

**ABSTRACT****VALIDATION OF UV-Vis SPECTROPHOTOMETRIC METHOD FOR  
DETERMINATION OF FORMALIN IN YELLOW TOFU  
(TAHU KUNING)**

Formalin is often misused on certain food product such as yellow tofu (*tahu kuning*) as a preservative. The determination of formalin in yellow tofu is therefore very necessary. UV-Vis spectrophotometric method with chromotropic acid as a reagent has been used for determination of formalin in the present study. Before doing validation, optimization of method to find the optimum condition was carried out firstly. The optimum condition of spectrophotometric method was performed in the wavelength of 567 nm. To yield the complete reaction, it was needed 1.2 ml solution of 0.5 % chromotropic acid and 6.0 ml concentrated sulfuric acid. The absorbance was observed after 15 minutes. In that condition, the equation of regression was  $y = 0.3955 x + 0.0289$ ,  $r = 0.9968$ ;  $p = 0.039$  ( $p < 0.05$ ) and  $V_{x_0} = 4.83\%$  ( $V_{x_0} \leq 5\%$ ). The limits of detection and quantitation were found to be 0.0022 ppm and 0.0067 ppm respectively, while the accuracy gave average recovery of 78.67 % and the precision gave variation coefficient (CV) of 1.46 %. The determination of formalin in yellow tofu was carried out in three sample which was taken from a market in Surabaya. The result showed that one of these three samples was positive of formalin and the concentration was  $(77.66 \pm 1.15) \mu\text{g/g}$  or 0.0078 % b/b in wet sample.

Keywords : Validation, spectrophotometric method, formalin, yellow tofu (*tahu kuning*)

