

Utilization of Modified White Corn Starch in Producing Marshmallow Cream

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Abstract	<p>The purpose of this study was to determine the effect of the white maize starch by oxidation and acetylation-oxidation modification on gel formation and character of the resulting gel, and applying a modified white corn starch in manufacturing of marshmallow cream. White corn varieties Srikandi, Pulut and Canggal are used as raw materials to produce starch. Starch modification is conducted by oxidation and acetylation-oxidation. Quality analysis of the modified starch is freeze thaw stability, smallest gel formation concentration and gel strength. Corn starch, both native and modified applied in manufacturing of marshmallow cream. The results showed that the treated starch acetylation-oxidation provide the best freeze thaw stability with the least water released than native starch and modified starch oxidation. Starch modified by oxidation tend to have the highest Least Gelling Concentration (LGC). Gel produced from modified starch both oxidation and acetylation-oxidation has a gel strength greater than the native starch. Marshmallow cream that uses a modified starch by acetylation-oxidation, have the best received power in testing organoleptic by the panelists. Use of modified starch does not give a noticeable difference in color of the product, but it gives texture and the best spread power compared to products using original starch.</p>
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