chemQ bioscience Product Information

Liver Perfusion Solution I; Catalog Number: CQ-PIB-1000; Volume: 1000 mL

Liver Perfusion Solution I is shipped at cold temperature. Store at 2°C-8°C, away from direct light.
Liver Perfusion Solution I is for research use or further manufacturing. To order this item, please contact us at info@vitroprep.com.

Chelation Perfusion Protocol of Human and/or Large Animal Whole Liver:
Tissue should be collected from the donor with as much intact vasculature as possible, specifically the portal vein. Perfusion of the tissue can take place through any of the major vessels (superior vena cava, inferior vena cava, or portal vein); however, the portal vein is recommended due to its capacity to reach 80-100% of the liver mass. If perfusing through the portal vein, the SVC should be completely closed off, leaving the IVC open or restricted to allow the perfusate to exit. The perfusion rate should be high enough to achieve adequate tissue inflation (chelating buffer infiltration) without overly inflating the tissue and introducing too much pressure on the cells. A rate of 0.4-0.6 mL/gram of tissue/minute is recommended. However, constant observation of the tissue throughout the perfusion process should still be done to avoid under- or over-inflation. Depending on the amount of residual blood remaining when the tissue was received, the chelation perfusion should take 10-14 minutes.

Additional considerations and notes:
a. The tissue will arrive packaged in cold shipping media. This cold media is harmful to the cells if warmed above 10°C, therefore it is strongly advised to flush the shipping media out of the tissue using “Organ Flushing Solution” (CQ-LRS-1000) prior to the chelation perfusion.
b. It is recommended to perfuse the tissue with 35°C-37°C Liver Perfusion Solution I.
c. If the resulting cell suspension reveals large clumps (above 2-3 cells per clump), inadequate perfusion of the chelating buffer is likely the cause. Multiple variables can affect the performance of Liver Perfusion Solution I, including, but not limited to: residual blood and/or clotting in the organ due to poor flushing (use Organ Flushing Solution), damaged vasculature, and inadequate perfusion rate/pressure.