INTISARI

Buah nanas sangat mudah didapatkan, murah harganya dan dapat digunakan penduduk sebagai buah pelengkap hidangan. Buah nanas mengandung bromelin, dekstrosa, levulosa, asam organik, protein, dan sakarosa. Bromelin merupakan enzim proteolitik golongan sulfhidril yang aktivitasnya dipengaruhi antara lain oleh suhu, konsentrasi enzim, dan pH. Penelitian ini bertujuan untuk mengetahui kondisi optimum yang dibutuhkan oleh bromelin untuk menggumpalkan susu kambing segar sehingga diharapkan nantinya dapat dimanfaatkan untuk pembuatan dodol dan permen.

Penelitian ini termasuk jenis penelitian eksperimental sederhana pola satu arah. Penelitian ini dilakukan dengan tiga perlakuan yaitu suhu, konsentrasi enzim dan pH. Suhu dimulai dari 40,0°C sampai 75,0°C dengan selisih 5,0°C setiap variabel; konsentrasi enzim dimulai dari 25,0 mg/10 ml sampai 150,0 mg/10 ml dengan selisih 25,0 mg, dan pH dimulai dari pH 4,0 sampai pH 7,0 dengan selisih 0,5 setiap variabel. Suhu, konsentrasi enzim dan pH optimum ditunjukkan oleh rata-rata pemisahan fase air yang paling tinggi dan waktu untuk menggumpalkan susu kambing segar yang paling cepat.

Hasil penelitian menunjukkan bahwa suhu, konsentrasi enzim dan pH berpengaruh pada aktivitas proteolitik dari enzim bromelin dalam sari buah nanas yang diuji terhadap susu kambing segar. Aktivitas proteolitik dari enzim bromelin dalam sari buah nanas berlangsung secara optimum pada suhu 60,0°C; konsentrasi enzim 75,0 mg/10 ml dan pH 6,5.

ABSTRACT

Pineapple fruits have been familiar with so many people as serving complement fruits, inexpensive, and so easy to get it. Pineapple fruits contain bromeline, dextrose, levulose, organic acid, protein and sucrose. Bromeline is proteolytic enzyme from sulfhydril category whose activities are affected such as temperature, concentration, and pH. This research aimed to understand the optimum condition required by the essence of pineapples fruits' which contained bromeline for coagulation the milk from goat, so that, the research was expected eventually could be used for making coconut milks and candies.

This research included the kind of research of simple experimental in one direction pattern. Indeed, the research was conducted with three treatments that were, temperature, the enzyme concentration and pH. The temperature treatment was begun from 40,0 °C to 75,0 °C with a difference of 5 °C every its variable. The enzyme concentration treatment was begun from 25,0 mg/10 ml to 150,0 mg/10 ml with a difference of 25,0 mg. The last pH treatment was begun 4,0-7,0 pH, with a difference of 0,5 each of its variable. The optimum temperature, enzyme concentration, and pH were shown by the average of the highest water phase separation, and time required to most quickly coagulate milk.

The result of research have shown that temperature, enzyme concentration, and pH were influence to the activities of bromeline's proteolytic enzyme in the essence of pineapple fruits which examined on goat's milk. The activities of bromeline's proteolytic enzyme have taken place optimally on the 60,0 °C temperature, the enzyme concentration of 75,0 mg/10 ml and pH 6,5.