**DEPARTMENT OF CLINICAL LABORATORY SCIENCE**

**COLLEGE OF APPLIED MEDICAL SCIENCE**

**KING SAUD UNIVERSITY**

**PRACTICAL LAB**

**COURSE-322**

**HISTOLOGICAL TECHNIQUE**

Prepared by: rawan alfrayh

***1st weak***

- Introduction of section cutting, floating out section, mounting section, draining and drying

Things we need for demonstration:-

1- a) microtome

b) Water bath

c) Hot plate

2- Knife holder for disposable plate

3- Regular knife holder with plate

4- Block adapter

5- Fine pointed needle

6- Forceps

7- Brush

8- Clean slide

9- Pencil

10- Ice tray (cold water)

NOTES:

-**microtome**: start at 5 ….trimming at 10 till the whole tissue appear then gradually decrease till 5 then start pick the tissue

-**hotplate** : (60c) = 6 for 20-30 min the slide should be dry for 5 min in air to avoid bubbles

-**water bath**: (45c) = 4.5 ……add gelatin to allow the tissue to stick to slide

**20% alcohol:** to allow the tissue to spread on slide

-**knife** disposable for student

Permanent in some hospital

- tissue not good?

1-block not cold so the solidity between the tissue & wax will be different (tissue will be more solid)

2-knife not good so we need to change the knife

***2nd weak***

Part 1

Preparation of fixative

-fixative we use

1- 10% formal saline to make 1L

Part 2

Practice section cutting…

***3rd weak***

Before the specimen come to the laboratory -

-when receiving the specimen check for:

1-prepare the tissue (human organ)

2-fixative (already prepared)

3-selection of tissue block

4-final fixation of tissue

5-processing of tissue

a)dehydration (70% 95% 100%)

b) Clearing (clearing agent = xylene(chloroform))

c) Wax impregnation (paraffin wax)

-decalcification.

-practice section cutting…

***4th weak***

Embedding tissue in paraffin wax-

\*embedding machine :

a)forceps

b)needle

c)spatula

orientation of the tissue blocks-

practice section cutting…-

***5th weak***

-proper section cutting.

-prepare slide boxes.

***6th weak***

Preparation of stain-

1)MAYERS preparation:

2)EOSIN preparation:

3)EHRLICHS preparation:

4)staining preparation and procedure:

a)copling jars

b) 1-alcohol : 70% , 95% , 100% .

2-clearing : xylene

3-ammonia water :

{ ammonia water solution + Tap water}.

4-forcep

5-needle

6-mounting medium

7-coverslip

8-pencil

9-slide

10-staining racks

5)demonstration of MAYERS HAEMATOXELYN stain

***7th weak***

-preparation of EHRLICHS ALUM HAEMATOXYLIN & EOSINE:

1-alcohol : 70% , 95% , 100% .

2-clearing : xylene

3-ammonia water :

{ ammonia water solution + Tap water} .

4-forcep

5-needle

6-mounting medium

7-coverslip

8-pencil

9-slide

10-staining racks

-demonstration of EHRLICHS ALUM HAEMATOXYLIN & EOSINE:

-procedure of EHRLICHS ALUM HAEMATOXYLIN & EOSINE:

***8th weak***

-preparation of WIEGERTS IRON HAEMATOXYLIN & VANGIESON STAIN:

-demonstration of WIEGERTS IRON HAEMATOXYLIN & VANGIESON STAIN:

-procedure of WIEGERTS IRON HAEMATOXYLIN & VANGIESON STAIN:

***9th weak***

-preparation of PERL'S PRUSSIAN BLUE stain:

-demonstration of PERL'S PRUSSIAN BLUE stain:

-procedure of PERL'S PRUSSIAN BLUE stain:

***10th weak***

: -preparation of ALCIAN BLUE stain

-demonstration of ALCIAN BLUE stain:

-procedure of ALCIAN BLUE stain:

***11th weak***

-preparation of P.A.S stain:

-demonstration of P.A.S stain:

-procedure of P.A.S stain:

***12th weak***

-demonstration of sharpening machine.,