

INTISARI

BAIHAQI H. I., 2020, POTENSI EKSTRAK ENZIM DAUN MANGGA KOPYOR (*Mangifera indica* L.) SEBAGAI AGEN FIBRINOLITIK SECARA *IN VITRO*, SKRIPSI, FAKULTAS FARMASI, UNIVERSITAS SETIA BUDI, SURAKARTA.

Agen fibrinolitik digunakan untuk mendegradasi fibrin dalam bekuan darah sehingga produk degradasi akan menjadi lebih larut dalam darah. Enzim fibrinolitik dapat dihasilkan dari tanaman salah satunya yaitu berasal dari tanaman mangga. Penelitian ini bertujuan untuk mengetahui potensi ekstrak enzim daun mangga kopyor (*Mangifera indica* L.) dan mengetahui konsentrasi yang paling efektif sebagai agen fibrinolitik secara *in vitro*.

Penelitian diawali dengan determinasi tanaman mangga kopyor (*Mangifera indica* L.), pengambilan bahan, ekstraksi enzim fibrinolitik daun mangga kopyor dengan metode sentrifugasi, pemurnian ekstrak enzim daun mangga kopyor dengan pengendapan ammonium sulfat (pelet pemurnian enzim ke-1) dilanjutkan presipitasi TCA atau aseton, pencucian metanol dan ekstraksi fenol (pelet pemurnian enzim ke-2), pengukuran kemurnian protein, penetapan kadar protein metode Lowry serta uji potensi fibrinolitik metode *fibrin plate* secara *in vitro*.

Ekstrak enzim daun mangga kopyor memiliki potensi sebagai agen fibrinolitik secara *in vitro* ditandai dengan terbentuknya zona jernih pada media fibrin. Konsentrasi yang efektif, yaitu 80% memiliki potensi yang optimal sebagai agen fibrinolitik. Sampel supernatan 80% (37,3mm), pelet pemurnian enzim ke-1 80% (45,51mm), dan pelet pemurnian enzim ke-2 (45,77mm). Sampel pelet pemurnian enzim ke-2 pada konsentrasi 80% memiliki potensi yang optimal sebagai agen fibrinolitik secara *in vitro*.

Kata Kunci : *Mangifera indica* L., fibrinolitik, *fibrin plate*, Lowry

ABSTRACT

BAIHAQI HI, 2020, POTENTIAL ENZYMES EXTRACT OF KOPYOR MANGGO LEAF (*Mangifera indica* L.) AS FIBRINOLITIC AGENT IN VITRO, ESSAY, FACULTY OF PHARMACY, SETIA BUDI UNIVERSITY, SURAKARTA.

Fibrinolytic agents are used to degrade fibrin in blood clots so that the degradation products will become more soluble in the blood. Fibrinolytic enzymes can be produced from plants, one of which is the mango plant. This study aims to determine the potential of kopyor mango leaf enzyme extract (*Mangifera indica* L.) and determine the most effective concentration as fibrinolytic agent in vitro.

The research began with the determination of kopyor mango (*Mangifera indica* L.), material collection, extraction of kopyor mango leaf fibrinolytic enzymes by centrifugation method, purification of kopyor mango leaf enzyme extract by depositing ammonium sulfate (first enzyme purification pellet) followed by TCA or acetone precipitation, methanol washing and phenol extraction (second enzyme purification pellet), protein purity measurement, Lowry method protein assay and fibrinolytic potential test using fibrin plate method in vitro.

Kopyor mango leaf enzyme extract has potential as fibrinolytic agent in vitro characterized by the formation of a clear zone on fibrin media. Effective concentration, that is 80%, has optimal potential as fibrinolytic agent. 80% (37.3mm) supernatant sample, 80% first enzyme purification pellet (45.51mm), and second enzyme purification pellet (45.77mm). The sample of the second enzyme purification pellet at concentration of 80% has optimal potential as in vitro fibrinolytic agent.

Keywords: *Mangifera indica* L., fibrinolytic, fibrin plate, Lowry