



## Isolation and Characterization of a Ceramide and $\beta$ -Sitosterol Compounds on *Haliclona* (Reniera) *fascigera* From Spermonde Archipelago

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**Abstract:**The research purpose was to determine the molecular structure of a compound **1** (a ceramide) and compound **2** ( $\beta$ -sitosterol) isolated from ethyl acetate fraction of *Haliclona* (Reniera) *fascigera* sponge. The isolation and purification of compound **1** and **2** using vacuum liquid chromatography (VLC), flash column chromatography and preparative thin layer chromatography (PTLC). Molecular mass of compound **1** were 551 m/z and confirmed by ESI-MS mode ion positive as m/z 552.64 (M+H) and ion negative mode as m/z 550.39 (M-H). Molecular mass of compound **2** was m/z 414 and confirmed by GC-EIMS. Molecule structure of compound **1** was confirmed by FTIR, LCMS, GCMS, 1D and 2D NMR analyses. Molecule structure of compound **2** was determined by FTIR, GC-EIMS, <sup>1</sup>H-NMR, <sup>13</sup>C-NMR, DEPT 135 and compared with literature data. Results of analysis spectroscopy and chromatography confirmed that compound **1** is a new ceramide namely (2*R*, 3*S*, 4*E*)-2-(hexadecanoylamino)-4-nonadecene-1,3-diol and compound **2** as  $\beta$ -sitosterol. The composition of amino alcohol aliphatic as unit sphingoid long chain base (LCB) and unit Fatty Acid Methyl Ester (FAME) in compound **1** were determined by GC-EIMS.

**Key words:** *Haliclona*, ceramide,  $\beta$ -sitosterol, sponge, FAME, LCB.

AjukSapar *et al*/International Journal of ChemTech Research, 2017,10(5): 52-61.

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