

Agar Structure

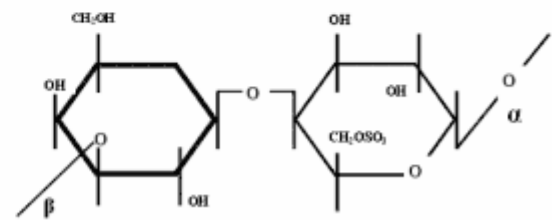
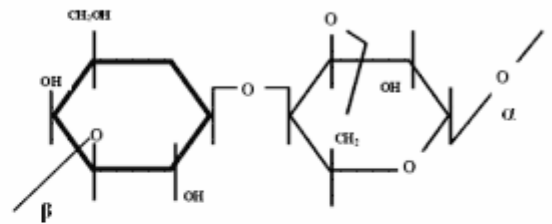
Agar is the hydrophilic colloidal substance extracted from Agarophyte Gelidium, Gracilaria, and related red algae.

The red-purple seaweeds from which agar is obtained grow in nearly all seas of the world.

Commercial agar has been shown to contain, in addition to insoluble debris, proteinaceous material and soluble and insoluble salts, two major separable polysaccharides:

Agarose, is a strongly gelling, non-ionic polysaccharide which is regarded as consisting of 1,3- linked β -D-galactopyranose and 1,4-linked 3,6-anhydro- α -L-galactopyranose units.

Agaropectin, is a less clearly defined, more complex polysaccharide having sulfate groups attached to it.



Agar properties

1. Agar agar is a versatile hydrocolloid completely soluble in boiling water.
2. Special Agar agar powders can be dissolved at lower temperatures.
3. Agar agar provides odourless, colourless superior quality gels even at very low concentrations.
4. Agar agar has good synergies with sugars and with different hydrocolloids.
5. Agar agar is the strongest natural jelling agent.
6. Agar agar provides a thermoreversible gel.
7. Agar agar solutions gel at temperatures from 35 to 43 °C and melt at temperatures from 85 to 95 °C.
8. Agar agar is the only hydrocolloid that gives gels that can stand sterilization temperatures.