ABSTRACT

HAFILUDDIN. Extraction and Identification of Bioactive Compounds Sea Slug (Discodoris sp.) as an antioxidant. Supervised by TATI NURHAYATI dan NURJANAH

One of the commodities produced from the ocean that have a bioactive compounds is a sea slug (Discodoris sp.). That is very interesting to study mainly deals with the nature of both chemical and biochemical characteristics and their use for the field of food and health. The purpose of this study is to determine the nutrient content of sea slug, determine antioxidant activity, and determine the bioactive compounds of sea slug. The experiment was conducted with several stages: sample preparation, extraction bioactive compound, fractionation by TLC and identification of compounds by GC-MS. Sea slug from the island of Madura Pamekasan potential as a source of protein, fat, and minerals. Sea slug has esensial amino acids amount to 5,57% was dominated by leucin of 1,42%. Nonesial amino acids amount to 6,54% wich was dominated by glutamic acid 2,19%. Saturated fatty acids amounted to 27.53% of sea slug was dominated by palmitic (C16:0) which was 13.36%. Unsaturated fatty acids amounted to 34.66%, which was dominated by the essential fatty acids linolenic (C18:3, n-3) 20.91%. The highest yield of the crude extract was ethanol of 6,97% and contained alkaloid, steroids, saponin, phenols, carbohydrates and reducing sugar compound. The bioactive compounds in the meat of sea slug with ethanol solvent was galoxolide, dibuthyl phthalate, di-n-octyl phthalate, oleic acid amide, erucylamide, squalene and has an IC50 best antioxidant activity in fraction 5 at 150.92 ppm.

Key words: antioxidant, bioactive compounds, sea slug (Discodoris sp.)