

Development the Novel Method for the Analysis of Alginic Acid in *Laminaria japonica*

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Alginic acid is linear polyuronan which is composed of three type of (1→4) linked structural blocks, poly-β-D-mannuronic acid, poly-α-L-guluronic acid and mixed blocks of the two uronic acids. Alginic acids find considerable commercial application in food, pharmaceutical and industrial uses due to their solution properties. Although alginic acids from solutions of high viscosity, their most interesting property is the ability to form gels with divalent cations particularly calcium.

Although there are a few analytical methods which are specifically designed for alginic acid determination, they were not considered the contents of decomposing monosaccharide from alginic acid. Therefore, it's difficult to determine the exact content of alginic acid in *Laminaria japonica*.

In this study, chromatogram peak analysis results from alkali-catalyzed hydrolyzate of alginic acid from *Laminaria japonica* by HPLC were carefully compared with colorimetric analysis results from that by UV-vis spectrophotometer (John F. Kennedy method) and analyzed their correlation. This new approach provides a rapid method for the quantitative assay of alginic acid in *Laminaria japonica*.