

SECRETARIAT

OF

THE TECHNICAL STANDARDISATION COMMITTEE (FOOD STUFFS)
(DIRECTORATE GENERAL OF SUPPLIES AND TRANSPORT)

DEFENCE FOOD SPECIFICATIONS - 2022


SPECIFICATION NO 308A : WHOLE WHEAT FLOUR (ATTA)

Quality

1. The Whole Wheat Flour (Atta) shall be obtained by milling wheat of current season's crop by stone mill or roller flour mill process. The wheat shall be effectively cleaned prior to milling.
2. The Whole Wheat Flour (Atta) shall be in the form of powder, free from lumps and insect webs, grittiness, insect infestation, fungus infection, dirt and other impurities. It shall have characteristic taste and smell and be fit in all respects for human consumption. It shall also be free from fermented, musty or other objectionable odour.

Packing


3. The Whole Wheat Flour (Atta) shall be packed in any one of the following packs as specified by the purchaser:-
 - (a) **Jute Bags Type 'A'**. Jute bags conforming to BIS specification No IS:15138 - 2002 having outside length, breadth and corrected mass varying between 87.5 and 91.5 cm, 58.5 and 62.5 cm and 676 and 693 gm respectively for packing upto 45 kg.
 - (b) **LLDPE Bags**. As per the requirement of the user, Whole Wheat Flour (Atta) may be packed in 05kg/10kg/20kg LLDPE bags made of 350 gauge biaxially oriented polypropylene film (BOPP/LLDPE) film of food grade quality.


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vetted ON 18 APR 2023

(c) **50 /25/ 20 kg HDPE Woven Bags.** As per requirement Whole Wheat Flour (Atta) shall be packed in 50/25/20 kg High density Polyethylene (HDPE)/ Polypropylene (PP) woven sacks as per Bureau of Indian Standards specification No IS: 14887-2000 for Testing and Quality check. In addition, to provide burst strength to LDPE woven bags, an inner lining of 80 μ (micron) for 25 Kg bags and 125 μ (micron) for 50 Kg bags be added.

| S No | Characteristic | Requirement | | Tolerance |
|--------|---|-------------|----------|------------------|
| | | Type 1 | Type 2 | |
| (i) | Capacity | 50 Kg | 25 Kg | |
| (ii) | Dimensions (cms) (See Notes 1 and 2) | | | |
| | (aa) Inside length | 100 | 65 | + 2 cm - 1cm |
| | (ab) inside width | 57 | 48 | |
| (iii) | Mass of sack (See Note 2) | 135 | 67 | + 6% - 3% |
| (iv) | Ends per dm | 48 | 44 | ± 02 |
| (v) | Picks per dm | 48 | 44 | |
| (vi) | Average breaking strength of fabric, Min (Ravelled strip method, 325 mm x 70 mm ¹) (N ²) (kgf) | | | |
| | (aa) Lengthwise | | 882 (90) | 784 (80) |
| | (ab) Widthwise | | 882 (90) | 784 (80) |
| (vii) | Average breaking strength of bottom seam (Strip Method), Min N ² (kgf). | | 363 (37) | 323 (33) |
| (viii) | Elongation at break fabric (Ravelled strip method), percent | | | |
| | (aa) Lengthwise | | 20 | 20 } ± 5 20 } |
| | (ab) Widthwise | | 20 | |


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VETTED ON 18 APR 2023

Notes

1. The specified dimensions provide for optimum free space of minimum 20 percent of length when measured along the surface of the fabric from mouth-stitch line of the sacks up to the surface level of contents.
2. The mass of sack is based on fabrics weighing 106 g/m² and 96 g/m² for Type 1 and Type 2 sacks respectively.
 - ¹⁾ Width after raveling = 50 mm, Gauge length = 200 mm.
 - ²⁾ 1N = 0.102 kg (approx).

Packing Parameters

4. The mouth of each bag shall be machine stitched in two rows in case of HDPE Bags. However, in case of jute bags the mouth of each bag shall either be machine stitched or may be rolled over and hand stitched with 3 ply jute twine. In the later case, stitches shall be in two cross rows with at least 14 stitches in each row.
5. In case of LLDPE / **BOPP** bags, band sealing not less than 10 mm shall be done at the open ends. BOPP bags shall not be stitched instead heat sealable BOPP polymers shall be used as per industrial norms.

Marking

6. The following particulars shall be stencilled on one side of each bag with food grade dye or food grade ink :-
 - (a) Name of mill/Address of manufacturer.
 - (b) Whole Wheat Flour (Atta) (Chakki press/ Roller Mill) in suitable size characters for all types of packaging to be according to The Legal Metrology (Packaged Commodities) Acts, 2009 and Rules, 2011.
 - (c) Lot No / Batch No.
 - (d) Nett weight.
 - (e) Date of milling.
 - (f) Best before and warranty period.
 - (g) Symbol for veg food.
 - (h) FOR DEFENCE SERVICES ONLY.

Note

1. Marking of both Nett weight and gross weight to be applicable for all categories of jute bags and 50 Kg HDPE bags only.
2. Less jute bags and 50 Kg HDPE bags, marking of only Nett weight applicable to all other packaging types.


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Warranty

7. In accordance with special warranty clause, Appx 'J', to the specification, the warranty period shall be 90 days from the date of procurement. Only freshly milled Whole Wheat Flour (Atta) should be procured. On the day of procurement the Atta shall not be more than seven days to ten days old from the date of milling.

Inspection

8. Inspection of Whole Wheat Flour (Atta) shall be carried out before acceptance by the Director General of Supplies and Transport or an Officer acting on his behalf, for all consignments. The decision of this Officer regarding acceptability shall be final.

9. The Whole Wheat Flour (Atta) shall conform to the following:-

- | | | |
|-----|---|---|
| (a) | Moisture | - Not more than 11.0% |
| (b) | Gluten (on dry basis) | |
| | (i) For stone mill processed Whole Wheat Flour (Atta) | - Not less than 9.0% |
| | (ii) For roller mill processed Whole Wheat Flour (Atta) | - Not less than 9.5% |
| (c) | Alcoholic Acidity (as H ₂ SO ₄) | - Not more than 0.10% |
| (d) | Total Ash (on dry basis) | - Not more than 2.0% |
| (e) | Acid insoluble Ash (on dry basis) | - Not more than 0.10% |
| (f) | Granularity | - To satisfy the test (As per Appx 'B' attached) |
| (g) | Crude Fibre (on dry basis), Percent by weight | - Not more than 2.5% |

10. The methods of analysis used shall be as laid down in Bureau of Indian Standards Specification No IS: 1155-1968 (Reaffirmed 2005) for wheat Atta.

Mandatory Requirements of FSSAI/BIS

11. All mandatory requirements of FSSAI/BIS, as amended from time to time, pertaining to the above Specification including marking of BIS certification mark for container/contents. Best Before _____, coloured symbol for declaring vegetarian and non-vegetarian food etc on packs shall be complied with.


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APPENDIX 'J'
TO SPECIFICATION NO 308A FOR
WHOLE WHEAT FLOUR (ATTA)

SPECIAL WARRANTY CLAUSE

1. The contractor warrants the supplies delivered to be sound, wholesome, and meets the quality parameters as per DFS of Whole Wheat Flour (Atta) for a period of 90 days from date of procurement in any climate and under all conditions of storage and movement in India.
2. In the event of the supplies or a part thereof having been declared during the period of warranty as being unsound, unwholesome or not meeting quality parameters as per DFS of Whole Wheat Flour (Atta)) by the Director General of Supplies & Transport, QMG's Branch, Army Headquarters, New Delhi or any officer acting on his behalf whose opinion as to whether or not the particular consignment is sound, wholesome, or meeting the quality parameters as per DFS of Whole Wheat Flour (Atta)), will be final. The purchaser will have the right to dispose of the condemned stock in any way he considers necessary after giving due notice to the contractor and also, at his discretion, either to allow the contractor to replace the condemned stock within a specified period or to recover from the contractor the contract price thereof together with sales tax and excise duty, if any paid thereon by the purchaser along with all incidental and freight charges incurred from the place of delivery to the place where the supplies were ultimately condemned. The opinion of the Director General of Supplies and Transport or an officer acting on his behalf in regard to these charges will be final.
3. The declaration by the Director General of Supplies and Transport or any officer acting on his behalf communicated to the contractor in writing that a particular consignment has been condemned will be taken by the contractor as the conclusive evidence of the proper condemnation of that consignment provided that such comment is issued by the Director General of Supplies and Transport within 15 days of the expiry of the warranty period. Nothing herein contained shall prejudice any other right of the purchaser in that behalf under this contract or otherwise.

APPENDIX 'B'
TO SPECIFICATION NO 308A FOR
WHOLE WHEAT FLOUR (ATTA)

DETERMINATION OF GRANULARITY

Procedure

1. Transfer about 10 g of the material to 600-micron IS Sieve and sieve for 2 minutes. Brush the upper surface of the sieve and sieve again for one minute.

Note. In case 600-micron IS Sieve (conforming to IS:460-1962) is not available BS Test Sieve 25, ASTM Sieve 30 or Tyler Test Sieve 28, which have their apertures within the limits specified for this IS Sieve, may be used.

2. The material shall be considered to satisfy the test if the residue left on the sieve shall be 0.0-0.3% by weight.

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DEFENCE FOOD SPECIFICATIONS - 2022

SPECIFICATION NO 310 : REFINED WHEAT FLOUR (MAIDA)

Quality

1. The Refined wheat flour (Maida) shall be prepared from wheat which conforms to Specification No 205 or from imported wheat and which has been accepted by the milling agents. The Wheat shall be effectively cleaned prior to milling and milled by the roller mill process. The flour shall not be artificially bleached.

2. When Refined Wheat Flour (Maida) is produced simultaneously with Atta and/or suji, the bran content will increase by 0.3% for every 1.0% of flour/suji extraction upto 20% extraction of flour + Suji; and above 20% to 30% flour + Suji extraction, the bran extraction will increase by 1% for every 2% increase in flour + Suji extraction. The divide range at different points shall be as given below:-

| <u>Flour or flour + Suji %</u> | <u>Atta %</u> | <u>Bran %</u> |
|---------------------------------------|----------------------|----------------------|
| 0 | 95 | 5 |
| 1 | 93.7 | 5.3 |
| 2 | 92.4 | 5.6 |
| 3 | 91.1 | 5.9 |
| 4 | 89.8 | 6.2 |
| 5 | 88.5 | 6.5 |
| 6 | 87.2 | 6.8 |
| 7 | 85.9 | 7.1 |
| 8 | 84.6 | 7.4 |
| 9 | 83.3 | 7.7 and so on |
| 10 and so on upto 20% | 82.0 | 8.0 upto 20.0% |
| 20 | 69.0 | 11.0 |
| 22 | 66.0 | 12.0 |
| 24 | 63.0 | 13.0 |
| 26 | 60.0 | 14.0 |
| 28 | 57.0 | 15.0 |
| 30 | 54.0 | 16.0 |

3. The Refined wheat flour (Maida) shall be free from grittiness, insect infestation, fungus infection, dirt and other impurities and shall have characteristic taste and smell and be fit in all respects for human consumption.


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VETTED ON 18 APR 2023

Packing


4. (a) The Refined wheat flour (Maida) will be packed in 50Kgs new trade jute bags conforming to BIS Specification No 15138-2002. Each bag shall contain 50 Kg of net weight with permissible variation in line with The Legal Metrology (Packaged Commodities) Acts, 2009 and Rules, 2011.
- (b) **25 kg HDPE Woven Bags.** Refined wheat flour (Maida) shall be packed in 25 kg High density Polyethylene (HDPE)/ Polypropylene (PP) woven sacks as per Bureau of Indian Standards specification No IS: 14887-2000 for Testing and Quality check. Each bag shall contain 25 kg net of Refined Wheat Flour (Maida) with permissible variation as per The Legal Metrology (Packaged Commodities) Acts, 2009 and Rules, 2011.
- (c) **02/05/10 Kg.** Refined wheat flour (Maida) may be packed in 02 kg/ 05 kg/ 10 kg reverse printed 12 micron polyester laminated with 120 ± 10 micron food grade polyethylene.
- (d) **500 gm/1Kg.** Refined wheat flour (Maida) may be packed in 500 gm/1 Kg reverse printed 12 micron polyester laminated with 80 ± 10 micron food grade polyethylene.

Marking

5. The following particulars shall be stencilled on one side of each bag:-
 - (a) Name of Supplier
 - (b) Description of contents character of suitable size (Refined Wheat Flour (Maida)) or as per The Legal Metrology (Packaged Commodities) Acts, 2009 and Rules, 2011.
 - (c) Nett Weight.
 - (d) Date of packing
 - (e) Lot No/Batch No.
 - (f) Best before and warranty period
 - (g) Symbol for veg food
 - (h) FOR DEFENCE SERVICES ONLY
6. The dye or ink used for stencilling shall not penetrate into the material.

Hygiene

7. The Refined Wheat Flour (Maida) shall be prepared in premises maintained in a hygienic condition which shall be open to inspection at any time by a competent authority approved by the Quartermaster General and the Director of Medical Services.
8. The basic hygiene requirements in a factory producing Refined Wheat Flour (Maida) for the Defence Services shall be in accordance with Appendix 'H'.


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9. In addition, the milling machinery (other than machinery used for cleaning of wheat) shall be maintained free of insect infestation by the employment of manual cleaning as far as possible. All parts of the machine with the associated conveyors and spouting will be kept free from insect infestation. This manual cleaning shall be supplemented at regular intervals by the employment of special disinfestations and cleaning measures such as may be prescribed by the Director General of Supplies and Transport. Both manual and special methods shall be subject to scrutiny at regular intervals by officers of the Directorate General of Supplies and Transport.

Warranty

10. In accordance with special warranty clause as per Appendix 'J' to this specification, the warranty period shall be 90 Days.

Inspection

11. An inspection of Refined Wheat Flour (Maida) shall be carried out before acceptance by the Director General of Supplies and Transport, or an officer acting on his behalf, on all consignments awaiting despatch from the mill. The decision of this officer regarding acceptability shall be final. The procedure for inspection shall be in accordance with relevant sections of Appendix 'K'.

12. The Refined Wheat Flour (Maida) shall conform to the following standards of analysis:-

| | | | |
|-----|--|---|----------------------|
| (a) | Moisture | - | Not more than 12.0% |
| (b) | Gluten (on dry basis) | - | Not less than 9.0% |
| (c) | Total ash (on dry basis) | - | Not more than 1.0% |
| (d) | Acid insoluble ash (on dry basis) | - | Not more than 0.05% |
| (e) | Alcoholic Acidity (as H ₂ SO ₄) With 90% alcohol | - | Not more than 0.10% |
| (f) | Granularity | - | To satisfy the test. |

13. The methods of analysis shall be those laid down in IS specification No IS : 1009-1968 – Specification for Refined wheat flour (Maida).

Mandatory Requirements Of FSSAI/BIS

14. All mandatory requirements of FSSAI/BIS, as amended from time to time, pertaining to the above Specification including marking of BIS certification mark for container/contents, Best Before _____, coloured symbol for declaring vegetarian and non-vegetarian food etc on packs shall be complied with.


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APPENDIX 'H'**STANDARD MINIMUM REQUIREMENTS OF HYGIENE IN DEFENCE
CONTROLLED FLOUR MILLS**

1. An adequate supply of potable water which shall be periodically tested and certified as free from injurious bacteria and substances by public health laboratory.
2. An efficient drainage system with proper method of disposal of waste water.
3. Periodic medical examination should ensure that no individual is employed who is suffering from infectious or communicable disease or who suffers from any disability, for example "running sores" which is likely to result in contamination of wheat, packing material, machinery and finished wheat products.
4. Proper medical cover for employees to ensure regular medical check-up and routine vaccination / inoculation and record should be maintained to that effect.
5. Sufficient number of spittoons and reuse receptacles should be provided at various places in the mills.
6. Sanitary conveniences shall be provided, maintained and kept clean and properly lighted.
7. The building of the mill shall be suitable in size commensurate to the grinding. The construction shall be cement / lime plastered to ensure cleanliness and to facilitate adoption of prophylactic measures against infestation.
8. The mill building and godowns shall be adequately lighted and ventilated and should meet the requirement of Factories Act 1948.
9. The floors of the building except upper storeys and of godowns shall be cement plastered, smooth and impervious to water. The gaps in the floors of upper storeys, mostly wooden, shall be filled with suitable filling compound to avoid potential hide outs for insects.
10. The internal walls of building and godowns shall be preferably cement / lime plastered, smooth, free from crevices and sharp angles.
11. The milling section should be fly proof and all the godowns shall be bird and rodent proof.

APPENDIX 'J'**SPECIAL WARRANTY CLAUSE**

1. The contractor warrants the supplies delivered to be sound and meet the quality parameters as per DFS of Refined Wheat Flour (Maida), for a period of 90 days from date of procurement in any climate and under all conditions of storage and movement in India.
2. In the event of the supplies or a part of having been declared during the period of warranty as being unsound, unwholesome or not meeting quality parameters as per DFS, by the Director General of Supplies and Transport, QMG's Branch Army Headquarters, New Delhi or any officer acting on his behalf (whose opinion as to whether or not it meets the quality parameters as per DFS the particular consignment is sound, wholesome, or will be final), the purchaser will have the right to dispose of the condemned stock in any way he considers necessary after giving due notice to the contractor and also, at his discretion, either to allow the contractor to replace the condemned stock within a specified period or to recover from the contractor the contract price thereof together with all incidental and freight charges incurred from the place of delivery to the place where the supplies were ultimately condemned. The opinion of the Director General of Supplies & Transport or an officer acting on his behalf in regard to these charges will be final.
3. The declaration by the Director General of Supplies & Transport or any officer acting on his behalf communicated to the contractor in writing that a particular consignment has been condemned will be taken by the Contractor as the conclusive evidence of the proper condemnation of that consignment provided that such communication is issued by the Director General of Supplies & Transport within 45 days of the Expiry of the Warranty Period. Nothing herein contained shall prejudice any other right of the purchaser in that behalf under this contract or otherwise.

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DEFENCE FOOD SPECIFICATIONS-2021

SPECIFICATION NO 450 : DALIA

Quality

1. The Dalia shall be prepared from wheat which conforms to Specification No 456 or from imported wheat of acceptable quality. The wheat shall be effectively cleaned prior to milling. No foreign food grains shall be present.
2. The Dalia shall be of characteristic taste and smell and fit for human consumption in all respects. It shall be free from insect infestation, moulds and fungi, dirt and other impurities.

Packing

3. (a) Dalia will be packed in 50 Kgs new trade Jute bags conforming to BIS Spn No 15138-2002. Each bag shall contain 50 Kgs of nett weight with permissible variation in line with Standards of The Legal Metrology (Packaged Commodities) Acts, 2009 and Rules, 2011.
- (b) **25 kgs HDPE Woven Bags.** Dalia shall be packed in 25 kg High density Polyethylene (HDPE)/ Polypropylene (PP) woven sacks as per Bureau of Indian Standards specification No IS: 14887-2000 for Testing and Quality check. Each bag shall contain 25 kg net of Dalia with permissible variation as per The Legal Metrology (Packaged Commodities) Acts, 2009 and Rules, 2011
- (c) **02/05/10 Kgs.** Dalia may be packed in 02kg/05kg/10kg reverse printed 12 micron polyester laminated with 120 ± 10 micron food grade polyethylene.
- (d) **500 gm/1Kg.** Dalia may be packed in 500 gm/1 Kg reverse printed 12 micron polyester laminated with 80 ± 10 micron food grade polyethylene.


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Marking

4. The following particulars shall be stenciled on one side of each bag:-

- (a) Name of Supplier.
Description of contents character of suitable size (Dalia) or as per The Legal Metrology (Packaged Commodities) Acts, 2009 and Rules, 2011
- (b) Nett weight.
- (c) Gross weight.
- (d) Date of packing
- (e) Lot No/Batch No.
- (f) Best before and warranty period
- (g) Symbol for veg food
- (h) FOR DEFENCE SERVICES ONLY

Hygiene

5. The Dalia shall be prepared in premises maintained in a Hygienic condition which shall be open to inspection at any Time by a competent authority approved by the Quartermaster General and Director of Medical Services (Army).

6. The basic hygiene requirements in a factory producing Dalia for the Defence Forces shall be in accordance with Appendix H.

7. In addition, the milling machinery (other than machinery used for the cleaning of wheat) shall be maintained free of insect infestation. All parts of the machinery, with the associated conveyors and spouting shall be kept free from insect infestation. This will be effected by manual cleaning, supplemented at regular intervals by the employment of special disinfestations and cleaning measures such as may be prescribed by the Food Inspection Organisation.

Warranty

8. In accordance with special warranty clause as per appendix 'J' to this specification, the warranty period shall be 90 Days.

Inspection

8. An inspection of Dalia shall be carried out before acceptance, by the Director of Supplies and Transport or an officer acting on his behalf, on all consignments awaiting despatch from the Mill. The decision of this officer regarding acceptability shall be final.

9. The Dalia shall be dressed through a set of sieves, IS 160 (BSS =1/16") and IS 80 (BSS 1/32") and shall conform to the following standards :-

- (a) Moisture : Not more than 10%.
- (b) Gluten (dry) : Not less than 8%.


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- | | | | |
|-----|--|---|--------------------------------------|
| (c) | Aqueous acidity (Milliliters of 0.1N Sodium Hydroxide) | : | Not more than 26.0 ml per 100gms. |
| (d) | Percentage retained by IS 160 (BSS 1/16") sieve | : | Not more than 25%. |
| (e) | Percentage retained by IS 80 (BSS 1/32") sieve | : | Not less than 75%. |
| (f) | Fine product ie passing through IS 80 (BSS 1/32") sieve | : | Not more than 0.5%. |
| (g) | Total ash | : | Not more than 2.0%. |
| (h) | Ash insoluble in HCL | : | Not more than 0.05%. |

10. The methods of analysis shall be as laid down in IS Specification No IS : 1155-1968 for wheat atta.


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APPENDIX 'H'**STANDARD MINIMUM REQUIREMENTS OF HYGIENE IN FOOD FACTORIES**

1. To ensure the standard of hygiene in a factory the following minimum requirements shall apply:-

- (a) **Floors.** The floors should be impervious and kept clean all times.
- (b) **Lighting and Ventilation.** Adequate standards of lighting (natural and artificial) in working parts of the factory together with adequate ventilation and sufficient space for and protection from machinery.
- (c) **Fly / Rodent / Pest / Bird Proofing.** Fly / rodent / pest / bird proofing of factory premises to the extent necessary to protect raw material during storage and processing and the manufactured products until it has been packed and the containers sealed.
- (d) **Water-Supply.** An adequate supply of potable water in the factory and drinking water for the employees will be provided which shall be periodically tested and certified as free from injurious bacteria and other substances by a public health laboratory.
- (e) **Disposal of Wastes.** An efficient drainage system must be provided with proper methods of disposal of waste water and other effluents. Provision must exist to eliminate dusts/fumes if any.
- (f) **Conservancy.** A proper conservancy system adequately serviced with approved methods of disposal of human excreta.
- (g) Additional special hygiene precautions are necessary when waste products which are dangerous or likely to create conditions which are dangerous to health are produced at any stage during handling of raw materials or its manufacture.
- (h) **Safety.** Adequate fencing of machinery shall be secured in the case of all types of machinery and its moving parts and the moving machinery shall be kept in a position which provides sufficient safeguard against any accident. Each factory must have first aid box with necessary minimum items.

2. **Workers.**

- (a) So far as the health of the employees is concerned, they shall be periodically examined by Medical Officer and it should be ensured that no individual suffering from any communicable disease or any disability likely to result in contamination of the raw materials, implements, equipments or finished products, is employed.
- (b) All the employees should be protected against communicable diseases with preventive inoculation / vaccination.
- (c) Provisions for personal hygiene of employees will include potable drinking water, washing facilities (Soap, basin or taps, nail brushes and towels) sanitary annexes and at least two sets of clean clothing for each employee for use only in the factory and Masks / hand gloves, where necessary. There should be a separate room for keeping the personal belongings and to change the clothes and for drying of wet clothes.

APPENDIX 'J'
TO SPECIFICATION NO 450 FOR DALIA

SPECIAL WARRANTY CLAUSE

1. The contractor warrants the supplies delivered to be sound and meet the quality parameters as per DFS of Dalia, for a period of 90 days from the last day of the month of delivery in any climate and under all conditions of storage and movement in India.
2. In the event of the supplies or a part of having been declared during the period of warranty as being unsound, unwholesome or not meeting quality parameters as per DFS, by the Director General of Supplies and Transport, QMG's Branch Army Headquarters, New Delhi or any officer acting on his behalf (whose opinion as to whether or not it meets the quality parameters as per DFS the particular consignment is sound, wholesome, or will be final), the purchaser will have the right to dispose of the condemned stock in any way he considers necessary after giving due notice to the contractor and also, at his discretion, either to allow the contractor to replace the condemned stock within a specified period or to recover from the contractor the contract price thereof together with all incidental and freight charges incurred from the place of delivery to the place where the supplies were ultimately condemned. The opinion of the Brigadier Procurement or an officer acting on his behalf in regard to these charges will be final.
3. The declaration by the Brigadier Procurement or any officer acting on his behalf communicated to the contractor in writing that a particular consignment has been condemned will be taken by the Contractor as the conclusive evidence of the proper condemnation of that consignment provided that such communication is issued by the Brigadier Procurement within 45 days of the Expiry of the Warranty Period. Nothing herein contained shall prejudice any other right of the purchaser in that behalf under this contract or otherwise.

SECRETARIAT

OF

THE TECHNICAL STANDARDISATION COMMITTEE (FOOD STUFFS)
(DIRECTORATE GENERAL OF SUPPLIES AND TRANSPORT)

DEFENCE FOOD SPECIFICATIONS-2021

SPECIFICATION NO 454 : SUJI

Manufacture

1. The suji shall be the purified middlings obtained from the milling of wheat which conforms to JSS Specification for imported wheat and which has been accepted by the milling agents. The wheat shall be effectively cleaned prior to milling and milled by roller mill process.
2. The Suji shall not be artificially bleached. It shall be free from grittiness, flour, bran, offals, insect infestation, fungus infection, dirt and other impurities and shall have characteristic taste and smell and be in all respects fit for human consumption.
3. When the suji is produced with atta the bran content will increase by 0.25% for every 1.0% of suji extraction upto 10% extraction of suji. The divide range at different range at different points will be as given below:-

| Suji % | Bran % | Atta % |
|--------|--------|--------|
| 0 | 5.95 | - |
| 1.0 | 5.25 | 93.75 |
| 2.0 | 5.50 | 92.50 |
| 3.0 | 5.75 | 91.25 |
| 4.0 | 6.00 | 90.00 |
| 5.0 | 6.25 | 88.75 |
| 6.0 | 6.50 | 87.50 |
| 7.0 | 6.75 | 86.25 |
| 8.0 | 7.00 | 85.00 |
| 9.0 | 7.25 | 83.75 |
| 10.0 | 7.50 | 82.50 |

4. The suji shall be of two grades viz (a) large particle grade and (b) small particle grade as prescribed in clauses 3.2.1 & 3.2.2 of BIS Specification No IS: 1010 – 1968 which are reproduced below.


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5. Large Particle Grade. When tested by the method prescribed in Appendix „A“ to this specification:-

- (a) All the material shall pass through a sieve of silk or nylon bolting cloth 20 GG (aperture 1.16 mm) or 1.18 mm IS Sieve.
- (b) Not less than 90 percent of the material shall be retained on a sieve of silk or nylon bolting cloth 30 GG (aperture 0.73 mm) or 710 micron IS Sieve and
- (c) Not less than 98 percent of the material shall be retained on a sieve of silk or, nylon bolting cloth 70 GG (aperture 0.24 mm) or 250 micron IS Sieve.

6. Small Particle Grade. When tested by the method prescribed in Appendix „A“ to this specification:-

- (a) All the material shall pass through a sieve of silk or nylon bolting cloth 20 GG (aperture 1.16 mm) or 1.18 mm IS Sieve;
- (b) Not more than 10 percent of the material shall be retained on a sieve of silk or nylon bolting cloth 30 GG (aperture 0.73 mm) or 710 micron IS Sieve ; and
- (c) Not less than 98 percent of the material shall be retained on a sieve of silk or nylon bolting cloth 70 GG (aperture 0.24 mm) or 250 – micron IS Sieve.

Note:- Since the sieves made of commercial silk or nylon bolting cloth may vary in the average mesh openings from those given in 3.2.1 and 3.2.2, a tolerance of +7.5 percent is permitted.

Warranty

5. In accordance with special warranty clause as per appendix 'J' to this specification, the warranty period shall be 90 Days.

Pre-Inspection of Stores / Consignment

7. Contractors / suppliers must satisfy them – selves that the stores are in accordance with the terms and conditions of the contract and fully conform to the required specification by carrying out a thorough pre-inspection of each lot / batch before actually tendering the same for inspection to the quality Assurance Officer nominated under the terms of contract. A declaration by the contractor that necessary pre-inspection has been carried out on the stores tendered will be submitted alongwith the challan.


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Inspection

8. The supplier / contractor shall inform the Quality Assurance Officer as to when he is in a position to tender the stores for inspection, so that arrangements can be made in advance for testing and inspection of the stores.

9. An inspection shall be carried out by the Quality Assurance Officer, or an officer acting on his behalf, on all supplies tendered for acceptance. The decision of this officer shall be final.

10. The Quality Assurance Officer shall draw samples by random sampling method of the batch / lot / consignment for inspection as mentioned in clause 8.0 of this JSS which shall conform to the following:-

- | | | | |
|-----|---|---|---------------------|
| (a) | Moisture | - | Not more than 12.5% |
| (b) | Total Ash (on dry basis) | - | Not more than 1.0% |
| (c) | Acid insoluble Ash (on dry basis) | - | Not more than 0.05% |
| (d) | Alcoholic Acidity (as H ₂ SO ₄) with 90.0% alcohol) | - | Not more than 0.10% |

11. The method of analysis used shall be those laid down in BIS Specification No IS: 1010 – 1968 Specification of Suji or Rava (Semolina).

Hygiene

12. The Suji shall be prepared in premises maintained in hygienic condition which shall be open to inspection at any time by a competent authority approved by the Quartermaster General and the Director General of Medical Service (Army).

13. Basic hygiene requirement in a factory producing Suji for the Defence Services shall be in accordance with Appendix „B”.

14. In addition, the milling machinery (other than machinery used for the cleaning of wheat) shall be maintained free of infestation by the employment of manual cleaning as far as possible. All parts of machines with the associated conveyors and spouting will be kept free from insect infestation. This manual cleaning shall be supplemented at regular intervals by the employment of special disinfestation and cleaning measures such as may be prescribed by the Director General of Supplies and Transport. Both manual and special methods shall be subjected to scrutiny at regular intervals by the Director General of Supplies and Transport or an officer acting on his behalf.


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Sampling

15. The supplier shall offer the stores duly packed as stated as clause 9.0 arranged in such a way that the entire lot is accessible to the Quality Assurance Officer.
16. The Quality Assurance officer shall draw samples by random sampling method of the batch/lot/consignment for inspection.
17. Out of the total stock of jute bags containing Suji, 10% of the jute bags will be selected randomly. All the bags are opened. Original, duplicate and triplicate samples containing 4 Kgs each will be drawn by Inspecting Officer and will be signed and labelled by Inspecting Officer.

Packaging

18. (a) Suji will be packed in 50 Kg new trade Jute bags conforming to BIS Spn No15138 – 2002. Each bag shall contain 50 Kg of net weight with permissible variation in line with The Legal Metrology (Packaged Commodities) Acts, 2009 and Rules, 2011
- (b) **25 kgs HDPE Woven Bags.** Suji shall be packed in 25 kg High density Polyethylene (HDPE)/ Polypropylene (PP) woven sacks as per Bureau of Indian Standards specification No IS: 14887-2000 for Testing and Quality check. Each bag shall contain 25 kg net of Suji with permissible variation as per The Legal Metrology (Packaged Commodities) Acts, 2009 and Rules, 2011.
- (c) **02/05/10 Kgs.** Suji may be packed in 02kg/05kg/10kg reverse printed 12 micron polyester laminated with 120 ± 10 micron food grade polyethylene.
- (d) **500 gm/1Kg.** Suji may be packed in 500 gm/1 Kg reverse printed 12 micron polyester laminated with 80 ± 10 micron food grade polyethylene.

Marking

19. The following particulars shall be stencilled one side of each bag. "The dye or the ink the ink used for stencilling shall not penetrate into the material".
- (a) Name of mill.
Description of contents character of suitable size (SUJI) or as per The Legal Metrology (Packaged Commodities) Acts, 2009 and Rules, 2011.
- (b) Net weight.
- (c) Gross weight.
- (d) Date of milling.
- (e) JSS Number.
- (f) Best before and warranty period.
- (g) Green/Veg logo.
- (h) FOR DEFENCE SERVICES ONLY.


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APPENDIX 'A'
(Refers to Para 5 and 6)

DETERMINATION OF PARTICLE SIZE

Sieves

1. Make a nest of 3 sieves of silk or nylon bolting cloth or IS Sieves, the uppermost having a designation 20 GG (aperture 1.16 mm) or 1.18 mm IS Sieve, the middle of 30 GG (Aperture 0.73 mm) or 710 micron IS Sieve and the lowermost 70 GG (aperture 0.24mm) or 250 micron IS Sieve with cover on top of the uppermost sieve and a receiver below the lowermost sieve.

Procedure

2. Weigh accurately about 100 g of the material into the uppermost sieve and fit it with the cover. Shake the nest of sieves with the receiver thoroughly and ensure that all the Material on the uppermost sieve has passed through it. Stop shaking, remove the nest of sieves and examine the uppermost sieve to be assured that all the material has passed through it. Transfer the residues on the lowest sieves separately to two tared weighing dishes using a brush and weigh each dish.

Calculation

3. Material retained on sieve 30 GG or 710 micron = $\frac{100 W_1}{W}$

Where

W₁ = weight in g the material retained on sieve 30 GG or 710 micron IS Sieve, and
W = weight in g of the material taken for the test.

A.3.2. Material retained on sieve 70 GG or 250 Micron = $\frac{100 (W_1 + W_2)}{W}$

1 2

IS Sieve, percent by weight. W

Where

W₁ = weight in g of the material retained on sieve 30 GG

Or 710 micron IS Sieve,

W₂ = weight in g of the material retained on sieve 70 GG

or 250 micron IS Sieve, and

W = weight in g of the material taken for the test.

APPENDIX 'B'
(Refers to Para 13)

**STANDARD MINIMUM REQUIREMENTS OF HYGIENE IN DEFENCE CONTROLLED
FLOUR MILLS (APPENDIX 'I').**

1. An adequate supply of potable water which shall be periodically tested and certified as free from injurious bacteria and substances by public health laboratory.
2. An efficient drainage system with proper method of disposal of waste water.
3. Periodic medical examination should ensure that no individual is employed who is suffering from infectious or communicable disease or who suffers from any disability, for example "running sores" which is likely to result in contamination of wheat, packing material, machinery and finished wheat products.
4. Proper medical cover for employees to ensure regular medical check up and routine vaccination / inoculation and record should be maintained to that effect.
5. Sufficient number of spittoons and reuse receptacles should be provided at various places in the mills.
6. Sanitary conveniences shall be provided, maintained and kept clean and properly lighted.
7. The building of the mill shall be suitable in size commensurate to the grinding. The construction shall be cement / lime plastered to ensure cleanliness and to facilitate adoption of prophylactic measures against infestation.
8. The mill building and godowns shall be adequately lighted and ventilated and should meet the requirement of Factories Act 1948.
9. The floors of the building except upper storeys and of godowns shall be cement plastered, smooth and impervious to water. The gaps in the floors of upper storeys, mostly wooden, shall be filled with suitable filling compound to avoid potential hide outs for insects.
10. The internal walls of building and godowns shall be preferably cement / lime plastered, smooth, free from crevices and sharp angles.
11. The milling section should be fly proof and all the godowns shall be bird and rodent proof.

APPENDIX 'J'
TO SPECIFICATION NO 454 FOR SUJI -2021

SPECIAL WARRANTY CLAUSE

1. The contractor warrants the supplies delivered to be sound and meet the quality parameters as per DFS of SUJI, for a period of 90 days from the last day of the month of delivery in any climate and under all conditions of storage and movement in India.
2. In the event of the supplies or a part of having been declared during the period of warranty as being unsound, unwholesome or not meeting quality parameters as per DFS, by the Director General of Supplies and Transport, QMG's Branch Army Headquarters, New Delhi or any officer acting on his behalf (whose opinion as to whether or not it meets the quality parameters as per DFS the particular consignment is sound, wholesome, or will be final), the purchaser will have the right to dispose of the condemned stock in any way he considers necessary after giving due notice to the contractor and also, at his discretion, either to allow the contractor to replace the condemned stock within a specified period or to recover from the contractor the contract price thereof together with all incidental and freight charges incurred from the place of delivery to the place where the supplies were ultimately condemned. The opinion of the Brigadier Procurement or an officer acting on his behalf in regard to these charges will be final.
3. The declaration by the Brigadier Procurement or any officer acting on his behalf communicated to the contractor in writing that a particular consignment has been condemned will be taken by the Contractor as the conclusive evidence of the proper condemnation of that consignment provided that such communication is issued by the Brigadier Procurement within 45 days of the Expiry of the Warranty Period. Nothing herein contained shall prejudice any other right of the purchaser in that behalf under this contract or otherwise.

SECRETARIAT
OF
THE TECHNICAL STANDARDISATION COMMITTEE (FOOD STUFFS)
(DIRECTORATE GENERAL OF SUPPLIES AND TRANSPORT)

DEFENCE FOOD SPECIFICATIONS-2020

SPECIFICATION NO 309 : BRAN

Quality

1. The bran shall be the outer coating with the minimum of adhering endosperm of Wheat Kernel separated from effectively cleaned wheat in the usual process of milling. The bran shall be of the supplying mills own manufacture.
2. The bran shall be of broad flake, freshly milled, dry and sweet (without musty odour or sourness), free from lumps, dirt and husks of foreign grains or any other impurity.
3. The bran shall be of two grades as under:-
 - (a) Grade I for horses and mules will be produced at the Controlled Flour Mills from wheat corresponding to Specification No 456 or imported wheat and which has been accepted by the milling agents.
 - (b) Grade II for cattle may be produced at sources other than Controlled Flour Mills.

Packing

4. The flour will be packed in 50 Kgs new trade jute bags conforming to BIS Spn No 15138 - 2010. Each bag shall contain 25 Kgs of nett weight.


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Marking

6. The following particulars shall be stenciled on one side of each bags with food grade dye or food grade ink:-

- (a) Name of Mill/Address of Manufacturer
- (b) Name of Item
- (c) Nett Weight.
- (d) Date of Milling
- (e) Best before and warranty period
- (f) Green/Veg Logo
- (G) FOR DEFENCE SERVICES ONLY

Hygiene

7. The bran shall be prepared in premises maintained in hygienic conditions which shall be open to inspection at any time by a competent authority approved by the QMG and the Director of Medical Services (Army).

8. The basic hygiene requirements in a factory supplying bran for the Defence Services shall be in accordance with Appendix 'I'.

9. In addition, the milling machinery (other than machinery used for the cleaning of wheat) shall be maintained free of insects infestation by the employment of manual cleaning as far as possible. All parts of machines with the associated conveyors and spouting will be kept free from insects infestation. This manual cleaning shall be supplemented at regular intervals by the employment of special disinfestations and cleaning measures such as may be prescribed by the Director of Supplies and Transport, QMG's Branch. Both manual and special methods shall be subject to scrutiny at regular intervals by officers of the Directorate of Supplies and Transport, QMG's Branch.

Inspection

10. An inspection shall be carried out by the Director of Supplies and Transport, QMG's Branch or an officer acting on his behalf, on all supplies of Grade-I awaiting despatch from the mill as well as all consignments of Grade-II tendered for acceptance. The decision of this officer shall be final.



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Analysis

11. The bran shall conform to the following analysis:-

| | <u>Grade I (For Horse & Mules)</u> | <u>Grade II (For Cattle only)</u> |
|--------------------------------------|--|---------------------------------------|
| (a) Moisture | Not more than 12.0% | Not more than 12.5 % |
| (b) Crude Protein (NX6.25) | - | Not less than 14.5% |
| (c) Crude Fat or other extract | - | Not less than 3.0% |
| (d) Crude fibre | - | Not more than 11.0% |
| (e) Total Ash | Not more than 5.5% | Not more than 6.5% |
| (f) Ash Insoluble in HCL | Not more than 0.1% | Not more than 0.25% |
| (g) Husk of foreign food grains | Not more than 2.0% | Not more than 2.0% |
| (h) Fine Powder (Wheatings Pollards) | Not more than 15.0% | Not more than 30.0% |

12. The methods of analysis shall be those laid down in Indian Standard Specification No IS : 2239 –1971 for wheat Bran except for the percentage of fine powder i.e. wheatings, Pollards and middling which shall be determined by sieving 50 gms of the sample of Bran on a 20.32 cm square IS 50 sieve (aperture 0.500 mm) in a Simon Laboratory Sifter. The quantity of fine products passing through, after sieving for 2 minutes, shall be weighed and the percentage calculated.

Mandatory Requirements Of FSSAI/BIS

13. All mandatory requirements of FSSAI/BIS, as amended from time to time, pertaining to the above Specification including marking of BIS certification mark for container/contents, Best Before _____, coloured symbol for declaring vegetarian and non-vegetarian food etc on packs shall be complied with.


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**STANDARD MINIMUM REQUIREMENTS OF HYGIENE IN DEFENCE
CONTROLLED FLOUR MILLS**

1. An adequate supply of potable water which shall be periodically tested and certified as free from injurious bacteria and substances by Public Health Laboratory.
2. An efficient drainage system with proper method of disposal of waste water.
3. Periodic medical examination should ensure that no individual is employed who is suffering from infectious or communicable disease or who suffers from any disability, for example "running sores" which is likely to result in contamination of wheat, packing material, machinery and finished wheat products.
4. Proper medical cover for employees to ensure regular medical check up and routine vaccination/inoculation and a record should be maintained to that effect.
5. Sufficient number of spittoons and refuse receptacles should be provided at various places in the mills.
6. Sanitary convenience shall be provided, maintained and kept clean and properly lighted.
7. The building of the mill shall be suitable in size commensurate to the grinding capacity. The construction shall be cement/lime plastered to ensure cleanliness and to facilitate adoption of prophylactic measures against infestation.
8. The mill building and godowns shall be adequately lighted and ventilated and should meet the requirement of factories act 1948.
9. The floors of the building, except upper storeys, and of godowns shall be cement plastered smooth, impervious to water. The gaps in the floors of upper storeys, mostly wooden, shall be filled with suitable filling compound to avoid potential hide outs for insects.
10. The internal walls of building and godowns shall be preferably cement/lime, plastered, smooth, free from crevices and sharp angles.
11. The milling section should be fly proof and all the godowns shall be bird and rodent proof.