

MANUFACTURING

ADAPTABILITY & PERFORMANCE



MANUFACTURING OVERVIEW

Spray Drying

Modified Box Dryer and Fluid Bed Dryers are constructed to produce creamers of a wide density range with the minimum amount of fine particles. Products are all Kosher approved.

- **Homogenization:** particles of fat are reduced in size to 2 microns for excellent creaming
- **Heat Treatment:** ingredients can be heated and held for a determined time and temperature to assure proper stability
- **Wet Mixing:**
 - Liquid corn syrup: stored and processed hot
 - Handling of bulk liquid vegetable oil
 - Conversion of casein to caseinate
- **Packaging:**
 - 2,000 lb. supersacks
 - 40-50 lb. bags per pallet (stretch wrapped)
 - 50 lb. multi-walled paper bags, heat-sealed
 - Metal detection

FILTERMAT[®] Spray Drying

The FILTERMAT spray dryer provides gentle, flexible and economical drying for a variety of ingredients, including hygroscopic or sticky food and dairy products, which are difficult to handle in other drying systems.

FILTERMAT Spray Drying is ideal for economical production of a free-flowing, agglomerated powder. Our extensive experience provides complete control over crucial aspects of the drying process, including:

- Final moisture content
- Final product structure

FILTERMAT[®] is a registered trademark of DEC International, Inc.

PROCESSING CAPABILITIES

FLEXIBLE & DIVERSE



PRODUCT EXPERTISE

- Concept Development:
 - Develop concepts using realistic costs for ingredients and processing, including the ability to test for commercial feasibility
- Nutraceutical Experience:
 - Infant formula bases, pharmaceuticals, medical foods, high fat products and other nutritional and functional ingredients
- Identity-preserved and non-GMO products
- Trans-fat free shortening blends
- Encap™ 850 volume producing dry cake mix emulsifier
- Complete mixes for frozen desserts
- Organic creamers
- Free-fat analysis for emulsion stability
- Viscosity measurements



PROCESSING CAPABILITIES

- Pilot Plant Testing
 - Small batches and trial production runs to help validate and launch new ideas and products
- Dry blending, sifting, sampling and testing to customers' specifications
- Drying blends of dairy and non-dairy ingredients to meet customers' specifications
- Manufacturing acid-stable products for low pH systems

MANUFACTURING (cont.)

EFFICIENCY & DIFFERENTIATION



MANUFACTURING OVERVIEW

Foam Drying

- Gas Injection
 - Injection of air into liquid dairy or non-dairy mixture before spray-drying
- Low Bulk Density
 - Very low bulk density of finished powder that contains trapped air for a large amount of foam release when added to coffee or hot chocolate

Dry Blending

- Tote tumbling for gentle blending of bulk materials
- Two ribbon blenders, 4,000 lbs. per blend
- Ingredient storage separate from finished product storage
- Dedicated facility
- Heat-sealed 50 lb. multi-walled paper bags
- Supersack handling capability up to 2,000 lbs.
- Metal detection

