

UGC-Minor Research project

Executive Summary : -

(Sanctioned by UGC (WRO), Pune. (File No.47-871/09 (WRO), Dated: - 4th Sept., 2009.)

Principal Investigator : - Dr. C.B. Masram.

Topic : - “ Analytical Studies of some Organic Systems”

The present work aims to develop simple sensitive and precise study of Riboflavin & Ascorbic acid for developing its polargographic behaviour and their estimations in various medicinal products & natural fruits.

RIBOFLAVIN (Vitamin B₂)

The developed method was rapid, simple, reproducible and accurate. It could be applied to various pharmaceutical formulations. The Standard deviation, relative mean deviation and coefficient of variation are found to be 0.77, 5.2% and 4.5% respectively. An important advantage of the method is that it is possible to determine concentration of riboflavin in pharmaceutical formulations in the presence of other commonly occurring ingredients.

ASCORBIC ACID (Vitamin C)

The developed method was rapid, simple, reproducible and accurate. It could be applied to various pharmaceutical formulations and fruit samples. The Standard deviation, relative mean deviation and coefficient of variation are found to be 0.97, 3.2% and 3.5% respectively. An important advantage of the method is that it is possible to determine concentration of ascorbic in the presence of other commonly occurring ingredients.

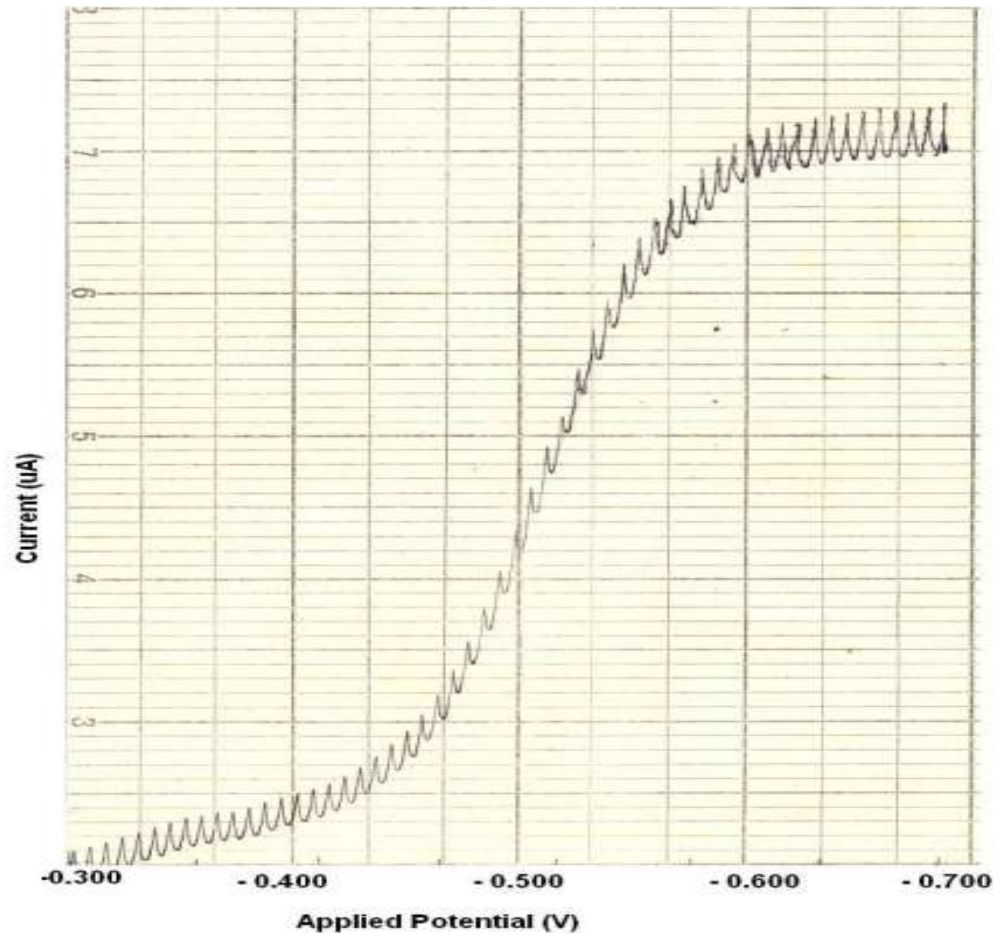


Fig. 1: Typical polarogram of 30 mg L⁻¹ riboflavin in 0.02M acetate buffer of pH=7.65.

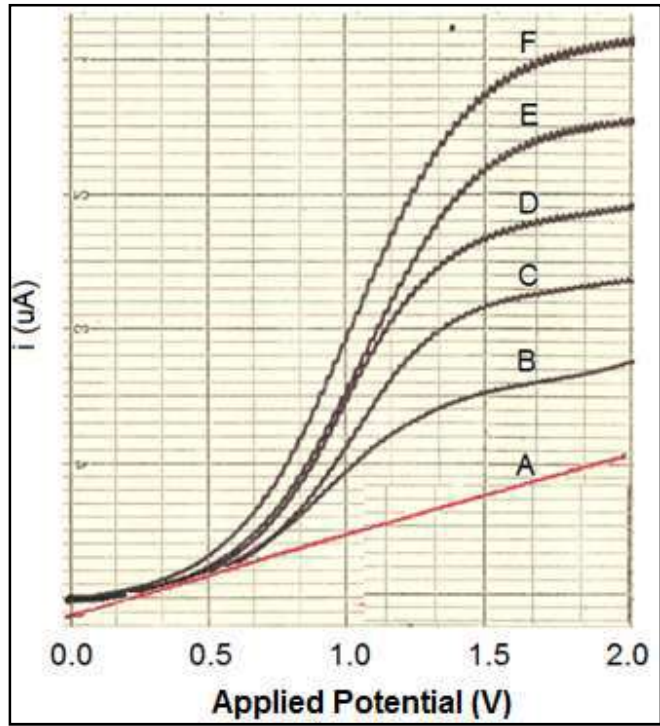


Fig. 2: Typical polarograms of ascorbic acid at different concentrations (A) Blank (B) 26 mg L^{-1} , (C) 35 mg L^{-1} , (D) 44 mg L^{-1} and (E) 53 mg L^{-1} ascorbic acid