



Kluman and Balter Limited

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Product Specification

| | | | |
|------------------|---------------------------|--------|----|
| Product | : Whey Powder | | |
| Size / Weight | : 25kg | | |
| K & B Code | : 150030 | | |
| Date | : 11/07/2018 | Issue: | 7. |
| Reason for issue | : Shelf life info amended | | |

1. Product Description: A free flowing milk powder, obtained by the evaporation and spray drying of pasteurized whey serum.

2. Analytical Standards:

2.1. Chemical:

| Parameter | Target Value | Limits | Method / Frequency |
|------------------------|--------------|--------------|----------------------|
| Protein | 11.0 – 14.0% | 8.0% minimum | IDF 20B |
| Fat | < 1.0 % | 2.5% max. | IDF 9C |
| Carbohydrate (Lactose) | 74 % | | Luff SCHOORL |
| Ash | < 1.0 % | 1.5 % max | ADPI |
| Moisture | < 2.0 % | 4.0% max | IDF 26 |
| pH | 6.6 | 6.5-7.1 | 10% solution at 25°C |
| | | | |

2.2. Physical, including allowable contaminants and levels and organoleptic attributes:

| Parameter | Target Value | Limits | Method / Frequency |
|--------------------|---|-----------------|----------------------|
| Organoleptic | Clean fresh sweet taste, absence of taints | | 10% solution at 25°C |
| Appearance | Off white to creamy yellow, free flowing powder. Absence of foreign material | | Visual |
| Scorched Particles | Disc A | Disc B max | ADPI |
| Solubility Index | < 0.1ml | 1.25ml Maximum | |
| Bulk Density | 0.65 /ml | 0.5 – 0.80 / ml | |

2.3. Microbiological:

| Parameter | Target Value | Limits | Method / Frequency |
|-----------------------|----------------|----------------|--------------------|
| Total Plate Count | <10 000 cfu /g | >30 000 cfu /g | IDF 100A |
| Enterobacteriaceae | Absent per g | > 10 cfu/g | ICMSF |
| E. Coli | Absent per g | Absent per g | ICMSF |
| Salmonella | Absent per 25g | Absent per 25g | AOAC 989 |
| Staphylococcus Aureus | Absent per g | Absent per g | IDF 60A |
| Yeasts & Moulds | <50 cfu/g | > 100 cfu /g | |
| | | | |

3. Metal Detection:

| | | | | | |
|--------------|-------|----------|-------|------------------|-------|
| Non-Ferrous: | 4.0mm | Ferrous: | 3.0mm | Stainless Steel: | 5.0mm |
|--------------|-------|----------|-------|------------------|-------|

Frequency of metal checking metal detector: After each 10 tonnes of product.

4. Nutrition: (State source of data) (Supplier data)

| Typical Values per 100g (as supplied) | |
|---------------------------------------|---------------|
| Energy, Kcals | 353 |
| Energy, Kjoules | 1503 |
| Protein | 12.5g |
| Fat | 2g |
| of which saturates | 0.8g |
| of which mono-unsaturates | 0.4g |
| of which poly-unsaturates | trace |
| Carbohydrate | 78.0g |
| of which sugars | 78.0g |
| of which starch | - |
| Sodium | 1090mg |
| Fibre | 0 |

5. Shelf Life:

Shelf life from date of production: 12 - 24 months depending on Packer.

6. Storage and Transport Conditions:

6.1. Storage Conditions: Dry, ambient conditions

6.2. Transport Conditions: Dry, ambient conditions.

7. Packaging

7.1 Primary Packaging: (unit of sale) –

Dimensions (L x W x H) mm: N/A

Material and closure: Multi-ply polylined paper sack, closed with cotton stitching

Weight of primary packaging: N/A

Label position: Front face of sack

Label information: Product name, manufacturer, EU health mark number, net weight, batch code.

Coding information and example:

7.2 Secondary Packaging: n/a

Dimensions (L x W x H) mm:

Material and closure: Polypropylene shrink wrap

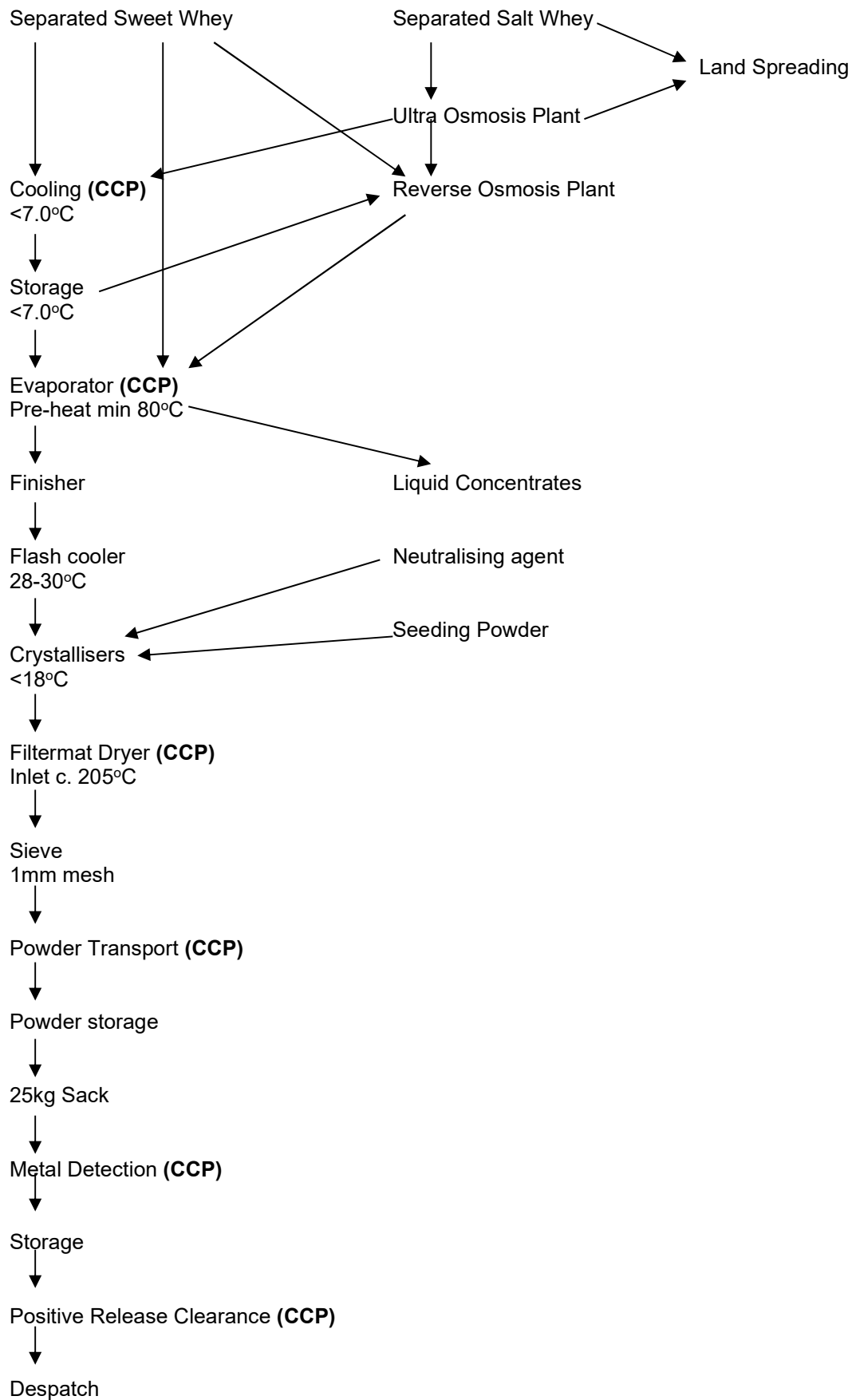
Weight of secondary packaging:

Label position:

Label information:

Coding information and example:

11. Flow diagram of manufacturing process, showing critical control points:



12. Detail of Critical Control Points

| CCP No. | Hazard Identified | Control Procedure | Target Level | Responsibility |
|-------------------------------------|---------------------------------|--|---|-----------------------|
| CCP 1 (Cooling) | Possible microbiological growth | Cooling temperature control | <10°C. Check refrigeration plant if not in control | Product Manager |
| CCP 2 (Evaporation) | Possible microbiological growth | Heat treatment | Pre-heater temperature min 80°C. Check steam pressure if not in control | Product Manager |
| CCP 3 (Filtermat dryer) | Wash water not potable | Water treatment | >0.5ppm chlorine. Check dosing if not in control | Engineer |
| CCP 4 (Powder transport) | Contaminated air supply | Filtered air | 0.01 micron. Replace filter if not in control | Engineer |
| CCP 5 (Metal Detection) | Metal contamination of product | In-line metal detector, checked every 10 tonnes. | Fe: 3.0mm Non Fe: 4.0mm S/S: 5.0mm | Product Manager |
| CCP 6 (Product clearance) | Product out of specification | Operate to documented procedures | Manufacturer specification | Technical Manager |

13. Food Intolerance Data:

The product is **FREE** from the following:

| Component | Yes / No | Detail including origin |
|---|----------|-------------------------|
| Additives ; Artificial | Y | |
| Additives ; Natural | Y | |
| Antioxidants BHA/BHT | Y | |
| Artificial Sweeteners | Y | |
| Azo and Coal Tar Dyes | Y | |
| Benzoates | Y | |
| Colours: Artificial | Y | |
| Colours: Natural | Y | |
| Colours: Nature Identical | Y | |
| Egg & Egg Derivatives | Y | |
| Flavourings: Artificial / Nature Identical | Y | |
| Flavourings: Natural | Y | |
| Glutamates, MSG | Y | |
| Gluten and Gluten Derivatives | Y | |
| Histamine, Caffeine | Y | |
| Lactose | N | Contains whey |
| Lupin Seed | Y | |
| Milk & Milk Derivatives | N | Contains whey |
| Modified Starches | Y | |
| Mustard, mustard seed, celery, celeriac, kiwi fruit | Y | |
| Nuts & Nut derivatives (including tree nuts) (and any possible sources of cross contamination) | Y | |
| Peanuts & Peanut Derivatives | Y | |
| Potassium Based Salt Substitute | Y | |
| Preservatives ; Artificial | Y | |
| Preservatives ; Natural | Y | |
| Rye, Barley & Oats or their Derivatives | Y | |
| Seeds (Poppy, Sesame, Sunflower) & Seed Derivatives | Y | |
| Sulphites and Sulphur Dioxide | Y | |
| Wheat and Wheat Derivatives | Y | |
| Yeast and Yeast Derivatives | Y | |
| Genetically Modified Ingredients | Y | |
| Components derived from Maize | Y | |
| - If No, are they derived from Identity Preserved Source ? | | |
| Or do they have a negative PCR Certificate ? | | |
| Components derived from Soya | Y | |
| - If No, are they derived from Identity Preserved Source ? | | |
| Or do they have a negative PCR Certificate ? | | |
| Processing Aids derived from G.M.O. | Y | |
| Beef | Y | |
| Beef derivatives, stocks, extracts, offals, gelatin, fat, blood | Y | |
| Beef, Pork, Lamb, Fish products or derivatives on site | Y | |
| Fish, Crustacian or Mollusc derivatives, stocks, extracts, offals, gelatin, fat, blood | Y | |
| Fish, Crustacians or Molluscs | Y | |
| Lamb | Y | |
| Lamb derivatives, stocks, extracts, offals, gelatin, fat, blood | Y | |
| Pork | Y | |
| Pork derivatives, stocks, extracts, offals, gelatin, fat, blood | Y | |

14. Diet Suitability:

The product is **SUITABLE** for the following diets:-

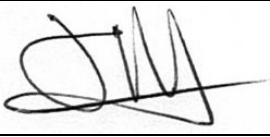
| | | | |
|-----------------|----------|---------------------------|-----------|
| Vegetarians | Y | Ovo - Lacto Vegetarians | Y |
| Vegans | N | Muslims / Halal certified | N* |
| Jewish / Kosher | Y | Diabetics | Y |
| Low Potassium | Y | Coeliacs | Y |
| Low Sodium | Y | Organic | N |

* suitable not certified

15. Warranty:

We warrant that all food products and packaging materials supplied by Kluman & Balter Ltd:

- Shall comply in all respects with this specification, shall be clean, sound, non-injurious to health and shall be fit for the purpose for which they are intended.
- Shall comply with all aspects with the Food Safety Act 1990, and with associated regulations, and with all other relevant United Kingdom and European Union legislation, regulations, standards and codes of practice. Packaging shall comply with legal requirements for Food Contact Materials.
- Shall be of the nature, substance and quality described and shall not be presented in such a way which may mislead the purchaser.
- Shall be stored, stacked, handled and transported under suitable conditions so as to maintain safety and quality at all times.
- Shall be fully traceable back to the place and time of manufacture, and to the ingredients used.
- This specification is based on manufacturer's information, and is believed to be correct. No liability is accepted for errors and omissions. It may be updated or altered from time to time as new information becomes available.
- Customers are advised to determine the suitability of products for their specific application, and to store and use products according to this specification. It will not normally be possible to provide a life extension on products once delivered to customers' premises.
- Customers must notify any damage or defects immediately on arrival.

| For and on behalf of Kluman & Balter: | | For and on behalf of: (customer) | |
|---------------------------------------|---|----------------------------------|--|
| Signature: |  | | |
| Print Name: | Thomas Morrell | | |
| Position: | Technical Assistant | | |
| Date: | 11/07/2018 | | |
| KB code & Product: | 150030 Dried Whey Powder | | |