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Exploring the possibility of using Davul Kurundu leaf extract (*Neolitsea involucrata*) to develop rice based noodles

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The objective of this study was to incorporate edible grade binding material from Davul Kurundu leaves into rice flour with a view to produce rice based noodles in order prevent occurring of more breakages and easy extrusion. Hence a study was carried out using 8 kg of rice flour with respect to the Thaguchi's special set of designs of orthogonal arrays with three variables at two levels. They were with (a_1) & without (a_0) wheat flour, with (b_1) & without (b_0) leaf extract and adopting two drying methods oil frying (c_1) & mechanical drying (c_2) to get moisture content les than 8.0 %.

In extraction of Davul Kurundu leaf extract, leaves were blanched at 100^0C for 5 min and rubbed each other at slightest acidic media (PH 6.5). Eight rice noodles samples (diameter 2 mm) with three replicates were prepared as per design and subjected for breakability test, cooking test and measuring organoleptic properties taste and aroma using 6 member sensory panel, giving scores between 1 to 10. The results obtained from the study are given in table 1.

Table 1 – Breakability, cooking time & organoleptic properties of the samples.

	Treatment Combinations	Breakability (g) (Mean value)	Cooking time (Min) (Mean value)	Organoleptic properties	
				Taste (Mean value)	Aroma (Mean value)
1	No leaf extract/ Air dried/ No Wheat flour	29.6	10	2.2	4.0
2	No leaf extract/ Oil fried/ 15% Wheat flour	73.3	08	4.7	4.8
3	Leaf extract/ Air dried/ 15% Wheat flour	40.5	10	3.1	4.2
4	Leaf extract/ Oil fried / No Wheat flour	99.3	05(6)	6.2	6.3

Since value of $\bar{a}_1$ is greater than the $\bar{a}_0$ (51.4 > 76.7) for breakability, strength of rice noodles strings will be increased with incorporation of Davul kurundu leaf extract. In the case of cooking time which also declined with incorporation of Davul Kurundu leaf extract ($\bar{a}_1$ 8 < $\bar{a}_0$ 9) into the rice noodles strings. Similarly organoloeptic properties taste ($\bar{a}_1$ 6.2 < $\bar{a}_0$ 3.7) & aroma ($\bar{a}_1$ 5.2 < $\bar{a}_0$ 4.0) are also having higher value for $\bar{a}_1$ comparatively $\bar{a}_0$.

Hence, there is a big advantage in the use of Davul Kurundu leaf extract in manufacturing rice base noodles as it prevents breakability of strings during production.

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