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SCHOOL OF PHARMACY

Department of Pharmaceutical Chemistry

A study of label claim of low dose Acetyl Salicylic Acid (Aspirin) tablets on sale in Thika town

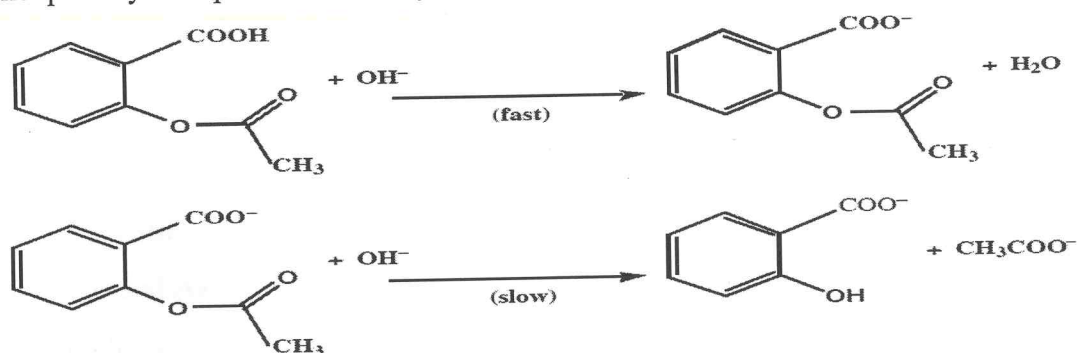
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ABSTRACT

In the last few years, aspirin has become a life saver against cardiovascular accident. This study was carried out to determine content of active ingredients and possible dose variations in the amount of active constituent (acetylsalicylic acid) in the various brands of aspirin drugs marketed in Thika Town. In this study, ten different brands of low dose aspirin tablets were randomly sampled from different community pharmacy outlets and assay of Acetyl salicylic acid was performed using the back titration method described in the British Pharmacopoeia.

In this study, the back titration method described in the BP was used. Back titration is done when reactions are slow or present unfavorable equilibria for direct titration. Aspirin is a weak acid that also undergoes slow hydrolysis; i.e., each aspirin molecule reacts with two hydroxide ions. To overcome this problem, a known excess amount of base is added to the sample solution and an HCl titration is carried out to determine the amount of unreacted base. This is subtracted from the initial amount of base to find the amount of base that actually reacted with the aspirin and hence the quantity of aspirin in the analyte.



Ten samples were included in the analysis. All the ten samples were within the Pharmacopoeia content limits of 95-105%. The samples were as follows; Sample A (75mg) 100.25%, Sample B (75mg) 102.44%, Sample C (100mg) 103.26%, Sample D (75mg) 99.27%, Sample E (75mg) 97.75%, Sample F (75mg) 98.68%, Sample G (80mg) 99.79%, Sample H (300mg) 98.64%, Sample I (300mg) 100.46% and Sample J (50mg) 99.79%.

The samples assayed suggest that the different brands of ASA on sale in Thika Town meet the British Pharmacopoeia set contents limits despite the variations.