

Decomposition of **Cruorine** and Extraction of **Hematin**



An experiment described in Section 11 of G. G. Stokes
“On the Oxidation and Reduction of the Colouring Matter of the
Blood.” Proceedings of the Royal Society of London, **13**, 355-364
(1864)

Excerpt from Stokes Section 11

This [the decomposition of cruorine and separation of hematin] may be easily effected on a small scale by adding to the watery extract from blood-clots about an equal volume of ether, and then some glacial acetic acid, and gently mixing, but not violently shaking for fear of forming an emulsion. When enough acetic acid has been added, the acid ether rises charged with nearly the whole of the colouring matter, while the substance which caused the precipitate remains in the acid watery layer below. The acid ether solution shows in perfection the characteristic spectrum fig. 3. When most of the acid is washed out the substance falls, remaining in the ether near the common surface. If after removing the wash-water a solution, even a weak one, of ammonia or carbonate of soda be added, the colouring matter readily dissolves in the alkali.

G. G. Stokes (1864)

Preparation of a Watery Extract of Red Blood Cells

- Obtain a fresh sample of animal blood in presence of an anticoagulant, e.g. citrate or EDTA
- Centrifuge the blood and decant the blood plasma.
- Suspend the pellet of red blood cells in 80 volumes of water.
- Add a 5 mL sample to a test tube

