Arabinogalactan from larch wood for density gradient separations

Catalog Number A6606
Store at Room Temperature

CAS RN 9036-66-2
Synonym: Polyarabinogalactan

Product Description
In the early seventies a crude form of arabinogalactan was purified for use in density gradient separation of red blood cells. Many researchers have since found arabinogalactan to be an appropriate medium for use in cell separations.

This product is a highly purified arabinogalactan prepared specifically for use in density gradient separations of cells, viruses, and organelles. Arabinogalactan is nontoxic, completely compatible with biological materials, readily soluble in water, and can be sterilized by filtration or autoclaving. Arabinogalactan solutions have low viscosities. They are not sensitive to changes in pH or dissolved salts, and are readily adjusted to the desired osmolality.

Precautions and Disclaimer
This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions
General Density Gradient Solution [28.5% (w/v) Arabinogalactan (Catalog Number A6606) solution in water] - Heat as needed to dissolve and cool to room temperature. Bring to final volume with water.
Density: 1.120±0.002 g/ml

General Density Gradient Diluent - May also be used as diluent for solution for platelet or lymphocyte separation.

KCl (Catalog Number P4504) 28 g/L
Na₂HPO₄ (Catalog Number S0876) 1.22 g/L
KH₂PO₄ (Catalog Number P5379) 0.22 g/L
D(+)-Glucose (Catalog Number G8270) 2.00 g/L

Heat as needed to dissolve and cool to room temperature. If necessary, adjust the pH to 7.3-7.5 prior to bringing to final volume with water.
Density: 1.040±0.002 g/ml
Osmolality: 295±5 mOsm/kg

Isotonic Arabinogalactan Solution -
NaCl (Catalog Number S9625) 5.50 g/L
Na₂HPO₄ (Catalog Number S0876) 1.22 g/L
KH₂PO₄ (Catalog Number P5379) 0.22 g/L
Arabinogalactan (Catalog Number A6606) 29.5%

Heat as needed to dissolve and cool to room temperature. Bring to final volume with water.
Density: 1.120±0.002 g/ml
Osmolality: 295±5 mOsm/kg

Isotonic Arabinogalactan Solution Diluent -
NaCl (Catalog Number S9625) 8.1 g/L
Na₂HPO₄ (Catalog Number S0876) 1.22 g/L
KH₂PO₄ (Catalog Number P5379) 0.22 g/L
D(+)-Glucose (Catalog Number G8270) 2.00 g/L

Heat as needed to dissolve and cool to room temperature. If necessary, adjust the pH to 7.3-7.5 prior to bringing to final volume with water.
Density: 1.040±0.002 g/ml

Solution for Platelet Separation -
NaCl (Catalog Number S9625) 4.9 g/L
Na₂HPO₄ (Catalog Number S0876) 1.20 g/L
KH₂PO₄ (Catalog Number P5379) 0.20 g/L
Sodium citrate tribasic dihydrate (Catalog Number C7254) 4.00 g/L
D(+)-Glucose (Catalog Number G8270) 2.00 g/L
Arabinogalactan (Catalog Number A6606) 20.0%

Heat as needed to dissolve and cool to room temperature. If necessary, adjust the pH to 7.3-7.5 prior to bringing to final volume with water.
Density: 1.082±0.001 g/ml
Osmolality: 290±5 mOsm/kg
Solution for Lymphocyte Separation -

- NaCl (Catalog Number S9625) 6.8 g/L
- KCl (Catalog Number P4504) 0.40 g/L
- Sodium bicarbonate 0.35 g/L (Catalog Number S8875)
- Na$_2$HPO$_4$ (Catalog Number S0876) 0.048 g/L
- KH$_2$PO$_4$ (Catalog Number P5379) 0.060 g/L
- D(+)-Glucose (Catalog Number G8270) 1.0 g/L
- Arabinogalactan (Catalog Number A6606) 18.5%

Heat as needed to dissolve and cool to room temperature. If necessary, adjust the pH to 7.3-7.5 prior to bringing to final volume with water.

Density: 1.077±0.001 g/ml
Osmolality: 290±5 mOsm/kg

Storage/Stability
Store the product at room temperature. When stored at room temperature, the arabinogalactan powder is stable indefinitely.

Stock solutions are stable for at least one year at −20 °C. Filter the solutions through a 0.45 µm filter and store in 50 ml aliquots in capped containers at −20 °C.

References
The general references cite uses of arabinogalactan in cell research.


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