**UJI AKTIVITAS ANTIOKSIDAN EKSTRAK ETANOL DAUN BELIMBING MANIS (*Averrhoa carambola* L.) DI DAERAH PADANG LAWAS UTARA, SUMATERA UTARA**

**DENGAN METODE DPPH (*1,1-Diphenyl-2-***

***Picrylhydrazil*)**

# ABSTRAK

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Daun Belimbing Manis (*Averrhoa carambola* L.) termasuk *family* Oxalidaceae, merupakan salah satu jenis tumbuhan tropis yang diketahui memiliki antioksidan yang tinggi. Belimbing manis merupakan tanaman yang memiliki berbagai kandungan zat gizi yang bermanfaat bagi tubuh, seperti vitamin A, vitamin C, kalium, dan serat, memiliki efek farmakologis seperti anti radang usus, antimalaria, antirematik, analgesik, peluruh liur, peluruh kencing (diuretik), dan menghilangkan panas.

Tujuan penelitian ini untuk mengetahui aktivitas antioksidan ekstrak etanol daun belimbing manis, dan dibandingkan dengan vitamin C sebagai kontrol positif, mengetahui golongan senyawa dalam daun belimbing manis dan perbedaan nilai IC50 ekstrak etanol daun belimbing manis dan vitamin C. Ekstrak didapat dengan cara maserasi menggunakan pelarut etanol 96%. Ekstrak etanol daun belimbing manis dan vitamin C diuji menggunakan metode DPPH (*1,1,-diphenyl-2-picrylhydrazyl*), dan menggunakan spektrofotometri UV–Visible untuk menentukan panjang gelombangnya.

Hasil skrining fitokimia serbuk simplisia dan ekstrak etanol daun belimbing manis mengandung golongan senyawa flavonoid, saponin, steroid, dan tanin. Hasil pengujian aktivitas antioksidan dalam meredam radikal bebas DPPH menunjukan bahwa ekstrak etanol daun belimbing manis memiliki aktivitas antioksidan yang kuat dimana ekstrak etanol daun belimbing manis memiliki nilai IC50 sebesar 69,63 ppm dan vitamin C memiliki aktivitas yang sangat kuat dimana nilai IC50 sebesar 33,67 ppm. Dimana koefisiensi korelasi (r) yang diperoleh yaitu ekstrak etanol daun belimbing manis 0,948 dan koefisien korelasi vitamin C adalah 0,966.

Kata Kunci : Ekstrak Daun Belimbing Manis (*Averrhoa carambola* L.), Vitamin C, Antioksidan, DPPH, Spektrofotometri UV - Visible

**TESTING ANTIOXIDANT ACTIVITY OF ETHANOL EXTRACT OF SWEET Starfruit (*Averrhoa carambola* L.) LEAVES IN PADANG LAWAS UTARA, NORTH SUMATERA USING DPPH METHOD (1,1-Diphenyl-2-Picrylhydrazil)**

# ABSTRACT

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LeafSweet Starfruit (Averrhoa carambola L.) including family Oxalidaceae, is one type of tropical plant that is known to have high antioxidants. Carambola is a plant that contains various nutrients that are beneficial to the body, such as vitamin A, Vitamin C, potassium, and fiber, has pharmacological effects such as anti-inflammation of the intestine, antimalarial, antirheumatic, analgesic, laxative saliva, laxative urine (diuretic), and dissipate heat.

The purpose of this study was to determine the antioxidant activity of the ethanol extract of sweet star fruit leaves, and compared with vitamin C as a positive control, to determine the class of compounds in sweet star fruit leaves and differences in IC values.50Ethanol extract of sweet star fruit leaves and Vitamin C. The extract was obtained by maceration using 96% ethanol as solvent. The ethanol extract of sweet star fruit leaves and vitamin C were tested using the DPPH (1,1,-diphenyl-2-picrylhydrazyl) method, and using UV-Visible spectrophotometry to determine the wavelength.

The results of phytochemical screening of simplicia powder and ethanol extract of sweet starfruit leaves contain flavonoid, saponin, steroid, and tannin compounds. The results of testing the antioxidant activity in reducing DPPH free radicals showed that the ethanolic extract of sweet starfruit leaves had strong antioxidant activity where the ethanolic extract of sweet starfruit leaves had an IC value.50 of 69.63ppm and vitamin C has a very strong activity where the IC . value50of 33.67 ppm. Where the correlation coefficient (r) obtained is the ethanol extract of sweet star fruit leaves 0.948 and the correlation coefficient of vitamin C is 0.966.

Keywords : Leaf ExtractSweet Starfruit (Averrhoa carambola L.), Vitamin C, Antioxidant, DPPH, UV Spectrophotometry - Visible