Waters
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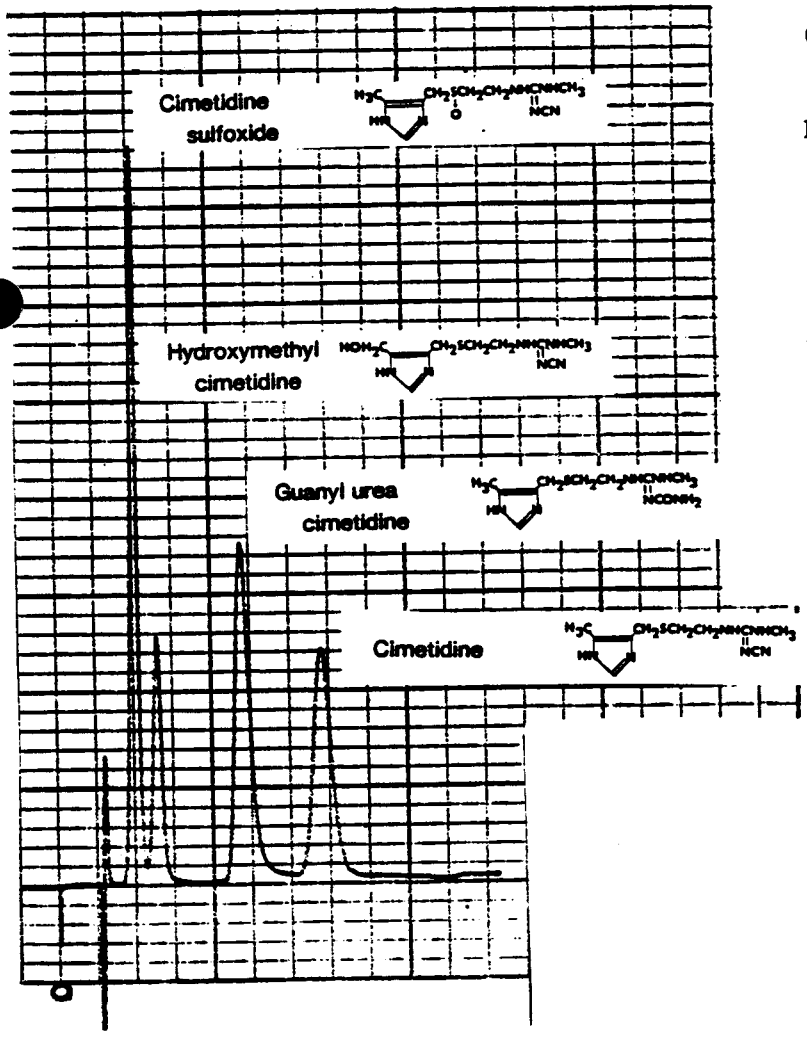
ANALYSIS OF CIMETIDINE AND ITS METABOLITES WITH A Z-MODULE™ SYSTEM

Cimetidine (Tagamet®, Smith Kline) is a potent H_2-histamine receptor antagonist with widespread clinical applications as an inhibitor of gastric acid secretion. Cimetidine is metabolized *in vivo* to three metabolites, hydroxymethyl cimetidine, cimetidine sulfoxide and guanylurea cimetidine. Of the three, cimetidine sulfoxide is the most important as well as the most polar. In the past, it has been poorly separated from the other metabolites and has often exhibited tailing due to excessive retention on normal-phase columns. Recently a rapid reverse-phase system has been developed for the analysis of cimetidine and its metabolites which employs the Z-Module System.



Column: Radial PAK μBONDAPAK™ C_{18} Cartridge

Mobile Phase: 5mM n-butylamine phosphate, pH 7.1, in water:methanol (75:25 (v/v))

Flow Rate: 4 ml/min

Detector: Waters Associates® Model 450 Variable UV/Vis Detector; 229 nm; 0.1 AUFS

Sample Concentration Injected: Approximately 1μg metabolites and 2.5 μg cimetidine

Injection Volume: 25μl

Chart Speed: 5 mm/min.

*Reference Lab Highlight Volume 1, No. 4
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