

Technical Data Sheet

Leecoll Density Gradient Medium

Catalog Number: LCS01, LCS02

Physical State	Liquid
Ingredients	Silica gel particle media modified with a polyvinylpyrrolidone (PVP) coating
CAS	65455-52-9
Density (20°C, g/mL)	1.125-1.135
Viscosity (cP)	<15
Osmolality (mOsmol/kg)	<25
Conductivity (mS/m)	<100
pH	8.5-9.5
Color	Colourless to slightly yellow

Product Description

Leecoll is a fully validated density gradient centrifugation medium for cells, viruses, and subcellular particles.

Based on well-established density gradient centrifugation theory, this product enables gentle, rapid, and efficient separation of various cell types, viruses, and subcellular fractions within the density range of 1.0-1.3 g/mL. It is suitable for separation of most biological particles with a sedimentation coefficient greater than 60S.

The core component of this product is a PVP-coated silica particle medium with a particle size of 15-30 nm and a free PVP content of only 1%-2%, featuring a scientifically formulated and stable composition. The silica particles have inherent particle size heterogeneity, which allows differential rate sedimentation during centrifugation to spontaneously form a continuous, isotonic density gradient. The experimental operation is convenient and flexible: density gradients can be rapidly prepared using a gradient mixer or high-speed centrifuge. Alternatively, samples can be pre-mixed with the medium to perform separation within the in-situ formed gradient, achieving gradient formation and sample separation in one single step. Satisfactory separation results can be obtained in a single run, greatly simplifying workflows and improving experimental efficiency.

Transportation and Storage

- Transportation at Ambient Temperature
- The product can be stored at 4-30 °C. Refrigerated storage at 4-8 °C is preferred.
- The unopened product has a shelf life of up to 5 years when stored at ambient temperature. After opening, storage at 4-8 °C is recommended. For optimal stability, the product should be stored at 4-8 °C regardless of whether it has been opened.
- Long-term storage at -20 °C is not recommended. If stored at -20 °C for a short period, the storage duration should not exceed 6 months. After freezing and thawing, the product should be thoroughly mixed before use.
- During storage, maintain the system pH within 5.5-10 and avoid contact between the reagent and divalent cations.

Applications

Designed for processing biological samples such as blood and tissues, it efficiently separates, purifies, and enriches cells, bacteria, viruses, organelles, and various subcellular components. It can also effectively discriminate intact viable cells from damaged cells and cell debris.

Notice

1. To protect operators' safety and health, laboratory coats and disposable gloves must be worn at all times during the experiment.
2. Certain technical information supplied with this product is for customer reference, academic exchange, and scientific research only. Our company does not warrant the absolute accuracy or completeness of such information.
3. This product is for research use only. Any use in clinical diagnosis, therapy, food, pharmaceuticals, or other human-related applications is strictly prohibited. Do not store this product in residential premises.
4. This product retains stable performance within a pH range of 5.5–10.0. Conditions such as $\text{pH} < 5.5$, the presence of divalent cations (e.g., Ca^{2+} , Mg^{2+}), or elevated temperature may induce coagulation and destabilization of colloidal silica. Avoid experimental systems with low pH, high salt concentrations, or divalent ions.