

GELATIN (7202)

Intended Use

Gelatin is a protein source and solidifying agent for use in preparing microbiological culture media.

Product Summary and Explanation

Gelatin is a protein of uniform molecular constitution derived chiefly by the hydrolysis of collagen.¹ Collagens are a class of albuminoids found abundantly in bones, skin, tendons, cartilage and similar animal tissues.¹ Koch introduced Gelatin into bacteriology when he invented the gelatin tube method in 1875 and the plate method in 1881. This innovation, a solid culture method, became the foundation for investigating bacterial growth.¹ Gelatin-based media were soon replaced by media containing agar as the solidifying agent.

Gelatin is used in culture media for determining gelatinolysis (elaboration of gelatinases) by bacteria. Several media containing Gelatin are specified in standard methods for multiple applications.^{2,3}

Principles of the Procedure

The melting point of a 12% concentration of gelatin is between 28 and 30°C, allowing it to be used as a solidifying agent. Certain microorganisms elaborate gelatinolytic enzymes (gelatinases) which hydrolyze gelatin, causing liquefaction of a solidified medium. Gelatin is also used as a nitrogen and amino acid source.

Precaution

1. For Laboratory Use.

Quality Control Specifications

Dehydrated Appearance: Powder is granular, homogeneous, free-flowing and light beige.

Prepared Appearance (2% wt/vol): Prepared medium is light amber, clear to slightly opalescent, with no or a light precipitate.

pH (2% Solution at 25°C): 4.5 - 5.5

Expected Cultural Response: Cultural response in Nutrient Gelatin after incubation at 35°C for up to 7 days.

Microorganism	Gelatinase Reaction
<i>Staphylococcus aureus</i> ATCC 25923	positive
<i>Staphylococcus epidermidis</i> ATCC 12228	negative

Test Procedure

Refer to appropriate references for specific procedures using Gelatin.

Results

Refer to appropriate references for test results.

Storage

Store sealed container of Gelatin 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 container. Gelatin should be discarded if not free flowing, or if the appearance has changed from the original color. Expiry applies to Gelatin in its intact container when stored as directed.

Packaging
Gelatin

Code No.	7202A	500 g
	7202B	2 kg
	7202C	10 kg

References

1. **Gershenfeld, L., and L. F. Tice.** 1941. Gelatin for bacteriological use. J. Bacteriol. **41**:645-652.
2. **U.S. Food and Drug Administration.** 1995. Bacteriological analytical manual, 8th ed., AOAC International, Gaithersburg, MD
3. **Eaton, A. D., L. S. Clesceri, and A. E. Greenberg (eds.).** 1995. Standard methods for the examination of water and wastewater, 19th 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 (410)780-5120 or fax us at (410)780-5470.