

	<p align="center">PRODUCT SPECIFICATIONS SHEET</p> <p align="center">“Emergency Food Ration”</p> <p align="center">BP-5</p>	<p>Date of issue:</p> <p>Author: A Fleet</p> <p>Revision: ARF, MEFB</p> <p>Version: 1.2</p> <p>Date: 27.09.2019</p>
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General Description

Emergency Food Ration, 500g packs, 24 units per carton.

Technical Specifications

Ready-to-eat fortified and cereal based dry compressed food, 9 bars per pack of 500g, 24 packs per carton
To be eaten directly or as a porridge prepared by adding small amount of boiling water or boiling milk.
Each bar weighs minimum 55g.

Nutrition Content per 100 g

Energy value: min 440 kcal
Proteins: 12-16% of weight
Carbohydrates: 60-64% of weight
Fat: min 15g of weight
Trans fatty acids: <2% of total fat¹

Vitamins (minimum)

Vitamin A: 0.47mg
Vitamin B1: 0.52mg
Vitamin B2: 0.8mg
Vitamin B6: 0.87mg
Vitamin B12: 1.3mcg
Vitamin C: 40mg
Niacin: 8mg
Vitamin D: 4.3mcg
Vitamin E: 7.0mg
Folic acid: 130mcg
Ca-D-pantothenate: 3.0mg
Biotin: 62.5mcg

Minerals (typical values)

Calcium: 600mg
Potassium: 250mg
Magnesium: 120mg
Chloride: 60mg
Sodium: 15mg
Iron: 10mg
Phosphorous: 600mg
Zinc: 10mg
Copper: 1mg
Selenium: 25mcg
Iodine: 100mcg

Ingredients:

Baked wheat, vegetable fat, sugar, vegetable soya protein, malt, vitamins and minerals. Does not contain any

¹ As per 2019 EU guidance: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32019R0649&from=EN>

ingredient of animal origin.

Standards and recommendations

Emergency Food rations must comply, except when specified otherwise in this contract, with the following guidelines or standards of 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.
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- General standard for the labelling of pre-packed foods: CODEX STAN 1-1985

Raw material specifications:

- Wheat flour must conform to Codex STAN 152-1985.
 - Sugar must conform to Codex STAN 212-1999.
 - Shortening must be prepared from oil that conform to Codex STAN 210-1999, must be "free" from trans fatty acids and must contain only antioxidants that comply with Codex and relevant regulations.
 - Skimmed milk powder must conform to Codex STAN 207-1999. (It must also be accompanied by a 'melamine-free' certificate.)
 - Maximum level aflatoxin M1: < 0.5 mcg/kg in milk (recommended methods ISO 14501/IDF 171:20071 or ISO 14674/IDF 190:20052).
 - Complete micronutrient premixes must be purchased from a UNICEF approved supplier addresses of premix suppliers are at : <http://foodqualityandsafety.wfp.org>.
- Other raw materials and additives (if used) must comply with Codex or relevant regulations.

Safety:

Listeria monocytogenes: neg/25g
Salmonella: neg/25g
Pathogenic Staphylococci: neg/g
Standard plate count: <10000cfu/g
Enterobacteriaceae: <10cfu/1g
Escherichia coli: <10cfu/g
Yeast and mould: <100cfu/g
Aflatoxin M1: < 0.5 ppb (Reference method: AACC 45-16) or LC-MS/MS
Organoleptic (smell, taste, colour): Pleasant smell and palatable taste, typical colour.
Broken bars: Max 5.0 % broken (Reference method by weight: visual inspection)
GMO (only if required): Negative (< 0.9% of GMO material)
Pesticide residues: <10ppb
Acceptable levels of heavy metals:
Cadmium: 0.064 ppm
Lead: 0.107 ppm
Mercury: 0.021 ppm
Tin: 60.0 ppm

Transport and storage

Store in a cool, dry place, away from direct sunlight.

Minimum Shelf life

5 years

Packaging

Packed in a carton box containing 24 packs of 500g; each pack contains 9 bars wrapped in a polyethylene film.
Packaging must allow airdrop delivery.

Analytical requirements for Certificate of Analysis

A Certificate of Analysis is required for every batch supplied against UNICEF Supply Division Purchase Orders. The principal tests listed below must be performed in order to check if the quality of EFR meets above requirements. Additional analyses shall be defined in case of further quality assessment.

List of compulsory tests for Certificate of Analysis and reference methods:

Moisture content: Max 4.5 % (Reference method: AOAC 18th ed.2006)

Energy: min 440kcal/100g (Reference method: by calculation).

Protein: 12-16 g/100 (Reference method: IS 7219: 1973 (Reaff:2005))

Fat: Min 15.0 g/100g (Reference method: AOAC 18th ed.2006)

Carbohydrates (diff.) 60 - 64g/100g (Reference method: by calculation)

Ash (total): Max 3.5 g/100g (Reference method: AOAC 18th ed.2006)

Vitamin C: >40mg/100g (Reference method: IS:5838-1970 (Reaff.2005))

One mineral tracer of choice

Microbiology

Standard plate count: Max 10,000 cfu per g

(Reference method: 3M Petrifilm Aerobic Count Plate AOAC® Official MethodsSM990.12)

Yeast and Moulds: <100cfu per g (Reference method: 3M Petrifilm Yeast and Mould AOAC® Official MethodsSM997.02)

Salmonella: neg/25g

Aflatoxin M1: <0.5ppb