

# Full Cream Milk

Instantized 28% avg. butterfat ADPI quality



Product Spec  
Version FCMP 09/01

## Description

LottèNidoo Instant Full Cream Milk Powder is made from the standardization, evaporation and spray drying fresh pasteurized whole milk originated from New Zealand.

## Product Characteristic

- Excellent Solubility
- Good flow properties
- Contains Lecithin
- Full fat content
- Rich Creamy Flavour



## Product Application

LottèNidoo Instant Full Cream Milk Powder is an ideal milk source for easy storage and convenient to blend into luke warm water in getting a good source of protein and necessary ingredients for body absorption. It may be used in beverages as coffee or tea whitener. And some apply for making of chocolate and confectionery that required of creamy taste.

## Packaging

LottèNidoo Instant Full Cream Milk Powder is filled in below consumer packing sizes.

Aluminum Tin (Food Grade Type)	Aluminum Sachet
<ul style="list-style-type: none"><li>• 400g /900g/1800g/2500g</li></ul>	<ul style="list-style-type: none"><li>• 20g</li></ul>
	<ul style="list-style-type: none"><li>• 400g/500g/900g (also in paper box)</li></ul>

## Storage And Shelf Life

LottèNidoo Instant Full Cream Milk Powder products are to be stored and transported in a dust and pest free environment in cool and dry conditions. Typically at temperatures below 25°C, relative humidity below 65% and in an odour free environment. The shelf life is recommended to be consumed within 36 months from manufacturing date for freshness. The expiry date is to be printed at the bottom of each tin or at the back of each sachet.

Code Printed : Production and Expiry Dates(MM/YYYY). And Batch Code is beginning with NZ followed by the receiving bulk number of the powdered milk.

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## Product Analysis

LottèNidoo Instant Full Cream Milk Powder which is sampled, prepared and tested in accordance with documented procedures shall have the following composition (The value output are typical as measured on an “as is” basis):

Ingredients: Fresh milk, Soya Lecithin, Vitamin A, Vitamin D3, Vitamin B1, Vitamin C, Iron, Zinc, Calcium and Folic Acid.

### Typical Composition Analysis

Protein (N x 6.38)	26.80
Moisture (g/100g)	2.7
Fat (g/100g)	28.03
Total Carbohydrate (g/100g)	36.30
Minerals (g/100g)	5.6

### Typical Chemical Analysis

Titratable Acidity (% m/v)	0.10
Inhibitory Substances (IU/ml)	Not Detected

### Typical Nutritional Analysis

Energy (kJ/100g)	2067
Calories (kcal/100g)	494
Lactose (g/100g)	37.8
Fibre (g/100g)	<1.0
Cholesterol (mg/100g)	69
Saturated fat (g/100g)	17.3
Vitamin A (IU/100g)	2100 I.U.
Vitamin D3 (IU/100g)	350 I.U.
Vitamin C (mg/100g)	8.0
Iron (mg/100g)	0.2
Sodium (mg/100g)	270
Calcium (mg/100g)	1150

### Typical Physical Properties

Bulk Density (g/ml)	0.49
Insolubility Index (ml)	<1.0
Colour	Pale Cream
Flavour	Creamy
Odour	Clean
Scorched Particles (/32.5g)	A

### Typical Microbiological Analysis

Aerobic Plate Count (cfu/g)	<10,000
Coliforms(/g)	Not Detected
Escherichia Coli (/g)	Not Detected
Yeast & Moulds (cfu/g)	<1
Coag + Staph aureus (/g)	Not Detected
Salmonella (/750g)	Not Detected

### Typical Environmental Analysis

Pesticides (screening)	
-organochlorine(mg/kg)	<0.002
-polychlorine (mg/kg)	-
-PCB (mg/kg)	<0.03
Heavy metals	
-arsenic(mg/kg)	<0.02
-lead(mg/kg)	<0.05
-cadmium(mg/kg)	<0.002
-mercury(mg/kg)	<0.01
Radioactivity	
-caesium 137(Bq/kg)	<5
-caesium 134(bq/kg)	<5
Antibiotics	neg. Delvo



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## Quality Assurance

Strict quality control procedures are enforced during manufacture. The manufacturing processes include of powdered sourcing in which uniquely New Zealand origin, filling and handling environment is also subject to regular monitoring and control.

Final product is sampled and tested for chemical, sensory and microbial parameters using internationally recognized procedures. A third party certification of SGS Sanitary and FDA analysis is mandatory and imposed in any of the finishing products.

During storage and shipment, precautions are taken to ensure that product quality is maintained. Each package is identified via laser printed batch code to enable trace back.

## Compliance

ISO 9001-2000.

SGS SANITARY AND FDA.

MALAYSIA MINISTRY OF AGRICULTURE (VETERINARY DIVISION).

NZ FOOD SAFETY AUTHORITY (COUNTRY OF ORIGIN).

HALAL.

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## **HEAT TREAT - INSTANISED FULL CREAM MILK POWDER (HEREIN “WMP”)**

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### **PREHEATING**

The conventional process for the production of milk powders starts with taking the raw milk received at the dairy factory and pasteurising and separating it into skim milk and cream using a centrifugal cream separator. The next step in the process is "preheating" during which the standardised milk is heated to temperatures between 75 and 120\_C and held for 15 seconds. Preheating causes a controlled denaturation of the whey proteins in the milk and it destroys bacteria, inactivates enzymes, generates natural antioxidants and imparts heat stability. High preheats in WMP are associated with improved keeping quality but reduced solubility.

### **EVAPORATION**

In the evaporator the preheated milk is concentrated in stages or "effects" from around for 13% total solids content for whole milk. This is achieved by boiling the milk under a vacuum at temperatures below 72\_C in a falling film on the inside of vertical tubes, and removing the water as vapour. This vapour, which may be thermally compressed, is then used to heat the milk in the next effect of the evaporator which may be operated at a lower pressure and temperature than the preceding effect. Modern plants may have up to seven effects for maximum energy efficiency. More than 85% of the water in the milk may be removed in the evaporator.

### **SPRAY DRYING**

Spray drying involves atomising the milk concentrate from the evaporator into fine droplets. This is done inside a large drying chamber in a flow of hot air (up to 200\_C) using either a series of high pressure nozzles. The milk droplets are cooled by evaporation and they never reach the temperature of the air. The concentrate may be heated prior to atomisation to reduce its viscosity and to increase the energy available for drying. Much of the remaining water is evaporated in the drying chamber, leaving a fine powder of around 6% moisture content with a mean particle size typically of < 0.1 mm diameter. Final or "secondary" drying takes place in a fluid bed, or in a series of such beds, in which hot air is blown through a layer of fluidized powder removing water to give product with a moisture content of 2-4%. Precautions must be taken to prevent fires and to vent dust explosions should they occur in the drying chamber or elsewhere.

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## PACKAGING AND STORAGE

Milk powders are immensely more stable than fresh milk but protection from moisture, oxygen, light and heat is needed in order to maintain their quality and shelf life. Milk powders readily take up moisture from the air, leading to a rapid loss of quality and caking or lumping. The fat in WMPs can react with oxygen in the air to give off-flavours, especially at higher storage temperatures (> 30\_C) typical of the tropics. WMPs are often packed under inert gas to protect the product from oxidation and to maintain their flavour and extend their keeping quality. Packaging is chosen to provide a barrier to moisture, oxygen and light. Shipments of milk powder should never suffer prolonged exposure to direct sunshine especially in tropical countries. A few hours at elevated temperatures (> 40\_C) during transshipment can negate many weeks of careful storage. It is suggested that all finishing products to maintain at < 25\_C favorably at all time in retaining the freshness.

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NO DESCRIPTION AFTER THIS LINE

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