

## ABSTRACT

### ANALYSIS SEMIQUANTITATIVE OF CAFFEINE IN ENERGY DRINK USING DIGITAL IMAGE PROCESSING METHOD FROM THIN LAYER CTOMATOGRAPHY (TLC)

Oktaviola Dwi Safitri

Energy drinks or called energy drinks are drinks that can be used to maintain health and increase body endurance. Almost all energy drinks contain caffeine. This study used 3 samples, namely Extrajoss, Kukubima, and Kratindaeng. The purpose of this study was to determine how much caffeine content is in energy drinks using digital image processing of the results of Thin Layer Chromatography (TLC). The results of linearity in this study entered the range of correlation coefficient values that meet the values of  $y = 2.024x + 418.6$  and  $r$  values = 0.9906. Still, this method cannot be said to be valid because it has not gone through complete method validation. The results of the semiquantitative analysis are obtained from digital image processing, namely from the JustQuantify website. The results of this study were caffeine levels in each sample, sample A was 194,4 mg / 150 ml; sample B of 279,1 mg / 150 ml; sample C amounted to 286,5 mg / 150 ml.

**Keywords :** *Caffein, Energy Drink, and Thin Layer Chromatography (TLC)*