Effect of different concentration of Citric Acid on Liquid Whole Egg

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Introduction

From day to day, consumers give more importance to the high quality of food products. The responsabilties of food industries to preserve the native quality of food become an obligation. Egg and its products known as very perishable food due to their high nutrients. The production chain of egg products requires operating the products at temperatures above 70°C, which damages the ingredients of egg products. To reduce these damages, some preservative is used. The most common one to use in poultry and egg products industries is the Citric Acid.

Materials and methods

To determinate its effect on Liquid Whole Egg, we add citric acid to raw liquid whole egg until getting the pH of 5.0; 5.5; so on until pH7. We heat treated liquid whole egg at a water bath (70°C for approximately 3 minutes). For each pH, we measured the color and the denaturation of proteins by Differential Scanning Calorimetry (DSC). Salty muffins are made from the treated whole liquid egg for the sensorial analysis.

Results and discussion

The effect of the citric acid is clear on the colour. The difference of DSC diagrams between the raw whole egg and the treated one is apparent. We notice that the consumer prefer the muffins made with the highest pH value for both salty and non-salty ones.

Conclusions

The effect of citric acid on the liquid whole egg was obvious. Although this study determinate only the instant effect of citric acid we need to know it's effect when we storage the whole liquid egg.

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