

Tips for Using UltraGRO™-PURE to Grow Mesenchymal Stem Cells (MSCs)

HELIOS® Bioscience Brand, AventaCell Product, UltraGRO™-PURE shows optimal growth of MSC at 5 % (v/v) in typical cell culture media, i.e. Alpha-MEM, which contains 2 mM L-Glutamine.

We recommend seeding MSCs at approximately $3 \times 10^3 \sim 6 \times 10^3$ cells per cm^2 .

For UltraGRO™-Adv. product, addition of exogenous Heparin is **NOT** required.

UltraGRO™-PURE. Storage

UltraGRO™-PURE product is most stable when stored frozen (-20°C) until needed.

Please thaw frozen UltraGRO™-PURE product in a 37°C water bath before use. Once UltraGRO™-PURE product is thawed, it is recommended to use it for completed medium preparation (e.g. 5 %) immediately, or to divide it into single-use aliquots and store unused aliquots at -20°C .

It is highly recommended to prepare the UltraGRO™-PURE containing medium (e.g. 5 %) on the same day or one day before cell culture and store the unused UltraGRO™-PURE containing medium at 2°C to 8°C no longer than 2 weeks.

Precipitation in Cell Culture

Clotting or insoluble particles may form in thawed UltraGRO™-PURE, it is recommended to centrifuge at $3,400 \times g$ for 3 ~ 5 minutes or to filter the liquid concentrate with a sterile $40 \mu\text{m}$ Cell Strainer to remove insoluble particles.

NOTE: $0.22 \mu\text{m}$ filtering is **NOT** recommended for UltraGRO™-PURE 100 % concentrate.

Repeated freeze-thaw cycles should be avoided, as they will cause an increase in insoluble particles and potential decrease UltraGRO™-PURE performance.