

**SOAKING WATER OF PINEAPPLE PEEL (*Ananas comocus L. Merr*) SOLUTION ON REDUCING FORMALDEHYDE LEVELS
IN SALTED FISH**

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ABSTRACT

Formaldehyde in salted fish processing is used to accelerate the drying process and extend the shelf life of salted fish, potentially causing harmful effects on health. Treatment before processing, such as soaking can be done to reduce formaldehyde levels so that it is not harmful to health. Natural ingredients that can be used for soaking are pineapple peels. The purpose of the study was to determine the decrease in formaldehyde levels in salted fish before and after soaking using pineapple peel solution.

This research is a pre-experimental study with One Group Pretest and Posttest Design. The object of research is salted fish soaked in pineapple peel solution concentrations of 20%, 40%, 60%, 80% with 4 replications. Soaking time is done for 60 minutes. The method of checking formaldehyde levels using the spectrophotometer method on salted fish samples. The data that has been obtained is then analyzed using paired t-test.

The results of the examination of the average formaldehyde levels of salted fish before soaking amounted to 13.30 mg/kg, while after soaking the pineapple peel solution concentration of 20%, 40%, 60%, 80% respectively amounted to 6,58 mg/kg, 4,16 mg/kg, 0,15 mg/kg, and 0,11 mg/kg and PDAM water of 8,14 mg/kg. Paired t-test obtained the results of $P < \alpha$ (0.05) which means there is a significant difference in decline. The highest formaldehyde content reduction of 99,14% occurred in the treatment of soaking in pineapple peel solution with a concentration of 80% with a soaking time of 60 minutes.

There is a significant difference between formaldehyde levels in salted fish before and after soaking using pineapple peel solution. The use of pineapple peel solution can be an alternative effort in reducing formaldehyde levels in salted fish before processing for consumption as well as the use of other fruit peels with different concentration variations and different soaking times in salted fish.

Keywords: formaldehyde (CH₂O), salted fish, pineapple peel soaking solution (*Ananas comocus L. Merr*).

**AIR RENDAMAN LARUTAN KULIT NANAS (*Ananas comocus*
L. Merr) TERHADAP PENURUNAN KADAR FORMALIN PADA
IKAN ASIN**

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ABSTRAK

Formalin pada pengolahan ikan asin diaplikasikan guna mempercepat tahapan pengeringan dan memperpanjang umur simpan ikan asin sehingga berpotensi guna memunculkan efek berbahaya pada kesehatan. Intervensi sebelum tahapan pengolahan, seperti perendaman mampu diimplementasikan guna mereduksi kadar formalin agar tidak berbahaya bagi kesehatan. Bahan alami yang mampu diaplikasikan saat perendaman ialah kulit nanas. Tujuan penelitian guna mengetahui penurunan kadar formalin pada ikan asin sebelum dan sesudah perendaman dengan larutan kulit nanas.

Studi ini yakni penelitian pra eksperimen dengan rancangan *One Grup Pretest and Posttest Design*. Objek penelitian berupa ikan asin yang direndam larutan kulit nanas konsentrasi 20%, 40%, 60%, 80% dengan replikasi 4 kali. durasi perendaman diimplementasikan selama 60 menit. Metode pemeriksaan kadar formalin menerapkan metode spektrofotometer pada sampel ikan asin tongkol. Data yang telah didapat kemudian dianalisis menerapkan uji *paired t-test*.

Temuan pemeriksaan rata-rata kadar formalin ikan asin sebelum perendaman sebanyak 13,30 mg/kg, sedangkan sesudah perendaman larutan kulit nanas konsentrasi 20%, 40%, 60%, 80% berturut-turut sebanyak 6,58 mg/kg, 4,16 mg/kg, 0,15 mg/kg, dan 0,11 mg/kg dan air PDAM sebanyak 8,14 mg/kg. Uji *Paired t-test* didapat hasil $P < \alpha$ (0,05) yang berarti adanya perbedaan penurunan yang signifikan. Penurunan kadar formalin tertinggi sebanyak 99,14% timbul pada intervensi perendaman larutan kulit nanas konsentrasi 80% dengan lama perendaman selama 60 menit.

Ada perbedaan penurunan secara signifikan antara kadar formalin pada ikan asin sebelum dan sesudah perendaman dengan larutan kulit nanas. Pemakaian larutan kulit nanas mampu akan upaya alternatif dalam menekan kadar formalin dalam ikan asin sebelum diimplementasikan tahapan pengolahan guna dikonsumsi serta pemakaian kulit buah lainnya dengan variasi konsentrasi dan durasi lama perendaman yang berbeda pada ikan asin.

Kata kunci : formalin (CH₂O), ikan asin, perendaman, larutan kulit nanas (*Ananas comocus L. Merr*).