

**IMPACT OF MIXING METHOD AND FOOD ACID ADDITION ON
CUPCAKE TEXTURE**

By

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STATEMENT BY THE AUTHOR

I hereby declare that this submission is my own work and to the best of my knowledge, it contains no material previously published or written by another person, nor material which to a substantial extent has been accepted for the award of any other degree or diploma at any educational institution, except where due acknowledgement is made in the thesis.

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ABSTRACT

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Texture is one of the most critical attributes which determine the quality of food product. Mixing method parameters affects the characteristic of dough or batter that responsible for the final product textures. The productivity of CO₂ gas induced by acetic acid and leavening agent (sodium bicarbonate) content which contributes on texture and volume product. The objective of this study is to investigate the effect and interaction of different mixing speed level (90, 180, 220 rpm) at several mixing time (3, 6, 9 minute) with various ratio of apple vinegar to baking soda (0:1, 1:1, 2:1) on cupcake batter characteristic and cupcake texture. Texture attribute interactions on apparent viscosity of cupcake batter, cupcake hardness, cupcake volume ratio, cupcake appearance are correlated. Consumer acceptability towards various specification of cupcake textures were further investigated. The result shows that the viscosity of cupcake batter influenced by all factors. Meanwhile, hardness, volume ratio, visual appearance of cupcakes rapidly changed due to the increasing of mixing speed. Food acid has a positive relation with cupcakes softness and firmness which affecting the final appearance of cupcake. Hence, the cupcake producer could gain the knowledge of suitable mixing method and food acid amount that potential to produce a specific characterization of cupcake texture based on their consumer segmentation.

Keywords: Mixing Method, Food Acid, Cupcake batter, Cupcake, Texture attribute



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DEDICATION

I dedicate this works to my parents and for the future of food processing.



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