

**Physicochemical and functional properties of cassava flour grown in different locations in Sabah, Malaysia**

**ABSTRACT**

The tuber of cassava is used as raw materials in the bakery, food, pharmaceutical and garment industries. The nutritional value of cassava roots is important because they are the main part of the plant consumed in developing countries. However, there is much variation in the nutrient quality of the cassava root depends on the several factors, such as geographic location, variety, age of the plant, and environmental conditions. This study was performed to compare and provide information on physicochemical and functional properties of cassava flour planted in two different districts in Sabah, Malaysia, namely Tawau and Semporna. Proximate analysis showed significant differences ( $p < 0.05$ ) in crude protein (2.07 and 2.69%), crude fat (0.55 and 0.68%) and dietary fibre contents (2.38 and 2.09%). Determinations on physicochemical and functional characteristics of the cassava flour showed significant differences ( $p < 0.05$ ) in bulk density (0.57 and 0.79 g/ cm<sup>3</sup> ), pH (6.75 and 6.72), colour and foam capacity (3.66 and 7.33%) while there was no significant difference shown in water and oil absorption capacities as well as emulsion capacity. Cassava planted in Semporna was observed to have high values of all pasting property parameters relative to the one planted in Tawau except for the setback viscosity. Gelatinization properties of flours showed significant differences ( $p < 0.05$ ) in onset (70.59 and 68.99°C) and end temperatures (79.81 and 80.03°C).