

**PENGEMBANGAN METODE EKSTRAKSI DAN ANALISIS HORMON Indole-3-butyrac acid DARI TANAMAN KENTANG (*Solanum tuberosum* L.) MENGGUNAKAN HIGH PERFORMANCE LIQUID CHROMATOGRAPHY**

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| <b>Title</b>          | PENGEMBANGAN METODE EKSTRAKSI DAN ANALISIS HORMON Indole-3-butyrac acid DARI TANAMAN KENTANG ( <i>Solanum tuberosum</i> L.) MENGGUNAKAN HIGH PERFORMANCE LIQUID CHROMATOGRAPHY   |
| <b>Author Order</b>   | 1 of 4   |
| <b>Accreditation</b>  |  |
| <b>Abstract</b>       | <p>Studying plant growth hormone such as Indole-3-butyrac acid (IBA), one of auxin family is important for potato seed development. Unfortunately, simple, quick, and accurate extraction and analysis method to support the study of hormone in potato plant still limited. This study aim to develop extraction and analysis method of IBA from potato fresh tissue. For analysis method development, this study used IBA standard (purity 99.9%) as sample. The Analysis used reversed-phase high performance liquid chromatography (RP-HPLC) with ultraviolet detector (wavelength 280 nm), C18 column, and room temperature for chromatography condition. To get the best analysis method, this study used methanol, water, and acetic acid as mobile phase with several different compositions. This study also used several different flow rate of mobile phase. The study tested the best analysis method by linearity standard curve procedure. The concentrations of the standard IBA solution for linearity were 50 ppm, 100 ppm, and 150 ppm. This study used the best analysis method to confirm extraction result of IBA hormone from potato fresh tissue by maceration procedure. Several compositions of methanol and temperatures used to find the best extraction procedure of the hormone. The result showed for the best analysis method by RP-HPLC, the composition of mobile phase was methanol: water = 80: 20 (v/v) with 0.8 ml/min in flow rate. The result showed, the best analysis method of IBA has linearity equation: <math>y = 7175x + 17734</math> with correlation coefficient value (<math>R^2</math>) = 0.992. For the best extraction method of IBA, the best composition of sample and methanol was 2.5 gram: 10 ml (b/v) under controlled temperature (10oC). The conclusions, the studies were successfully developing extraction and analysis method of IBA hormone from potato fresh tissue.</p> |
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