

C. High Heat**DairyAmerica, Inc**

11/25/2011

Extra Grade High Heat Dried Nonfat Milk

Extra Grade High Heat NFDM is an Extra Grade Spray Dried Nonfat Milk Powder which has been subjected to a High Heat treatment. It contains the lactose, milk proteins and milk minerals in the same relative proportions as they occur in fresh milk. The product is made from fresh, pasteurized nonfat milk to which no preservative, alkali, neutralizing agent or other chemical has been added. Because of its high absorption qualities, DairyAmerica's Extra Grade High Heat NFDM is especially suited for baked goods, dry mixes, and process meat.

Further information regarding grade standards and methods of analysis are available from the American Dairy Products Institute (ADPI).

TYPICAL ANALYSIS

Protein (Nx6.38)%	33.0% ± 2
Lactose	51.0%
Fat	1.25% Maximum
Moisture	4.0% Maximum
Ash	8.2% Maximum
WPN	1.50mg/g or less
Titratable Acidity	0.15% Maximum
Antibiotic Residues	Negative

MICROBIOLOGICAL STANDARDS

Standard Plate Count	10,000/g Maximum
Coliform	<10/gm
Salmonella	Negative

PHYSICAL PROPERTIES

Scorched Particles	Disc B (15.0mg), Maximum
Solubility Index	1.2 ml, Maximum
Color	Light cream to white
Flavor	Clean, cooked flavor
Odor	Fresh, no off odor

Storage and Shipping

Product should be stored in a dry, cool, clean warehouse free of odors with a temperature below 80 degrees F and relative humidity below 65%. Stored under these conditions, it is recommended that the product be consumed in less than eighteen months to assure fresh tasting product.

Packaging

Multiwall kraft bags with polyethylene inner liner or other approved closed container, i.e., "tote bags", etc.

Nutrient Information

The nutrients found in 100 grams of products are as follows:

Protein (Nx6.38)	34 g
Lactose	51 g



Gustave Wüst
 Sales Manager
 Hoogwegt U.S., Inc.

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Fat	0.8 g
Water	4.0g Maximum
Ash	8.0 g
Calories	359 K cal
MINERALS	
Calcium	1248 mg
Iron	0.4 mg
Magnesium	110 mg
Phosphorus	993mg
Potassium	1674 mg
Sodium	494 mg
Zinc	4.08 mg
LIPIDS: FATTY ACIDS	
Saturated, total	0.50 g
Monounsaturated, total	0.20 g
Polyunsaturated, total	0.03 g
Cholesterol	25mg
Calories from Fat	6.5 K cal
VITAMINS	
Vitamin C	8.0 mg
Thiamine	0.415 mg
Riboflavin	1.8 mg
Niacin	0.951mg
Pantothenic Acid	3.568 mg
Vitamin B6	0.361 mg
Folacin	50 mcg
Vitamin A	30 IU
	6.7 RE

Amino Acid Composition of Protein

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Extra Grade	HIGH HEAT
Spray Dried Nonfat Dry Milk ~ Formula 205	
Prepared by: Tom Honse	Approved by: Tom Honse
Revised: 06/15/2010	Supersedes: 04/15/2008

Regulations/General:

This product conforms to the USDA Standards in 7CFR §58.248, the Standards of Identity in 21CFR§131.125, and complies with FDA's Good Manufacturing Practices in 21CFR§110. Prior to receipt, the raw milk used to produce this product is screened for antibiotic residues per the approved methods mandated by the Federal Pasteurized Milk Ordinance (PMO). The product is legally pasteurized through a state-sealed HTST unit at a minimum 161°F (72°C)/15 sec. as part of the production process.

Description:

This product is a food-grade powder resulting from the removal of only water from pasteurized skim milk. It shall be white to light cream in color, free-flowing and free of lumps that do not break up under slight pressure. It shall be practically free of dark particles. Flavor shall be sweet, pleasing, but slight chalky, cooked, feed or flat flavors are permissible.

Chemical/Physical & Microbiological:

CHEMICAL/PHYSICAL	TYPICAL*	SPECIFICATIONS
*%Moisture ^{15.111} (vacuum)	3.0	≤ 4
*%Butterfat ^{15.086} (ether extraction)	0.7	≤ 1.25
*%Titratable Acidity ^{15.021} (10% solution as lactic acid)	0.13	≤ 0.15
*Scorched Particles ^{15.172}	Disk A 7.5mg	Disk B ≤ 15mg
*Protein ^{15.132} (Kjeldahl x 6.38)	35.0	34 min
*Ash ^{15.041}	6.3	≤ 8.0
*Solubility Index ^{15.171}	0.10 ml	≤ 2.0 ml
*Whey Protein Nitrogen (WPN) ^{1-D.1.v.}	0.70 mg/g	≤ 1.5 mg/g
*pH ^{15.022} (10% solids basis)	6.4 – 6.8	≥ 6.4 min.
%Granulation (10g; mechanical shaker, 10 minutes, med setting)	98 thru USS#40	

MICROBIOLOGICAL	TYPICAL**	SPECIFICATIONS
*Bacterial estimates (SPC) ^{6.020}	< 10 cfu/g	≤ 10,000 cfu/g
*Coliform ^{7.020 & 7.070}	< 10 cfu/g	< 10 cfu/g
*Yeast/Mold ^{8.115}	< 10 cfu/g	< 50 cfu/g
*Coag.+ Staph ^{5.050} (1x/shift individual plates)	Negative (to test)	
*Salmonella ^{5.020 & 15.035} (2x375g composite)	Negative (to test)	

Methods of Analysis

As mandated by PMO – APHA *Standard Methods for the Examination of Dairy Products* – 17th Ed.

ADDITIONAL REFERENCES: 1) USDA DA Instruction-918-RL, Laboratory Methods and Procedures
2) ADPI *Publication-Standards for Grades of Dry Milks, including Methods of Analysis* (Bulletin 916)

*Typical Analysis. Not all tests performed on each sub lot. *Added tests can be done at additional customer cost*

Shelf Life/Packaging/Coding:

Shelf life – 1 year when shipped and stored at ambient temperatures less than 90° F.
Packaged in 25kg bags x 40/pallet and 2000# totes.

Coding information printed/stamped on package with product name, state plant number

CODE: 4-digit AMPI ID number, 1YYDAY (Julian date) and sub lot letters/number.

Example: 6000110200FR09 6000 = Freeman-110 = 2010-200 for Jul 19-sublot FR 09
1 subplot = 2 pallets or 1 tote

Kosher: Yes – O-U_D

Allergens: milk

AMPI Product Codes: 205-7055 = HH NFDM 25kg bags; 207-7600=Super HH totes

COUNTRY OF ORIGIN:

AMPI is a major Midwestern American Dairy Cooperative that uses only domestic milk in the manufacturing of our dairy products.

FOREIGN MATERIAL PROTECTION:

All AMPI dairy powders pass over a set of in-line rare-earth magnets followed by a sieving procedure that utilizes a 40 mesh screen immediately prior to the final packaging step.

Ingredients:

Pasteurized Nonfat Dry Milk

NUTRIENTS	UNITS	/100g
Water	g	3.16
Energy	Kcal	362
Protein	g	36.16
Total Lipid (fat)	g	0.77
Trans Fatty Acids	g	0.02
Ash	g	7.93
Carbohydrate (by difference)	g	51.98
Fiber, total dietary	g	0
Sugars (total)	g	51.98
Lactose	g	51.98
MINERALS		
Calcium – Ca	mg	1257
Iron – Fe	mg	0.32
Magnesium – MG	mg	110
Phosphorus – P	mg	968
Potassium – K	mg	1794
Sodium – Na	mg	535
Zinc – Zn	mg	4.08
VITAMINS		
Vitamin C – ascorbic acid	mg	6.8
Thiamin	mg	0.42
Riboflavin	mg	1.55
Niacin	mg	0.95
Pantothenic acid	mg	3.57
Vitamin B-6	mg	0.36
Folate – total	mcg	50
Folic Acid	mcg	0
Vitamin B-12	mcg	4.03
Vitamin A	IU	22
Vitamin E (alpha-tocopherol)	mg	0.02
Vitamin D	IU	332
Vitamin K (phyloquinone)	mcg	0.1
Lipids		
Fatty Acids – total saturated	g	0.499
Fatty Acids – tot.monounsatur.	g	0.201
Fatty Acids – tot. polyunsatur.	g	0.030
Cholesterol	mg	20

Source: USDA:ARS Release 19 2006

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Hoogwegt U.S., Inc.

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STANDARDS: GRADE A NON FAT DRY MILK

Composition

High Desert's non-fat milk will be made from fresh raw milk that will be antibiotic free and pasteurized during the manufacturing.

General Requirements

Color	White to light cream
Flavor	Free from objectionable flavors
Scorched	7.5 mg (Maximum)
Burned Particles	Free from them
Extraneous Matter	None

Analytical and Chemical Testing

Moisture	4.0%(Maximum)
Acidity, as lactic	0.15%(Maximum)
Fat	1.25% (Maximum)
Solubility Index	1.25ml (Maximum)
Phosphatase	20µg/ml(Maximum)
Antibiotics	Not Found
<u>Low Heat</u> Whey Protein N	6.0 mg (Minimum) of undenatured WPN/g
<u>Med Heat</u> Whey Protein N	1.6 - 5.9 mg (Minimum) of undenatured WPN/g
<u>High Heat</u> Whey Protein N	1.5 mg (Minimum) of undenatured WPN/g

Bacteriological Requirements

Standard Plate Count	10,000/g (Maximum)
Yeast & Mold	50/g (Maximum)
Coliforms	10/g (Maximum)
E Coli	Negative/10 gm
Staph aureus (coag. Positive)	Negative/10 gm
Salmonella	Negative/750g




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