

SKIM MILK (7352)

Intended Use

Skim Milk is dehydrated skim milk for use in preparing microbiological culture media.

Product Summary and Explanation

Skim Milk is soluble, spray-dried skim milk. When prepared in a 10% solution, it is equivalent to fresh skim milk. Skim Milk is added to enhance growth of *Mycobacterium tuberculosis* and *Corynebacterium diphtheria* in culture media. Skim Milk is used for differentiating organisms based on coagulation and proteolysis of casein in foods¹ and dairy products.² Indicators of pH, Litmus and Bromcresol Purple, are used with Skim Milk to determine acid production. Methylene Blue and Resazurin may be used with Skim Milk as oxidation-reduction indicators.

Principles of the Procedure

Skim Milk is a source of lactose and casein in prepared culture media.

Precaution

1. For Laboratory Use.

Chemical Characteristics Specification

<u>Specification</u>	<u>Expected Results</u>
Butterfat	≤ 1.5%
Moisture	≤ 4.5%
Scorched Particles	Maximum Disc B (15 mg)

Microbial Load

Standard Plate Count	≤ 30,000 cfu/g
Coliform	≤ 10 cfu/g
<i>Salmonella</i>	Negative

Quality Control Specifications

Expected Cultural Response: Litmus Milk was prepared with a test lot of Skim Milk, and inoculated with the test organisms listed below. Cultures were incubated aerobically at 35 ± 2°C and examined for growth after 2 – 7 days incubation.

Microorganism	Approx. Inoculum (CFU)	Growth	Reactions
<i>Bacillus subtilis</i> ATCC® 9372	10 - 300	Growth	Digested curd
<i>Clostridium perfringens</i> ATCC® 13124	10 - 300	Growth	Stormy fermentation, acid
<i>Escherichia coli</i> ATCC® 25922	10 - 300	Growth	Solid curd, acid
<i>Salmonella typhi</i> ATCC® 19430	10 - 300	Growth	Reduction

The organisms listed are the minimum that should be used for quality control testing.

Test Procedure

Refer to appropriate references for specific procedures using Skim Milk.

Results

Refer to appropriate references for test results.

Storage

Store sealed bottle containing Skim Milk at 2 - 30°C. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light by keeping container tightly closed.

Expiration

Refer to expiration date stamped on the container. Skim Milk should be discarded if not free flowing, or if appearance has changed from the original color. Expiry applies to Skim Milk in its intact container when stored as directed.

Limitation of the Procedure

Skim Milk supports the growth of many microorganisms. Perform microscopic examination and other biochemical tests to identify isolates to the genus and species level.

Packaging

Skim Milk	Code No.	7352A	500 g
		7352B	2 kg
		7352C	10 kg

References

1. **Lee, J. S., and A. A. Kraft.** 1992. Proteolytic microorganisms, p. 193-198. *In* Vanderzant, C. and D. F. Splittstoesser (eds.). Compendium of methods for the microbiological examination of foods, 3rd ed. American Public Health Association, Washington, D.C.
2. **Frank, J. F., G. L. Christen, and L. B. Bullerman.** 1993. Tests for groups of microorganisms, p. 271-286. *In* Marshall, R. T. (ed.). Standard methods for the microbiological examination of dairy products, 16th ed. American Public Health Association, Washington, D.C.

Technical Information

Contact Acumedia Manufacturers, Inc. for Technical Service or questions involving dehydrated culture media preparation or performance at (517)372-9200 or fax us at (517)372-2006.