

**CALCULATING BREAD/BREAD ALTERNATE
to comply with FCS Instruction 783-1 for grains/breads**

* Breeding is in Group A (1 serving = 20g/0.7 oz)

* Batter (prepared or dry weight is in Group B (1 serving = 25g/0.9 oz)

or

* 1 serving of Bread/bread alternate is the amount of product to provide 14.75 grams of enriched flour/whole grain

There are several acceptable ways to calculate the Bread/bread alternate component using the updated Grains/Breads Instruction information. Please take note the components required for each different calculation.

METHOD 1. Monitor the total batter/breader weight.

Use this calculation if only the total batter/breading weight is monitored. Note: the percent of enriched flour/whole grain must be greater than the total liquid used in the combined batter/breading composite. *Additionally, the enrichment level for the breeding must be 85-percent or greater and the batter must be 65-percent enriched or greater to use method one.

A) Check to make sure that the breader and batter are each made from enriched flour/whole grain and that the combined enriched flour/whole grain components are greater than the total liquid (example: water and oil if applicable). This can be confirmed by a composite listing or a calculation.

			% Enriched Components	=	Total Enrichment
Breader	50%	X	0.85*	=	42.5%
Batter (dry basis)	17%	X	0.65*	=	11.05%
Water	<u>33%</u>				
	100%				<u>53.55%</u>

53.55% enriched components > 33% water

B) Calculations for Grains/Breads contribution:

$$\frac{(\text{ounces of } \mathbf{\textit{breeding}} \text{ per serving} + \text{ounces of } \mathbf{\textit{wet/raw batter}} \text{ per serving})}{\mathbf{0.9} \text{ ounces per serving}} = \text{servings of bread alternate per serving}$$

$$\frac{(.6 \text{ oz breeding}) + (.6 \text{ oz wet batter})}{0.9 \text{ oz}} = 1.33 \text{ servings}$$

Round down to the nearest ¼ serving. This method provides “1.25 servings of Bread Alternate”

METHOD 2. Monitor the batter and breading weights separately.

Use this calculation if the batter and breading weights are monitored separately and each are made from enriched flour/whole grain.

$$\frac{(\text{ounces of } \mathbf{\textit{Dry Batter}} \text{ per serving})}{\mathbf{0.9} \text{ ounces per serving}} + \frac{(\text{ounces of } \mathbf{\textit{breeding}} \text{ per serving})}{\mathbf{0.7} \text{ ounces per serving}} = \text{servings of bread alternate per serving}$$

$$\frac{(.6 \times 34\% = \text{oz dry batter})}{.9 \text{ oz (Group B)}} + \frac{(.6 \text{ oz breeding})}{.7 \text{ oz (Group A)}}$$

$$= .2266 + .8571 = 1.083 \text{ servings}$$

Round down to the nearest ¼ serving. This method provides “1.00 serving of bread alternate”

METHOD 3. Grams of Enriched Flour/Whole Grain per serving.

You may also calculate the contribution of bread alternate by directly using the grams of enriched flour/whole grain contained in the batter/breadding. 1 serving = 14.75 grams of enriched flour/whole grain

$$(\text{ounces of } \mathbf{\textit{dry batter}}^* \text{ per serving} \times \text{percent of enriched flour/whole grain} \times 28.35 \text{ grams per ounce}) + (\text{ounces of breeding} \times \text{percent of enriched flour/whole grain} \times 28.35 \text{ grams per ounce}) \div 14.75 \text{ grams per serving}$$

$$* (0.6 \text{ oz wet batter} \times 34\% \text{ dry batter mix}) = 0.204 \text{ oz dry batter}$$

$$\frac{(0.204 \text{ oz} \times 65\% \times 28.35 \text{ g/oz}) + (0.6 \text{ oz} \times 85\% \times 28.35 \text{ g/oz})}{14.75 \text{ grams of enriched flour/whole grain}}$$

$$= \frac{3.7592 + 14.4585}{14.75} = 1.235 \text{ servings}$$

Round down to the nearest ¼ serving. This method provides “1.00 serving of bread alternate”

Calculations for Corn Dogs (and other products in which Batter is monitored only in the cooked state): Corn dogs are prepared using cooked links or franks dipped into batter and then cooked. The finished (cooked/prepared) batter weights are monitored rather than the raw weights. Exhibit A of the Grains/Breads instruction lists batter in group B at 0.9 oz/serving. This batter weight is the finished weight not the raw weight. [Since the link was cooked before the batter was applied it is not likely to lose weight during the batter cooking process.] [This allows us to use the cooked/prepared weight of the batter for calculating the bread alternate component.]

$$\frac{\text{(ounces of cooked/prepared batter per serving)}}{\mathbf{0.9} \text{ ounces per serving}} = \text{servings of bread alternate per serving}$$

Fill specs: 2.0 oz frankfurter
 + 2.0 oz cooked batter
 4.0 oz corn dog (finished weight)

Calculation: $\frac{2.0 \text{ oz cooked batter}}{0.9 \text{ oz per serving}} = 2.22 \text{ servings}$

Round down to the nearest ¼ serving. This method provides “2.00 servings bread alternate for the Child Nutrition Meal Pattern Requirements”

