

*UTILIZATION OF PURPLE SWEET POTATO PEEL EXTRACT IN BORAX
DETECTION IN PULI CRACKERS SOLD IN NGEMPLAK TULUNGAGUNG
MARKET*

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ABSTRACT

Background: Method validation is one of the quality assurance in meeting the requirements of standardized laboratories. The method validation process is carried out on the natural material development method. One of them is anthocyanin in purple sweet potato skin which is used in borax detection based on pH. Borax is a material that is prohibited as a food additive, but is still widely found in puli cracker food products. So that method validation and determination of borax levels in puli crackers sold at Ngemplak Market, Tulungagung were carried out. **Objective:** To detect borax in puli crackers sold at Ngemplak Market, Tulungagung by utilizing purple sweet potato skin extract. **Research Method:** The research method was carried out experimentally with organoleptic tests, making color comparators with variations in borax concentration, method validation and testing borax on puli crackers qualitatively and quantitatively. **Results:** The organoleptic results in 5 samples are likely to contain borax with the characteristics of a crunchy texture and bitter taste. Purple sweet potato skin extract can detect borax on a color comparator with color changes at each variation of borax concentration of 0.05% -1%. The method validation process using the UV-Vis Spectrophotometer instrument has met the requirements. The results of the qualitative test showed the presence of borax and the quantitative test produced small levels of borax. **Conclusion:** The method of determining borax levels with purple sweet potato skin extract has met the method validation requirements including linearity with R^2 0.996; LoD 0.028%; LoQ 0.095%; accuracy 101.04%; and RSD 1.8%. And the sample contains borax with levels ranging from 0.0002% -0.0004%.

Keywords: Method validation, purple sweet potato skin, anthocyanin, puli crackers, borax

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