

Cornmeal

This processed commodity is generally used as a staple food in all categories of programs.

A. NUTRITIONAL VALUES (PER 100 g)

These are average values, taken from the U.S. Department of Agriculture, Agricultural Research Service (USDA:ARS) 1998 USDA Nutrient Database Laboratory Home Page, Release 12, (<http://www.nal.usda.gov/fnic/foodcomp>). These nutrient values are provided as a guide for use in the calculation of food aid rations; users should be aware that shipments of food aid may vary from these exact values. The values for thiamin, riboflavin, niacin, vitamin A, calcium and iron represent the minimum levels of enrichment nutrients (converted to a 100 g basis) as listed in Specifications below.

B. COMPONENTS

100% Yellow Corn, shelled, dehulled and degermed to reduce susceptibility to rancidity.

C. SPECIFICATIONS

Per Federal Specification NC-521E (March 3, 1970), Cornmeal will be enriched to contain: 2.0 to 3.0 mg/lb thiamin; 1.2 to 1.8 mg/lb riboflavin; 16.0 to 24.0 mg/lb niacin or niacinamide; 13.0 to 26.0 mg/lb iron; and 750 mg/lb calcium (see Table next page).

D. PACKAGING

25 kg (55 lbs.) bags of multi-wall paper. Three plies of paper (minimum) with an inner polyethylene or polypropylene plastic liner. The outer paper ply is treated to provide wet strength.

E. SHELF LIFE

At least one year. See Section III: Storage/Shelf Life Specifications for more information.

Nutrient	Amount	Unit
Water	11.6	g
Energy	366.0	Kcal
Protein	8.5	g
Total Lipid	1.7	g
Carbohydrate	77.7	g
Fiber, total dietary	7.4	g
Ash	0.6	g
Calcium	110	mg
Iron	2.90	mg
Magnesium	40	mg
Phosphorus	84	mg
Potassium	162	mg
Sodium	3.0	mg
Zinc	0.7	mg
Copper	0.1	mg
Manganese	0.1	mg
Selenium	8	mcg
Vitamin C	0	mg
Thiamin	0.44	mg
Riboflavin	0.26	mg
Niacin	3.53	mg
Pantothenic acid	0.3	mg
Vitamin B-6	0.3	mg
Folate	150	mcg
Vitamin B-12	0	mcg
Vitamin A	2205	IU
Vitamin E	0.3	mg-ATE
Vitamin D	n/a	IU
Iodine	n/a	mcg

CHEMICAL AND PHYSICAL REQUIREMENTS

ITEM	REQUIREMENT ¹	
	Minimum	Maximum
Moisture	--	13.0
Fat, %	--	1.5
Ash, % ²	--	³
Material that will pass through U.S. Standard No. 20 woven-wire-cloth sieve, %	99	--
Material that will pass through U.S. Standard No. 25 woven-wire-cloth sieve, %	90	--
Material that will pass through U.S. Standard No. 45 woven-wire-cloth sieve, %	30	--
Material that will pass through U.S. Standard No. 80 woven-wire-cloth sieve, %		
Vitamin A Palmitate, IU/lb. ⁴	8,800	--
Calcium, mg/lb. ²	500	750

¹ All values are on the basis of weight.

² These limiting values are on a moisture-free basis.

³ For maximum ash see Table on "Maximum Ash Allowable Without Discount at Specified Calcium Levels" (paragraph 9.D) in USDA Specifications.

⁴ Vitamin A Palmitate (stabilized) must be added in encapsulated form containing 250,000 IU Vitamin A Palmitate/g.

Source: USDA:FSA:PDD:EOB November, 1997. Contact 202-690-3565
<http://www.fas.usda.gov/excredits/pl480/commodities/cornmeal.html>

ENRICHMENT INGREDIENTS	Minimum	Maximum
Thiamine, mg/lb.	2.0	3.0
Riboflavin, mg/lb.	1.2	1.8
Niacin or niacinamide, mg/lb.	16.0	24.0
Vitamin A-Palmitate, IU/lb. ¹	8,800	--
Calcium (in harmless and assimilable form), mg/lb.	500	750
Iron (reduced iron, 325 mesh, to be used as the iron source), mg/lb. ²	TBD*	TBD*

¹ Vitamin A Palmitate (stabilized) must be added in encapsulated form containing 250,000 IU Vitamin A Palmitate/g.

² Ferrous sulfate is not to be used as the iron source in any processed cereal products purchased for export assistance programs.

*TBD: To be determined

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