

SAN DIEGO NATHAN SHOCK CENTER



PREPARING MATRIGEL ALIQUOTS

SD-NSC Human Cell Models of Aging

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There are other options and don't forget to lot test!

- Several manufacturers offer a growth factor reduced basal membrane extract product equivalent to Matrigel (Corning). Cultrex BME (R&D Systems) and Geltrex (ThermoFisher) are also commonly used.
- The Salk Stem Cell Core historically used Matrigel (Cat No. 354230). Since 2016 we've exclusively used Cultrex BME Type 1 (Cat No. 3433-005-01).
- As Matrigel and other BMEs are an undefined biological product lot testing is encouraged to assess quality of individual lots prior to purchase.

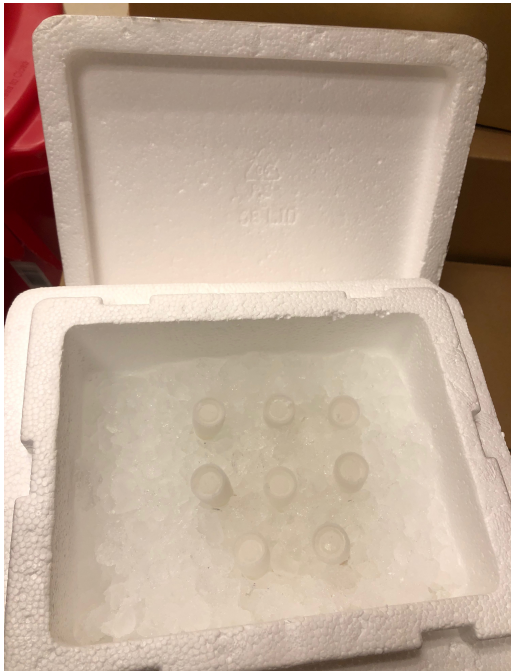


Some Considerations Before Starting

- Matrigel readily polymerizes to form a 3D hydrogel at room temperature. It is crucial to keep Matrigel cold throughout the aliquoting process to prevent premature polymerization.
- We typically make 1mg, 2mg, and 4mg aliquots. Larger aliquots are possible.
- Protein concentrations vary lot to lot, aliquot volumes will change. Recalculate aliquot volumes with every new purchase.
- Adding an additional 5%-10% to your aliquot volume will help minimize loss through pipetting error.

Thaw Matrigel Bottles on Ice 1-3 days in Advance

- Place frozen bottles in a Styrofoam box half-filled with ice
- Add more ice to cover bottles
- Place the Styrofoam lid securely on the box (use tape if necessary)
- Store box in 4C overnight
- If not aliquoting the next day, refresh ice as needed and aliquot within 3 days



Organize ice buckets, tips, and tubes in the hood



Keep things cold and change your tips

- Using the cold block, arrange 1.5mL tubes in a manner that will allow for aseptic aliquoting. We often prefer arranging tubes around the edge of the cold block.
- Aliquot Matrigel using a manual single channel pipette and pre-frozen tips. Avoid repeat pipetters – they do not work well with viscous solutions.
- Change tips frequently to avoid buildup inside the tip. Changing tips after 10 aliquots is a good rule of thumb.
- Aseptically cap each 1.5mL tube and label the top with aliquot size (1mg, 2mg, or 4mg).
- Move tubes to spare ice bucket and continue aliquoting the remaining tubes.
- Tubes should remain on ice until you are ready to transfer to -80C storage
- Transfer aliquots into labeled freezer boxes and store at -80C