



Blocking out

It is process of making blocks by using melted paraffin wax : this done by using two L shape pieces of brass.

Advantages

- ✚ Very thin sections may be obtained.
- ✚ The process is very rapid.
- ✚ It is easy to get serial sections.
- ✚ The tissue block can be easily stored.

Disadvantage

- ✚ Overheated paraffin make the specimen brittle and difficult sectioning.
- ✚ Prolonged treatment in paraffin causes shrinkage and hardening of the tissue.
- ✚ Tissue that are difficult to infiltrate (bone , teeth, eyes and brain) need immersion for proper support , otherwise they fail to sectioning.
- ✚ Paraffin processing removes fat, the dehydrants and clearing agents used in the process are fat solvents.

Notes.....

- ◆ Slow cooling would allow large crystals to form ,so fragmentation would be during section cutting.
- ◆ Excessive cooling (ice water) produces a similar effect.
- ◆ Ordinary cold tap water about (10-20) °C.
- ◆ During blocking process pour melted paraffin at once to avoid layer different in solidity.
- ◆ If there are air bubbles use warm needle to get rid of them.



Trimming

It is process of removing the excess wax from edges of the block to give a cubic shape then next step is usually to attach the blocks to the block holders, so that sections can be cut.

Sectioning or Cutting

Artifact	Causes	Treatment
Curved & wrinkled section.	<ul style="list-style-type: none"> a) Wax is too solid. b) Cold room temperature c) Slow cooling of wax during blocking d) Cutting knife is with obtuse angle 	<ul style="list-style-type: none"> a) Re-pour the specimen in less hard wax . b) Warm the room or the place by using burner. c) Re-pour the specimen. d) Change the knife angle
Separation of specimen from surrounding wax.	<ul style="list-style-type: none"> a) The specimen had been cooled before impregnation b) Impregnation with cold wax. c) Presence residual alcohol. 	<ul style="list-style-type: none"> a & b Re-pour the specimen. c) Melt the cast then place the specimen in a solution of(xylen +alcohol) equally then repeat the process of clearing.....ect.



Section curved & adhere to the knife.	a) Acute knife angle. b) Wax is soft. c) High room temperature.	a) Change the angle. b) Re-pour the specimen with solid wax. c) Cool the block with ice or put it in the refrigerator.
---------------------------------------	---	--

Difficulties encountered in obtaining good sections:

- 1) Imperfect dehydration.
- 2) Imperfect clearing.
- 3) Imperfect impregnation with molt paraffin wax.

Mounting sections on slide:

There are two ways to do this.....

- ✚ Section may mounted on slides on hot place.
- ✚ Ribbons of sections may be spread on warm before mounting (water bath) at 45 °C.