ABSTRACT

SIMULTANEOUS DETERMINATION OF EGCG AND CAFFEINE IN THE IMPORTED BLACK TEA PRODUCTS SOLD IN SURABAYA USING TLC-DENSIITOMETRY METHOD

Wita Saraswati

There are various kinds of black tea products in Surabaya both from local production and imported products. The quality of these products yet to be known precisely. EGCG and caffeine which contain in tea can be used as a quality parameter of the tea products. The purpose of this research was to determine the concentration of EGCG and caffeine in the imported black tea products. First of all, extraction of EGCG-caffeine in the tea was done to separate them with other compounds. The solvent that used in the extraction process was ethyl acetate. Thin Layer Chromatography (TLC) Densitometry method was used for the quantitative analysis. Eluent for this analysis was a combination of chloroform: ethyl acetate: n-butanol: formic acid (2:1:0,7:0,3) and the maximum wavelength was 275 nm. Such method was validate for parameters as follow: selectivity, LOD & LOQ, linearity, accuracy, and precision. All of the parameters has met the validation requirements. Furthermore, the results of EGCG contains in the samples were lower than the caffeine level.

Keyword: EGCG, Caffeine, TLC – Densitometry, Black tea