

# 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*

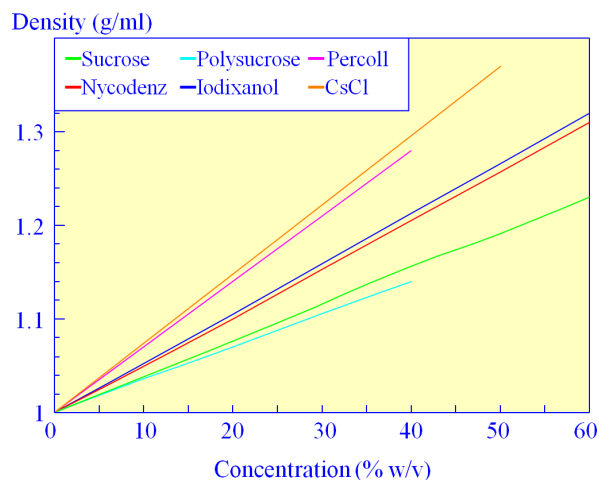
### Technical data

Specific optical rotation ( $\alpha$ ) <sub>D,20</sub>	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. 1026582	1x500g
Prod. no. 1006031	1x 5kg
Prod. no. 1017120	1x25kg



Concentration vs. Density for some density solutions.

**Web:**

[www.axis-shield-density-gradient-media.com](http://www.axis-shield-density-gradient-media.com)

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