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Properties of Starches from Potato Varieties Grown in Hokkaido

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Using potato cultivars grown in Hokkaido, the starch properties in potato tubers were characterized. The starch properties determined in this study were the contents of amylose and phosphorus, granule size distribution, and pasting properties using a rapid viscoanalyzer. There were wide variations in starch parameters among the 96 potato starch samples used. A high phosphorus content of starch was closely associated with high peak viscosity and breakdown and low peak viscosity temperature. Although the amylose content also had an effect on pasting properties, the correlation coefficients between the phosphorus content and pasting properties were higher than those between the amylose content and pasting properties.

Key words: potato starch, phosphorus content, pasting properties



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