ACTOSE PRODUCT BULLETIN

Revision Date: 8/26/2016

Hilmar[™] 5120 IF Refined Edible Lactose 200 mesh

Hilmar[™] 5120 IF is a crystalline alpha monohydrate lactose manufactured using a crystallization and purification process. It is produced under, and tested to strict infant formula hygiene standards. This true refined product has consistent quality and purity, which suits its use in dry mix infant care formulations and other mixes where high levels of hygiene security are required. This milled 200 mesh product is ideal for dry blending.

FEATURES / BENEFITS

- Superior Consistency, Purity and Clarity
- Meets Stringent Color Specifications
- Natural Carbohydrate
- Meets stringent infant formula production and product QA & QC standards
- Suited for dry blending of infant formula formulations
- Non GMO (our products are not manufactured with genetically engineered components)

APPLICATIONS

- Infant Formula
- Powdered Mixes
- Veterinary Products
- Homeopathic Products
- Bakery and Food Applications
- Pharmaceutical Fermentations

FOOD SAFETY & CERTIFICATION

- Produced in a GFSI-Certified Facility
- SEDEX Approved
- EU Compliant

Typical Particle Size

Typical Bulk Density
Poured Density

PHYSICAL CHARACTERISTICS

Hilmar[™] 5120 IF Refined Edible Lactose is a free flowing, off-white, slightly yellow crystallized powder. A 2% solution is slightly sweet without foreign flavors or odors. It is water-soluble.

Typical %

Typical Range

0.5 - 0.7 g/ml

| Typical Faither Cize | 1 y p 10 a 1 7 0 |
|----------------------|------------------|
| USS 200# (passing) | 80 <u>+</u> 5 |
| | |
| | |

NUTRITIONAL VALUES

| Composition | Specification | Test Method |
|----------------------------|---------------|------------------|
| Lactose Monohydrate (%) | 99.4 min | Calculation |
| Loss of Drying (%) | 0.3 max | USP |
| Total Protein (%) | 0.3 max | AOAC |
| Residue on ignition (%) | 0.3 max | USP |
| рН | 4.0 - 7.0 | 10% Sol. at 20°C |
| Scorched Particle (mg/25g) | 7.5 | SMEDP |

| Microbiology | Specification | Test Method |
|-------------------------------|---------------|-------------|
| APC (cfu/g) | 500 max | SMEDP |
| E. coli (1g) | Negative | ISO |
| Salmonella (1,500g) | Negative | AOAC |
| Yeast (cfu/g) | 50 max | ISO/IDF |
| Mold (cfu/g) | 50 max | ISO/IDF |
| E Sakazakii (30x10g) | Negative | ISO/TS |
| Enterobacteriaceae (10x10g) | Negative | ISO |
| Coagulase Positive Staph (25g | g) Negative | AOAC |
| Listeria (25g) | Negative | AOAC |

PACKAGING

25 kg heat-sealed, multi-wall kraft bag with inner polyethylene bag liner. Forty bags per pallet.

STORAGE / SHELF LIFE

Shelf life is two years from the date of manufacture. Recommended storage is less than 25° C and a relative humidity lower than 75%. Store away from aromatic materials.

RECOMMENDED LABEL

Refined Lactose

ORDERING INFORMATION

| BAG SIZE | PART CODE | SHIPPING POINT |
|-----------------|-----------|----------------|
| 25 kg | 350012 | Hilmar, CA |
| 900 kg | 350013 | Hilmar, CA |