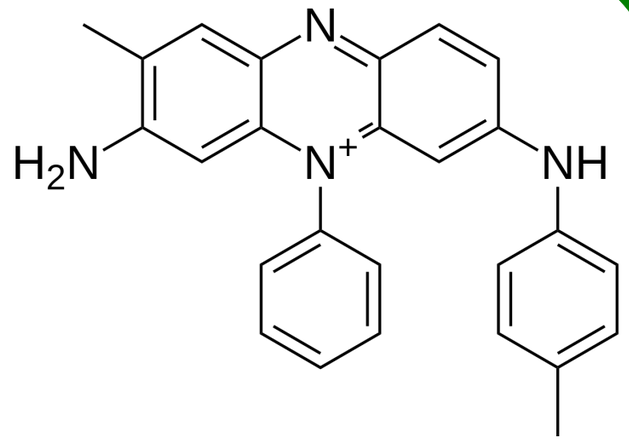
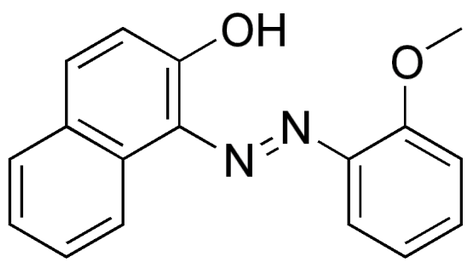
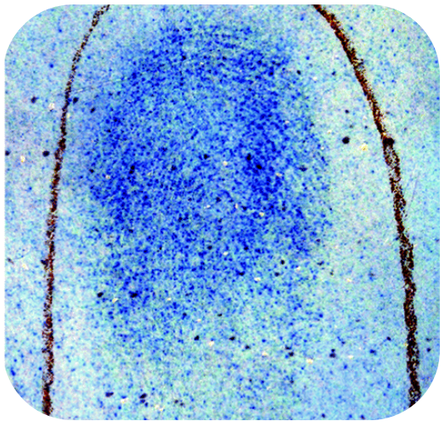
Dyes: Modern

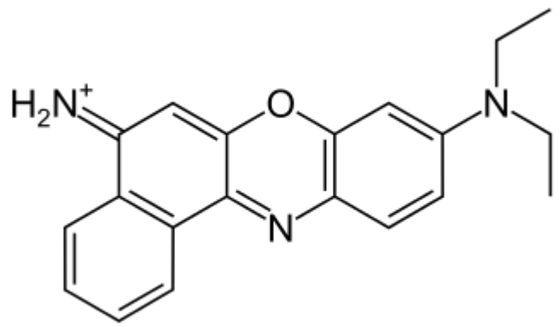
Development of modern synthetic dyes was started by William Perkin, who inadvertently synthesised an aniline dye, Mauveine, whilst trying to find a synthesis for quinine in 1856.

An explosion in synthetic dyes followed. The chromophore in modern synthetic dyes is often a long conjugated π-system, resulting in an electronic spectrum that absorbs strongly in part of the visible region of the EM spectrum, producing the observed colour.









Top: Mauveine. Prior to its discovery, purple clothing dye required the collection and crushing of thousands of innocent sea snails.
Middle: Sudan red. An azo dye used as a food colouring.
Bottom: Nile blue. A dye used in cell staining. The preponderance of African-inspired names for synthetic dyes comes from a 19th Century marketing ploy to make the colours seem exotic.