

## LIQUID CHROMATOGRAPHIC DETERMINATION OF BIOGENIC AMINES IN SOME VIETNAM FISH SAUCE ON DANSYL CHLORIDE DERIVATIVES

### Abstract

Relating to the freshness, quality, and safety of food, monitoring of biogenic amines (BAs) in fish sauce is important. An insight novel and effective method for the determination of biogenic amines including: histamine, putrescine, and spermidine has been developed and validated. The method includes extraction of amines with perchloric acid, pre-column derivasation with dansyl chloride, and extraction of derivatives with n-heptane, back-dissolution with methanol prior to subjected to analysis by HPLC-UV at 250 nm. The structure of BAs was confirmed by (+)ESI-HRMS. The calibration curve was established in the range of 0.5 and 25 mg L<sup>-1</sup> ( $R^2 > 0.999$ ) with the limit of detection ranged between 0.048 – 0.095 mg L<sup>-1</sup>, limit of quantification ranged beweent 0.16 – 0.32 mg L<sup>-1</sup>, the %RSD (intraday and interday) <5%. The method was applied in fish sauce sample and the concentration in the range of 39.47-173.60 mg L<sup>-1</sup> for histamine, 35.66 – 378.17 mg L<sup>-1</sup> for putrescine, and 8.91-233.67 mg L<sup>-1</sup> for spermidine.

*Key words: Fish sauce, biogenic amines, polyamines, dansyl chloride, HPLC-UV,...*