

Technical Specifications

Specifications for Super Cereal Flour:

Product purposes:

SUPER CEREAL; Wheat Soya Blend with sugar is a product for adults and children over than 6 months.

Product type

SUPER CEREAL- Wheat Soya Blend with Sugar is prepared from heat treated wheat and soya beans, vitamins and minerals. If SUPER CEREAL- Wheat Soya Blend with Sugar is consumed as porridge or gruel, it should be prepared by mixing an appropriate proportion of flour and clean water (e.i. 40g of SUPER CEREAL- Wheat Soya Blend with Sugar with 250 gm of water) followed by a boiling time at simmering point from five to ten minutes.

Standards and recommendations

SUPER CEREAL- Wheat Soya Blend with Sugar shall comply, in terms of raw materials, composition or manufacture, except when specified otherwise in this contract, with the following guidelines or standards of Codex Alimentarius.

- Guidelines on Formulated Supplementary Foods for Older Infants and Young Children, CAC/GL 08- 1991 of the Codex Alimentarius.
- Code of Hygienic Practice for Foods for Infants and Children CAC/RCP 66 - 2008 of the Codex Alimentarius;
- Recommended International Code of Practice: General Principles of Food Hygiene CAC/RCP 1- 1969 Rev 4 - 2003 including Annex “Hazard Analysis and Critical Control Point (HACCP) System and Guidelines for its application”.
- General principles for addition of essential nutrients to foods: CAC/GL 09-1987 (amended 1989, 1991), of the Codex Alimentarius.

RAW MATERIALS

Main ingredients

SUPER CEREAL- Wheat Soya Blend with Sugar shall be manufactured from fresh wheat and soy beans of good quality and shall comply with all relevant national food laws and standards. Requirements for the raw materials are: Wheat

- conform to Codex STAN 152-1985.
- be obtained from non-genetically modified varieties (if required by the contract). Soya beans
- conform to Codex STAN 171-1989 (Rev.1-1995).

- be obtained from non-genetically modified varieties (if required by the contract). Wheat and soya beans must be stored under dry, ventilated and hygienic conditions. Only safe insecticides (i.e. phosphine) may be used for fumigation control. Where needed, fumigation must be performed by certified operators.

Sugar

Refined sugar shall conform to Codex STAN 212-1999. Sugar must be milled to meet particle specification: 100% through a 1mm screen, 95% through a 600 micron screen.

Vitamins and minerals

Micronutrient premixes are used at the following rate per metric ton of finished product:

- 2.0 kg of vitamin premix (FBF-V-13).
- 12.3 kg of Dicalcium Phosphate Anhydrous.
- And 2.7 kg of Potassium chloride. Requirements Potassium chloride and Dicalcium Phosphate Anhydrous are:
- Must meet at least food chemical codex.
- Particle size for Potassium chloride min 60% < 250 µm (microns).
- Dicalcium Phosphate Anhydrous, compliant with food chemical codex, min 95% The composition of micronutrient premixes is presented in product specification.

Ingredients Specification:

S.No	Ingredients	Percentage (by weight)
1	Wheat	63.30
2.	Whole Soya beans	25.00
3.	Sugar	10/00
4.	Vitamin/ Mineral FBF-V-13	0.20
5.	Dicalcium Phosphate anhydrous	1.23
6.	Potassium chloride	0.27

Formula SUPER CEREAL- Wheat Soya Blend with Sugar is manufactured according to the following formula

Nutritional value should be as below:

Energy	380 Kcal minimum
Protein	17.0% (N x 6.25) minimum
Fat	6.0% minimum
Crude fibre	3.8% maximum
Ash	4.5% minimum

Micronutrient rate and chemical forms should be as follows:

	Target/ 100g finished product	Form
Vitamin/ Mineral prefix FBF-V-13		
Vitamin A	3460 IU	Dry Vitamin A Palmitate 250 Cold Water Dispersible Stabilized

Vitamin D3	441.6 IU	Dry Vitamin D3 100 water Dispersible Stabilized
Vitamin E TE	8.3 mg	Dry Vitamin E Acetate 50% water Dispersible
Vitamin K1	30 µg	Dry Vitamin K1 5% Water Dispersible
Vitamin B1	0.2 mg	Thiamine mononitrate
Vitamin B2	1.4 mg	Vitamin B2 fine powder
Vitamin B6	1 mg	Pyridoxine hydrochloride
Vitamin C	90 mg	Ascorbic acid
Pantothenic acid	1.6 mg	Clacium D Panthotenate
Folate (DFE)	110 µg	Folic Acid *
Niacin	8 mg	Niacinamide
Vitamin B12	2 µg	Vitamin B12 0.1% or 1% Spray dried
Biotin	8.2 µg	Biotin 1%
Iodine	40 µg	Potassium Iodide*
Iron (a)	4 mg	Ferrous fumarate fine powder
Iron (b)	2.5 mg	Iron sodium EDTA
Zinc	5 mg	Zinc Sulphate Monohydrate
Carter		Corn maltodextrin
		*Adequate dilution must be used in order to guarantee premix homogeneity
Other minerals		
Potassium	140 mg	Potassium Chloride with 0.5 % silicon dioxide as anticaking agent, compliant with food chemical codex, min 90%<425 micron and min 60%<250 micron
Calcium	362 mg	Dicalcium Phosphate Anhydrous, compliant with food chemical codex, min 95%<250 micron, total aerobic viable count <1000 CFU/g, yeast<10 CFU/g, mould <100 CFU/g, and enterobacteria negative in 1 g.
Phosphorous	280 mg	

Note: Variable levels of micronutrients (i.e iron, zinc, etc.) naturally present in wheat and soya may lead to variable amount of micronutrients in finished product.

Flour characteristics Particle size

It shall have a uniform fine texture with the following particle distribution:

- 95% must pass through a 600 micrometer sieve.
- 100% must pass through a 1,000 micrometer sieve.

Organoleptic: it shall have a pleasant smell and palatable taste.

Microbiology

SUPER CEREAL- Wheat Soya Blend with Sugar shall not exceed the following levels of microbiological contamination:

Microorganisms	Maximum Levels
Mesophyllic aerobic bacteria	100,000 cfu per g
Coliforms	100 cfu per g
Salmonella	0 cfu per 25 g
Escherichia Coli	10 cfu per g
Staphylococcus aureus	10 cfu per g
Bacillus cereus	50 cfu per g
Yeasts and moulds	1,000 cfu per g

Contaminants

SUPER CEREAL- Wheat Soya Blend with Sugar shall be free from objectionable matter; not contain any substances originating from micro-organisms or any other poisonous or deleterious substances such as anti-nutritional factors, heavy metals or pesticide residues, in amounts which may represent a hazard to health.

- Permitted level of total aflatoxin: 20 ppb (B1, B2, G1, G2).
- Heavy metals: below levels specified in Codex Stan 193-1995, in particular Pb max 20 ppb and Cd max 100 ppb.

Shelf life

It shall retain above qualities for at least 12 months from date of manufacture when stored dry at ambient temperatures prevalent in the country of destination.

Note: The successful bidder's must furnish Analytical lab test report of supplied products from Government authorized lab at the time of delivery of goods.

Labelling and Packaging Requirements

Packaging: Packet of 1 kg (primary packing) and such 3 packet shall be packed in one single package (Secondary packing).

1. Each Packet 1 Kg (primary pack) label shall state the following:

- (a) name of the Nutritional supplement;
- (b) name of the manufacturer;

- (c) place of manufacture;
- (d) lot number;
- (e) composition;
- (f) concentration
- (g) dose mode for administration;
- (h) expiration date;
- (i) storage requirements
- (j) All labelling shall withstand immersion in water and remain intact.
- (k) Step following preparation/cooking method
- (l) packing must be air tight, moisture proof and can withstand wear and tear during handling and transportation.

2. The secondary Packing label following information shall be stenciled or labelled

on the exterior shipping cartons/bag on two opposing sides in bold letters with waterproof ink in a clearly legible manner that is acceptable to the Purchaser.

- a. Generic name and trade name of the Nutritional supplement;
- b. Lot or batch number;
- c. Expiration date (month and year in clear language, not code);
- d. Manufacturer's name and registered address;
- e. Manufacturer's national registration number;
- f. Instructions for storage (temperature) and handling;
- g. Number of packet contained in pack
- h. Step on cooking/preparation method
- i. Easy to carry package by hand.

Required documents.

- 1. Copy of VAT Registration
- 2. Copy of Company Registration
- 3. Copy of latest tax clearance certificate
- 4. Organization Profile
- 5. Client list of the super cereal supply