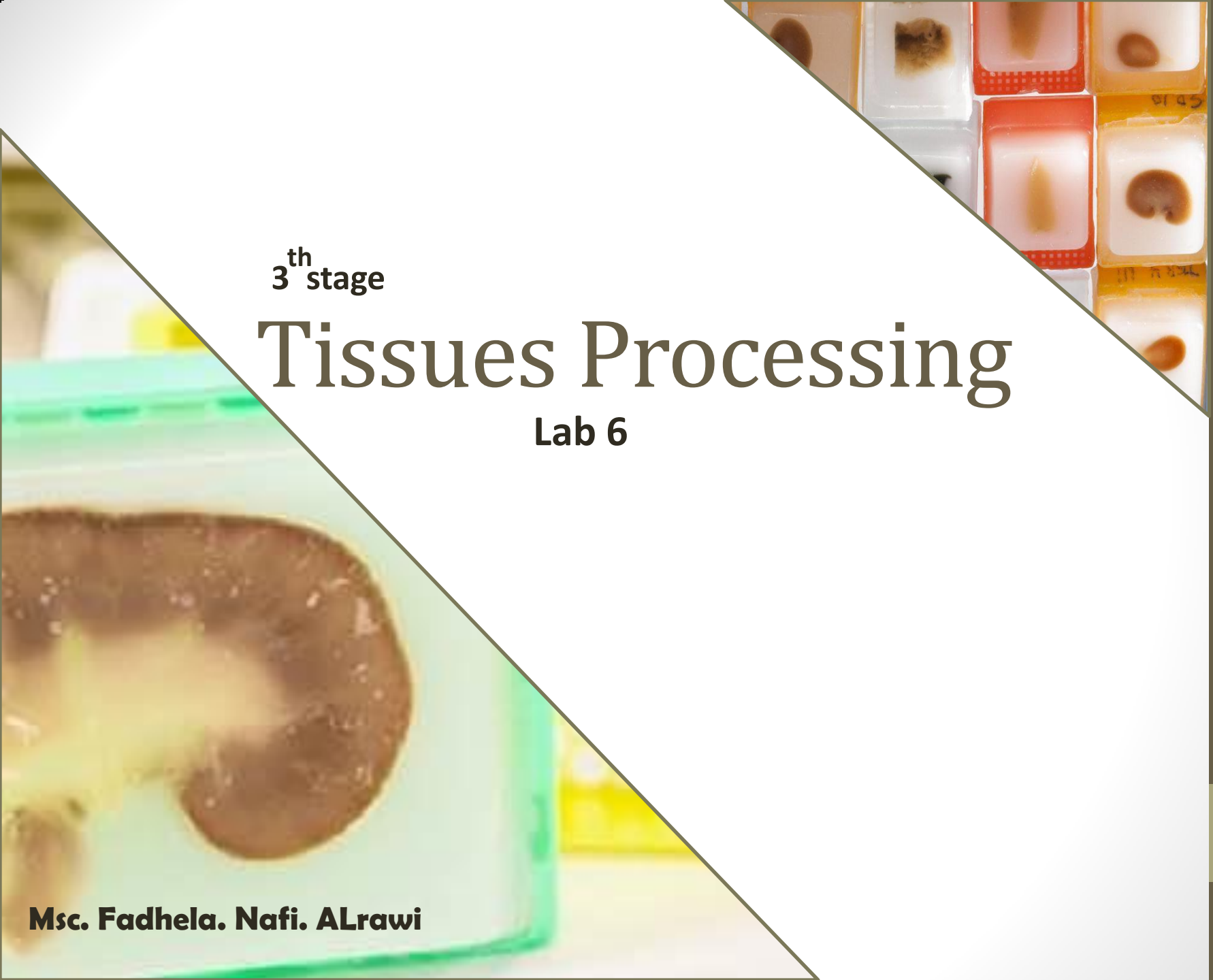


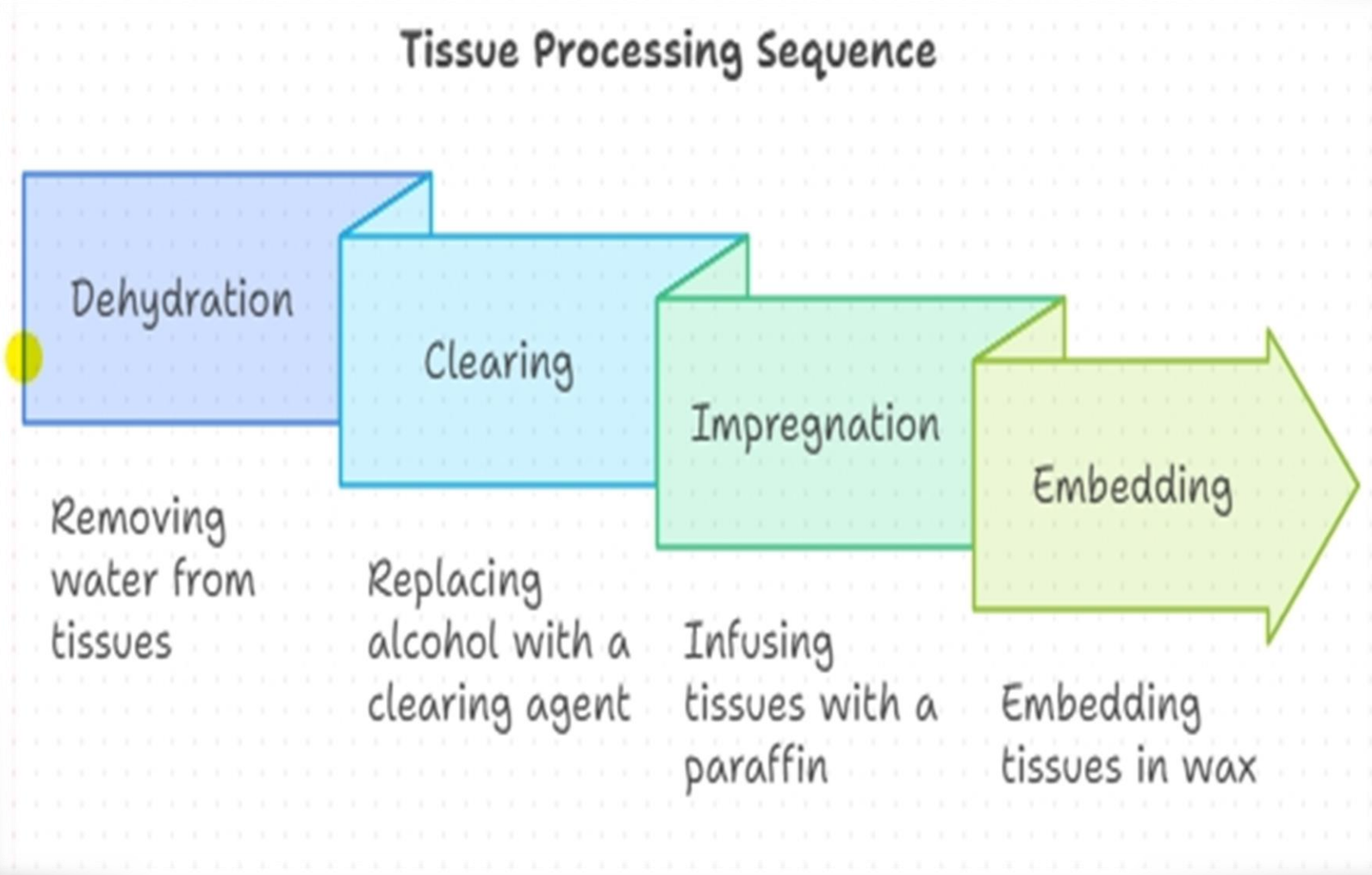
3th stage

Tissues Processing

Lab 6

Msc. Fadhela. Nafi. ALrawi

Tissues Processing



1_Dehydration

Which dehydration agent to use for tissue preparation?

Ethanol

Widely used, safe, effective.

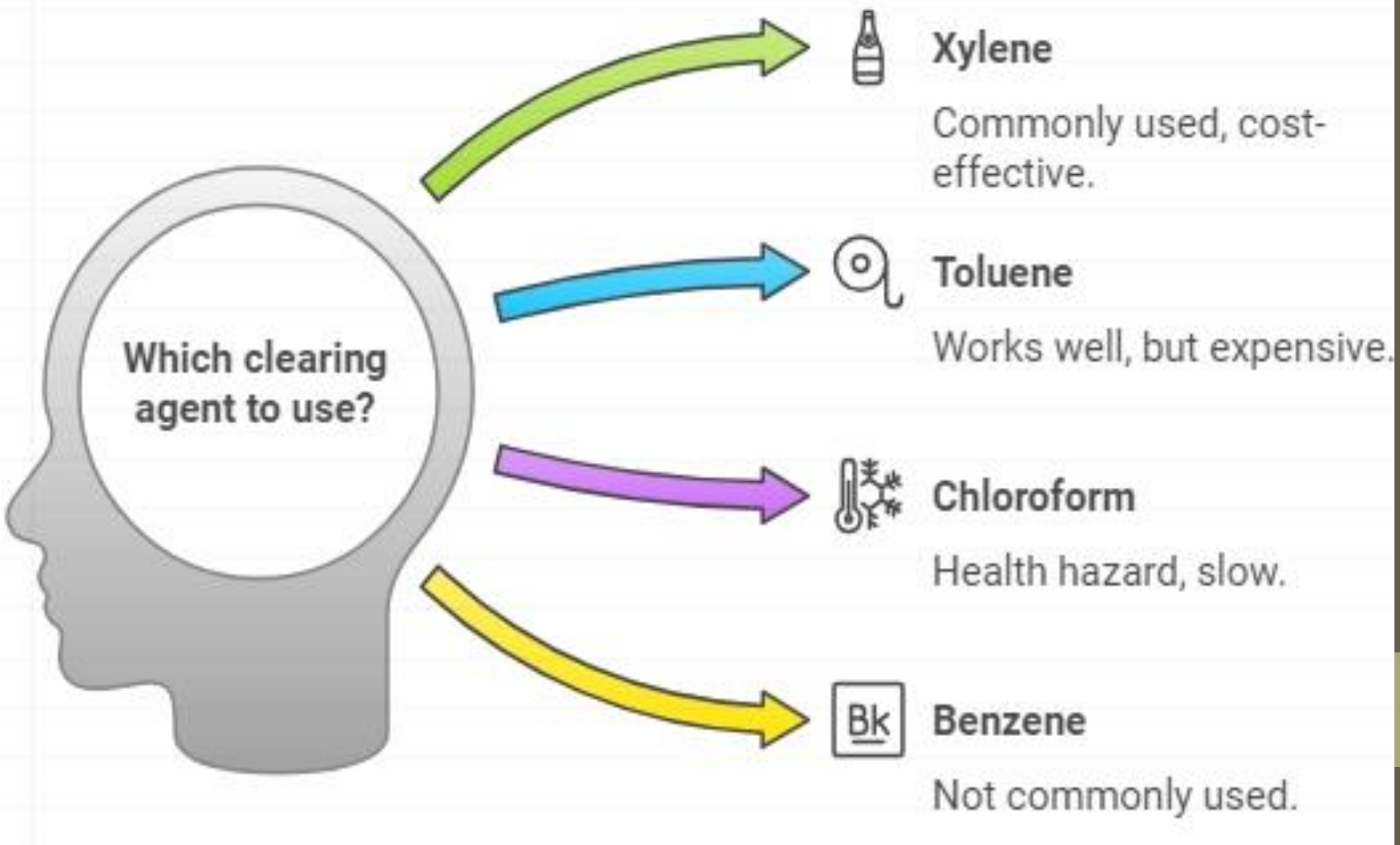
Methanol

Less common, effective.

Acetone

Fast, but a fire hazard.

2_Clearing


Which clearing agent to use?
Xylene
Commonly used, cost-effective.
Toluene
Works well, but expensive.
Chloroform
Health hazard, slow.
Bk
Benzene
Not commonly used.

Choice of a clearing agent depends upon following

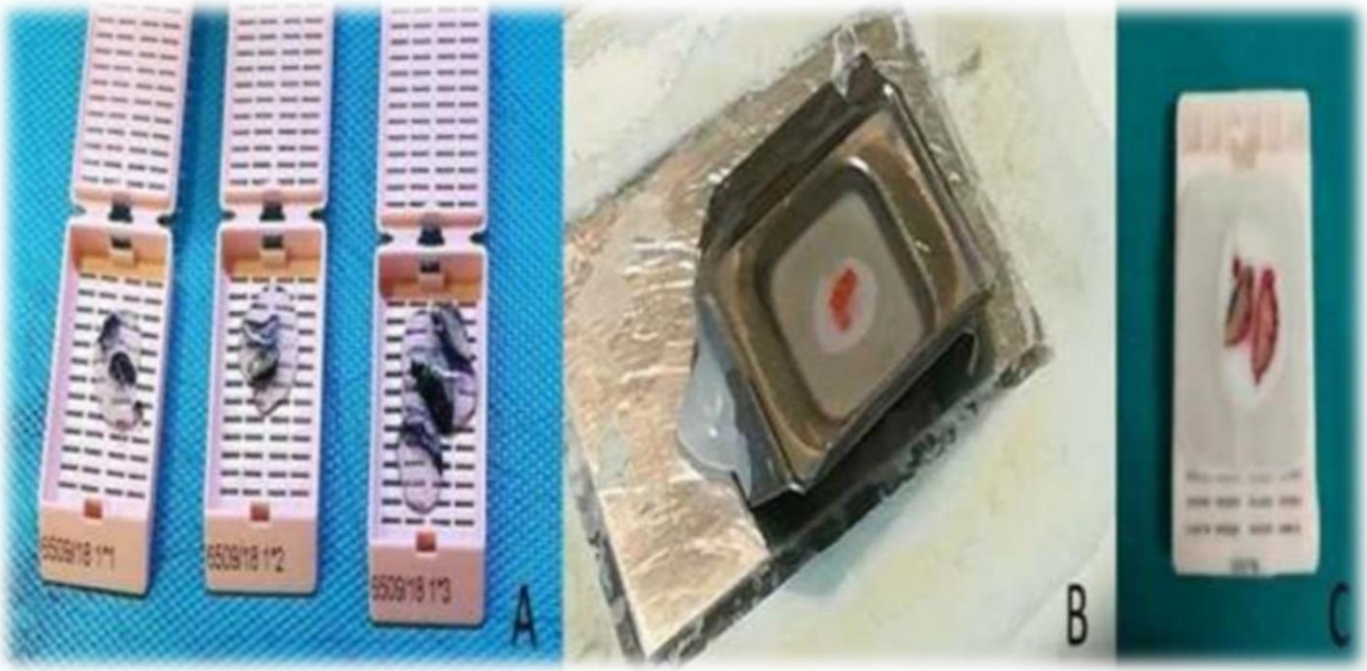
- The type of tissue to be processed and the type of processing to be undertaken.
- Safety factors
- Cost and convenience
- Speedy removal by molten paraffin wax.
- Minimal tissue damage

3_Impregnation

- The tissues are put from 2 - 4 hours in hot soft paraffin at 57 °C in the oven.
- The paraffin will penetrate in-between the cells of the tissues.

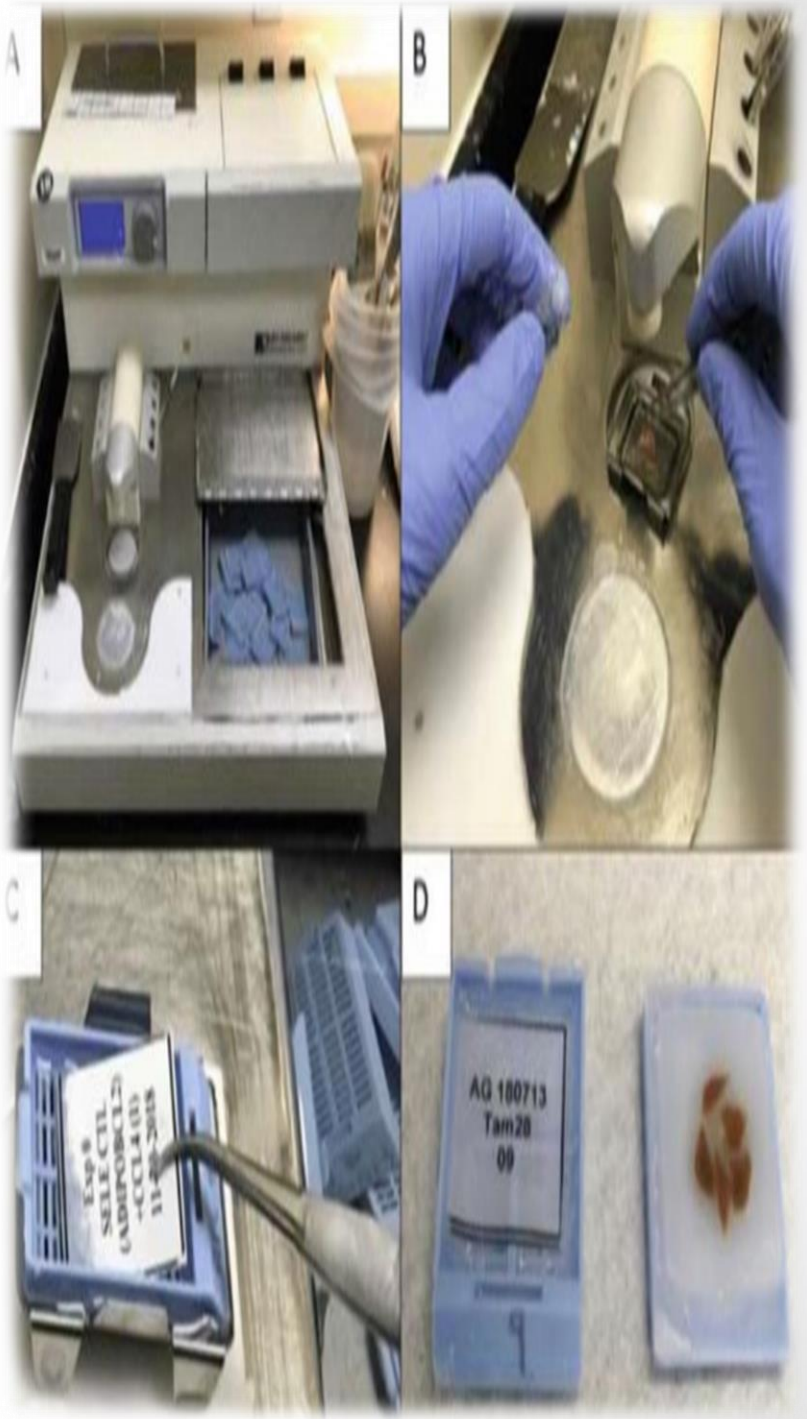
4_Embedding

- Impregnated tissues are placed in a mould and then fresh melted wax is poured in it and allowed to settle and solidify.
- Once the block has cooled sufficiently to form a surface skin it should be immersed in cold water to cool it rapidly.



Trimming

After preparation of was templates preferably trimmed with a sharp blade so that the specimen be in a position Suitable for cutting edges
so that they become parallel and can be applied to edge of the knife of
microtome.



Summary of Paraffin Wax Embedding

1. Dehydration:

a. 70% alcohol 1 hour

b. 90% alcohol I 1 hour

c. 90% alcohol II 1 hours

2. Clearing:

a. Xylene I 15 minute

b. Xylene II 15 minute

3. Wax Impregnation:

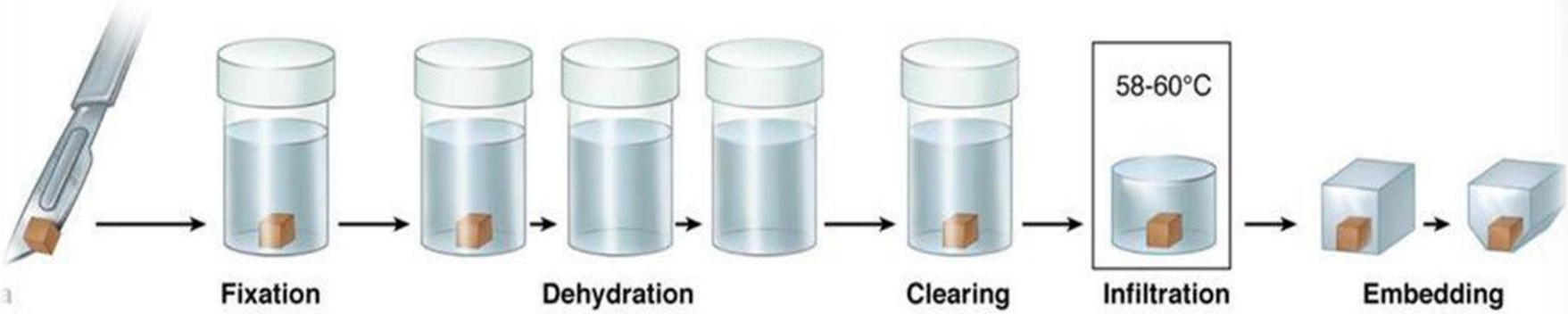
a. Paraffin wax 1 1 hour

b. Paraffin wax II 1 hour

c. Paraffin wax III 1 hou

4.Embedding

Sample preparation for the microtome sectioning



formaldehyde ethanol xylene paraffin

(70% → →100%)

Thank You