

INVENTARISASI SENYAWA ANTIINFLAMASI PADA TANAMAN
BUASBUAS (*Premna pubescens* Blume) DENGAN METODE
GAS CHROMATOGRAPHY-MASS SPEKTROMETRI

Risna Lenita Nasution (NIM 4143220035)

ABSTRAK

Tujuan dari penelitian ini untuk mengidentifikasi dan membandingkan jenis senyawa antiinflamasi pada daun muda, daun tua, buah dan tangkai daun tanaman buasbuas (*Premna pubescens* Blume) dengan metode *Gas Chromatography Mass Spectrometry* (GC-MS). Masing-masing sampel diekstrak menggunakan metode maserasi dengan perendaman etanol 96% di *dryer* untuk mendapatkan ekstrak etanol berbentuk pasta. Pasta di analisis menggunakan (GC-MS). Data hasil GC-MS dianalisis menggunakan *software Pubchem* (<https://pubchem.ncbi.nlm.nih.gov>). Hasil penelitian menunjukkan senyawa antiinflamasi terbanyak pada daun tua dengan 11 jenis senyawa bioaktif diantaranya senyawa 2-oxopentanedioic acid, (methyltrisulfanyl)methane, (5S)-5-benzyl-1-[4-[(2R)-5,6-dioxo-1-(2-phenylethyl)piperazin-2-yl]butyl]-4-(2-phenylethyl)piperazine-2,3-dione, 9-methoxy-3,6-dimethyl-2,4,5,6-tetrahydro-1H-azepino[4,5-b]indol-6-ium; chloride, (1S)-2-ethyl-1-(4-methylphenyl)-1H-chromeno[2,3-c]pyrrole-3,9-dione, ethyl 2-(2-oxocyclohexyl)acetate. Pada daun muda hanya ada 1 jenis senyawa bioaktif yaitu senyawa 1-cyano-2-methylguanidine. Pada buah sebanyak 4 jenis senyawa bioaktif diantaranya senyawa 3-(3,4-dichlorophenyl)-1-[6-[2-(dimethylamino)ethoxy]-4,7-dimethoxy-1-benzofuran-5-yl]propan-1-ol, N,N-dimethyl-4-[2-(3-methylphenyl)ethenyl]aniline. Pada tangkai daun sebanyak 4 jenis senyawa bioaktif diantaranya senyawa (5S)-5-benzyl-1-[4-[(2R)-5,6-dioxo-1-(2-phenylethyl)piperazin-2-yl]butyl]-4-(2-phenylethyl)piperazine-2,3-dione, N-[chloro(dimethylamino)phosphoryl]-N-methylmethanamine, 2-triethoxysilylbutanenitrile. Senyawa antiinflamasi tertinggi terdapat di daun tua dan terendah di daun muda.

Kata kunci: Antiinflamasi, Buasbuas (*Premna pubescens* Blume), *Gas Chromatography Mass Spectrometry* (GC-MS), *Software Pubchem*, Senyawa Bioaktif

**AN INVENTORY OF ANTI-INFLAMMATORY COMPOUNDS IN BUASBUAS
(*Premna pubescens* BLUME) BY USING GAS CHROMATOGRAPHY-MASS
SPECTROMETRY**

Risna Lenita Nasution (NIM 4143220035)

ABSTRACT

The purpose of this research was to identify and compare type of anti-inflammatory compounds in young leaves, old leaves, fruit and leaf stalks of the plant buasbuas (*Premna pubescens* Blume) with Gas Chromatography Mass Spectrometry method (GC-MS). Each sample was extracted using a soaking method of maceration with ethanol 96% in the dryer to get the ethanol extract of shaped pasta. Pasta in analysis using (GC-MS). GC-MS results data is analyzed with software Pubchem (<https://pubchem.ncbi.nlm.nih.gov>). The results showed the most antiinflamasi compound on old leaves with 11 types of bioactive compounds such as compounds 2- oxopentanedioic acid, (methyltrisulfanyl) methane, (5S) -5- benzyl -1- [4- [(2R) -5,6 -dioxo -1- (2-phenylethyl) piperazin -2- yl] butyl] -4- (2-phenylethyl) piperazine -2, 3- dione, 9-methoxy -3, 6- dimethyl -2, 4, 5, 6- tetrahydro -1 H- azepino [4, 5-b] indol -6-ium; chloride, (1S) -2- ethyl -1- (4- methylphenyl) -1H- chromeno [2,3-c] pyrrole -3,9-dione, ethyl 2- (2-oxocyclohexyl) acetate. In young leaves there is only 1 type of bioactive compound that is compound 1- cyano -2- methylguanidine. In fruits as many as 4 types of compounds bioactives including compounds 3- (3,4- Dichlorophenyl) -1- [6- [2- (Dimethylamino) Ethoxy] -4,7- Dimethoxy -1- Benzofuran -5- Y1] Propan -1- Ol, N, N- Dimethyl -4- [2- (3- Methylphenyl) Ethenyl] Aniline. On the stalk leaves as many as 4 types of bioactive compounds such as compounds (5S) -5- benzyl -1- [4- [(2R) -5,6- dioxo -1- (2- phenylethyl) piperazin -2- yl] butyl] -4- (2-phenylethyl) piperazine -2, 3- dione, N- [chloro (dimethylamino) phosphoryl]- N-methylmethanamine, 2- triethoxysilylbutanenitrile. Highest anti-inflammatory compounds contained in old leaves and lowest in young leaves.

Keywords: Anti-inflammatory, Buasbuas (*Premna pubescens* Blume), Gas Chromatography Mass Spectrometry (GC-MS), Software Pubchem, Bioaktif Compound.

THE
Character Building
UNIVERSITY