

ABSTRACT

EFRIDA MAHARANI, 2025, DIURETIC ACTIVITY TEST OF ETHANOL EXTRACT OF ARUMANIS MANGO LEAVES (MANGIFERA INDICA L. VAR. ARUMANIS) IN MALE WHITE MICE (MUS MUSCULUS), KARYA TULIS ILMIAH, PROGRAM STUDI D-III FARMASI, FAKULTAS FARMASI, UNIVERSITAS SETIA BUDI, SURAKARTA. Dibimbing oleh apt. Yane Dila Keswara, S.Farm., M.Sc.

Diuretics are drugs that act on the kidneys to increase the excretion of water and sodium chloride. Arumanis mango leaves are known to contain various bioactive compounds such as flavonoids, alkaloids, and triterpenoids. The flavonoid mechanism inhibits the reabsorption of $\text{Na}^+/\text{K}^+/\text{Cl}^-$ ions, resulting in an increase in electrolytes in the tubules and resulting in a diuretic effect. This study aims to determine the diuretic effect of ethanol extract of Arumanis mango leaves (*Mangifera indica* L. var. *Arumanis*) in male white mice (*Mus musculus*).

The test was conducted using five treatment groups, each consisting of 5 mice. The negative control group was given 0.5% CMC-Na, the positive control group was given furosemide at a dose of 0.104 mg/20g of mouse body weight. The other three treatment groups were given ethanol extract of arumanis mango leaves at doses of 60 mg/kg body weight, 120 mg/kg body weight, and 240 mg/kg body weight given orally. Before being given treatment, each group was given a loading dose of 0.56 mL of warm water orally, then the dose was administered to each group. After that, observations were made by measuring the urine volume of the mice every hour for 6 hours.

Research results show that ethanol extract of sweet mango leaves has diuretic activity and contains flavonoids, alkaloids, and triterpenoids. The diuretic activity of sweet mango leaf extract at doses of 60 mg/kgBW and 240 mg/kgBW can provide an effective dose to increase urine volume in test animals (mice).

Keywords: *Mangifera indica* L. var. *arumanis*, diuretic, urine volume, furosemide, AUC, diuretic activity.

