SELECTIVITY TEST OF NATURAL INDICATORS OF YOUNG TEAK LEAF EXTRACT (Tectona grandis L.f.) TO DETECT FORMALIN USING UV-VIS SPECTROPHOTOMETER

Tabitha, Asworo*

Diploma Program in Pharmaceutical and Food Analysis, Poltekkes Kemenkes Malang

**Email: kntabitha@gmail.com*

ABSTRAK

Formalin is a prohibited food preservative based on BPOM Regulation No. 11/2019 on Food Additives. Therefore, strict monitoring of the presence of formaldehyde in food is very important, especially in tofu and wet yellow noodles which are still often detected to contain the substance. Test kits are one of the development methods that can be used to detect formalin with faster, easier, more practical and safer results. The formalin test kit can be made from natural reagents containing anthocyanin compounds, one of which is young teak leaves. This test kit needs to be validated based on appropriate parameters to determine its effectiveness in detecting formalin. This study aims to determine the selectivity of young teak leaf extract as a formalin detector. Young teak leaf extract was obtained by maceration method using ethanol solvent. The extract obtained was then reacted with negative control and positive control solutions for selectivity testing which was seen from the color changes that occurred and the difference in the maximum wavelength of both. The observation results of the selectivity test visually showed a change in color, in tofu there was a change in color from red to faded red. In wet yellow noodles there is a color change from blackish red to blackish red with fading intensity. The results obtained were then measured at the maximum wavelength, the results showed that there was a bathochromic shift. In white tofu there was a shift from 586 nm (negative control) to 637 nm (positive control). In wet yellow noodles there was a shift from 529 nm (negative control) to 549 nm (positive control). From the results, it can be concluded that young teak leaf extract as a natural reagent has good selectivity to formalin in the sample matrix of white tofu and wet yellow noodles.

Keywords: *Young teak leaves, Anthocyanins, Selectivity*