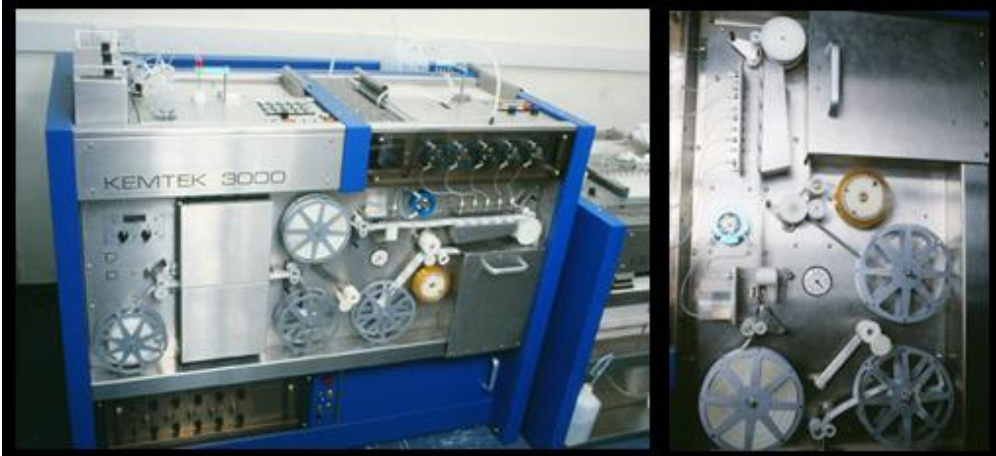




The Royal College of Pathologists

Pathology: the science behind the cure

Object 45: Radioimmunoassay



What is it?

Radioimmunoassay (RIA) is a laboratory technique that uses a radioactively labelled antigen to enable accurate measurement of antigens in a diagnostic sample. It uses the 'lock and key' principle of antigen-antibody interaction to measure how much antigen is present.

History

RIA was developed by New York scientists Rosalyn Yalow and Solomon Berson in the 1950s. They refused to patent the assay as they believed that the technique should benefit all patients. At the same time, British biophysicist Professor Roger Ekins published his own findings on the measurement of thyroxine in the blood using a similar technique. Yalow was awarded the Nobel Prize in 1977 for her work on RIA.

Pathology

RIA is one of the most powerful tools in use in the diagnostic laboratory today. It is exquisitely sensitive, and can detect levels of drugs as low as one part in a billion. It is also very versatile and can measure a wide range of substances including drugs, vitamins and hormones. RIA is used by pathologists working in many disciplines including toxicology, clinical biochemistry and immunology.

Find out more

You can [read](#) Rosalyn Yalow's Nobel Prize lecture.