.4				
		WINE, RED	2.1				
		WINE, WHITE	.2	1,358.1	185	7.341	+
3,7-DIMETHYL-1,3,6-OCTATRIENE	3539	GRAPEFRUIT JUICE	74.5				
		MANGO	27.6	102.1	9.5	10.747	++



CONSUMPTION RATIO AND FOOD PREDOMINANCE OF FLAVORING MATERIALS (continued)

FLAVORING MATERIAL:	FEMA NO.	OCCURRING IN:	ANN CONS KG VIA THIS FD	ANN CONS KG VIA FOOD	ANN CONS KG AS ADDED FLAV	CONSUMPTION RATIO	FOOD PRE-DOMINANT
GERANYL ACETONE	3542	GRAPEFRUIT JUICE TEA, GREEN TOMATO	.0 18.4 3,223.2	3,241.6	72	45.023	++
ETHYL-2-HYDROXYHEXANOATE	3545	GRAPE, CONCORD ORANGE JUICE STRAWBERRY	2.3 1,177.6 5.5	1,185.4	.4	2,963.500	++
2-HYDROXYACETOPHENONE	3548	ALMOND, ROASTED COCOA COFFEE ROASTED RUM WHISKEY	70.2 56.1 1,784.8 .9 .2	1,912.2	23	83.139	++
3-HYDROXY-2-PENTANONE	3550	BEER	1,081.0	1,081.0	2.0	560.500	++
ISOPHORONE	3553	CRANBERRIES GRAPEFRUIT JUICE MUSHROOM, FRESH	15.4 13.8 1.2	30.4	1.3	23.384	++
P-MENTHA-1,8-DIEN-7-AL	3557	GRAPEFRUIT JUICE ORANGE JUICE	3.2 110.4	113.6	37	3.070	+
P-MENTHA-1,3-DIENE	3558	CARROT LEMON OIL NUTMEG OREGANO PEPPER	970.8 3,450.0 5,520.0 1,094.8 13,683.9	24,719.5	1.5	16,479.666	++
P-MENTHA-1,4-DIENE	3559	CARROT CARROTS LEMON OIL NUTMEG ORANGE JUICE OREGANO PEPPER	4,603.7 4,584.6 58,650.0 6,900.0 110.4 4,535.6 18,932.5	98,316.8	498	197.423	++
PIPERITENONE	3560	GRAPEFRUIT JUICE ORANGE JUICE	2.8 220.8	223.6	15	14.907	++
P-MENTHA-1,8-DIEN-7-YL ACETATE	3561	GRAPEFRUIT JUICE	1.2	1.2	5.0	.240	-
P-MENTH-3-EN-1-OL	3563	GRAPEFRUIT JUICE	2.8	2.8	.0	>999,999	++
P-MENTH-8-EN-1-OL	3564	GRAPEFRUIT JUICE MANGO NUTMEG	295.3 1.8 1,495.0	1,792.1	321	5.583	+
P-MENTH-8-EN-2-ONE	3565	CELERY LEAVES GRAPEFRUIT JUICE SPEARMINT OIL	309.1 .9 3,450.0	3,760.0	.0	>999,999	++
METHYL 2-METHYL-3-FURYL DISULFIDE	3573	COFFEE ROASTED	11.3	11.3	2.7	4.185	+
METHYL 1-PROPENYL DISULFIDE	3576	ONION	1,136.2	1,136.2	3.2	355.063	++

CONSUMPTION RATIO AND FOOD PREDOMINANCE OF FLAVORING MATERIALS (continued)

FLAVORING MATERIAL:	FEMA NO.	OCCURRING IN:	ANN CONS KG VIA THIS FD	ANN CONS KG VIA FOOD	ANN CONS KG AS ADDED FLAV	CONSUMPTION RATIO	FOOD PRE-DOMINANT
3-OCTANOL	3581	APPLE JUICE MUSHROOM, FRESH STRAWBERRY WINE, WHITE	2.3 164.7 1.8 .2	169.0	6.8	24.853	++
1-OCTEN-3-YL ACETATE	3582	MUSHROOM, FRESH SPEARMINT OIL	.9 230.0	230.9	6.8	33.956	++
1-PENTEN-3-OL	3584	ASPARAGUS, COOKED CHICKEN, HEATED KIWIFRUIT STRAWBERRY TEA, BLACK TEA, GREEN	5.8 637.6 .9 20.2 151.8 4,489.6	5,305.9	3.6	1,473.861	++
DELTA TETRADECALACTONE	3590	BUTTER COCONUT	7,728.0 1,242.0	8,970.0	.9	9,966.667	++
2,5-XYLENOL	3595	COFFEE ROASTED	1,673.3	1,673.3	.2	8,366.500	++
3,4-XYLENOL	3596	COFFEE ROASTED	892.4	892.4	.4	2,231.000	++
2-METHOXY-4-PROPYLPHENOL	3598	RUM	37.7	37.7	.9	41.889	++
2-METHYL-TRANS-2-BUTENOIC ACID	3599	CELERY LEAVES	77.3	77.3	.0	>999,999	++
OCTYL 2-METHYLBUTYRATE	3604	STRAWBERRY	9.2	9.2	34	.271	-
2-ACETYL-5-METHYLFURAN	3609	BEER	108.1	108.1	1.8	60.056	++
2-PROPENYLPYRROLE	3614	TEA, GREEN	220.8	220.8	.0	>999,999	++
THIAZOLE	3615	CHICKEN, HEATED	17.7	17.7	.0	>999,999	++
ALPHA IONOL	3624	GRAPE	598.0	598.0	.3	1,993.333	++
BETA IONOL	3625	GRAPE	920.0	920.0	1.3	707.692	++
DIHYDRO-BETA IONONE	3626	RASPBERRY	5.1	5.1	.2	25.500	++
DIHYDRO-ALPHA-IONONE	3628	TEA, GREEN	184.0	184.0	.1	1,840.000	++
4-HYDROXY-5-METHYL-3(2H)-FURANONE	3635	RASPBERRY	5.1	5.1	.1	51.000	++
2,6,6-TRIM-1,2-CYCLOHEXEN-1-CARBOXALD	3639	MANGO TEA, GREEN	.2 73.6	73.8	.1	738.000	++
ETHYL TRANS-4-DECENOATE	3642	BEER	864.8	864.8	.2	4,324.000	++
ETHYL TRANS-2-OCTENOATE	3643	GRAPE, CONCORD GRAPEFRUIT JUICE	2.3 .0	2.3	.0	>999,999	++

# Consumption Ratio



CONSUMPTION RATIO AND FOOD PREDOMINANCE OF FLAVORING MATERIALS (continued)

FLAVORING MATERIAL:	FEMA NO.	OCCURRING IN:	ANN CONS KG VIA THIS PD	ANN CONS KG VIA FOOD	ANN CONS KG AS ADDED FLAV	CONSUMPTION RATIO	FOOD PRE-DOMINANT
3-METHYL-2-BUTEN-1-OL	3647	COFFEE ROASTED ORANGE JUICE RASPBERRY	6,023.7 18.4 114.3	6,156.4	.1	61,564.000	++
1,4-CINCOLE	3658	GRAPEFRUIT JUICE	16.6	16.6	462	.036	-
9-DECEMOIC ACID	3660	BEER	10,810.0	10,810.0	.0	>999,999	++
2,5-DIMETHYL-4-METHOXY-3(2H)-FURANONE	3664	GRAPE, CONCORD MANGO PINEAPPLE STRAWBERRY	34.5 4.6 96.6 563.0	698.7	.0	>999,999	++
4-ETHYL-2,6-DIMETHOXYPHENOL	3671	BEER	108.1	108.1	.0	>999,999	++
2-ETHYLFURAN	3673	CHICKEN, HEATED OLIVE OIL	782.5 100.5	883.0	.0	>999,999	++
ETHYL TRANS-2-HEXENOATE	3675	GRAPE, CONCORD STRAWBERRY	2.3 1.8	4.1	.0	>999,999	++
CIS-3-HEXENYL BENZOATE	3688	TEA, GREEN	138.0	138.0	.0	>999,999	++
HEXYL BENZOATE	3691	PEACHES TEA, BLACK	724.5 986.7	1,711.2	.0	>999,999	++
3-METHYL-2-BUTANOL	3703	BRANDY, GRAPE GRAPE, MUSCAT	36,483.8 3.5	36,487.3	.0	>999,999	++
CIS-2-NONEN-1-OL	3720	ASPARAGUS, COOKED	1.4	1.4	.0	>999,999	++
TRANS,TRANS-2,4-OCTADIENAL	3721	PEANUT OIL PEANUT, ROASTED	.0 .7	.7	.0	>999,999	++
2-OXOBUTYRIC ACID	3723	BEER	11,891.0	11,891.0	.0	>999,999	++
2-PENTADECANONE	3724	CHEESE, CHEDDAR CHICKEN, HEATED COCONUT COFFEE, ROASTED	1,390.4 115.9 2,691.0 3,235.0	7,432.3	.0	>999,999	++
4-PROPEMYL-2,6-DIMETHOXYPHENOL	3728	BEER	108.1	108.1	.0	>999,999	++
2,2,6-TRIMETHYL-6-VINYLTETRAHYDROPIRAN	3735	GRAPEFRUIT JUICE WINE, WHITE	15.2 2.8	18.0	.0	>999,999	++
P-VINYLPHENOL	3739	ASPARAGUS, COOKED BEER COFFEE, ROASTED MANGO PEANUT, ROASTED RASPBERRY STRAWBERRY TEA, GREEN	21.9 16,647.4 1,004.0 .2 1.2 20.2 12.9 36.8				

CONSUMPTION RATIO AND FOOD PREDOMINANCE OF FLAVORING MATERIALS (continued)

FLAVORING MATERIAL:	FEMA NO.	OCCURRING IN:	ANN CONS KG VIA THIS PD	ANN CONS KG VIA FOOD	ANN CONS KG AS ADDED FLAV	CONSUMPTION RATIO	FOOD PRE-DOMINANT
		WINE, RED	.7	17,745.3	.0	>999,999	++
5-HYDROXY-7-DECEMOIC ACID DELTA LACTONE	3745	MANGO	73.6	73.6	.0	>999,999	++
LINALOOL OXIDE	3746	APPLE JUICE BEER GRAPE GRAPE, MUSCAT GRAPEFRUIT JUICE ORANGE JUICE STRAWBERRY TEA, BLACK TEA, GREEN WINE, WHITE	7.8 432.4 193.2 1.6 2,827.6 36.8 42.3 910.8 1,573.2 207.0	6,232.7	104	59.930	++
BETA CARYOPHYLLENE OXIDE		BEER GRAPEFRUIT JUICE	432.4 55.2	487.6	3.3	147.757	++
CADINENE		GRAPEFRUIT JUICE ORANGE JUICE PEPPER TEA, GREEN	500.9 18.4 7,310.6 4,324.0	12,153.9	90	135.043	++
CARYOPHYLLENE ALCOHOL		BEER GRAPEFRUIT JUICE	648.6 165.6	814.2	.9	904.667	++
MENTHADIENOL		ORANGE JUICE	294.4	294.4	.1	2,944.000	++
2-BUTANOL		APPLE JUICE BEANS BUTTER CHEESE, CHEDDAR CHEESE, SWISS LENTILS ORANGE JUICE PEAS POTATO CHIPS RUM STRAWBERRY TEA, BLACK WHISKY WINE, RED	677.1 44.9 115.0 16,190.9 198.0 2.5 73.6 139.2 8.7 5,658.0 119.6 341.6 1,139.9 17.9	24,726.9	.1	247,269.000	++