

**DEVELOPMENT OF HIGH PROTEIN POWDER BEVERAGE
WITH HIGH SENSORY ACCEPTANCE USING WHEY PROTEIN
CONCENTRATE**

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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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This research resulted in a high protein powder beverage using 28.47 grams whey protein concentrate (WPC) and contain approximately 23.5 grams of protein including 2.56 grams leucine. Further development in order to improve the sensory profile was conducted in two stages; base improvement by replacement of dextrose using skim milk powder (SMP) and whole milk powder (WMP), and improvement on flavour through sweetness profile improvement and chocolate flavourings application. Dextrose replacement did not seem to be recognized in the improvement of milkiness and thickness by untrained panelists. On the other hand, the improvement of sweetness (stevia substitution using sucrose) increased the appropriateness of attributes intensity and overall likeness of the developed formula. While application of chocolate flavoring optimally improved sensory profile and overall likeness only if base adjustment was also done. This study resulted in a chocolate flavoured whey-based beverage formula using SMP, stevia, sucrose, salt, cocoa powder, and chocolate flavourings. The developed formula was significantly preferred in comparison to a local commercial product.

Keywords: Product Development, Whey Protein, Sensory Evaluation.



DEDICATION

I dedicate this work to the future product developers. I hope my work, my mistakes, my reflection can be something worth learning from. You are the future of Indonesia's food industry.



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