

ABSTRACT

VALIDATION OF VISIBLE SPECTROPHOTOMETRIC METHOD FOR DETERMINATION OF FORMALIN IN FRESH FISH (*IKAN KAKAP*)

Formalin, an illicit additive substance, was added on certain food product as a preservative. Therefore, the determination of formalin in food product such as fresh fish is very important. The Visible Spectrophotometric method with chromotropic acid as a reagent has been used for determination of formaldehyde in this research. The aim is get a method which met the criteria of validation.

The optimum result were obtained when 1.2 ml solution of 0.5 % disodium chromotropic (as color developing reagent) and 6 ml concentrated sulfuric acid (as catalyst) were added and then the absorbance was measured after 15 minutes at 567 nm.

The result shows the detection and quantitation were found to be 0.0022 ppm and 0.0067 ppm respectively, while the linear regression was $y = 0.3953 x + 0.0207$, $r = 0.9995 > r_{table}$, $p = 0.005$ ($p < 0.01$) and $V_{x_0} = 2.45\%$ ($V_{x_0} \leq 5\%$). The recovery percentage was 67.08 % and the coefficient of variation was 1.39%. The determination of formalin in three fresh fish samples which were taken from a market in Surabaya showed that there was no formalin in those three samples.

Keyword : Validation, Spectrophotometric, Formalin, Fresh Fish (*ikan kakap*)