

Real-time potentiometric monitoring hydrolysis of a bio-degradable drug (Atracurium besylate)

Ahmed Ma'mun

Cairo University, Egypt

Over the last decade, the field of Point-of-care (POC) diagnostics and *In-vitro* diagnostic (IVD) tests have been extensively used and acquired increasing prominence. The outstanding opportunities offered have greatly expanded the application fields and have placed these technologies at the forefront of the tests used in providing life-saving decisions to maintain health, manage disease, monitor therapy or pre- surgical operation examinations. Being portable and the unique ability of selective, and direct detection of ionic analytes in biological specimens without extraction, are very attractive features of potentiometric Ion Selective Electrodes (ISEs). The ability to furnish a continuous real time signals allows performing *in vitro* monitoring of the chemical species in chemical or biological reactions in the real time. Our drug, Atracurium besylate (ATR) is a skeletal muscle relaxant used for anesthesia in surgical operations undergoes chemo-degradation *in vivo* yielding a toxic metabolite Laudanosine (LDS). A closer insight to the *in vivo* metabolic processes of ATR, it was reported to be susceptible to degradation by Hofmann elimination as a primary route and ester hydrolysis as a secondary route of chemo-degradation.

Biography

Ahmed Ma'mun he completed his master degree in analytical chemistry at Cairo university. Also, he is an Editorial board member in journal of electrochemical society and many reputable scientific journals. Invited speaker in many international conferences worldwide. Expert in all topics related to analytical chemistry and bioanalysis Since graduation from Faculty of pharmacy-Cairo university May 2006. This lecture is a part of my recent publication " Real-time potentiometric sensor; an innovative tool for monitoring hydrolysis of chemo/bio-degradable drugs in pharmaceutical sciences" published in journal of biomedical and pharmaceutical analysis-The American Chemical Society- February 2018.

ahmedmamun1984@hotmail.com