

PRACTICAL: HISTOLOGICAL TECHNIQUES

Introduction: Histological techniques refer to the procedures used to prepare tissues for microscopic examination. They include:-

1. *Harvesting of biological tissues*-tissues can be obtained from human or animal sources.

Practical exercise: Dissect the rabbit provided; harvest various organs e.g. kidney, lungs and bone. Wash the organs in normal saline for 20 minutes.

2. *Gross examination*-involves trimming, cassetting, labelling.

Practical exercise: trim the harvested tissues to blocks of about 4x5mm thick and retain them in the normal saline.

3. *Fixation*-transfer the trimmed tissues into universal bottles with adequate fixative e.g. 10% formal saline for a minimum of 48 hours. The tissues can then be transferred into 70% alcohol indefinitely.

Practical exercise:

- a) To prepare 100ml of 10% formal saline: Measure 0.85g of sodium chloride and transfer to a clean conical flask; add 90ml of distilled water and mix to dissolve the powder. Add 10ml of strong formalin/formaldehyde, label and store.

- b) Fix the harvested tissues

4. *Decalcification*-transfer the bones into decalcifying agent e.g. nitric acid-formaldehyde and leave for 2-7 days for decalcification to occur. Test endpoint of decalcification periodically.

Practical exercise: