

The Effect of Soaking Period on Chemical Quality of Gelatin Derived From Broiler Leg Skin

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ABSTRACT

Gelatin is usually used for the healthcare industry, photographic industry, and food industry. However, many the gelatin were still imported from abroad that not surely “halal”, so it necessary to produce our own gelatin. The product of gelatin this experiment used 2%NaOH with different soaking periods. The objective of this experiment was to determine the quality base-based gelatin produced from the skin of broiler legs. Completely randomized design with three treatment of soaking periods (1 day, 2 day and 3 day)used in this experiments with three replications. Variable measured were pH, water content, fat and inorganic material (ash). Data obtain were analyzed using variance analysis and different between treatments were analyzed using multiple range Duncan test. The result showed that periods did not significantly affect the quality of gelatin derived from the skin of broiler legs.

Key Words: Gelatin, Broiler Legs, Soaking, NaOH

THE EFFECT OF SOAKING PERIODS ON CHEMICAL QUALITY OF GELATIN DERIVED FOR BROILER LEGS SKIN

(PENGARUH PERENDAMAN BASA TERHADAP KUALITAS KIMIA GELATIN KULIT KAKI AYAM)

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2) DOSEN JURUSAN PETERNAKAN FAKULTAS PETERNAKAN UHO

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INTRODUCTION

One of broiler chicken waste that very abundant was chicken legs. Usually the broiler chicken leg is less attractive to consumers because it contains less meat and more skin and bones. Broiler chicken leg contains a lot of protein in the skin muscles, as known as collagen. Collagen is a fibrous protein that is insoluble in the main role in the extracellular matrix and in the connective tissue (Soepamo, 2011). Therefore, there should be an investigation to determine the quality of gelatin derived from waste broiler chicken farms

METHODOLOGY

This research was conducted for two months in April to May 2014 in Analytic Chemistry Lab F-University of Sciences Haluan Oleo Kendari.

Procedure

- Preparation of raw materials and the process of separation of skin from shank
- The Process Of Extraction Of Skin
- The process of changing into a gel gelatin

The treatment is applied to the research of the long soaking the skin in broiler chicken legs 2% NaOH solution, namely:

P1 = Long Soaking 1 day

P2 = Long Soaking 2 days

P3 = Long Submersion in 3 days

CONCLUSION

Based on the results of the research can be disimpulkan that the long soaking treatment of one to three days in a solution ofalkaline NaOH 2% not giving real effect to the quality of chemical skin gelatin broiler chicken legs.

RESULT

Tabel 1. pH rate (acidity)Gelatin

Repetition	Treatment		
	Soaking time (day)		
	1	2	3
1	8.2	8.89	9.28
2	8.56	9	9.24
3	8.76	9.02	9.18
Rate	8.51 ± 0.28	8.97 ± 0.07	9.23 ± 0.05

Description: Unsignificant ($p>0.05$)

Tabel 2. Moisture Content Of Gelatin

Repetition	Treatment		
	Soaking time (day)		
	1	2	3
1	6.49	8.19	5.93
2	9.09	7.68	5.79
3	6.77	6.84	8.06
Rataan	7.45 ± 1.43	7.57 ± 0.68	6.58 ± 1.27

Description: Unsignificant ($p>0.05$)

Tabel 3. Fat Content Of Gelatin

Repetition	Treatment		
	Soaking time (day)		
	1	2	3
1	19.58	17.46	20.13
2	9.97	15.88	12.19
3	11.91	17.66	12.92
Rate	13.82 ± 5.08	16.99 ± 0.98	15.28 ± 4.19

Description: Unsignificant ($p>0.05$)

Tabel 4. Ash content of glatin

Repetition	Treatment		
	Soaking time (day)		
	1	2	3
1	9.22	9.61	9.74
2	12.51	10.19	8.39
3	11.92	11.35	10.00
Rate	11.22 ± 1.75	10.38 ± 0.89	9.38 ± 0.86

Description: Unsignificant ($p>0.05$)