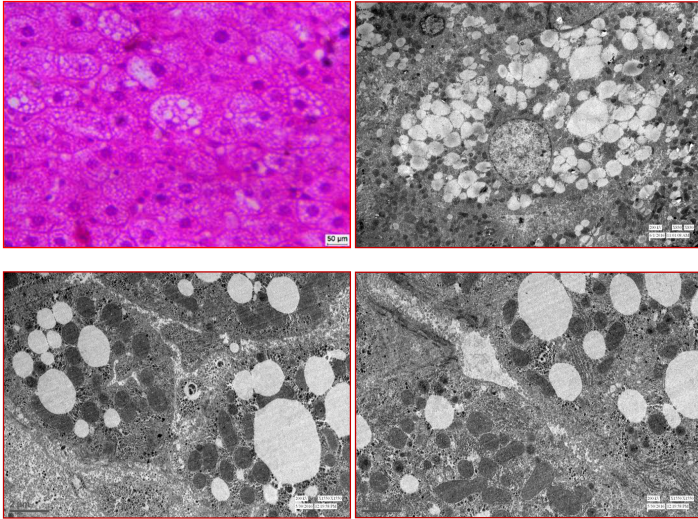


A Handbook on Hepatotoxicity



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Chapter 29

Thioacetamide induced Hepatotoxicity

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Thioacetamide with chemical formula C_2H_5NS and molecular weight 75.13, is a white crystalline substance of a faint aroma, and readily soluble in water and organic solvents. Thioacetamide was first developed by Childs and Siegler in 1945 to stop deterioration of oranges before developing it into a fungicide. Thioacetamide releases hydrogen sulphide during hydrolysis in acidic or alkaline environment. This reaction is used in the activated sludge sewage treatment procedure. Thioacetamide started to show up in the juice of treated fruits as a result of its use as a fruit preservative agent. Concerns were expressed over any possible negative health impacts. Fitzhug and Nelson 1948 provided the first proof of thioacetamide's hepatotoxic and carcinogenic potential, and subsequently it was added to list of substances that cause liver necrosis. Gupta 1956 demonstrated that histological visuals after few hours of single dose of thioacetamide were similar to those generated by several centrilobular hepatotoxicants, like carbon tetrachloride, chloroform, and ethionine. Several properties of thioacetamide like relatively short half-life, well-known potential