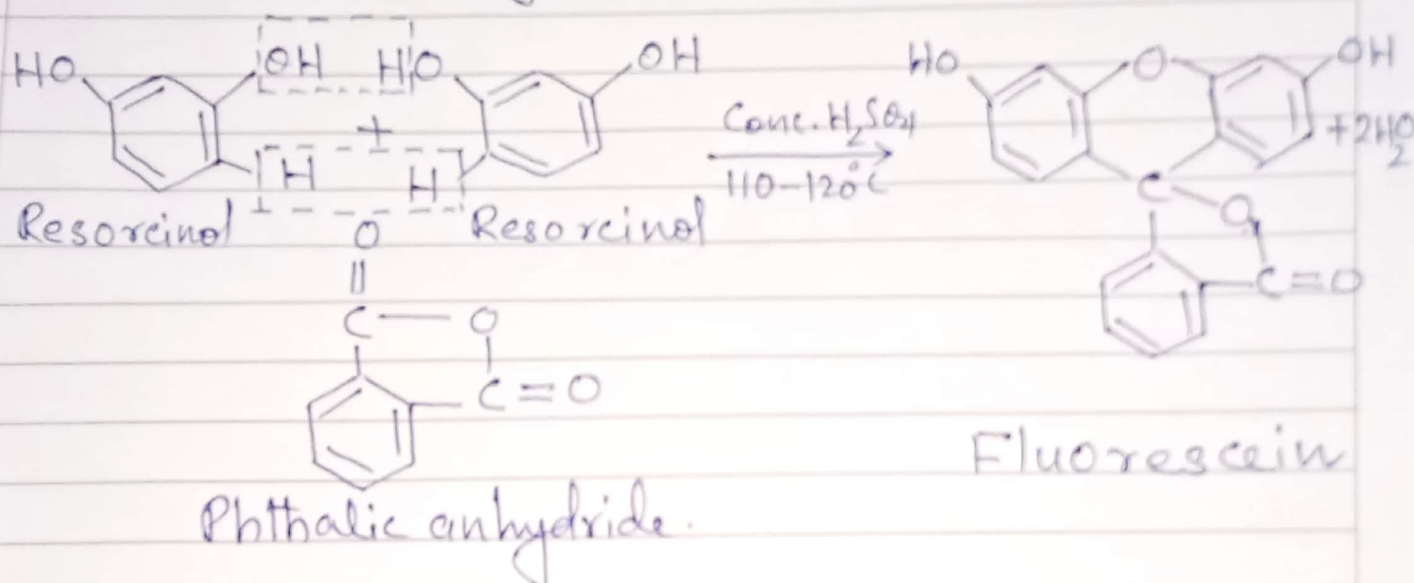


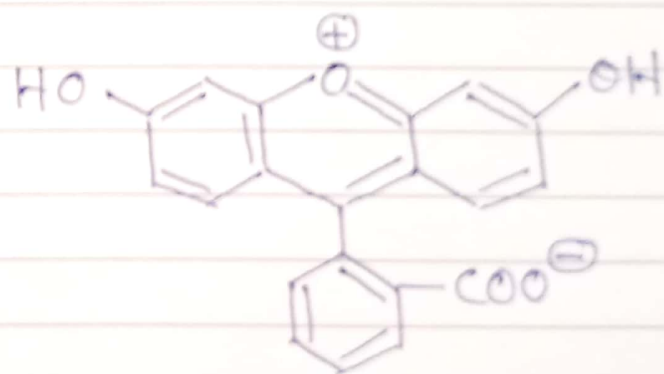
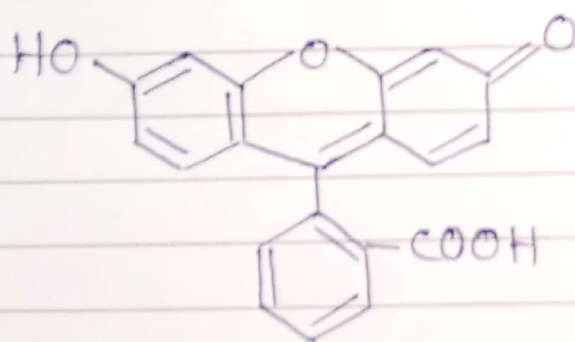
Expt. No.

⑥ Chemistry and synthesis of Fluorescein dye

Fluorescein dye is the Xanthene derivative. It is synthesised by condensation of resorcinol with phthalic anhydride at $110-120^{\circ}\text{C}$ in presence of conc. H_2SO_4 or Anhydrous ZnCl_2 .

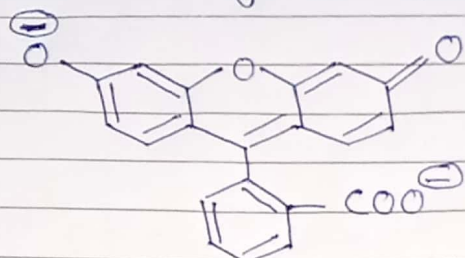


It is an orange solid, insoluble in water. Its orange colour is due to its existence in o-quinonoid and p-quinonoid forms.



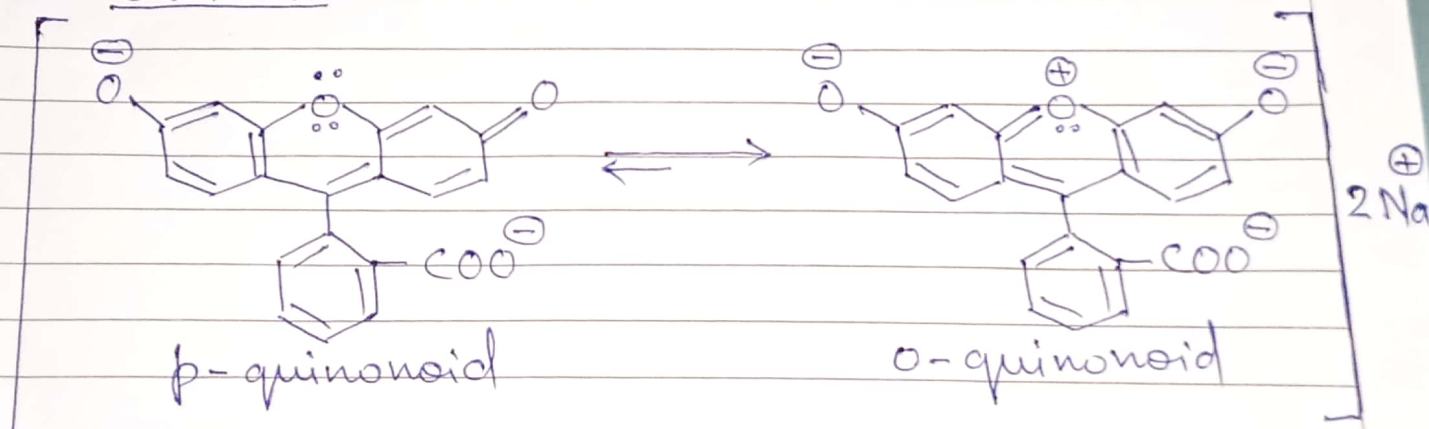
Teacher's Signature : _____

Fluorescein dissolves in alkalis to give a reddish brown solution, which on dilution gives a strong yellowish-green fluorescence due to formation of the following anionic form.



Fluorescein ion
(Yellowish-green fluorescence)

The sodium salt of fluorescein is known as Uranine.



Uranine

Uses:-

1. Sodium salt of fluorescein (Uranine) is used in dyeing wool, and silk in brilliant yellow shade from an acid bath.
2. It is used in tracing underground currents in sea and rivers.
3. It is used as marker in accident sites.

Teacher's Signature : _____