

SOP – H1/09:

Procurement of Cadaver Human Hearts and Component Parts of the Anatomy

Procedures:

1. Transport cadaver hearts in UW/HTK preservation solutions as conducted previously.
2. In Aviva laboratory set-up organ perfusion equipment to allow retrograde perfusion [@ 50-70mmHg] of the heart aorta and pulmonary vein with 'warm' (32-35 °C) AQIX® RS-I.
3. Assemble **TWO** 500mL reservoirs of AQIX® RS-I previously warmed to 32-35 °C and pre-aerated with carbogen gas [5%CO₂/95% O₂].
4. Upon arrival of cadaver organ, execute retrograde perfusion of the vasculature with 'warm' AQIX® RS-I (see (2), above) to quickly (5-10 mins) flush out preservation solution.
5. To induce a quiescent heart for further dissection, the organ should be infused with *carbogenated* AQIX® RS-C (cardioplegic) solution at room temperature which will allow 1-2 hours of cardiac arrest.
6. Procure samples [0.5 – 2.0 cm] of cardiac tissue and store in 125mL AQIX® RSI kits of RS-I solution for transportation over ice (0 – 4 °C) for periods of up to 46 hours (see, SOP-S2).
7. Reanimation of cardiopleged hearts or cardiac tissue samples should be performed by continuously perfusing with *carbogenated* AQIX® RS-I at 37 °C.
8. To increase the oxygen carrying capacity of AQIX RS-I for organ perfusion, the addition of human RBC's at 10-25% Hct has proved beneficial.