

AXIS-SHIELD DENSITY GRADIENT MEDIA

Polysucrose™ 400

Product description

Polysucrose™ 400 is a synthetic high molecular weight polymer made by the copolymerization of sucrose and epichlorohydrin. The molecules have a branched structure with a high content of hydroxyl groups giving a good solubility in aqueous solutions. The product is similar to Ficoll® 400 from GE Healthcare.

The reactivity and stability of Polysucrose™ 400 are determined by its hydroxyl groups and the glycosidic bonds in the sucrose residues. Polysucrose™ is stable in alkaline and neutral solutions. At pH values lower than 3, it is rapidly hydrolyzed, especially at elevated temperatures. In neutral solutions, Polysucrose™ 400 can be sterilized by autoclaving at 110°C for 30 minutes without any degradation.

Polysucrose™ 400 is readily soluble in aqueous solutions when added slowly to the liquid with constant stirring. Concentrations up to 50% (w/v) can easily be obtained.

Applications

Using sodium metrizoate and a polysaccharide Bøyum (1968) developed a one-step centrifugal technique for isolation of lymphocytes (Lymphoprep™). In this method the polysaccharide aggregates the erythrocytes, thereby increasing their sedimentation rate. Polysucrose™ 400 has also been used as a density gradient medium for the purification of other cells and in membrane fractionation.

Non-ionic high molecular weight solutes such as polysucrose are required for a number of other research scenarios. Polysucrose™ 400 may be used as a stabilizing agent in protein solutions and it can function as an immuno-logically inert carrier for low molecular weight haptens in immunological studies. Polysucrose™ 400 is also used to reduce non-specific binding of labelled probes to nitrocellulose membranes during nucleic acid hybridization. It also simplifies the loading of nucleic acids into the sample wells of agarose gels for electrophoresis.

Ficoll is a trademark of GE Healthcare companies

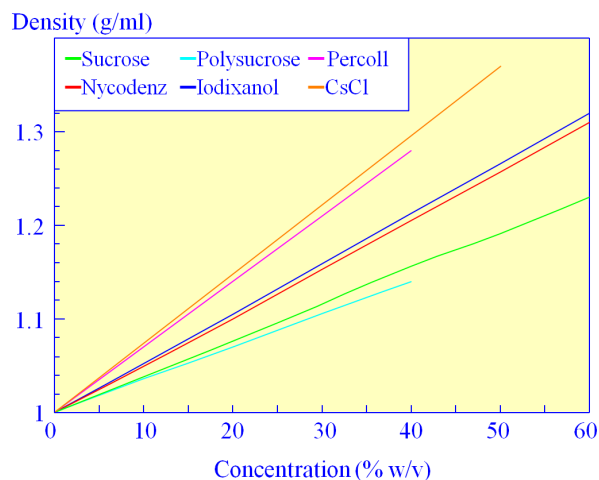
Technical data

Specific optical rotation (α) _{D,20}	53 – 59°
Intrinsic viscosity (20° C)	0.14 – 0.20
Average molecular weight (Mw)	450,000 ± 100,000
Mw distribution by GPC	conforms to standard
Loss on drying (%)	<5.0%
pH (10% w/v aqueous solution)	7.0 – 9.0
Sulphated ash	<0.3%
Content of chloride (ppm)	<500 ppm
Microbiological contamination	<100 CFU/g <10 yeasts and mould/g

Availability

Polysucrose™ 400 is available in the following package sizes:

Prod.no. 1006031	1x 5kg
Prod. no. 1017120	1x25kg



Concentration vs. Density for some density solutions.

Web:

www.axis-shield-density-gradient-media.com

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