HAJI DOSSA NUTRALGUM (PVT.) LTD.

Process Flow Chart Verification

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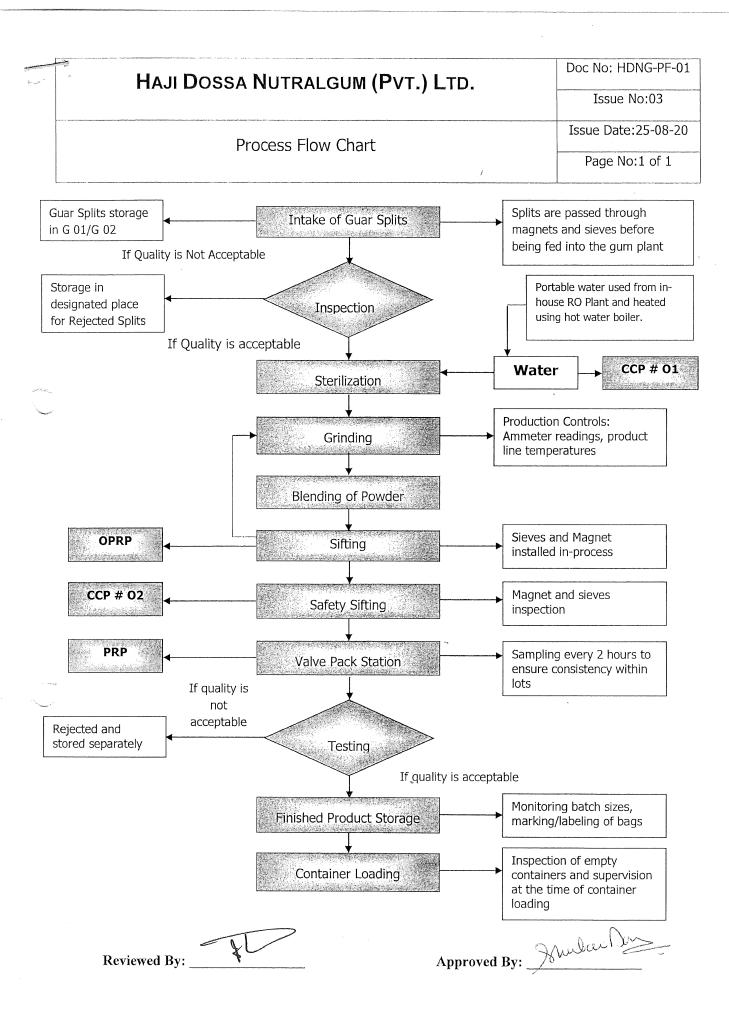
Verification Date: 02 - 01 - 2023

| S. No | Personnel Name | Department | Designation | Signature |
|-------|--------------------|------------|--|-----------|
| 1 | Ms. Sherbano Dossa | Management | Management Representative/ FSTL (Team Leader) | Sherten A |
| 2 | Mr. M. Abdullah | Production | Production Manager (Team Member) | Jan |
| 3 | Mr. Zaki Ahmed | Quality | Quality Assurance Manager (Team Member) | |
| 4 | Mr. Zubair Ahmed | Lab | Assist. Quality Assurance (Team Member) | 7. |
| 5 | Mr. Rashid | Lab | Assist. Quality Assurance (Team Member) | M. |

Note: A copy of the Process Flow Chart (HDNG-PF-01) is attached with this record for reference.

Prepared By

Approved By



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Address: Haji Dossa Nuralgum (Pvt.) Ltd.

Plot No. 33, Sector 19, Korangi Industrial Area, Karachi, Pakistan.

HACCP Plan for:* Processing guar splits into guar gum powder.

Plan agreed by:

Name: SHERBANO DOSSA

Signed: 9Webas 10

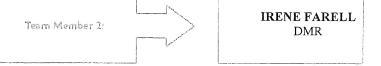
Position: FSTL

Date: 15 02 2020

HACCP TEAM









ZUBAIR AHMED Asst. QAM

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| | * |
|---|--|
| Product Description | Guar gum is a natural substance that is white to cream colored in nature. It is an odorless and tasteless fine powder. Standard Qualities produced by Haji Dossa Nutralgum (Pvt.) Ltd are FSD-3 and MR-150. However viscosities and mesh can be tailor-made as per individual customer requirements. |
| Raw Materials, Ingredients & Process Details | Guar gum powder is derived from the guar seed of the guar plant, <i>Cyamopsis tetragonolobus</i> . It is manufactured by a purely mechanical and thermal process, which involves cleaning, grinding and sifting of the <i>endosperm</i> of the guar seeds (also known as 'guar splits'). The shelf life of guar splits intended for the use of manufacturing guar gum powder is two years from the date of production. |
| Packaging | Standard packaging is in imported 25kg Scandinavian Kraft Paper Sacks; 4-Ply Valve Pack Bags with an inner P.E lining. |
| Storage Conditions | Ambient conditions are suitable for all guar gum powder storage and transportation. However for long term storage, maximum shelf life and performance is retained when stored between 10 - 25°C and relative humidity of <30%. |
| Method of Distribution | Transported in full container loads, or less than full container loads at ambient conditions. Preferably on pallets and covered with plastic wrap to protect the bags. |
| Finished Product Shelf Life | 24 Months after the Date of Production. |
| Intended use | Largest market for guar gum is in the food industry, where its applications include baked goods, dairy products, various condiments and sauces and frozen foods. Guar gum is also used in the manufacture of canned pet foods, and has some applications in the pharmaceutical and cosmetic industry. |
| Consumers | Guar gum is considered as a GRAS product (Generally Recognized as Safe) by the FDA and so can be used by all human beings. It is an all natural, chemical and preservative free product and therefore not known to have any allergens. |

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IDENTIFICATION OF CCP's

| Process Stage | Hazard | Type of Hazard / Comment | Control Measures | CCP No. |
|--|------------|--|---|------------|
| ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | Biological | Microbial Pathogen | Heat treatment of water used Monthly samples sent to external laboratory for Microbiological Analysis | t |
| Sterilization | Chemical | - | Water itself used is within Specifications set in HDNG-IMIP-01 Test Report from external laboratory | CCP -1 |
| Water used to wash the guar splits | Physical | - Physical Hazard that may come from inadequate water storage conditions, open tanks etc (dust, rodents, birds) controlled using PRP | Water itself used is within Specifications set in HDNG-IMIP-01 Test Report from external laboratory Cleaning of water tanks, covered lids of water tanks | |
| | Biological | - | - ' | |
| 5 f | Chemical | - | - | |
| Safety Sifting (Sieving using SS-1 and passing product through Magnet before finished product packing) | Physical | Foreign Material - For example sieve pieces, wooden pieces, metallic pieces | Weekly Inspection and cleaning of sifter Daily Magnet Cleaning Magnet Strength determined by Supplier Certification Magnet replacement after every 5 years | CCP- 2 |

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Establishing Critical Limits, Monitoring, Corrective Actions and Verifications

| CCP and | Control | Critical | | onitoring Pr | | · · · · · · · · · · · · · · · · · · · | Corrective | Records | Verification |
|--|---|---|---|---|---------|---------------------------------------|--|---------------|---|
| Hazard | Measures | Limits | What | How | Freq | Who | Action | | S |
| CCP-1 Sterilizatio n (Water used to wash the guar splits) Biological = Yes | Heat treatment of the water used for guar splits washing | 1. Min. 80 C Temperat ure of Water used to wash the splits through Hourly Monitorin g of the temperatu re | Temperature , Microbiologi cal Analysis | Hourly monitorin g of water temperat ure as per HDNG- WI-02 | Every | Mixer Opera tor | Incase of deviation inform the Plant Manager and QAM | HDNG-P- 01 | Temperatur e thermomete r calibrated |
| | Water itself used is within Specificatio n set in HDNG- IMIP-01 | 2. Microbiol ogical Analysis as described in Incoming Material Inspection Plan | Process Water 1 and 2 (water in direct contact with splits) must be within Microbiologi cal Specification s | Samples sent to external labs | Monthly | Assist ant QAM, DMR | Incase of deviation inform the Director to take further action | | External Testing for microbiologi cal analysis (Monthly sample sent to AKU) |

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| CCP-2 Safety Sifting (Sieving using SS-1 and passing product through Magnet before finished product packing) Physical = Yes | Sieves & Magnet used | Absence of foreign material ON 60 Mesh. | Finished Product Mesh Condition of sieve incase damaged and/or deshaped. | On-site using 60 Mesh Test Screen. Visual Inspectio | Every four hours Weekly inspecti on of sieve | Plant Operato r Assistan t QAM | Incase of deviation inform the QAM who will take a decision on segregation and resifting. Replace the damaged sieve with one in good condition and repair the one that is broken. | Maintena nce Card QR-6.3-02 | Two Hourly Samples of finished guar gum powder tested in in- house lab for mesh. Finished product mesh test ON 80 Mesh. Certificates from supplier |
|--|----------------------------|---|---|---|---|--|--|--|--|
| | | e | Daily Magnet Cleaning Magnet strength | Magnet Cleaning SOP Suppliers certificate | Daily On Purcha se | Assistan t QAM FSTL | Replace the Magnet every 5 years | Magnet Cleaning Form HDNG-P- 04 Supplier Certificat e | |

Review By: Jave HAJI DOSSA NETRALGUM (PVT.) LTD. HACCP Plan

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