INTISARI

ANALISIS ASAM AMINO DALAM LELE (*Clarias Batracus*) DAN CUMI-CUMI (*Todarodes pasificus*) DENGAN KROMATOGRAFI CAIR KINERJA TINGGI MELALUI DERIVATISASI FENILISOTIOSIANAT (PITC).

Oleh:
Susy Yunita Prabawati
14618/I-4/1154/00

Telah dilakukan analisis asam amino dalam sampel lele (*Clarias batracus*) dan cumi-cumi (*Todarodes pasificus*) dengan kromatografi cair kinerja tinggi (KCKT) dan untuk meningkatkan sensitivitas deteksi dilakukan derivatisasi menggunakan fenilisotiosianat (PITC). Tujuan penelitian ini adalah untuk mempelajari keberhasilan metode KCKT dalam memisahkan asam amino hasil hidrolisis protein.

Hasil penelitian menunjukkan bahwa PITC dapat digunakan sebagai zat penderivatif dalam menganalisis asam amino hasil hidrolisis asam dengan HCl 6 M selama 24 jam pada 110 °C, menghasilkan suatu senyawa feniltiohidantoin (PTH)-asam amino yang dapat menyerap cahaya pada daerah UV-Vis λ = 254 nm. Metode KCKT menggunakan kolom Shim-pack CLC-ODS (C-18), diameter 6,0 mm, panjang 15 cm, dan ukuran partikel 5 µm dengan teknik elusi gradien dapat digunakan untuk memisahkan asam-asam amino hasil hidrolisis sampel lele dan cumi-cumi. Dari hasil penelitian ini diketahui bahwa komponen asam amino dalam sampel lele yaitu asam glutamat, fenilalanin, valin dan leusin sedangkan dalam sampel cumi-cumi yaitu histidin, arginin, prolin dan leusin.

ABSTRACT

ANALYSIS OF AMINO ACIDS IN CATFISH (*Clarias batracus*) AND SQUID (*Todarodes pasificus*) BY HIGH PERFORMANCE LIQUID CHROMATOGRAPHY THROUGH DERIVATISATION WITH PHENYLISOTHIOCYANATE

By:
Susy Yunita Prabawati
14618/I-4/1154/00

Analysis of amino acids content in some samples of catfish (*Clarias batracus*) and squid (*Todarodes pasificus*) have been conducted by High Performance Liquid Chromatography (HPLC) and to improve the sensitivity of detection, the amino acids were derivated with phenylisothiocyanate (PITC). This research was aimed to study the performance of HPLC method for the separation of amino acids resulted from the hydrolysis of protein.

The result showed that PITC was successfully used as derivating substance in the analysis of amino acids resulted in acidic hydrolysis using HCl 6 M for 24 hours at 110 °C, produced PTH-amino acids, which were able to absorb the energy at the range of uv-vis, i.e. λ=254 nm. The HPLC method using Shim-pack CLC-ODS (C-18) colum, (6 mm I.D x 15 cm L) and 5 μm particle with the gradient elusion technique was successfully used to separate the amino acids produced from hydrolysis of catfish and squid. It was also shown that the composition of amino acids in the samples catfish were glutamic acid, phenylalanine, valine, and leucine, while that in the samples of squid were hystidine, arginine, proline, and leucine.