CHRONOLOGY OF ADVANCES IN TOXICOLOGY

Chronology of advances in toxicology

1702

Richard Mead " A Mechanical account of Poisons" was the First Publication on Poisons . A Mechanical Account of Poisons in Several Essays is the first book in English . It was devoted entirely to the discussion of poisons.

1752

First time a chemical test to detect poison was used and accepted in a trial. The Mary Blandy case in England is the first reported use of chemical tests to detect arsenic in a legal trial.

1814

Mathieu J Orfila Father modern Toxicology.[1787 – 1853] Professor of Chemistry and Legal medicine, Paris , France. First book in Toxicology was published.

In France, Mathieu Orfila's Traité des Poisons is the first book devoted entirely to the subject of toxicology, introducing precise chemical methods . Orfila popularizes the word "toxicology."

1836

James Marsh ; an English Chemist. English chemist James Marsh devises a test for identifying trace amounts of arsenic. It became popular as 'Marsh Test'

1851

Jean-Servais Stas from Belgium. Belgian chemist Jean-Servais Stas develops a method for detecting vegetable alkaloid poisons (caffeine, morphine, strychnine, atropine, opium etc) in dead person.

1859

Spectroscope was invented by Robert Wilhelm Eberhard Bunsen and Gustav Robert Kirchhoff of Germany.

1860

Robert Wilhelm Eberhard Bunsen and Gustav Robert Kirchhoff. Spectrum Analysis Developed with the aid of the spectroscope, which they invented in 1859, German chemist Robert Bunsen and physicist Gustav Kirchhoff discover that vaporizing a substance creates a unique "signature" spectrum, which can be used to identify it. Using the spectroscope, in the same year they discover two new alkali metals—cesium and rubidium.

1906

Paper Chromatography technique was developed. Botanist Mikhail Tswett invents paper chromatography, basically to study the make-up of plant proteins such as chlorophyll.

1926

Swedish chemist Theodor Svedberg builds the first ultracentrifuge—a machine that separates particles by mass—making it possible to determine precisely the molecular weights of highly complex proteins. Svedberg wins the Nobel Prize for Chemistry in 1926 for his invention of the ultracentrifuge and studies in the chemistry of colloids.

1941

Ultraviolet Spectrophotometer Introduced

The Beckman model DU UV-vis spectrophotometer developed by Arnold Beckman, Howard Cary and Warren Baxter .It is the first instrument to probe the ultraviolet region with high precision and accuracy. It is considered by many as the most important instrument ever developed in the advancement of bioscience."

1948

During the 1920s and 1930s, Swedish chemist Arne Tiselius helps develop and improve electrophoresis and analysis by adsorption. In 1948, he receives the Nobel Prize in Chemistry for his work.

1950

New technologies like Ultraviolet and infrared spectrometry, X-ray diffraction, and paper chromatography made their entry in to forensic science.

1952

Partition Chromatography was developed and demonstrated by British biochemists Archer J. P. Martin and Richard L. M. Synge in 1941 at Biochemical Society meeting in London, England. They share the Nobel Prize in Chemistry in 1952 for their development of partition chromatography.

1953

Gas Chromatography was developed .The first commercial gas chromatograph was manufactured.

1966

Other latest technologies entered the field of Forensic science were; Fourier-transformed infrared spectroscopy (FTIR) ; measures various infrared wavelengths. Atomic absorption spectroscopy; uses the absorption of light to measure the concentration of gas-phase atoms.