



Technical Data Sheet

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Agar Agar (Plant Tissue Culture Grade)

RDM-AA-02

Principle

Agar is a Phycocolloid extracted from the red-purple marine algal group (class Rhodophyceae) including *Geledium*, *Pterocladia* and *Gracilaria*. The property of agar makes it suitable ingredients in media formulation. Agar is not utilized or hydrolyzed by the microorganisms for basic metabolisms, and it remained the firm at the incubation temperatures of bacteria (below 40°C). The formed gel is clear enough to visualize minute contamination and pigmentation formed due to microorganism and since used in plant tissue culture media. Agar obtained from marine algae has desirable features such as melting point of 80°C and gelling at 42 °C is best to use as the solidifying agent.

Use: Recommended to use as a gelling agent in solid medium.

Quality Control

Appearance	Off white colored homogeneous free flowing powder
Solubility	Soluble above $\geq 80^{\circ}\text{C}$, insoluble in cold water
Clarity	Clear to slight opalescent gel above 1.2 % concentration
Dye diffusion	18- 20 mm (at 1.5 %)
Reaction of 2%	6.50 – 7.50 at 25°C
Identification test	Reddish to black colored when treated with iodine solution
Gelling Temperature	38-42°C
Melting range (2%)	85°C
Water	$\leq 15\%$
Total ash	$\leq 6.5\%$
Test for Water absorption	≤ 30 ml of water is absorbed by 2 g of agar
Test for Starch	No Formation of blue color on addition of iodine

Storage and Shelf Life: The product is highly hygroscopic; keep the container tightly closed at all times and store it properly as per the conditions mentioned on the label. The declared expiry is valid only when stored as per the conditions mentioned on the label.

Note: Sterilize media immediately after reconstitution.

Disposal: To avoid the contamination or propagation of any hazardous microbes used, unusable or modified preparation of this product must be disposed after autoclaving or incineration after completion of task.

Reference

1. Dodds, J. H., & Roberts, L. W. (1985). *Experiments in plant tissue culture*. International Potato Center.
2. Trigiano, Robert N., and Dennis J. Gray, eds. *Plant tissue culture, development and biotechnology*. CRC Press, 2011.

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