

**PERBANDINGAN KANDUNGAN ASAM LEMAK PADA KERANG
KIPAS-KIPAS (*Amusium pleuronectes*) DARI PERAIRAN
KENDAL DAN PERAIRAN PEMALANG**

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RINGKASAN

Binatang laut, khususnya kerang, mengandung asam lemak yang sangat bermanfaat bagi kesehatan manusia. Beberapa penelitian menyebutkan bahwa, kandungan asam lemak khususnya omega-3 pada binatang laut dapat menurunkan kadar kolesterol dalam darah, mencegah hipertensi, kanker, diabetes, asma, jantung dan lain-lain. Penelitian pendahuluan mengenai kandungan asam lemak pada kerang *Amusium sp* dari daerah Brebes, tidak ditemukan adanya senyawa tersebut (Cahyono dkk, 2008). Pada penelitian ini dilakukan kembali identifikasi asam lemak kerang *Amusium* daerah Kendal dan Pemalang, dengan asumsi memiliki kondisi perairan yang berbeda.

Ekstraksi asam lemak dilakukan melalui metode soklet dengan pelarut *n*-heksan. Minyak hasil isolasi kemudian dihidrolisis dalam suasana basa membentuk garam derivatnya. Garam yang dihasilkan kemudian diubah menjadi bentuk ester melalui reaksi esterifikasi, yang selanjutnya diidentifikasi dengan menggunakan metode GC-MS.

Hasil penelitian menunjukkan bahwa prosentase minyak kerang Kendal 6,5%, sedangkan untuk kerang Pemalang 6,8%. Analisis kadar air menghasilkan 84,32% untuk kerang Kendal, dan 82,04% untuk kerang Pemalang. Hasil analisis GC-MS menyatakan bahwa kandungan asam lemak kerang daerah Kendal dan Pemalang berbeda. Kerang Kendal mengandung asam *palmitoleat*, *palmitat*, *oleat*, *stearat*, *eicosatetraenoat* dan *eicosapentaenoat*. Kerang perairan Pemalang mengandung asam lemak *miristat*, *palmitoleat*, *palmitat*, *oleat*, *stearat*, *eicosatetraenoat*, *eicosenoat* dan *eicosapentaenoat*. Untuk pertama kalinya senyawa omega-3 berhasil diidentifikasi pada kerang *Amusium pleuronectes* dari Kendal dan Pemalang.

SUMMARY

Marine animals, especially scallop, contain several fatty acids which are beneficial to human health. Several studies show that the content of fatty acids in marine animals can decrease the concentration of cholesterol in blood, prevent from high blood pressure, cancer, diabetes and many other diseases. The previous research has been identified composition of fatty acid in *Amusium* scallop from Brebes, was not found this substance (Cahyono *et al.* 2008). This research was conducted again to identify the composition of fatty acids in *Amusium*, taking from Kendal and Pematang, with the assumption they have different water condition.

Extraction of scallop oil was carried out by soxhlet method using *n*-hexane as solvent. The isolated oil was hydrolyzed in base condition to form its derivative salt. The salt was then converted into an ester through esterification. Finally, the ester was analyzed by GC-MS method.

The research data showed that the percentage of oil of Kendal's and Pematang's scallop were 6.5% and 6.8% respectively. Water content of Kendal's and Pematang's scallop were 84.32% and 82.04%. From the GC-MS analysis, it could be concluded that the content oil Kendal's and Pematang's scallop was different. Kendal's scallop contained *palmitoleic acid*, *palmitic*, *oleic*, *stearic*, *eicosatetraenoic*, and *eicosapentaenoic* acids. Meanwhile, fatty identified from chromatogram of Pematang scallop oil were *myristic acid*, *palmitoleic*, *palmitic*, *oleic*, *stearic*, *eicosenoic*, *eicosatetraenoic* and *eicosapentaenoic* acids. For the first time omega-3 is identified successfully from Kendal's and Pematang's *Amusium pleuronectes* scallop.

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