ABSTRACT

Background: Cardiovascular disease is one of the leading causes of death in the world and is the number one cause of death in Indonesia. Cardioprotective agents can be used to prevent and treat cardiovascular disease, with one of the targets being the inhibition of platelet aggregation (antiplatelet). One source of antiplatelet agents comes from plants. Karet Kebo leaves (*Ficus elastica* Roxb. ex Hornem) is traditionally used for the treatment of cardiovascular diseases (stroke and thrombosis). The plant extract has platelet aggregation inhibitory activity, so its potential as an antiplatelet fraction needs to be known, but there is no further information regarding the content of compounds that contribute as antiplatelets.
Objectives: to identify the content compound of Karet Kebo extract and determine the potential of its fraction in inhibiting platelet aggregation.
Methods: identification was carried out by thin-layer chromatography and High-Resolution Mass Spectrometry (HRMS) analysis. Platelet aggregation was measured using the Light Transmission Aggegometer. Data from the percent aggregation was statistically analyzed using Kruskal-Wallis followed by Tukey's Post hoc test if there were significant differences in variance.
Results and conclusions: the results of TLC analysis of ethanol extracts of Karet Kebo leaves (*Ficus elastica* Roxb. ex Hornem) contain terpenoid, flavonoid, phenolic and organic compounds. While the identification results using HRMS contained lupeol, α-linolenic acid, icaritin, phloretin, α,α-trehalose, chlorogenic acid, and abscisic acid compounds. The antiplatelet activity of F2 and F7 was higher than other fractions. However, in general, fractions and subfractions of Karet Kebo leaves (*Ficus elastica* Roxb. ex Hornem) induced by epinephrine had a weak antiplatelet activity with percent inhibition in the range of 6.38%-20.28% and 4.38%-5.70%, respectively.

Keywords: Aggregometer, Antiplatelet, Karet Kebo Leaves, *Ficus elastica*, Fractions