



# PRODUCT SPECIFICATION

## Skim Milk Powder (SMP) High Heat – Heat Stable

Valley Milk, LLC Skim Milk Powder (SMP) High Heat-Heat Stable is made through the spray drying fresh skimmed, pasteurized cow's milk. All milk that is processed in our facility is collected from our dedicated multigenerational, family owned dairy farms. All milk originates from the United States in California's San Joaquin Valley. SMP High Heat-Heat Stable has a shelf life of two years from the production date.

### Properties and Applications

Valley Milk Skimmed Milk Powder is clean tasting with an overall bland flavour, white to light cream color, free flowing capabilities with excellent solubility. Suggested applications include evaporated milk production, canned milk products, recombined milk (when used with anhydrous milk fat, unsalted butter, or frozen milk fat). Skimmed Milk Powder is not adapted to be used for infant feeding.

### Composition

Made from fresh skimmed bovine milk, standardized with lactose.

## PHYSICAL

	MINIMUM	MAXIMUM	UNITS	METHODS
<b>Protein</b>	32.40		%m/m	AOAC 991.20
<b>Milk Protein in milk Solids Non-Fat</b>	34.0	-	%m/m	AOAC 991.20
<b>Casein Protein</b>	27.0	-	%m/m	AOAC
<b>Moisture</b>	-	4.0	%m/m	AOAC 927.05
<b>Fat</b>	-	1.25	%m/m	AOAC 989.05
<b>Titrateable acidity</b>	-	0.15	%m/v	ADPI/Std. M. 17 <sup>th</sup> ed.
<b>Lactose</b>	-	58.3	%m/v	AOAC 945.22
<b>Ash</b>	-	8.6	%m/V	AOAC 945.46
<b>WPNI</b>	-	1.5	mg/g	ADPI/Std. M. 17 <sup>th</sup> ed.
<b>pH</b>	6.5	7.2	Mol/L	ADPI/Std. M. 17 <sup>th</sup> ed.
<b>Solubility Index</b>	-	1.25	mL	ADPI/Std. M. 17 <sup>th</sup> ed.
<b>Foreign matter</b>	-	Not Detected	/25g	
<b>Scorched particles</b>	-	7.5	mg/25g	ADPI BUL. 916
<b>Evaporated Milk Heat Stability</b>		>25 Min		

## CHEMICAL

	MINIMUM	MAXIMUM	UNITS	METHODS
<b>Antibiotics</b>	-	Negative	Charm S/L	Charm SL3
<b>Aflatoxin M1</b>	-	<0.50	µg/L	Charm

## MICROBIOLOGICAL

	MINIMUM	MAXIMUM	UNITS	METHODS
<b>Aerobic Plate Count</b>	-	<10,000	cfu/g	AOAC 990.12
<b>Yeast &amp; Mold</b>	-	<50	cfu/g	BAM Ch 18
<b>Coliforms</b>	-	<10	cfu/g	AOAC 991.14
<b>Escherichia coli</b>	-	<3	MPN/g	BAM Ch 4
<b>Coagulase-Positive Staphylococci</b>	-	<10	cfu/g	AOAC 2003.08
<b>Salmonella</b>	-	Absent	/375g	AOAC-RI 121501
<b>Listeria</b>	-	Negative	/25g	AOAC-RI 061702

## Product Release Process

Representative samples are collected during packaging and tested according to the parameters listed above. Testing information will be made available with a certificate of analysis once all testing is completed and passes all requirements on physical, chemical, sensory, and microbiological specifications. Testing methods adhere to standards recognized in the US and around the world and include AOAC, ADPI, BAM methods of analysis. Retention samples are held at Valley Milk for a period of 2 years or in alignment with prescribed product shelf life.

## SENSORY

<b>Flavor</b>	Free from objectionable flavors
<b>Appearance</b>	No notable defect in color or particle
<b>Color</b>	White to light cream



## NUTRITIONAL DATA

### TYPICAL

Calories Calculated	358 kcal/100g
Total Calories from Fat	5 kcal/100g
Total Saturated Fatty Acids	0.30%
Cholesterol	25.6 mg/100g
Carbohydrate	54.32%
Potassium	1.49%
Sodium	0.367%
Lactose	48.5%
Dietary Fiber	1.4%
Ash	6.97%
Iron	<0.0002%
Total Vitamin D2 and D3	<4 IU/100g
Vitamin D2	<4 IU/100g
Vitamin D3	<4 IU/100g
Calcium	1.11%

## CONTAMINATE – MONITORING (ANNUAL BASIS)

	MINIMUM	MAXIMUM	UNITS	METHODS
Arsenic	-	<0.10	mg/kg	
Cadmium	-	<0.05	mg/kg	
Lead	-	<0.05	mg/kg	
Mercury	-	<0.05	mg/kg	
Nitrate (NO3)	-	50	mg/kg	
Nitrite (No2)	-	5	mg/kg	
Melamine		<0.5	mg/kg	

## Legal References

Valley Milk Skim Milk Powder is defined as a food ingredient that is fit for human consumption or for production of food for human consumption. The product meets standards identified by the WHO Codex Alimentarius, USDA, FDA, and the EU.

## Documents / Certificates Available

Valley Milk can provide the following certificates upon request: Kosher, Halal, Health, Origin, Free Sales, Veterinary.

## GMO Policy

Valley Milk Skim Milk Powder is considered as non-GMO according to the USDA Agriculture and marketing service 7 CFR 66.5 and EU regulation (EC) 1829/2003.



### PACKAGING

Product may be packaged in either heat sealed poly-lined multiwall kraft paper bags or packaged into poly lined totes without the use of staples or metal fasters.



### STORAGE AND HANDLING

It is recommended that product is stored at 80°F or less, with relative humidity of 65% or less, and in an odor-free environment. Stocks should be used in rotation preferably within 24 months of manufacture or as dictated by the expiration date labeled on the product.