Validation of the Paddy Parboiling Simulation Mathematical Model for BG 352   Long Grain *(Nadu)* Rice

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Parboiling (hydrothermal treatment) of rice is an ancient traditional process of South Asian countries and it's reducing the level of grain breakage and increase in head yield of rice during milling. However, parboiling of rice associated minor drawbacks such as reduce rice kernel whiteness and increase in kernel hardness. This research study was carried out to validate the parboiling simulation mathematical model develop by Gunathilake (2009). BG 352 long grain paddy was used for validation of model. Results show that mathematical model is fit for predict rice qualities such as kernel whiteness, hardness, broken grain percentage and head rice yield percentage, change with parboiling (hydrothermal) treatments of BG 352 variety. Goodness of fit of predicted values with actual values of kernel whiteness, hardness broken grain percentage and head rice yield showed 6.2, 6.8, 8.1 and 7.3 respectively. The average Goodness of fit of this resulted mathematical model is 7.18. Hence, it was also revealed, that the mathematical model is capable to predict values similar to actual values. Finally, it can be concluded that mathematical model is good fit for simulation of parboiling treatments of BG 352 long grain (*Nadu*) paddy.