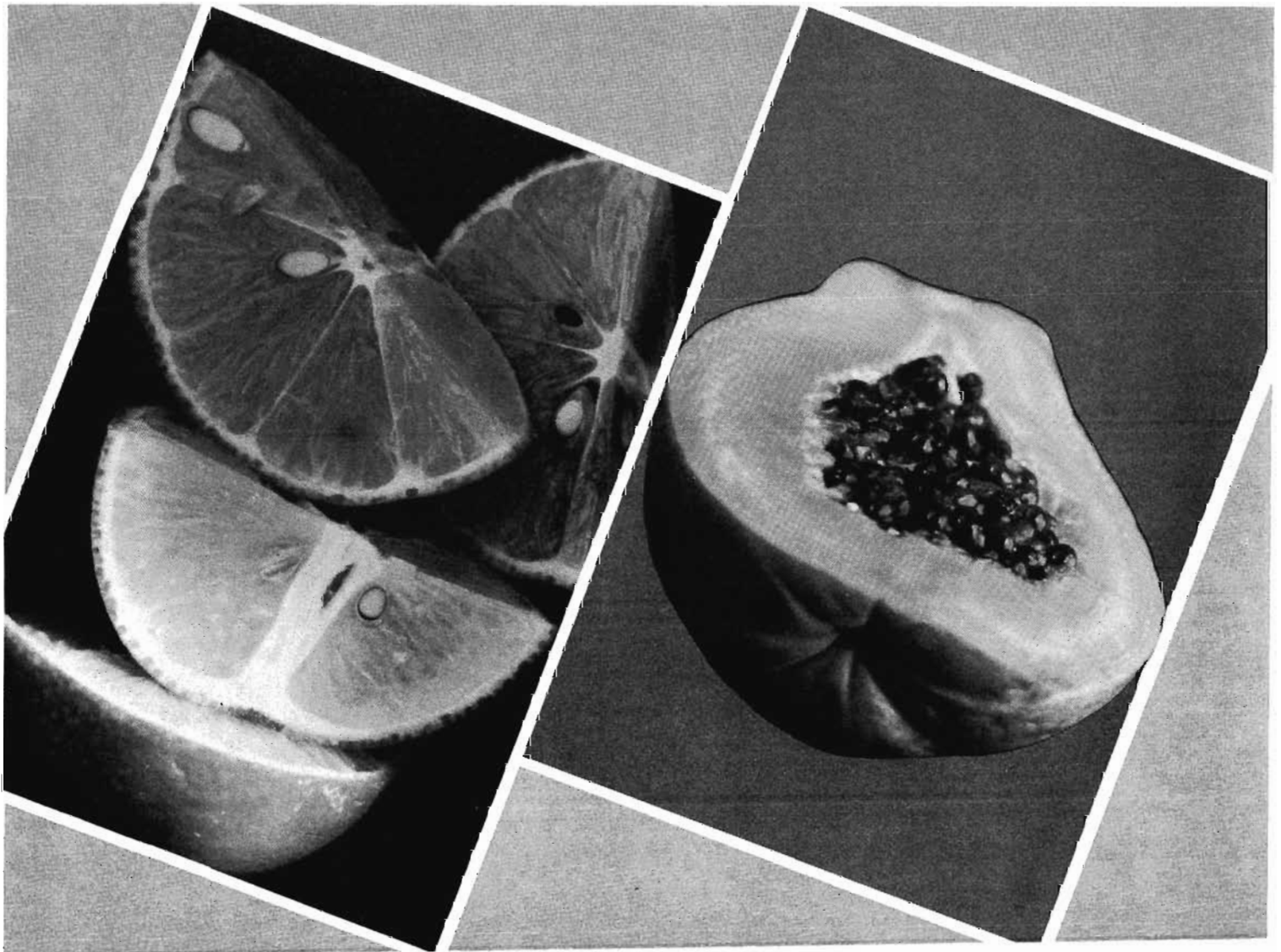


**FOODS OF HAWAII
AND THE
PACIFIC BASIN
Fruits and Fruit Products:
Raw, Processed, and Prepared**

Volume 5: Percentage of U.S. Recommended Daily Allowances

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FOODS OF HAWAII AND THE PACIFIC BASIN

Fruits and Fruit Products: Raw, Processed, and Prepared

INTRODUCTION

This is a companion publication to *Foods of Hawaii and the Pacific Basin, Fruits and Fruit Products, Volume 4: Composition* (3). In this volume, nutrient composition is expressed as percentage of U.S. Recommended Daily Allowances, or U.S. RDA, as in nutrition labeling. Many foods that are sold in packages or containers supply nutrition information, but others such as fresh produce generally do not. *The purpose of this publication is to bridge this gap by making available nutrition information—given as percentage of U.S. RDA—for eight nutrients provided by specified amounts of various fresh fruits and fruit products (Table 1).* These are foods presented in Volume 4. Foods are also listed in descending order of percentages for each nutrient (Table 2).

An earlier, similar publication on vegetables, *Volume 2: Percentage of U.S. Recommended Daily Allowances*, gives an overview of nutrition and discusses the development of the U.S. RDA and the bases and limitations of analyzing food and establishing allowances (2). This material is intended to forward consumers' ability to integrate dietary practice with nutrition knowledge and therefore is recommended reading for users of this volume.

DERIVATION OF VALUES IN TABLE 1

All values in Table 1 are derived from data in *Foods of Hawaii and the Pacific Basin, Fruits and Fruit Products, Volume 4: Composition* (3). The numbers for food items correspond to the numbers in Volume 4. Thus the scientific and local names, the history of an item, descriptions of general eating quality, size, waste or refuse, methods of cooking, laboratory preparation and sampling procedures, and analytical methods for the items in this publication can be found in Volume 4. Note that the data in the tables are taken from laboratory analyses and do not contain estimated, derived, or imputed values from another form of the food or from a similar food.

Common Measure

Household or retail market measures are referred to as common measures in Table 1. They are convenient quantities that may or may not be average serving sizes. The weight of the common measure, rounded to the nearest gram below 50 grams and to the nearest 5 grams above 50 grams, includes only the edible portion and not the waste or refuse. Although at least five separate measurements were taken for each item and averaged, the weights varied widely for some items. The weight of 1 cup of irregularly shaped items such as roselle, shredded coconut, and sliced or diced pieces was affected by the size of the pieces and the pressure applied in filling the cup, and therefore may vary from published weights. The linear dimensions, given as length by maximum diameter, if followed by the term *as purchased*, include the skin or peel (refuse). Fruits usually visualized with the skin on were described in this manner, although they are peeled before eating, e.g., bananas and oranges. However, the weight and nutritive values apply only to the *edible portion*.

Energy Value

The kilocalorie content is taken from Volume 4, Table 1, Column E, and is given in increments of 2 kilocalories up to 20 kilocalories, in increments of 5 up to 50, and in increments of 10 over 50. Values exactly halfway between two figures—e.g., 3 kilocalories, halfway between 2 and 4—were raised arbitrarily to the higher of the two, i.e., 4 kilocalories.

Protein, Vitamins, and Minerals

Percentage of U.S. RDA in a common measure is calculated from the values in Volume 4, Table 1, Column E, and is expressed in 2 percent increments up to 10 percent, in 5 percent increments from 10 to 50 percent, and in 10 percent increments above 50 percent. An asterisk (*) designates that none or less than 1 percent of the U.S. RDA of that nutrient is present in the common measure for that food. A blank space designates that the food was not analyzed for that nutrient.

Calculation of the percentage of U.S. RDA is given below, using Item 02-001, acerola—vitamin C, as an example. The vitamin C content of one medium acerola weighing 6 grams is 140 milligrams (first common measure, Column E, Volume 4). The U.S. RDA is 60 milligrams (Table 4). The amount of vitamin C provided by one acerola, expressed as percentage of U.S. RDA, is:

$$(140 \text{ mg vit. C} / 60 \text{ mg vit. C})100 = 233 \text{ percent.}$$

Expressed in increments of 10 percent, it becomes 230 percent.

NUTRITION INFORMATION LABEL AND ITS USE

The format, headings, and terms used in displaying nutrient content on the nutrition information label have been standardized, as the laws are very specific about the information that must be stated. A label from a canned fruit is shown here.

UNPEELED APRICOT HALVES IN HEAVY SYRUP	
SERVING SIZE	1 CUP
SERVINGS PER CONTAINER	3
CALORIES	220
PROTEIN	1 g
CARBOHYDRATE	56 g
FAT	0 g
PERCENTAGE OF U.S. RECOMMENDED DAILY ALLOWANCES (U. S. RDA)	
PROTEIN	* 1
VITAMIN A	70
VITAMIN C	10
THIAMINE	2
RIBOFLAVIN	2
NIACIN	4
CALCIUM	2
IRON	4
PHOSPHORUS	2
MAGNESIUM	4
*CONTAINS LESS THAN 2 PERCENT OF THE U.S. RDA OF THIS NUTRIENT	

The serving size of 1 cup identifies the amount of food for which the nutrition information is given. The number of servings per container also must be shown. Energy value stated in kilocalories, and protein, carbohydrate, and fat contents in grams must be declared for a serving. There are no U.S. RDA or Recommended Dietary Allowances for carbohydrate and fat. Protein and all vitamin and mineral contents are given as percentage of U.S. RDA in a serving. Although not shown on this label, the fatty acid, cholesterol, sodium, and potassium contents also may be declared under certain conditions in grams, and must appear immediately following the fat declaration.

Nutrition information labels can provide the information necessary to estimate the relative nutrient intakes for a full day. For example, in the label shown above, the percentage of U.S. RDA informs the consumer that a 1-cup serving of apricots pro-

vides 70 percent of the vitamin A allowance for a day, 10 percent of the vitamin C allowance, and so forth for the other nutrients listed. By adding up the percentages of U.S. RDA for each nutrient in all foods eaten in one day, one can find out if the percentages fall short of or exceed 100 percent. In order to take care of day-to-day variations, estimates should be averaged for several days of the week. Most people do not need 100 percent of the U.S. RDA for every nutrient. Using 100 percent as a goal is not dangerous, but concern about shortages is probably unwarranted unless intakes repeatedly fall below 70 percent or so. In this case the reader should refer to the Recommended Dietary Allowances (Table 3) for his/her age-sex category. Fruits that are important sources of seven nutrients are listed in Table 2 in descending order according to the percentage of the U.S. RDA provided in a designated serving. By using tables and labels, consumers can determine their nutrient intakes and be responsible for their dietary condition.

Table 1. Food energy and percentage of U.S. Recommended Daily Allowances for eight nutrients provided by specified amounts of fruit and fruit products

Item no.	Item and common measure ^{1, 2}	Weight	Food	Pro-	Vita-	Vita-	Ribo-			Cal-	Iron
			Energy	tein	min A	min C	Thiamin	flavin	Niacin	cium	
		Grams	Kcal	Percentage of U.S. RDA							
02-001	Acerola										
	1 medium, 7/8 x 7/8 inch as purchased, pitted	6	2	*	*	230	*	*	*	*	*
	1 cup, medium as purchased, pitted	100	30	2	8	3880	2	4	2	*	*
02-002	Apricot, semi-dried, sweet and sour										
	5 medium halves, 1 1/2 to 1 3/8 inch diameter as purchased	30	70	*						2	2
	1 package, 4 ounces as purchased	115	290	2						4	10
02-003	Avocado, Beardslee										
	1 cup, 1/2 inch cubes	150	350	*	60	6	4	20	6	*	6
	1 cup, pulp	230	540	*	100	8	6	30	10	2	8
02-004	Avocado, Hulumanu										
	1/2 medium, 7 inch length as purchased, peeled and pitted	220	230	4			4	10	15	2	6
	1 cup, 1/2 inch cubes	150	150	4			2	8	10	2	4
02-005	Avocado, Kahaluu										
	1 cup, 1/2 inch cubes	150	330	2	4	20				2	4
	1 cup, pulp	225	500	4	6	30				2	6
02-006	Avocado, Nabal										
	1/2 medium, 4 1/4 x 4 inch diameter as purchased, peeled and pitted	215	450	4	35	20	15	20		2	4
	1 cup, 1/2 inch cubes	150	310	2	25	15	8	15		2	4
02-007	Banana, Dessert, Bluefields or Gros Michel										
	1 medium, 6 1/2 x 1 5/8 inch as purchased, peeled	115	120	2	4	10	2	2	4	*	2
	1 cup, 1/4 inch slices	155	160	4	6	15	4	4	6	*	2
02-008	Banana, Dessert, Brazilian or "Apple"										
	1 medium, 5 3/4 x 1 3/4 inch as purchased, peeled	70	80	*	2	15	2	4	2	*	2
	1 cup, 1/4 inch slices	140	170	2	4	35	4	6	4	*	2

02-009	Banana, Dessert, Chinese or Cavendish 1 medium, 5 1/4 x 1 1/2 inch as purchased, peeled	65	45	2	2	8	2	2	2	#	2
		140	100	4	4	20	2	4	4	#	2
02-010	Banana, Dessert, Williams Hybrid 1 medium, 6 1/2 x 1 3/4 inch as purchased, peeled	135	140	2	2	10	4	4	4	#	4
		155	160	2	2	15	4	4	6	#	4
02-011	Banana, Plantain or cooking, Largo 1 medium, 7 x 2 1/2 inch as purchased, peeled	140	180	2	8	40	4	6	4	#	4
		150	190	2	8	45	4	6	4	#	4
02-012	Banana, Plantain or cooking, Maoli 1 medium, 7 1/2 x 2 7/8 inch as purchased, peeled	235	270	4	20	60	8	15	8	#	6
		150	170	2	10	40	6	10	4	#	4
02-013	Banana, Plantain or cooking, Popoulu 1 medium, 5 5/8 x 2 1/2 inch as purchased, peeled	240	270	4	35	60	10	10	8	#	4
		150	170	2	20	35	6	6	4	#	2
02-014	Breadfruit, green, raw 1/8 medium, 6 1/2 x 6 1/8 inch diameter as purchased, peeled	185	190	2	#	50	15	6	8	4	6
		105	110	2	#	30	8	4	4	2	2
02-015	Breadfruit, green, cooked 1/8 medium, 6 1/2 x 6 1/8 inch diameter as purchased, peeled	175	180	2	#	30	15	6	6	4	4
		100	100	2	#	15	8	4	4	2	2
02-016	Breadfruit, ripe, raw 1/8 medium, 6 7/8 x 5 inch diameter as purchased, peeled	125	170	#	2	45	10	4	10	2	2
		250	340	#	2	90	20	10	20	6	4
02-017	Cactus fruit 1 medium, 3 1/4 x 2 3/8 inch as purchased, peeled	145	80	2	#	60	2	2	2	6	2
		95	50	2	#	40	#	2	2	4	2
02-018	Carambola 1 medium, 5 x 3 inch as purchased, seeds removed	195	70	2	#	110	6	6	6	#	#
		135	50	2	#	80	4	4	4	#	#

Table 1. (Cont.) Food energy and percentage of U.S. Recommended Daily Allowances for eight nutrients provided by specified amounts of fruit and fruit products

Item no.	Item and common measure ^{1,2}	Weight	Food Energy	Pro-	Vita-	Vita-	Thiamin	Ribo-	Niacin	Cal-	Iron
		Grams	Kcal	tein	min A	min C		flavin		cium	
		<-----Percentage of U.S. RDA----->									
02-019	Carissa										
	1 medium, 1 1/2 x 1 1/8 inch as purchased, seeds removed	13	8	#	#	10	#	#	#	#	#
	1 cup, 1/8 inch slices	150	100	#	#	140	4	6	2	2	10
02-020	Cherimoya										
	1 large, 5 x 3 7/8 inch as purchased, peeled and pitted	550	610	15	#	110	40	35	30	4	8
	1 cup, pulp	250	280	6	#	50	20	15	15	2	4
02-021	Cherry seed, semi-dried, sweet and sour										
	5 medium, 3/4 x 11/16 x 1/4 inch as purchased, pitted	5	10	#						2	6
	1 package, 3 1/2 ounces as purchased, pitted	60	120	2						15	80
02-022	Coconut, mature										
	1 medium, 4 1/4 x 4 1/2 inch as purchased, shell removed	380	1600	20	#	25	15	2	10	6	40
	1 cup, grated, lightly packed	100	420	6	#	6	4	#	4	2	10
02-023	Coconut cream, frozen										
	1/2 cup	120	240	4						#	6
	1 can, 12 fluid ounces	360	730	10						2	15
02-024	Coconut cream, prepared with water										
	1/2 cup	115	280	6	#	6	2	#	4	2	10
	1 cup	230	550	10	#	10	4	#	8	4	20
02-025	Coconut cream, prepared without water										
	1/2 cup	115	380	8	#	6	2	#	6	2	15
	1 cup	230	760	15	#	10	4	#	10	2	30
02-026	Coconut water										
	1 small, 4 1/2 x 4 1/2 inch as purchased	150	35	#	#	4	#	#	#	2	#
	1 cup	240	60	#	#	6	#	#	#	4	#

02-027	Dragon eye or longan, dried										
	5 medium, 1 x 1 inch as purchased, pit and shell removed	8	25	#					#	#	
	1 package, 8 ounces as purchased, pit and shell removed	90	260	6					2	6	
02-028	Fig										
	1 medium, 2 1/4 x 2 inch as purchased	50	25	#	#	2	2	2	#	2	#
	1 large, 2 1/2 x 2 1/4 inch as purchased	70	35	#	#	2	2	2	2	2	#
02-029	Fruit punch base, frozen										
	1/2 cup, base	140	280	#					#	2	
	1 can, 12 fluid ounces, base	420	840	2					2	4	
02-030	Fruit punch concentrate, Hawaiian, frozen										
	1/2 cup, concentrate	150	310	#	#	4	2	6	#	2	
	1 can, 6 fluid ounces, concentrate	225	470	#	#	6	4	8	2	2	
02-031	Fruit punch syrup, imitation										
	1/2 cup, syrup	150	300	#					#	#	
	1 quart, syrup	1200	2400	2					4	2	
02-032	Ginger, semi-dried, salted										
	5 medium slices, 1 3/8 x 1 x 3/16 inch as purchased	14	20	#					4	4	
	1 package, 7 ounces as purchased	195	290	4					40	60	
02-033	Grape, Isabella										
	1 cup, whole as purchased, skin and seeds removed	90	60	#	2	4	4	2	45	#	2
	1 cup, pulp, skin and seeds removed	250	160	2	6	8	15	8	130	2	4
02-034	Grapefruit										
	1 medium, 2 3/4 x 3 1/2 inch as purchased, peeled, membrane removed	135	40	2	#	120	4	2	2	2	#
	1 cup, sections, membranes removed	200	60	2	#	180	6	2	2	4	2
02-035	Green sapote										
	1 medium, 4 x 3 3/4 inch as purchased, peeled and seeds removed	225	240	6	35	110	8	6	20	8	6
	1 cup, pulp	250	270	6	35	120	8	8	20	8	6
02-036	Guava, Cattley, red, seeds removed										
	1 medium, 1 x 7/8 inch as purchased	5	4	#	#	2	#	#	#	#	#
	1 cup, pulp and shell	245	190	2	10	130	8	6	20	6	6
02-037	Guava, common, seeds removed										
	1 medium, 3 x 2 1/2 inch as purchased	140	80	#	4	440	6	4	8	2	2
	1 cup, pulp and shell	245	130	2	6	780	10	8	15	4	4

Table 1. (Cont.) Food energy and percentage of U.S. Recommended Daily Allowances for eight nutrients provided by specified amounts of fruit and fruit products

Item no.	Item and common measure ^{1, 2}	Weight	Food Energy	Pro-	Vita-	Vita-	Thiamin	Ribo-	Niacin	Cal-	Iron
		Grams	Kcal	tein	min A	min C	Percentage of U.S. RDA	flavin		cium	
02-038	Guava, common, whole										
	1 medium, 3 x 2 1/2 inch as purchased	165	110	2		580	4	6	6	2	15
	1 cup, pulp and shell	240	160	2		840	6	8	8	2	20
02-039	Guava, extract, homemade										
	1 cup	235	35	#	#	290	4	2	8	2	15
	1 quart	940	130	2	#	1150	15	10	30	4	60
02-040	Guava, nectar, frozen, reconstituted										
	1 cup	250	90	#						#	#
	1 quart	1000	360	2						2	2
02-041	Guava, nectar, canned										
	1 can, 12 fluid ounces	350	160	#						2	2
	1 cup	235	110	#						#	2
02-042	Guava, nectar base, frozen										
	1/2 cup, base	140	250	#						#	8
	1 can, 6 fluid ounces, base	210	370	#						2	10
02-043	Guava, jelly										
	1 tablespoon	20	50	#						#	#
	1/4 cup	75	200	#						#	2
02-044	Guava, sauce, homemade										
	4 tablespoon	60	20	#	2	150	2	#	2	#	#
	1 cup	240	90	2	8	590	4	2	6	2	2
02-045	Java plum										
	3 medium, 7/8 x 3/4 inch as purchased, pitted	9	4	#	#	4	#	#	#	#	#
	1 cup, pitted	135	70	2	#	70	#	2	2	#	2
02-046	Ketambilla										
	1 cup, pulp, skin and seeds removed	235	110	6	10	250	2	8	#	2	6
	1 pound, pulp, skin and seeds removed	454	210	10	20	490	4	15	#	4	10

02-047	Lemon peel, dried										
	1 medium, 2 inch diameter x 3/16 inch as purchased, seeds removed	8	12	*						2	4
	1 package, 1 1/4 ounce as purchased, seeds removed	45	70	2						10	20
02-048	Lemon, preserved										
	1 large, 2 inch diameter x 1/4 inch as purchased, seeds removed	13	25	*						2	2
	1 package, 1 1/2 ounce as purchased, seeds removed	44	80	*						4	4
02-049	Lime, juice										
	1 tablespoon	15	4	*	*	6	*	*	*	*	*
	1 cup	250	60	2	*	100	4	6	2	2	2
02-050	Loquat										
	1 medium, 2 1/4 x 1 3/4 inch as purchased, peeled and pitted	25	12	*	6	*	*	*	*	*	*
	10 fruit, 1 1/2 inch length as purchased, peeled and pitted	100	45	*	20	*	2	2	*	*	*
02-051	Lychee, Brewster										
	1 medium, 1 1/2 x 1 1/4 inch as purchased, peeled and pitted	13	8	*	*	20	*	*	*	*	*
	1 cup, peeled and pitted	190	130	2	*	260	2	6	6	2	2
02-052	Lychee, Kwai Mi										
	1 medium, 1 1/2 x 1 1/4 inch as purchased, peeled and pitted	13	10	*	*	8	*	*	2	*	*
	1 cup, peeled and pitted	190	150	2	*	130	4	10	20	*	4
02-053	Lychee, semi-dried (Taiwan)										
	5 medium, 1 1/4 x 1 1/4 inch as purchased, peeled and pitted	14	35	2						*	*
	1 package, 8 ounces as purchased, peeled and pitted	130	300	10						2	6
02-054	Mango, Haden										
	1 medium, 3 5/8 x 3 1/4 inch as purchased, peeled and pitted	230	130	2	180	60	6	8	4	2	2
	1 cup, 1/2 inch cubes	170	100	2	130	45	4	6	2	2	2
02-055	Mango, Pirie										
	1 medium, 3 1/8 x 3 1/8 inch as purchased, peeled and pitted	170	120	2	160	45	10	6	4	2	2
	1 cup, 1/2 inch cubes	170	120	2	160	45	10	6	4	2	2

Table 1. (Cont.) Food energy and percentage of U.S. Recommended Daily Allowances for eight nutrients provided by specified amounts of fruit and fruit products

Item no.	Item and common measure ^{1,2}	Weight	Food Energy	Pro-	Vita-	Vita-	Thiamin	Ribo-	Niacin	Cal-	Iron
		Grams	Kcal	tein	min A	min C		flavin		cium	
		<-----Percentage of U.S. RDA----->									
02-056	Mango, chutney										
	1 tablespoon	18	35	*	*	2	*	*	*	*	*
	1/4 cup	70	140	*	*	4	*	2	*	*	4
02-057	Mango, sauce										
	4 tablespoon	70	100	*						*	*
	1 cup	270	370	2						2	2
02-058	Mango, shredded, sweet and sour										
	5 medium slices, 2 7/8 x 3/8 x 3/8 inch as purchased	20	50	*						2	2
	1 package, 1 1/2 ounces as purchased	42	110	*						2	2
02-059	Mountain apple										
	1 medium, 2 x 1 7/8 inch as purchased, pitted	55	16	*	*	20	2	2	*	*	2
	1 cup, 1/2 inch cubes	150	45	*	*	60	2	4	2	2	4
02-060	Mulberry										
	1 medium, 1 x 1/2 inch as purchased	2	*	*	*	2	*	*	*	*	*
	1 cup	140	60	4	*	80	2	8	4	6	15
02-061	Ohelo berry										
	1 medium, 3/8 x 1/2 inch as purchased	1	*	*	*	*	*	*	*	*	*
	1 cup	140	50	*	15	15	2	2	2	*	*
02-062	Olives, dried, sweet and sour										
	5 medium halves, 1 1/4 x 3/4 x 1/2 inch as purchased	20	50	*						2	4
	1 package, 7 ounces as purchased	200	490	2						10	30
02-063	Orange										
	1 large, 3 1/2 x 3 5/8 inch as purchased, peel and membranes removed	220	80	2	30	190	15	10	4	6	2
	1 cup, sections	190	70	2	25	160	15	10	4	4	2
02-064	Orange, juice, reconstituted										
	1 cup	250	110	2						2	2
	1 quart	1000	430	10						10	8

02-065	Papaya, green, raw										
	1/2 medium, 5 1/2 x 3 3/4 inch as purchased, skin and seeds removed	175	70	2					4	2	
	1 cup, 1/4 to 3/8 inch slices quartered	105	45	*					2	2	
02-066	Papaya, green, cooked										
	1 cup, 1/4 to 1/8 inch slices quartered	130	60	*					2	2	
	1 pound	454	200	2					8	6	
02-067	Papaya, Solo, hermaphrodite										
	1/2 medium, 5 x 4 inch as purchased, skin and seeds removed	145	70	*	30	200	2	4	2	4	2
	1 cup, 1/2 inch cubes	140	60	*	30	200	2	4	2	4	2
02-068	Papaya, Solo, pistillate										
	1/2 medium, 4 1/2 x 4 1/4 inch as purchased, skin and seeds removed	230	110	2	90	280	4	6	4	10	2
	1 cup, 1/2 inch cubes	140	70	*	60	170	2	4	2	6	2
02-069	Papaya, drink, canned										
	1 cup	250	100	*					*	2	
	1 can, 12 fluid ounces	375	150	*					2	4	
02-070	Papaya-passion fruit nectar, canned										
	1 cup	235	110	*					2		
	1 can, 12 fluid ounces	350	160	*					2		
02-071	Papaya-pineapple nectar, canned										
	1 cup	250	120	*					2	4	
	1 can, 12 fluid ounces	375	170	*					2	6	
02-072	Passion fruit, purple, juice										
	1 cup	250	130	2	35	120	*	20	20	2	4
	1 medium, 2 1/4 x 2 inch as purchased, skin and seeds removed	21	10	*	4	10	*	2	2	*	*
02-073	Passion fruit, yellow, juice										
	1 cup	250	130	2	120	80	*	15	30	2	6
	1 medium, 2 3/8 x 2 inch as purchased, skin and seeds removed	22	12	*	10	8	*	2	2	*	*
02-074	Passion fruit, juice, base, frozen										
	1/2 cup, base	145	240	*	80	260	*	10	6	*	6
	1 can, 6 fluid ounces, base	215	360	*	110	390	*	20	10	*	8
02-075	Passion fruit-orange, nectar										
	1 cup	250	100	*					*	*	
	1 quart	1000	390	*					2	2	

Table 1. (Cont.) Food energy and percentage of U.S. Recommended Daily Allowances for eight nutrients provided by specified amounts of fruit and fruit products

Item no.	Item and common measure ^{1,2}	Weight	Food Energy	Pro-	Vita-	Vita-	Thiamin	Ribo-	Niacin	Cal-	Iron
		Grams	Kcal	tein	min A	min C	flavin	flavin	cium		
		-----Percentage of U.S. RDA----->									
02-076	Passion fruit-orange, drink, canned										
	1 cup	240	110	#						#	4
	1 can, 12 fluid ounces	360	170	#						#	6
02-077	Pear (Japan)										
	1 medium, 3 1/4 x 3 3/4 inch as purchased, core removed	325	130	2						2	2
	1 small, 3 x 3 1/2 inch as purchased, core removed	285	110	2						2	2
02-078	Persimmon, Hachiya										
	1 medium, 2 1/2 x 2 1/2 inch as purchased, peeled	135	100	2	25	15	#	4	2	#	2
	1 cup, pulp	300	230	2	60	35	#	10	2	2	2
02-079	Persimmon, dried										
	1 small, 2 1/2 x 1 3/4 inch as purchased, stem ends removed	30	80	#	2	#	#	#	#	#	2
	1 large, 3 1/16 x 2 1/16 inch as purchased, stem ends removed	40	110	#	2	#	#	#	#	2	2
02-080	Pineapple, Smooth Cayenne										
	1 wedge, 1/8 of medium, 7 x 5 1/4 inch as purchased, refuse removed	160	80	2	2	25	10	4	2	2	2
	1 cup, 1/2 inch cubes	170	90	2	2	30	10	4	2	4	2
02-081	Pineapple-grapefruit, concentrate, frozen										
	1/2 cup, concentrate	145	240	#	4	320	15	6	6	8	4
	1 can, 6 fluid ounces, concentrate	210	340	#	6	460	20	8	8	10	6
02-082	Plum, Methley										
	1 medium, 1 3/4 x 1 3/4 inch as purchased, pitted	46	18	#	#	2	#	#	#	#	#
	1 cup, 3/8 inch slices	160	60	2	2	8	2	4	2	#	2
02-083	Plum, dried, salted										
	5 medium, 1 1/8 x 7/8 x 5/8 inch as purchased, pitted	10	12	#						2	25
	1 package, 4 1/4 ounces as purchased, pitted	75	90	4						10	170

02-084	Plum, semi-dried, salted										
	5 medium, 1 1/4 x 15/16 x 1/2 inch as purchased, pitted	11	25	*					*	8	
	1 package, 4 1/4 ounces as purchased, pitted	75	170	2					4	50	
02-085	Plum, semi-dried, sweet										
	5 medium, 1 x 7/8 x 1/2 inch as purchased, pitted	12	30	*					*	*	
	1 package, 5 1/2 ounces as purchased, pitted	100	240	2					4	8	
02-086	Plum, semi-dried, sweet and sour										
	5 medium, 1 x 3/4 x 5/8 inch as purchased, pitted	11	30	*					2	6	
	1 package, 1 1/2 ounces as purchased, pitted	70	200	2					8	45	
02-087	Poha										
	1 cup, husk removed	140	90	4	45	100	15	4	10	*	8
	1 pound, husk removed	454	290	15	150	320	50	15	40	4	25
02-088	Poha preserve										
	1 tablespoon	20	50	*					*	*	
	1/4 cup	80	220	2					*	2	
02-089	Pummelo or Shaddock										
	1 medium, 5 1/2 x 5 1/2 inch as purchased, peeled, membrane removed	610	210	8	*	410	15	10	6	4	6
	1 cup, sections	190	60	2	*	130	4	4	2	2	2
02-090	Roselle										
	1 medium, 1 7/8 x 3/4 inch as purchased, seed pod removed	2	*	*	*	*	*	*	*	*	*
	1 cup, seed pod removed	40	14	*	2	8	*	*	*	6	2
02-091	Soursop										
	1 medium, 7 x 5 1/4 inch as purchased, peeled and strained	625	440	6	*	170	30	45	50	6	30
	1 cup, pulp	225	160	2	*	60	10	15	15	2	10
02-092	Strawberry										
	1 cup, stem and cap removed	150	50	2	*	160	2	4	2	4	20
	1 pound, stem and cap removed	454	150	6	*	470	6	10	6	10	60
02-093	Surinam cherry										
	1 medium, 7/8 x 1 1/8 inch as purchased, pitted	6	2	*	2	2	*	*	*	*	*
	1 cup, pitted	175	70	2	40	50	2	6	2	2	2

Table 1. (Cont.) Food energy and percentage of U.S. Recommended Daily Allowances for eight nutrients provided by specified amounts of fruit and fruit products

Item no.	Item and common measure ^{1, 2}	Weight	Food Energy	Pro-	Vita-	Vita-	Thiamin	Ribo-	Niacin	Cal-	Iron
		Grams	Kcal	tein	min A	min C		flavin		cium	
		-----Percentage of U.S. RDA----->									
02-094	Sweetsop										
	1 medium, 4 x 4 1/2 inch as purchased, skin and seeds removed	155	130	4	#	90	10	6	6	2	2
	1 cup, pulp	250	220	8	#	150	15	8	10	4	4
02-095	Tamarind										
	1 medium, 2 1/2 x 1 inch as purchased, peeled and seeds removed	2	4	#	#	#	#	#	#	#	#
	1/2 cup, pulp	110	250	6	#	#	10	15	8	15	4
02-096	Tangerine										
	1 medium, 1 3/4 x 2 5/8 inch as purchased, peeled, membrane removed	90	30	#	15	45	6	2	#	2	2
	1 cup, sections	190	60	2	30	100	15	2	2	2	2
02-097	Tangerine, canned (Japan)										
	1 small segment, 1 1/4 x 3/4 x 1/2 inch as purchased	4	2	#						#	#
	1 cup, segments	180	120	2						2	2
02-098	Watermelon, Charleston Gray										
	1 wedge, 1/16 of 18 1/2 x 8 1/4 inch melon as purchased, rind removed	520	140	4	20	60	15	6		#	6
	1 cup, 1/2 inch cubes	150	40	2	6	20	4	2		#	2
02-099	Watermelon, Chilean black seeded										
	1 wedge, 1/16 of 9 1/4 x 9 1/2 inch melon as purchased, rind removed	260	90	4	25	25	6	6	2	2	2
	1 cup, 1/2 inch cubes	150	50	2	15	15	4	4	2	#	2
02-100	Wi-apple										
	1 medium, 2 3/4 x 2 1/2 inch as purchased, refuse removed	95	50	#	6	80	4	#	6	#	2
	1 small, 2 1/2 x 2 1/4 inch as purchased, refuse removed	75	40	#	6	60	2	#	4	#	2

¹Item numbers and common measures correspond to those in Volume 4.

²The linear dimensions given as length by maximum diameter, if followed by the term *as purchased*, include the skin or peel (refuse). Fruits usually visualized with the skin on were described in this manner, although they are peeled before eating, e.g., bananas and oranges. However, the weight and nutritive values apply only to the *edible portion*.

Table 2. Important sources of selected nutrients

PROTEIN			VITAMIN C (Cont.)		
Food	Percentage of U.S. RDA	Amount of food	Food	Percentage of U.S. RDA	Amount of food
Coconut, mature	20	1 medium	Cactus fruit	60	1 medium
Cherimoya	15	1 large	Banana, Plantain or cooking, Maoli	60	1 medium
			Banana, Plantain or cooking, Popoulu	60	1 medium
			Watermelon, Charleston Gray	60	1 wedge
			Breadfruit, green, raw	50	1/8 medium
VITAMIN A			THIAMIN		
Food	Percentage of U.S. RDA	Amount of food	Food	Percentage of U.S. RDA	Amount of food
Mango, Haden	180	1 medium	Cherimoya	40	1 large
Mango, Pirie	160	1 medium	Soursop	30	1 medium
Passion fruit, yellow, juice	120	1 cup	Pummelo or Shaddock	15	1 medium
Papaya, Solo, pistillate	90	1/2 medium	Watermelon, Charleston Gray	15	1 wedge
Passion fruit, juice, base, frozen	80	1/2 cup	Poha	15	1 cup
Avocado, Beardslee	60	1 cup	Pineapple-grpfruit, concentrate, frozen	15	1/2 cup
			Orange	15	1 large
			Coconut, mature	15	1 medium
			Breadfruit, green, cooked	15	1/8 medium
			Breadfruit, green, raw	15	1/8 medium
			Avocado, Nabal	15	1/2 medium
VITAMIN C			RIBOFLAVIN		
Food	Percentage of U.S. RDA	Amount of food	Food	Percentage of U.S. RDA	Amount of food
Guava, common, whole	580	1 medium	Soursop	45	1 medium
Guava, common, seeds removed	440	1 medium	Cherimoya	35	1 large
Pummelo or Shaddock	410	1 medium	Avocado, Nabal	20	1/2 medium
Pineapple-grpfruit, concentrate, frozen	320	1/2 cup	Avocado, Beardslee	20	1 cup
Guava, extract, homemade	290	1 cup	Passion fruit, purple, juice	20	1 cup
Papaya, Solo, pistillate	280	1/2 medium	Passion fruit, yellow, juice	15	1 cup
Passion fruit, juice, base, frozen	260	1/2 cup	Banana, Plantain or cooking, Maoli	15	1 medium
Ketambilla	250	1 cup			
Acerola	230	1 medium			
Papaya, Solo, hermaphrodite	200	1/2 medium			
Orange	190	1 large			
Soursop	170	1 medium			
Strawberry	160	1 cup			
Guava, sauce, homemade	150	4 tablespoons			
Passion fruit, purple, juice	120	1 cup			
Grapefruit	120	1 medium			
Cherimoya	110	1 large			
Carambola	110	1 medium			
Green sapote	110	1 medium			
Poha	100	1 cup			
Sweetsop	90	1 medium			
Wi-apple	80	1 medium			
Passion fruit, yellow, juice	80	1 cup			
Mango, Haden	60	1 medium			

Table 2. (Cont.) Important sources of selected nutrients

NIACIN			IRON		
Food	Percentage of U.S. RDA	Amount of food	Food	Percentage of U.S. RDA	Amount of food
Soursop	50	1 medium	Coconut, mature	40	1 medium
Grape, Isabella	45	1 cup	Soursop	30	1 medium
Cherimoya	30	1 large	Plum, dried, salted	25	5 medium
Passion fruit, yellow, juice	30	1 cup	Strawberry	20	1 cup
Passion fruit, purple, juice	20	1 cup	Coconut cream, prepared without water	15	1/2 cup
Green sapote	20	1 medium	Guava, extract, homemade	15	1 cup
			Guava, common, whole	15	1 medium

**Table 3. Food and Nutrition Board, National Academy of Sciences--National Research Council
Recommended Dietary Allowances,^a Revised 1980**

Designed for the maintenance of good nutrition of practically all healthy people in the U.S.A.

	Age (years)	Weight		Height		Protein (g)	Fat-Soluble Vitamins			Water-Soluble Vitamins						Minerals						
		(kg)	(lb)	(cm)	(in)		Vita- min A ($\mu\text{g RE}$) ^b	Vita- min D (μg)	Vita- min E (mg $\alpha\text{-TE}$)	Vita- min C (mg)	Thia- min (mg)	Ribo- flavin (mg)	Niacin (mg NE)	Vita- min B-6 (mg)	Fola- cin (μg)	Vitamin B-12 (μg)	Cal- cium (mg)	Phos- phorus (mg)	Mag- nesium (mg)	Iron (mg)	Zinc (mg)	Iodine (μg)
Infants	0.0-0.5	6	13	60	24	kg \times 2.2	420	10	3	35	0.3	0.4	6	0.3	30	0.5	360	240	50	10	3	40
	0.5-1.0	9	20	71	28	kg \times 2.0	400	10	4	35	0.5	0.6	8	0.6	45	1.5	540	360	70	15	5	50
Children	1-3	13	29	90	35	23	400	10	5	45	0.7	0.8	9	0.9	100	2.0	800	800	150	15	10	70
	4-6	20	44	112	44	30	500	10	6	45	0.9	1.0	11	1.3	200	2.5	800	800	200	10	10	90
	7-10	28	62	132	52	34	700	10	7	45	1.2	1.4	16	1.6	300	3.0	800	800	250	10	10	120
Males	11-14	45	99	157	62	45	1000	10	8	50	1.4	1.6	18	1.8	400	3.0	1200	1200	350	18	15	150
	15-18	66	145	176	69	56	1000	10	10	60	1.4	1.7	18	2.0	400	3.0	1200	1200	400	18	15	150
	19-22	70	154	177	70	56	1000	7.5	10	60	1.5	1.7	19	2.2	400	3.0	800	800	350	10	15	150
	23-50	70	154	178	70	56	1000	5	10	60	1.4	1.6	18	2.2	400	3.0	800	800	350	10	15	150
	51+	70	154	178	70	56	1000	5	10	60	1.2	1.4	16	2.2	400	3.0	800	800	350	10	15	150
Females	11-14	46	101	157	62	46	800	10	8	50	1.1	1.3	15	1.8	400	3.0	1200	1200	300	18	15	150
	15-18	55	120	163	64	46	800	10	8	60	1.1	1.3	14	2.0	400	3.0	1200	1200	300	18	15	150
	19-22	55	120	163	64	44	800	7.5	8	60	1.1	1.3	14	2.0	400	3.0	800	800	300	18	15	150
	23-50	55	120	163	64	44	800	5	8	60	1.0	1.2	13	2.0	400	3.0	800	800	300	18	15	150
	51+	55	120	163	64	44	800	5	8	60	1.0	1.2	13	2.0	400	3.0	800	800	300	10	15	150
Pregnant						+30	+200	+5	+2	+20	+0.4	+0.3	+2	+0.6	+400	+1.0	+400	+400	+150	c	+5	+25
Lactating						+20	+400	+5	+3	+40	+0.5	+0.5	+5	+0.5	+100	+1.0	+400	+400	+150	c	+10	+50

Source: Committee on Dietary Allowances, Food and Nutrition Board, 1980. Recommended Dietary Allowances, 9th Ed. National Academy of Sciences, Washington, D.C. (4)

Abbreviations: g = gram, mg = milligram, μg = microgram
RE = retinol equivalent, TE = tocopherol equivalent, NE = niacin equivalent

^aThe allowances are intended to provide for individual variations among most normal persons as they live in the United States under usual environmental stresses. Diets should be based on a variety of common foods in order to provide other nutrients for which human requirements have been less well defined.

^b1 retinol equivalent = 3.33 IU vitamin activity from retinol or 10 IU vitamin activity from β -carotene.

^c30-60 mg of supplemental iron is recommended.

Table 3. (Cont.) Estimated safe and adequate daily dietary intakes of selected vitamins and minerals ^a

	Vitamins						
	Age (years)	Vitamin K (μ g)	Biotin (μ g)	Pantothenic Acid (mg)			
Infants	0-0.5	12	35	2			
	0.5-1	10-20	50	3			
Children and Adolescents	1-3	15-30	65	3			
	4-6	20-40	85	3-4			
Adults	7-10	30-60	120	4-5			
	11+	50-100	100-200	4-7			
		70-140	100-200	4-7			
Trace Elements ^b							
	Age (years)	Copper (mg)	Man-ganese (mg)	Fluoride (mg)	Chromium (mg)	Selenium (mg)	Molybdenum (mg)
Infants	0-0.5	0.5-0.7	0.5-0.7	0.1-0.5	0.01-0.04	0.01-0.04	0.03-0.06
	0.5-1	0.7-1.0	0.7-1.0	0.2-1.0	0.02-0.06	0.02-0.06	0.04-0.08
Children and Adolescents	1-3	1.0-1.5	1.0-1.5	0.5-1.5	0.02-0.08	0.02-0.08	0.05-0.1
	4-6	1.5-2.0	1.5-2.0	1.0-2.5	0.03-0.12	0.03-0.12	0.06-0.15
Adults	7-10	2.0-2.5	2.0-3.0	1.5-2.5	0.05-0.2	0.05-0.2	0.10-0.3
	11+	2.0-3.0	2.5-5.0	1.5-2.5	0.05-0.2	0.05-0.2	0.15-0.5
		2.0-3.0	2.5-5.0	1.5-4.0	0.05-0.2	0.05-0.2	0.15-0.5
Electrolytes							
	Age (years)	Sodium (mg)	Potassium (mg)	Chloride (mg)			
Infants	0-0.5	115-350	350-925	275-700			
	0.5-1	250-750	425-1275	400-1200			
Children and Adolescents	1-3	325-975	550-1650	500-1500			
	4-6	450-1350	775-2325	700-2100			
Adults	7-10	600-1800	1000-3000	925-2775			
	11+	900-2700	1525-4575	1400-4200			
		1100-3300	1875-5625	1700-5100			

^a Because there is less information on which to base allowances, these figures are not given in the main table of Recommended Dietary Allowances and are provided here in the form of ranges of recommended intakes.

^b Since the toxic levels for many trace elements may be only several times usual intakes, the upper levels for the trace elements given in this table should not be habitually exceeded.

Table 3. (Cont.) Recommended energy intake

Category	Age (years)	Energy Needs (with range) (kilocalories)	
		kg × 115	(kilocalories)
Infants	0.0-0.5	kg × 115	(95-145)
	0.5-1.0	kg × 105	(80-135)
Children	1-3	1300	(900-1800)
	4-6	1700	(1300-2300)
	7-10	2400	(1650-3300)
Males	11-14	2700	(2000-3700)
	15-18	2800	(2100-3900)
	19-22	2900	(2500-3300)
	23-50	2700	(2300-3100)
	51-75	2400	(2000-2800)
	76+	2050	(1650-2450)
	Females	11-14	2200
15-18		2100	(1200-3000)
19-22		2100	(1700-2500)
23-50		2000	(1600-2400)
51-75		1800	(1400-2200)
76+		1600	(1200-2000)
Pregnancy		+300	
Lactation		+500	

The energy allowances for the young adults are for men and women doing light work. The allowances for the two older age groups represent mean energy needs over these age spans, allowing for a 2 percent decrease in basal (resting) metabolic rate per decade and a reduction in activity of 200 kilocalories per day for men and women between 51 and 75 years, 500 kilocalories for men over 75 years, and 400 kilocalories for women over 75 years. The customary range of daily energy output is shown in parentheses for adults and is based on a variation in energy needs of \pm 400 kilocalories at any one age, emphasizing the wide range of energy intakes appropriate for any group of people.

Energy allowances for children through age 18 are based on median energy intakes of children of these ages followed in longitudinal growth studies. The values in parentheses are 10th and 90th percentiles of energy intake, to indicate the range of energy consumption among children of these ages.

Table 4. The U.S. Recommended Daily Allowances for four population groups

Nutrients	Infants birth to 12 months	Children under 4 years of age	Adults and children 4 or more years of age	Pregnant or lactating women
Nutrients that <u>must</u> appear on the label*				
Protein, PER \geq casein **, g	20	45	45	45
Protein, PER $<$ casein, g	28	65	65	65
Vitamin A, IU	1,500	2,500	5,000	8,000
Vitamin A, μ g RE***	400-420	500	1,000	(1,600)
Vitamin C (ascorbic acid), mg	35	40	60	60
Thiamin (Vitamin B ₁), mg	0.5	0.7	1.5	1.7
Riboflavin (Vitamin B ₂), mg	0.6	0.8	1.7	2.0
Niacin, mg	8	9	20	20
Calcium, g	0.6	0.8	1.0	1.3
Iron, mg	15	10	18	18
Nutrients that <u>may</u> appear on the label				
Vitamin D, IU	400	400	400	400
Vitamin E, IU	5	10	30	30
Vitamin B ₆ , mg	0.4	0.7	2.0	2.5
Folic acid (folacin), mg	0.1	0.2	0.4	0.8
Vitamin B ₁₂ , μ g	2	3	6	8
Phosphorus, g	0.5	0.8	1.0	1.3
Iodine, μ g	45	70	150	150
Magnesium, mg	70	200	400	450
Zinc, mg	5	8	15	15
Copper, mg	0.6	1	2	2
Biotin, mg	0.05	0.15	0.3	0.3
Pantothenic acid, mg	3	5	10	10

Source: Institute of Food Technologists. 1974. Food Technology 28(7):1-6 (special insert). (5)

Abbreviations: g = gram, mg = milligram, μ g = microgram, IU = International Unit, RE = retinol equivalent

*Nutritional labeling is voluntary unless the processor adds nutrients or makes nutritional claims. Whenever used, these nutrients must be declared on the label.

**PER or Protein Efficiency Ratio is an indicator of protein quality. If the PER of the protein is equal to or greater than that of casein, a high-quality milk protein, the lower of the two protein values is recommended. If the protein quality is lower than that of casein, the higher of the two is recommended.

***Vitamin A was expressed as μ RE as well as IU in the Recommended Dietary Allowances, 1973 revised, except for the value in parentheses, computed by the author as one-fifth of the U.S. RDA stated as IU.

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