

# **ANALISIS GAS CHROMATOGRAPHY-MASS SPECTROMETRY (GC-MS) DAN THIN LAYER CHROMATOGRAPHY (TLC) FINGERPRINT EKSTRAK NUDIBRANCH *Phyllidia picta***

Oleh

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## **ABSTRAK**

Penelitian ini merupakan penelitian laboratorium yang bertujuan untuk mengetahui komposisi kimia ekstrak Nudibranch *Phyllidia picta* yang diperoleh dari Pantai Lovina, Buleleng-Bali. Subjek dalam penelitian ini adalah Nudibranch *Phyllidia picta* sedangkan objek dari penelitian ini adalah senyawa metabolit sekunder yang terkandung di dalam Nudibranch dan komposisi kimia yang terkandung dalam ekstrak Nudibranch *Phyllidia picta*. Spesimen Nudibranch *Phyllidia picta* diekstraksi dengan metode maserasi menggunakan pelarut aseton, kemudian dipartisi dengan dietil eter untuk menghasilkan ekstrak kasar. Ekstrak dianalisis menggunakan (TLC) menggunakan plat silika. Sementara komposisi kimia ekstrak kasar dianalisis dengan (GC-MS). Senyawa kimia dalam ekstrak ditentukan dengan membandingkan kromatogram GC-MS dengan *Wiley Mass-Spectral Library* versi 9. Hasil penelitian menunjukkan bahwa profil TLC berhasil menampilkan pemisahan yang sempurna, yang menghasilkan 5 (lima) spot noda dengan nilai *R<sub>f</sub>* tertinggi yaitu 0,888. Selanjutnya hasil analisis GC-MS menunjukkan 10 puncak senyawa teridentifikasi, dengan komponen senyawa yang terkandung yaitu *Aristolene*; (-)-*Isoledene*; (-)-*Isoledene*; 4-Methyl-2,6-bis(2-methyl-2-propanyl)phenol; 4-Isopropyl-1,6-dimethyl-1,2,3,4,4a,7-hexahydronaphthalene;  $\beta$ -gurjunene; 1-Methyl-4-methylene-2-(2-methyl-1-propen-1-yl)-1-vinylcycloheptane;  $\alpha$ Ylangene; *Abieta-8,11,13-triene*; 1,2-Benzenedicarboxylic acid, mono(2-ethylhexyl)ester.

**Kata Kunci:** Nudibranch *Phyllidia picta*, maserasi, TLC, dan GC-MS.

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## **ABSTRACT**

*This is a laboratory research that aims to determine the chemical composition of *Phyllidia picta nudibranch* extract btained from Lovina beach, Buleleng-Bali. The subject in this study were *Phyllidia picta nudibranch* while the object of this study was the secondary metabolites compounds contained in the nudibranch and chemical composition contained *Nudibranch Phyllidia picta nudibranch* extract. *Phyllidia picta* specimens were extracted by maceration method using acetone as solvent, then partitioned with diethyl ether to produce crude extract. Extract analysis using (TLC) using a silica plate. Meanwhile, the chemical composition of the crude extract was analyzed by (GC-MS). The chemical compounds in the extract were determined by comparing the GC-MS chromatogram with the Wiley Mass- Spectral Library version 9. The results showed that the TLC profile managed to display a perfect separation, which resulted in 5 (five) stain spots with the highest Rf value of 0.888. Furthermore, the results of the GC-MS analysis showed 10 peaks of compounds were identified, with the components contained namely Aristolen; (-)-Isoledene; (-)-Isoledene; 4-Methyl-2,6-bis(2-methyl-2-propanyl)phenol; 4-Isopropyl-1,6-dimethyl-1,2,3,4,4a,7-hexahydronaphthalene;  $\beta$ -gurjunene; 1-Methyl-4-methylene-2-(2-methyl-1-propen-1-yl)-1-vinylcycloheptane;  $\alpha$ Ylangene; Abieta-8,11,13-triene; 1,2-Benzenedicarboxylic acid, mono(2-ethylhexyl) ester.*

**Keywords:** *Phyllidia picta Nudibranch, maceration, TLC, and GC-MS.*