

8- Section cutting

It is the procedure in which the blocks which have been prepared are cut or sectioned and thin strips of varying thickness are prepared .

The instrument by which this is done is called as a Microtome

Type of Microtome : sliding , rotary , rocking , freezing , base sledge

Rotary microtome :

It is the most commonly used . Also known as Minnot, s Rotary microtome In this the Block holder moves up and down while the knife remains fixed It is suitable for cutting of small tissues & serial sections can be taken on it.

Parts of a Microtome (Rotary)

- A. Block holder .
- B. Knife clamp screws
- C. Knife clamps
- D. Block adjustment
- E. Thickness gauge
- F. Angle of tilt adjustment
- G. Operating handle







Tissue floatation bath

It is thermostatically controlled water bath with the inside colored black.

It is maintained at a temperature maintained 5-6 degree paraffin wax.



9- Staining :

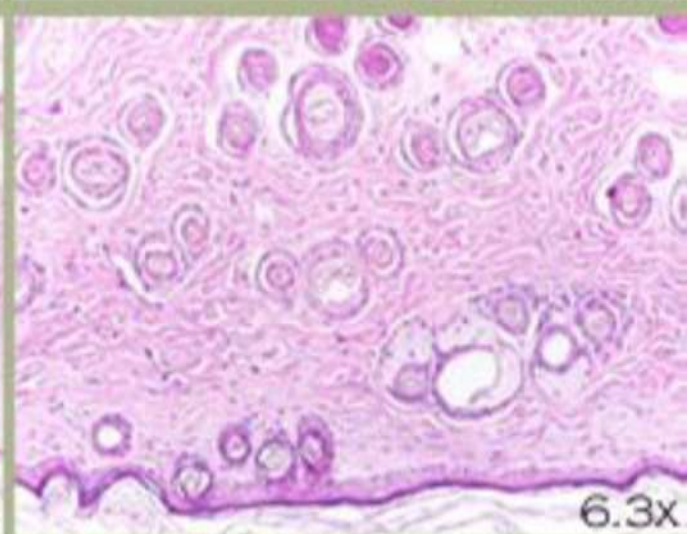
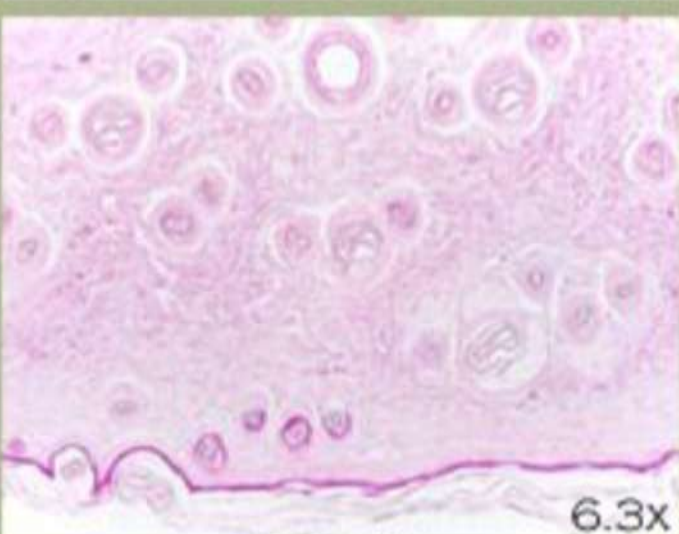
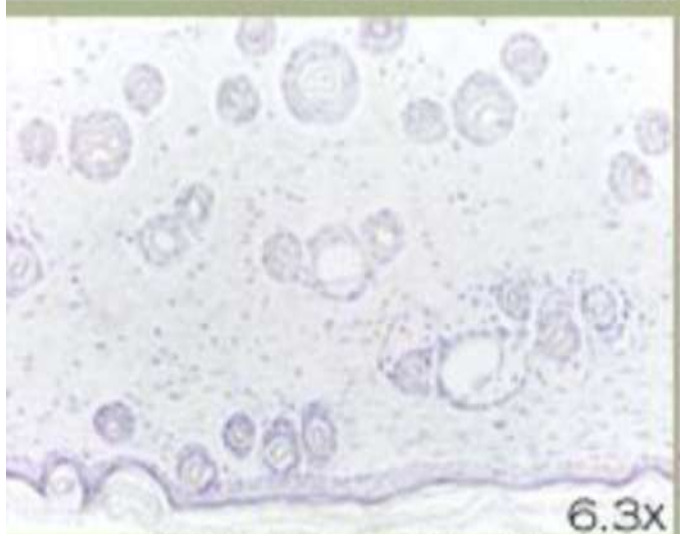
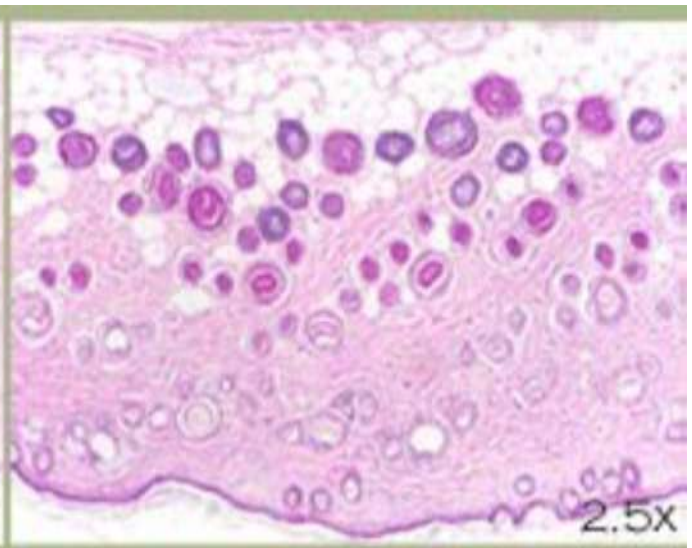
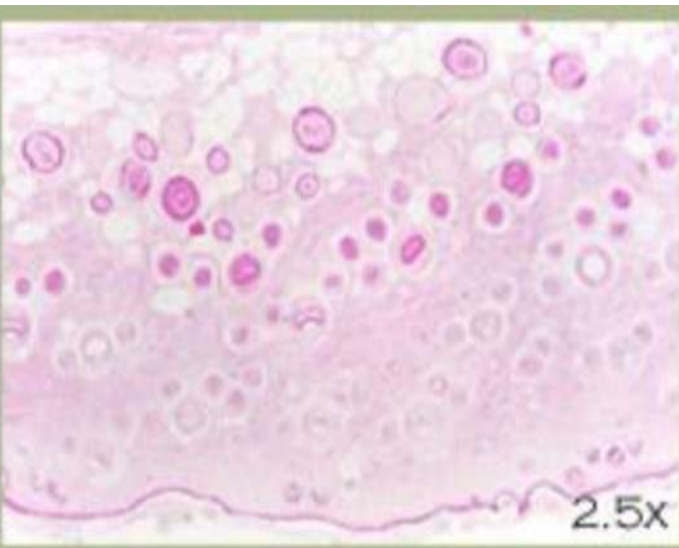
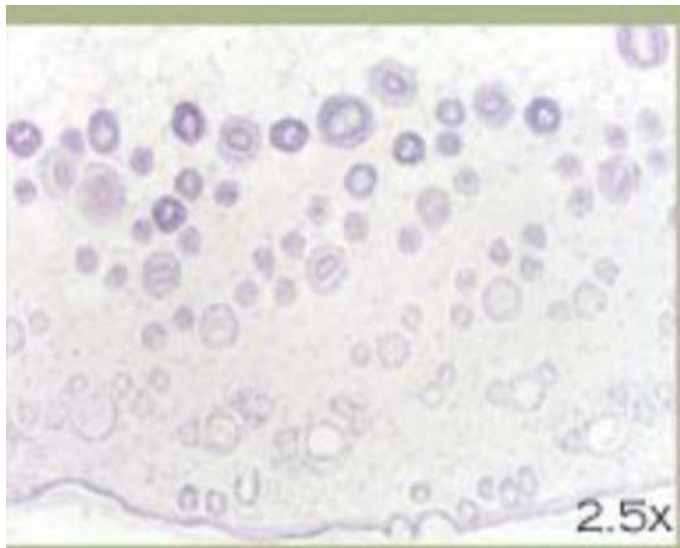
Is process by which we give color to a section , there are hundred of stains available , and can be classification to :
Acid stains , Basic stains , Neutral stains



Acid stains : In an acid dye the basic component is colored and the acid component is colorless , Acid dyes stain basic components e.g. **eosin stains cytoplasm** , the color imparted is shade of **red** .

Basic stains : In an basic dye the acid component is colored and the basic component is colorless , Basic dyes stain acidic components e.g. basic fuchsin stains nucleus , the color imparted is shade of **blue** .

Neutral stains : When an acid dye is combined with basic dye neutral dye is formed , As it contains both colored radicals , it gives different colors to cytoplasm and nucleus simultaneously .this is the basis of **Leishman stain** .

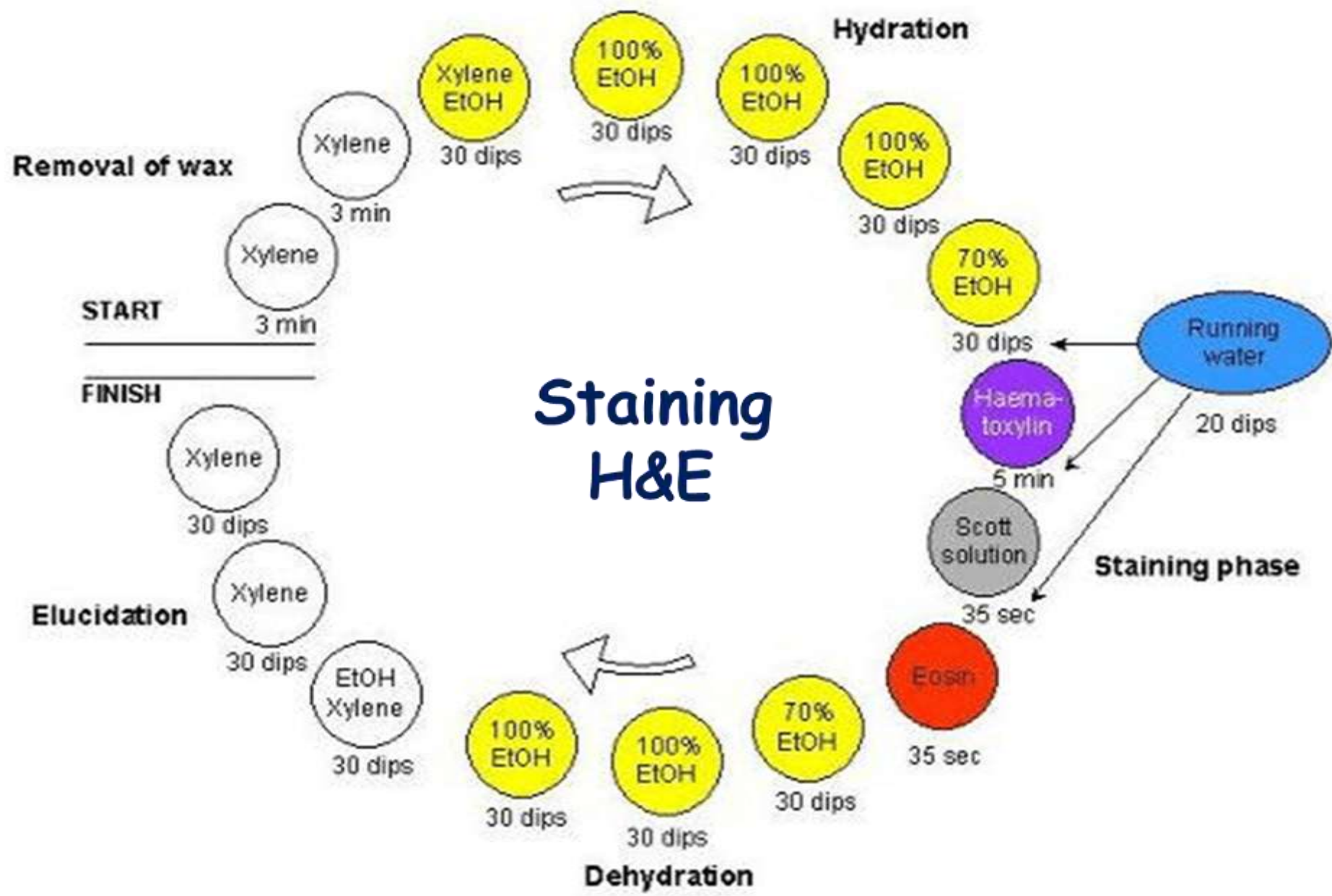


HEMATOXYLIN

EOSIN

H & E STAIN





10- Mounting :

Adhesives used for fixing the sections on the slides ,
the adhesives like : Albumin solution(mayor's egg
albumin , Starch paste , Gelatin) .

Mounting permanent agent : Canada balsam , DPX ,
Terpene resin .

<https://www.youtube.com/watch?v=ncj8JVsnZGU>

<https://www.youtube.com/watch?v=P0cZKCfyUwE>