
Brown Rice with Reduced Cooking Time

Salient features

- Reduction in the cooking time of brown rice by increasing the rate of water absorption.
- Low pressure air plasma treatment of brown rice and storing in vacuum desiccators.
- The etching of the surface, change in contact angles and surface energy of brown rice.
- Reduction in cooking time of brown rice by 28%.
- Increase in amount of water absorption by 7.2%.
- Decrease in cooking loss.
- Increase in whiteness index

Advantages

- ✓ Enhancement of cooking and textural properties of brown rice without significant changes in nutritional quality.
- ✓ Scope to use the atmospheric plasma treatments to overcome the certain limitations.

Process Technology

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/ Product developed

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by

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2012-13

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MoFPI

More information

Status of commercialization / Patent / Publication

Thirumdas, R., Sarangapani, C., Annapure, U.S. 2014. Cold plasma: A novel non-thermal technology for food processing. Food Biophysics, 10(1): 1-11.

Sarangapani, C., Yamuna Devi, Thirundas, R., Annapure, U.S. and Deshmukh, R.R. 2015. Effect of low-pressure plasma on physico-chemical properties of parboiled rice. LWT - Food Science and Technology, 63(1): 452-460

Thirumdas, R., Deshmukh, R.R. and Annapure, U.S. 2015. Effect of low temperature plasma processing on physicochemical properties and cooking quality of basmati rice. Innovative Food Science & Emerging Technologies, 31: 83-90.

The Technology is ready for commercialization.