**RCH PROTOCOL FOR EXTERNAL LABORATORIES REFERRING RECTAL BIOPSIES FOR ACHE STAINING**

# **ACTIVITY**

Acetylcholine Esterase (ACHE) is an enzyme histochemical test. It is performed on rectal biopsies taken where Hirschsprung's disease is suspected.

This document outlines specimen treatment, preparation and conditions required when referring a specimen to RCH.

**SPECIMEN**

A single fresh piece of rectal tissue (pot) or multiple pieces (pots) may be received. Eg. Distal end, proximal end.

**PROCEDURE**

1. Contact RCH Anatomical Pathology on **03 9345 5748** and inform them that a specimen is being transported to them for AChE.
2. Record a macroscopic description of the specimen(s) on the back of the request slip.
   * **It is important to notate the time the biopsy was taken and the time the biopsy was frozen down. Biopsies should be frozen down within 2 hours of being taken. Failure to do so may lead to a false negative result.**
3. Specimen is to be frozen in a *cryomold* in the correct orientation **prior to sending to RCH.**a) Add some OCT medium into a *cryomold*b) chill the *cryomold*, which will make the OCT thicken and help hold the tissue in place

c) Orientate specimen **on edge** – to provide a transverse section of submucosa. On examination of the specimen the submucosa is often clearly evident as round white tissue surrounded by the pinker contracted muscle coat. When sectioned 3 layers should be seen microscopically; mucosa, muscularis, and sub mucosa – mount specimen in OCT.  
  
  
  
  
  
  
d) Add more OCT on top and around tissue (until it is well covered)  
  
e) Complete freezing of tissue and OCT

Mucosa

Muscularis

Sub Mucosa

Mucosa

Muscularis

Sub Mucosa

1. Wrap *cryomold* containing frozen tissue in foil and place into specimen pot, labelled with patients details and specimen site, and put in an esky of dry ice for transportation to RCH.
2. Referring laboratory to organise transport of specimen and request slip to RCH between the hours of 8.00 and 16.00 Monday to Friday.

# **REFERENCES**

AP-M-350 Acetylcholine Esterase

**CHANGES TO PREVIOUS VERSIONS**

**Version 2**

* Inclusion of notation of time biopsy taken and time biopsy frozen down.