

The Phenolic Content of Polygala (Polygala Paniculata L.)

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Abstract. Background Polygala grass (Polygala paniculata L.) is one of the most widely grown plants in the Enrekang area, South Sulawesi. Polygala (Polygala paniculata L.) is included in the Polygalaceae tribe and is widely used by the community as a wound medicine. This study aims to determine the phenolic content of the methanol extract of polygala grass (Polygala paniculata L.) Methodology This research is done by experimental using quantitative method. This experiment has done by extracting sample using maceration method with methanol as solvent. The chemical compound then analyzed using TLC-Densitometry to determine the phenolic content. Results Table 1. Quantitative analysis of methanol extract of polygala grass (Polygala paniculata L.) Sample Area Phenolic content (μg) Average content (μg) % Phenolic content Methanol extract of Polygala grass (Polygala paniculata L.) I 936.40 35.112 35.280 0.004% II 1119.61 37.246 III 796.31 33.480 Table 2. Yield Value and Comparison of Sample and Gallic Acid on Densitometry Instrument No. Sample Rf Value 1 2 3 4 5 6 7 8 Sample 1 Sample 2 Sample 3 Gallic acid 100 ppm Gallic acid 200 ppm Gallic acid 300 ppm Gallic acid 400 ppm Gallic acid 500 ppm 0.99 0.99 0.94 0.88 0,88 0.87 0.87 0.87 Discussion To perform the extraction, the extraction method used was immersion in methanol solvent and the extraction results were obtained. Determination of the percent yield is intended to determine the extent to which secondary metabolites are transported by the solvent, but the type of compound transported cannot be determined. Qualitative testing of methanol extract of Polygala grass (Polygala paniculata L.) by thin layer chromatography (TLC). The concentration of the compound can be determined using a TLC densitometer by inserting separate points on the plate into the instrument, and then determining the concentration based on the area under the relationship curve (AUC) of each point on the disk. Quantitative tests were carried out to determine the phenol content in the methanol extract of polygala grass (Polygala paniculata L.) by densitometry. This analysis used standard solutions of gallic phenolic acid with different concentrations of 100, 200, 300, 400 and 500 ppm. Gallic acid standard solution is used as a reference to measure the number of phenolic compounds present in a natural substance, and gallic acid is a pure substance and can be obtained in pure form. To determine the phenol content in shrubs (Polygala paniculata L.) from the equation $y = 2078.85.85x$. Resolution is affected by the space saturation factor and although the scores aren't that great, the difference is very small. Conclusion Based on the results, it can be concluded that in the qualitative test, Polygala (Polygala paniculata L.) methanol extract is positive for phenolic compounds. And in the determination of phenol levels in Polygala grass (Polygala paniculata L.) obtained 35,280 g with phenolic level of 0.004%.

Keyword: phenolic, polygala paniculata l, polygala grass, TLC densitometry.