

ABSTRACT

Enzyme Modified Cheese (EMC) is the cheese flavor that was being made through an accelerated enzymatic process by biochemical processes that occur on protein and fat in natural cheese. The research objective is to determine the effect of stirring speed and temperature of fermentation in the manufacture of Enzyme Modified Cheese (EMC) that was made with raw materials Cheddar cheese. The benefits of this research are as diversification to dairy products thereby increasing the economic value and flavor.

The study consisted of preliminary and primary research. The preliminary study aims to determine the optimal fermentation time consisting of 6 hours, 8 hours and 10 hours in the manufacturing of Enzyme Modified Cheese (EMC) that taken for the reference for main research. The main research aims to determine the stirring speed and optimal fermentation temperature for the manufacture of Enzyme Modified Cheese (EMC). Stirring speed used was 50 RPM, 60 RPM, and 70 RPM, while the fermentation besides, temperature used was 40⁰C, 45⁰C, and 50⁰C. The experimental design to be used in the research was (3x3) factorial in a randomized block design (RBD) with three replications.

Preliminary and primary research responses include chemical response that consists of a water amount, protein amount and fat amount, as well as sensory responses to the aroma and flavor. Based on the results of this study concluded that the sample was selected from the preliminary study is a sample with a fermentation time of 10 hours. Results of a major study presented stirring speed factors affect the water amount, fat amount, aroma and flavor. Fermentation temperature factors affect the water amount, fat amount, aroma and flavor. The interaction between the rate of stirring and the temperature of fermentation affect the water amount, protein amount, aroma and flavor.

Keywords : Enzyme Modified Cheese (EMC), stirring speed, temperature fermentation