

ISOLATION AND IDENTIFICATION OF SOLASODINE FROM THE FRUIT OF *Solanum melongena* L.

Tjie Kok

Faculty of Biotechnology, Mathematics and Science Department, University of Surabaya,
Surabaya, Indonesia,
E-mail: tjie_kok@yahoo.com

Abstract

This research was aimed at isolating solasodine from the fruit of *Solanum melongena* L. and identifying the product of isolation. The isolation was performed initially by direct method steam distillation followed by reflux with concentrated hydrochloric acid to extract the intended substance. Identification of the product was conducted using color test with sulfuric acid (H_2SO_4), color test according to Briggs and Salkowski, thin layer chromatography (TLC), and Fourier transform–infrared spectrophotometry (FTIR). The reaction of the product and H_2SO_4 gave a brown coloration, while the result of TLC demonstrated a brown spot with retardation factor (Rf) similar to that of standard solasodine, and the IR spectrum showed peaks similar to those of standard. These results confirmed that solasodine existed in the extract of *Solanum melongena* L.'s fruit and therefore direct method live steam distillation followed by reflux can be used to isolate solasodine from the fruit.

Keywords: Solasodine, *Solanum melongena* L., steam distillation, reflux.

INTRODUCTION

In Indonesia, there are many specieses of *Solanum* plants that intently cultivated or grow by themselves. One species of *Solanum* plant containing solasodine is *Solanum melongena* L. (Christina & Irene, 2008; Chen

& Li, 1993). The fruit of this plant is widely used as food stuff and alternative medicine such as antipiretics, anti diarrhea, analgesics, and detoxicant.

Solasodine is an alkaloid having a structure of (Nishino & Hideaki, 2007):

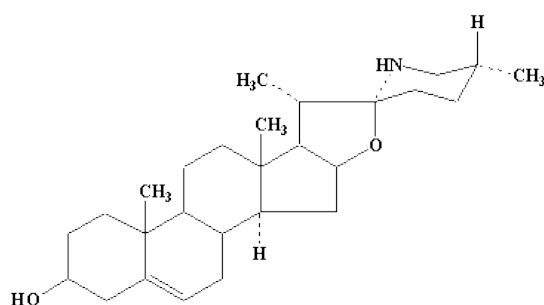


Figure 1 The structure of solasodine