

ABSTRACT**VALIDATION OF UV-Vis SPECTROPHOTOMETRIC METHOD FOR CHLORPHENIRAMINE MALEATE DETERMINATION IN TABLET CONTAINING TARTRAZINE****Rosa Iftia Elfadiana**

The determination of chlorpheniramine maleate (CTM) in tablet is very important to ensure the safety and the achievement of the therapeutic effects. However, tartrazine in CTM tablet will interfere CTM determination using direct UV-Vis spectrophotometry. Therefore, three-wavelength and derivative UV-Vis spectrophotometric method was performed to eliminate interference caused by tartrazine. The aim of this research was to validate UV-Vis spectrophotometric method for determination of chlorpheniramine maleate in tablet containing tartrazine. Selected wavelength were 262 nm, 266 nm and 270 nm for three-wavelength method and 232 nm for derivative method. Calibration graph for three-wavelength method was linear with coefficient correlation (r) of 0.9994 and V_{x0} of 2,29% meanwhile for derivative method the coefficient correlation (r) and V_{x0} were 0,999 and 1,33% respectively. The percentage recovery of chlorpheniramine maleate was $99.90\% \pm 9,2 \times 10^{-3}$ for three-wavelength and $99,31\% \pm 8,7 \times 10^{-3}$ for derivative method. The precision was 1,21% for three-wavelength method and 0,84% for derivative method. It can be concluded that UV-Vis spectrophotometric method with three-wavelength and derivative techniques for chlorpheniramine maleate determination in tablet containing tartrazine fulfills the validation parameters of selectivity, linearity, accuracy and precision. Based on one way ANOVA analysis, there were no significant differences among the result of CTM determination using the three-wavelength method, derivative method and standard method from Farmakope Indonesia.

Keywords: chlorpheniramine maleate, tartrazine, three-wavelength technic, derivative technic, UV-Vis spectrophotometry.