Details of Technology



Name of Technology	Brown rice flour improved for processed foods	Food
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Key words	brown rice, rice flour, vitamins, minerals, dietary fiber, processed foods, lwate Baking Industry Association	

What kind of technology is this?



Improved brown rice flour without loosing the nutrient components derived from brown rice

This is brown rice flour improved to use as the food material of various processed foods without loosing the nutrient components such as vitamins, minerals and dietary fiber derived from brown rice. Brown rice flour can be used without anxiety, because brown rice powder has been improved by the moisture-heat treatment method (patent registration) without using any chemical substance developed under the coordination of lwate Baking Industry Association and Faculty of Agriculture, lwate University.

Rice should be eaten not only as "granular food" but also as "flour food."

Rice is an identity of Japanese people. In the world, a major grain has been eaten as the processed foods after grinding. The addition of "flour food" as a processed food of rice to "granular food" as rice eating leads to high utilization of rice and expansion in rice consumption.

Brown rice is a treasure-house of nutrient elements.

Brown rice is rich in lipids, total fatty acids, dietary fiber, magnesium, phosphorus, vitamin B1, vitamin B6 and niacin compared to polished rice. Brown rice is rich in total fatty acids, magnesium, phosphorus and niacin compared to hard wheat flour. The nutrient elements in brown rice flour improved for the processed foods are equal to those of brown rice.

What are its applications?

Wheat flour of the processed food with wheat flour as the major material can be replaced partly by brown rice flour. For example, they include the baked products (bread, cake, cookie, pizza crust etc.), noodles (Japanese noodle, Chinese noodle, etc.), crusts (dumpling stuffed with minced pork, *shao-mai*, etc.) and confections (Japanese-style confections such as bean-jam cake, western-style confections).

Brown rice flour can be used as the major material in novel foods. For example, they include puffed confections (extrusion processing) and desert confections (rice pudding etc.).

	Patent No. 3780154 "Manufacturing method of brown rice flour,
Related patents	breads using brown rice flour, manufacturing method of millet flour and
	breads using millet flour."
	Journal of the Japanese Society for Food Science and Technology, 49,
	491-499 (2002), Journal of the Japanese Society for Food Science
Related materials	and Technology, 49, 757-764 (2002), Journal of the Japanese Society
	for Food Science and Technology, 50, 230-236 (2003), Cereal Chem.,
	82, 228-232 (2005), Nihon Reoroji Gakkaishi, 33, 81-85 (2005).