



Agarose

For separating and visualizing DNA and RNA fragments

Agarose is a polysaccharide derived from seaweed and is commonly used in molecular biology labs for making agarose gels. Agarose consists of a chain of β -D-galactopyranosyl units that are linked via (1,3) bonds, as well as (1,4) bonds to 3,6-anhydro- α -D-galactopyranosyl units. The double helical structure formed by the interaction of these chains enables agarose to create a gel matrix. The helical structure creates a porous network of agarose chains that can trap water molecules and solutes, forming a gel when the agarose solution cools and solidifies.

Agarose gels are used to separate and visualize DNA (and RNA) fragments of different sizes, typically produced by PCR, restriction enzyme digestion or RNA/DNA extraction product. Agarose is favored for this application because it forms a stable gel matrix when dissolved in buffer and heated, which allows for separation of DNA fragments by sizes as they migrate through the gel under electrical field. The percentage of agarose used in the gel determines the pore size, and thus, the size of DNA fragments that can be resolved. Agarose gels with higher concentrations resulting in smaller pores and lower concentrations resulting in larger pores.

Cat. Number	ASC-1020
CAS Number	9012-36-6
MDL Number	MFCD00081294
Molecular Weight	Depending on number of repeating units in the chain.
Molecular Formula	Depending on number of repeating units in the chain.
Storage Temperature	+20 °C
Form and Color	Powder / White to off-white
Electroendosmosis (EEO)	≤ 0.15
Gel Strength (1% Gel)	≥ 1200
Gelling Temperature (1.5%)	35 -37 °C
Melting Point (1.5%)	87 – 89 °C
Sulphate (W/%)	≤ 0.15
Sulphated Ash	≤ 0.5
Water Content	$\leq 10\%$
DNase	Negative
RNase	Negative



Protease	Negative
Endonuclease / ligase inhibitory factor	Negative
Synonym	Sepharose / 3,6-Anhydro- α -L-galacto-b-D-galactan