

**DETERMINATION OF TRIBUTYRIN IN MARGARINE BY USING
COLUMN CHROMATOGRAPHY (CC), THIN LAYER
CHROMATOGRAPHY (TLC) AND HIGH PERFORMANCE
LIQUID CHROMATOGRAPHY (HPLC)**

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ABSTRACT

DETERMINATION OF TRIBUTYRIN IN MARGARINE BY USING COLUMN CHROMATOGRAPHY, THIN LAYER CHROMATOPHRY (TLC) AND HIGH PERFORMANCE LIQUID CHROMATOGRAPHY (HPLC)

Triglycerides are product formed from the process of transesterification of fatty acid and glycerol. There are many types of triglycerides existed and one of them is tributyrin. Tributyrin is a compound that made up of combination butyric acid an also glycerol. It is a type of triglycerides that naturally present in butter and usually use as an ingredient in making margarine. In this analysis, it is concern to determine the concentration of tributyrin in the sample of margarine. The process started with the step of column chromatography and also thin layer chromatography in order to identify the most suitable solvent mixture and its ratio for the analysis. The best solvent is solvent mixture of hexane with acetonitrile with ratio 70:30. The information about the solvent mixture and the ratio later being further use for the analysis by using high performance liquid chromatography (HPLC). In the step of analysis using HPLC, the effect of flow rates are analyzed on both AR grade and HPLC grade of standard tributyrin to compare the content of impurities. After the best flow rate selected which s 1.0 mLmin^{-1} , the analysis are proceeds to the sample injection step to HPLC. Lastly, all results obtained then been used for calculation of concentration of tributyrin in the sample.