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Czech J. Food Sci.

**Tang D.-S., Tian Y.-J.,
He Y.-Z., Li L., Hu S.-**

Q., L.D..

Optimisation of ultrasonic-assisted protein extraction from brewer's spent grain

Czech J. Food Sci., 28 (2010): 9-17

Response surface methodology was employed to optimise the ultrasonic-assisted extraction of protein from brewer's spent grain. Three variables, namely the extraction time (min), ultrasonic power (W/100 ml of extractant), and solid-liquid ratio (g/100 ml) were investigated. Optimal conditions were determined and tri-dimensional response surfaces were plotted using mathematical models. The ANOVA analysis indicated that all the quantities determined, i.e. the extraction time, ultrasonic power, and solid-liquid ratio, had significant positive linear and negative quadratic effects on the protein yield. Optimum conditions for the extraction of protein were found to be the extraction time of 81.4 min, ultrasonic power of 88.2 W/100 ml of extractant, an solid-liquid ratio of 2.0 g/100 ml. The

