A DENSITOMETRIC TECHNIQUE FOR ESTIMATION OF SOLASODINE AND THE STUDY OF THE TOTAL ALKALOID AND SOLASODINE CONTENTS IN *SOLAMUM XANTHOCARPUM*

T.D. Ranatunge*, L.S. R. Arambewela*, M.A.N. Kumudini*,
J.Ranatunge* and S. Wimalasena**
*Ceylon Institute of Scientific & industrial Research, Colombo 7.
**Dept. of Chemistry, University of Kelaniya.

Solanum xanthocarpum used in the indigenous system of medicine as an expectorant is also a source of the commercially important compound solasodine.

Experiments on cultivation of *S. xanthocarpum* plants have commenced at CISIR. Therefore convenient analytical techniques and analytical data on the cultivated plants are necessary.

As the colorimetric, spectrophotometric and titrimetric methods of estimation of solasodine reported are too tedious, a simple and rapid densitometric technique was devised in our laboratory. The tlc plates were sprayed with antimony chloride or Dragendroff's reagents prior to scanning at the appropriate wavelengths as solasodine does not exhibit district absorption maxima in the uv and visible spectra. Antimony chloride was more sensitive than the latter but less stable colour.

The total glycoalkaloid contents of mature *S.xanthocarpum* ($\sim$0.15%) and of the plants before and after flowering were determined. A decrease in the alkaloid content was observed soon after flowering. A higher alkaloid content was found in green berries (0.28%) compared to yellow berries.

The estimation of solasodine contents indicated that highest content (3.5 mg/100 g) was in the green berries compared to yellow berries and the whole plants, before and after flowering. In general the total glycoalkaloid and solasidine contents in the plants were low.