

# Study of Alternate Energy on Extent of Gelatinization of Paddy

Tapas Gorai<sup>1</sup>, B. K. Panda<sup>2</sup>, S. L. Shrivastava<sup>3</sup>

<sup>1</sup>Food Engineering Department, Faculty of Agricultural Engineering

Bidhan Chandra Krishi Viswavidyalaya, West Bengal, India, Pin-741252

<sup>2,3</sup>Agricultural and Food Engineering Department Indian Institute of Technology Kharagpur, West Bengal, India, Pin-721 302

E-mail: <sup>1</sup>tpsgorai@gmail.com, <sup>2</sup>brajeshkumarpd2@gmail.com, <sup>3</sup>sls@agfe.iitkgp.ernet.in

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**Abstract**—Microwave soaking and high pressure steaming of IR 36 variety of paddy was studied and compared with the conventional (CFTRI) process. Microwave soaked rice was steamed at different pressure and time as per experimental design. The moisture content was increased with soaking time. It was discovered that the power level of 900W and paddy with 13.5% (w.b.) moisture content yielded a quality level higher than that of conventional steam-parboiled rice. The process parameters are optimized using design expert software and Total yield, head yield, broken content, hardness and yellowness was observed 67.67%, 57.36, 14.15%, 10.27kg/mm<sup>2</sup> and 22.01 respectively. The optimized solutions are found for soaking time of 20.9 minute, steaming time of 22 minute and steaming pressure of 1.8 kg/cm<sup>2</sup>.

**Keywords:** Accelerated aging, microwave energy, parboiling.