

**VALIDATION OF TEST METHOD ON THE ANALYSIS OF LEAD (Pb)
METAL ON HUMAN HAIR USING ATOMIC ABSORPTION
SPECTROPHOTOMETRIC (AAS)**

ABSTRACT

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A research has been conducted on the validation of test method in the analysis of Pb (lead) on the human hair using Atomic Absorption Spectrophotometric (AAS). The steps in this research included the validation of test method based upon the parameters of linearity, precision, accuracy, LOD and LOQ; laboratory quality assurance through the comparative test among laboratories, and application of the result of validation of test method by determining the effects of hijab and age on the women with hijab and women without hijab. The measurement of Pb (lead) on the hair used two methods of destruction: dry destruction and wet destruction using HCl and HNO₃. The results of the research showed that, from the curve of calibration, the linearity of lead (Pb) with the correlation coefficient (r) of 0,9999. The validation of the test method obtained the value of %RSD at 3,72%, value of %recovery at 101,25% and the value of LOD and LOQ at 0,0334 mg/L and 0,1113 mg/L respectively. Based upon the result of t test, it showed no significant difference between the test result in the laboratory of environment quality in UII and the Laboratory of BLH Special District of Yogyakarta. There's no effect of hijab on the Pb concentration on hair, meanwhile, related to the effect of age on the content of lead, there was no any conclusion validly taken due to the limited number of samples.

Keywords: validation, test method, lead, AAS