

**Method 1 – Storage, Retrieval and Transport of biopsies under *Hypothermic* conditions**

- a) AQIX® RS-S/RS-I solutions are packaged in 125 mL and 250 mL containers.
- b) Pre-aerate the AQIX® RS-S/RS-I solutions with *carbogen* [see SOP AFT/CG] and secure the lid closure tightly on the container.
- c) Store ***carbogenated*** AQIX® RS-S/RS-I solution containers @ 3 – 8 °C for not longer than 6 weeks.
- d) Dispatch AQIX® RS-S/RS-I solution containers @ 0-4 °C (over ‘wet’ ice) to tissue retrieval site in a polystyrene, outer box when temperatures are likely to exceed 25 °C or fall below 0 °C.
- e) Maintain AQIX® RS-S/RS-I solution containers @ 3 – 8 °C at tissue retrieval site.
- f) Open the **250 mL** AQIX® RS-S/RS-I solution container for the minimum time possible before inserting the **5 - 10cm x 20 - 35 mm** intestine biopsy sample.
- g) Quickly attach the lid closure on the container and close tightly.
- h) Transport container back to laboratory @ 0-4 °C (over ‘wet’ ice) in a polystyrene, outer box when temperatures are likely to exceed 25 °C or fall below 0 °C.
- i) Further dissection of the intestine biopsy to obtain the experimental 0.8 cm diameter tissue sheet preparations is carried out using ‘cold’ (3 - 8 °C) AQIX® RS-S or RS-I solution.
- j) Conduct experiments immediately on the tissue sheet preparations using a Ussing Transport Chamber using *carbogenated* AQIX® **RS-I** @ 37C [**recommended**],  
**or,**
- k) Store AQIX® RS-S/RS-I container + tissue sheet preparations in a fridge @ 3 – 8 °C overnight prior to conducting experiments the next day using carbogenated AQIX® RS-I @ 37 °C.

**Method 2 – Storage, Retrieval and Transport of biopsies at *Ambient* Temperatures**

- a) AQIX® RS-S solution is packaged in 125 mL and 250 mL containers.
- b) Pre-aerate the AQIX® RS-S/RS-I solutions with *carbogen* [see SOP AFT/CG] and secure the lid closure tightly on the container.
- c) Store ***carbogenated*** AQIX® RS-S/RS-I solution containers @ 3 – 8 °C for not longer than 6 weeks.
- d) Dispatch AQIX® RS-S/RS-I solution containers @ ambient temperatures to tissue retrieval site in a polystyrene, outer box when temperatures are likely to exceed 25 °C or fall below 0 °C.
- e) Maintain AQIX® RS-S/RS-I solution containers @ ambient temperatures at tissue retrieval site.
- f) Open the **250 mL** 250 mL AQIX® RS-S/RS-I solution container for the minimum time possible before inserting the **5 - 10cm x 20 - 35 mm** intestine biopsy sample.
- g) Quickly attach the lid closure on the container and close tightly.
- h) Transport container back to laboratory @ ambient temperature in a polystyrene, outer box when temperatures are likely to exceed 25 °C or fall below 0 °C.
- i) Further dissection of the intestine biopsy to obtain the experimental 0.8 cm diameter tissue sheet preparations is carried out using AQIX® RS-S or RS-I solution @ ambient temperature.
- j) Conduct experiments immediately on the tissue sheet preparations using a Ussing transport chamber using *carbogenated* AQIX® **RS-I** @ 37C [**recommended**],  
**or,**
- k) Store AQIX® RS-S/RS-I container + tissue sheet preparations @ 3 – 8 °C overnight prior to conducting experiments the next day using carbogenated AQIX® **RS-I** @ 37 °C.

## **Addendum**

1. AQIX® RS-I solution may be substituted for AQIX® RS-S solution for either hypothermic or ambient temperature procurement of the skin biopsies but AQIX® RS-S solution is preferred for ambient temperature procurement.
2. If tissue contamination becomes a problem then additional AQIX® RS-I solution may be needed to thoroughly rinse the skin biopsies before inserting into the AQIX® RS-S solution specimen bottles. Additionally, 100 mg/L of Chloromycetin may be added to AQIX® RS-S solution to prevent bacterial contamination without compromising the viability of the biopsy specimens.