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## **Water Sorption Analysis in Vegetables Using a Modified Astakhov Equation**

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Water sorption isotherms at 298 K for six kinds of fresh vegetable (Japanese radish), eggplant, potato, pumpkin and sweet-potato) were determined by the static equilibration method over saturated salt solutions in the relative humidity range of 11.3 to 97.3%. The equilibrium moisture content data were fitted to the modified Astakhov (DA) equation that assumes a Weibull probability density function for the desorption probability under the adsorption potential change. The modified DA equation was confirmed to be very accurate in predicting the water sorption isotherms of the test vegetables. In addition, the test vegetables could be classified into two groups based on the DA parameter values, which denote the porous degree of the vegetables.

group consisted of carrot, eggplant and pumpkin. Daikon, potato & belonged to the other group.

**Keywords:** [vegetable](#), [water sorption](#), [isotherm](#), [modified Dubinin-adsorption potential](#)

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