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ONLINE ISSN : 1881-3984

PRINT ISSN : 1344-6606

Food Science and Technology Research

Vol. 11 (2005) , No. 1 pp.26-31


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NIR Measurement of Specific Gravity of Potato
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(Received: June 15, 2004)

(Accepted: November 15, 2004)

Near infrared (NIR) spectroscopy was investigated as a method for nondestructive measurement of specific gravity of potato. A total of 250 potatoes of three cultivars, Irish-Cobbler, May-Queen and Kita-akari, were used as experiment samples. The NIR spectra (700-1100nm) of potato samples were acquired by the interactance method and partial least square (PLS) regression analysis was used to develop a predictive model for specific gravity. As a result, the model gave relatively good predictions of the specific gravity, with a correlation coefficient of 0.94 and standard error of prediction of 0.0044g/cm³. The results show the potential of the NIR technique as a means for nondestructive measurement of specific gravity of potato with reasonable accuracy.

Keywords: [near infrared \(NIR\) spectroscopy](#), [specific gravity](#), [potato](#), [partial least square regression \(PLS\)](#)


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NIR Measurement of Specific Gravity of Potato Jie Yu CHEN, Han ZHANG, Yelian MIAO and Ryuji MATSUNAGA, *FSTR*. Vol. **11**, 26-31. (2005) .

doi:10.3136/fstr.11.26

JOI JST.JSTAGE/fstr/11.26

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