KARAKTERISASI DAN PENENTUAN KOMPOSISI ASAM LEMAK MINYAK IKAN KEMBUNG (*Rastrelliger kanagurta*) SERTA UJI TOKSISITASNYA MENGGUNAKAN METODE BSLT

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RINGKASAN

Ikan Kembung (*Rastrelliger kanagurta*) merupakan salah satu jenis ikan laut Indonesia yang digunakan terbatas pada bahan pangan saja. Mengingat produksi perikanan yang sangat besar, maka penelitian untuk pemanfaatannya perlu dilakukan. Sebagai langkah awal, penentuan komposisi asam lemak dalam minyak ikan telah berhasil dilakukan, begitu pula dengan karakteristik dan sifat toksisitasnya.

Penentuan komposisi asam lemak dalam minyak ikan dilakukan dengan alat *Gas Chromatography-Mass Spectroscopy* (GC-MS) (jenis kolom RTX-5 MS dengan fenil metil siloxan sebagai padatan pendukung, panjang kolom 30 meter, gas pembawa Helium, suhu kolom 100-280 ^{o}C, split 1:60, detektor FID), penentuan karakteristik minyak ikan yang meliputi angka penyabunan dan angka asam dilakukan dengan menggunakan metode standar yang secara umum biasa digunakan, sedangkan toksisitasnya ditentukan dengan metode BSLT (*Brine Shrimp Lethality Test*).

Dari hasil penelitian dapat diketahui bahwa asam palmitat (24.71%), oleat (15,80%), stearat (8,12%), palmitoleat (7,26%) dan miristat (5,13%), adalah asam lemak mayor yang ada dalam minyak ikan Kembung. Sedangkan ekstrak gliseridanya mengandung asam palmitat (29,39%), oleat (14,85%), isostearat (8,86%), palmitoleat (7,15%) dan miristat (5,44%) dan ekstrak asam lemak bebasnya mengandung asam palmitat (29,50%), isokaproat (17,22%), isostearat (10,44%), hidrosinamat (10,16%) dan oleat (6,38%). Selain itu juga diketahui densitas, viskositas, angka penyabunan dan angka asam dari minyak ikan Kembung adalah 0,94 gram/ mL, 0,08 Nsm^{-2}, 132,62 dan 8,82. Dari uji toksisitas diperoleh nilai LC_{50} dari minyak ikan, ekstrak gliserida dan ekstrak asam lemak bebas adalah 5,97 ppm, 10,47 ppm dan 2,03 ppm. Dari nilai LC_{50} menunjukkan bahwa ketiga ekstrak ini berpotensi sebagai antikanker.

SUMMARY

Kembung fish (*Rastrelliger kanagurta*) is one of Indonesian seafish that used for food only. Considering the production of the fish is very large, research for its benefitment should be carried out. As a prelimary study, determination fatty acid composition of the fish oil have been did, also its characterisation and toxicity.

The determination of the fish oil fatty acid composition was conducted by *Gass Chromatography-Mass Spectroscopy* (GC-MS) (RTX-5 MS coloum with phenyl methyl siloxan, 30 meter, Helium, coloum temperature 100-280^{o} C, split 1:60, FID detector), the characterisations which were include saponification number and acid value were accomplished with standart method commonly used , while its toxicity was did by BSLT (*Brine Shrimp Lethality Test*).

It was known that palmitic (24.71%), oleic (15.80%), stearic (8.12%), palmitoleic (7.26%) and miristic acid (5.13%), all as majority fatty acid of Kembung fish oil. While the glyseride extract of one consists palmitic (29.39%), oleic (14.85%), isostearic (8.86%), palmitoleic (7.15%) and miristic acid (5.44%) and its free fatty acid extract consist of palmitic (29.50%), isocaproic (17.22%), isostearic (10.44%), hydroccinamic (10.16%) and oleic acid (6.38%). Beside those, it was also known that the fish oil density, viscosity, saponification number and acid value was 0.94 gram/ mL, 0.08 Nsm^{-2}, 132.62 and 8.82 respectively. Of toxicity test, it was known that LC_{50} of fish oil, glyseride extract and free fatty acid extract was 5.97 ppm, 10.47 ppm and 2.03 ppm. From its LC_{50}, showed that this third extract were potential as anticancer.

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