

## Physical, Chemical, and Functional Properties of Corn Flour Processed by Fermentation

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<b>Abstract</b>	<p>Corn flour has some limitations to be developed as food products. To expand the use of corn flour for food production, some modifications on its characteristic were needed. The production of corn flour by fermentation may change its characteristics; therefore could expand the application of corn flour to develop food products. The aim of this study was to determine the effect of fermentation media and fermentation time on physical, chemical and functional characteristics of corn flour. This research was performed using factorial randomized block design. The studied factors were: fermentation medium (water, lactic acid bacteria, <i>Lactobacillus casei</i>, and 'ragi tape') and fermentation time (20, 40, 60, and 80 h). The results of this research showed that corn flour produced by fermentation using <i>Lactobacillus casei</i> for 60 h has the best functional properties (based on gelatinization properties). The gelatinization properties of this corn flour were: the initial gelatinization temperature of 72 degrees C, maximum viscosity of 1646 BU, gelatinization peak temperature of 74 degrees C, breakdown viscosity of 402 BU and setback viscosity 1575 BU. The corn flour has a moisture content of 7.68%, ash content of 0.27%, soluble protein content of 2.48%, total protein of 8.27%, amylose content of 33.10%, water absorption capacity of 117.80%, oil absorption capacity of 149.50% and swelling power of 13.80%.</p>
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