

ABSTRAK

Hidayatul Fadlilah

“Pengaruh Jenis Air Rendaman pada Singkong (*Manihot esculenta*) terhadap Penurunan Kadar Asam Sianida (HCN)”
xv + 91 halaman + 12 tabel + 9 gambar + 4 lampiran

Singkong secara alami mengandung glikosida sianogenik yang berpotensi menjadi racun asam sianida (HCN). Singkong dapat lebih aman untuk dikonsumsi jika dilakukan pra-pengolahan dan pengolahan. Salah satu contoh pra-pengolahan adalah perendaman. Tujuan penelitian untuk mengetahui pengaruh jenis air rendaman pada singkong terhadap penurunan kadar asam sianida (HCN).

Penelitian merupakan penelitian pra eksperimen dengan rancangan *After Only Design*. Objek penelitian berupa singkong dengan jumlah keseluruhan 18 sampel. Jenis air rendaman berupa larutan garam dapur konsentrasi 10%, larutan kapur sirih konsentrasi 10%, dan air PDAM (kontrol) dengan suhu awal air rendaman 55°C. Waktu perendaman dilakukan selama 120 menit. Metode pemeriksaan kadar asam sianida menggunakan metode titrimetri. Data yang telah diperoleh kemudian dianalisis menggunakan uji Anova.

Hasil pemeriksaan kadar HCN singkong jenis adira 2 sebesar 180 mg/kg, sedangkan kadar HCN singkong sesudah perendaman dengan larutan garam dapur sebesar 63 mg/kg, larutan kapur sirih sebesar 70 mg/kg, dan air PDAM sebesar 175 mg/kg. Uji *Anova* menunjukkan adanya perbedaan nilai kadar asam sianida dari ketiga jenis air rendaman pada singkong ($p < 0,05$).

Kesimpulan penelitian ini adalah ada pengaruh jenis air rendaman terhadap nilai kadar asam sianida (HCN) yang terkandung dalam singkong. Larutan garam dapur/ kapur sirih dapat menjadi upaya alternatif menurunkan kadar HCN umbi singkong dan tetap diperlukan pengolahan lanjut, saat pemilihan sampel singkong disarankan mempertimbangkan bagian umbi yang akan digunakan.

Kata kunci : singkong, asam sianida (HCN), perendaman, jenis air
Daftar bacaan : 10 buku (2006-2020), 39 Jurnal (2016-2021)

ABSTRACT

Hidayatul Fadlilah

"THE IMPACT OF SOAKING WATER TYPE IN CASSAVA (*Manihot esculenta*) ON HYDROGEN CYANIDE (HCN) REDUCTION LEVEL"

xv + 91 pages + 12 tables + 9 images + 4 attachments

Cassava naturally contains cyanogenic glycosides, which have the potential to be hydrogen cyanide toxic (HCN). Cassava can be safer to be consumed if it is conducted pre-processing and processing. One example of pre-processing is soaking. The objective of this research was to comprehend the impact of soaking water type in cassava on the hydrogen cyanide (HCN) reduction level.

This research was pre-experimental research with After Only Design. The research object was cassava with a total of 18 samples. The types of soaking water were in the form of 10% of table salt solution concentration, 10% of calcium hydroxide solution concentration, and PDAM water, all soaking water with an initial temperature of 55°C and a soaking time of 120 minutes. The cassavas after soaking were examined for their hydrogen cyanide (HCN) levels by a titrimetric method. The data that was obtained was then analyzed using the Anova test.

The results of cassavas' HCN level examination after soaking, the form of 10% of table salt solution concentration was 63 mg/kg, 10% of calcium hydroxide solution concentration was 70 mg/kg, and PDAM water was 175 mg/kg. The Anova test obtained a sig value of $0.002 < (0.05)$, which meant that there was an impact between cassava soaking water type on hydrogen cyanide level reduction. The lowest HCN level, that was happened on soaking using table salt solution.

The conclusion of this research is that there is an impact of soaking water type on hydrogen cyanide (HCN) reduction level in cassava. The suggestion to the community to consume bitter cassava is to conduct pre-processing cassava before processing cassava; one of them is by soaking using table salt solution or calcium hydroxide solution. Further research can be carried out regarding the effect of rinsing amount and rinsing time on HCN level reduction and the physical character of cassava.

Keywords : cassava, hydrogen cyanide (HCN), soaking, water type

References : 10 books (2006-2020), 39 journals (2016-2021)