

## How to Determine if a Soy-Based Beverage Meets the Nutrient Requirements to Qualify as an Authorized Milk Substitute in WIC

In order to determine if a specific soy-based beverage product is an authorized milk substitute, it is necessary to compare the product nutrition information with the nutrient requirements for an authorized milk substitute in WIC, per the WIC food package interim rule.

If the product has an amount for a nutrient that is greater than or equal to (with normal rounding procedures) the required amount in Table 1, then the product qualifies for that nutrient. In order for the product to qualify as a soy-based beverage that can be substituted for milk, it must have amounts greater than or equal to the required levels in Table 1 for every nutrient listed. Failure on any one nutrient (e.g., insufficient protein at 7 grams per 8 fluid ounces) means that the product would not qualify even if it met all of the other standards. Nutrition information can be obtained either from a product nutrition label, product sheet, website, or other information from the manufacturer.

The following instructions explain how to determine if a soy-based beverage can be used as a milk substitute when the information is given either in terms of nutrient quantities (mg, etc.) or in terms of percent of daily value (%).

### 1. Check Serving Size and Adjust Accordingly

All of the tables below refer to amounts for a serving size of eight fluid ounces. If the nutrition information given is NOT for an 8 ounce serving, then you will need to adjust all of the nutrient quantities or percents of daily value to be for an 8 ounce serving. If the information is given for an 8 ounce serving, then you can use the information given and continue to the next section.

For example, if the serving size is given as 1500 IU of vitamin A per 6 ounce serving, then you would need to use a ratio to adjust to 8 ounces.

Example:

Quantity per 8 ounce serving = 8 ounces \* (Quantity in given serving / Ounces in given serving)

Quantity per 8 ounce serving = 8 \* (1500 / 6)

Quantity per 8 ounce serving = 2000 IU

If you are working with percent of daily value for a 4 ounce serving, then you can adjust this using the same method. For example, a product has 40 percent of daily value (% DV) of vitamin A for a 4 ounce serving.

Example:

% DV per 8 ounce serving = 8 ounces \* (% DV in given serving / Ounces in given serving) \* 100%

% DV per 8 ounce serving = 8 \* (0.40 / 4) \* 100% = 0.80 \* 100%

% DV per 8 ounce serving = 80 percent of daily value

### 2. Comparing Nutrition Information with Nutrient Requirements

Now that you have confirmed that the product information serving size is 8 ounces, or you have adjusted for an 8 ounce serving, you can determine if the product qualifies.

If the product nutrition information is given in terms of percent of daily value, then either refer to Table 1 or calculate the units per serving using Table 2. The steps for these methods are as follows:

#### a. Referring to Table 1:

If the percent of daily value for an 8 ounce serving is greater than or equal to the percent of daily value for that nutrient in Table 1, then the product meets that nutrient requirement.

For example, if the product has 30 percent of the daily value for calcium in an 8 ounce serving, then the product would meet the calcium requirement since the required percent of daily value is 27.60 percent.

Similar comparisons need to be made for all of the required nutrients in Table 1 and all nutrients must qualify for the product to qualify.

**Table 1. Nutrient Requirements for Authorized Substitution of Soy-based Beverages for Milk, includes as a Percent of Daily Value**

<i>Nutrient</i>	<i>Unit of Measurement</i>	<i>Required Quantity Per Cup (8-ounce serving)</i>	<i>Required Percent of Daily Value Per Cup (8-ounce serving)</i>
Protein	grams (g)	8.00	16.00%
Vitamin A	International Unit (IU)	500.00	10.00%
Vitamin D	International Unit (IU)	100.00	25.00%
Vitamin B <sub>12</sub>	micrograms (mcg or µg)	1.10	18.33%
Riboflavin	milligrams (mg)	0.44	25.88%
Calcium	milligrams (mg)	276.00	27.60%
Magnesium	milligrams (mg)	24.00	6.00%
Phosphorus	milligrams (mg)	222.00	22.20%
Potassium	milligrams (mg)	349.00	9.97%

Percent of Daily Value calculated by FNS as of April 2008.

Requirements listed on 72 FR 68973, at

<http://www.fns.usda.gov/wic/regspublished/wicfoodpkginterimrulepdf.pdf>

Reference values for nutrition labeling (daily values) are based on a 2000 calorie intake for adults and children 4 or more years of age. <http://www.cfsan.fda.gov/~dms/flg-7a.html> REV. Jan 30, 1998

b. Using Table 2 to Calculate Nutrient Quantities

To calculate the units of a nutrient from a percent of daily value given on a product label, multiply the percent for the given nutrient by the daily value in Table 2 (below). For example, if a nutrition label says that a product has 30 percent of the daily value for vitamin A in one 8 ounce serving, then multiply 30 percent times 5000 IU.

Example:  $(30/100) * 5000 = 1500$  IU

This means that the product provides 1500 IU per 8 ounce serving. In this case, the product does meet the requirement for this nutrient, since Table 1 shows that 500 IU of vitamin A are needed.

**Table 2. Reference Values for Nutrition Labeling**

NUTRIENT	UNIT OF MEASURE	DAILY VALUES
Protein	grams (g)	50
Vitamin A	International Unit (IU)	5000
Vitamin D	International Unit (IU)	400
Vitamin B <sub>12</sub>	micrograms (µg)	6.0
Riboflavin	milligrams (mg)	1.7
Calcium	milligrams (mg)	1000
Magnesium	milligrams (mg)	400
Phosphorus	milligrams (mg)	1000
Potassium	milligrams (mg)	3500

Reference values for nutrition labeling (daily values) are based on a 2000 calorie intake for adults and children 4 or more years of age. <http://www.cfsan.fda.gov/~dms/flg-7a.html>  
REV. Jan 30, 1998

### 3. Converting Units of Measurement

If the product nutrition information is given in terms of a unit (IU, g, mg, mcg/µg) and the units of each nutrient match the units given in Table 1, then you can directly compare the product information with the nutrient requirements in Table 1.

If the product nutrition information for a nutrient is given in terms of a unit that is not the same as the unit listed for that nutrient in Table 1, then you can use Table 3 to convert the units to the correct ones.

**Table 3. Units of Measurement Conversion Chart**

<i>If you know...</i>	<i>then do this...</i>	<i>to get...</i>
grams (g)	multiply by 1000	milligrams (mg)
milligrams (mg)	multiply by 1000	micrograms (mcg or µg)
micrograms (mcg or µg)	divide by 1000	milligrams (mg)
milligrams (mg)	divide by 1000	grams (g)

For example, if a product label says it contains 1000 mg of protein, then you will need to convert this to g.

$$\text{Example: } 1000 \text{ mg} / 1000 \text{ mg per g} = 1 \text{ g}$$

This product would not meet the protein requirement because it only has 1 g of protein, which is below the required 8 g per cup.