

Comparative studies on functional properties of Palmyrah seed shoot flour with Wheat and Rice flour

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Palmyrah palm (*Borassus flabellifer*) produces two types of flour such as *odiyal* and *pulukodiyal* flour. *Odiyal* flour obtained from sundried ground seed shoot of palmyrah though boiled dried and ground tuber give rise to *pulukodiyal* flour. Rice and wheat flour with different functional properties yield products with different textural qualities. If this palmyrah flour has appropriate functional properties it must be selected as a raw material to produce products, such as desserts and noodles. Therefore the present study was carried out to compare the functional properties of different flour, that is, wheat flour (PRIMA), rice flour (ANNA) and palmyrah flour such as *odiyal* and *pulukodiyal* flour. The functional properties (Water absorption capacity, Oil absorption capacity, Foam capacity and foam stability, Bulk density, Swelling capacity and Least Gelation Concentration) and moisture content of flours were evaluated. Wheat flour (4.34%) and rice flour (11.52%) showed significantly ($p < 0.05$) lowest and highest moisture content respectively when compared with other flour. *Odiyal* flour has significantly higher values for Oil absorption capacity (93.33%) and Foam capacity (40.64%) while *pulukodiyal* flour showed highest values for Water absorption capacity (320%), Bulk density (0.79g/cm^3) and Swelling capacity (29.00%). Wheat flour was showed highest value for least gelation concentration while rice flour showed lowest value compared to palmyrah flour. Palmyrah flour have good functional properties compare to wheat and rice flour which enhance the functional ingredients of food products also has a lot of potential in the food industry as thickening agent for desserts preparation in the food systems.

Keywords: Functional properties, Palmyrah, Shoot flour.