

**Penurunan Kadar HCN pada Tepung Kacang Koro Pedang (*Canavalia
Ensiformis L.*) dengan Teknologi *High Pulsed Electric Field***
(*Reduction of Hydrogen Cyanide (HCN) Content in Jack Bean (*Canavalia
ensiformis L.*) Flour Using High Pulsed Electric Field Technology*)
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ABSTRACT

*Thermal-based food processing methods are known to be effective; however, they have the potential to cause degradation of nutritional components in food, thus alternative technologies that are more efficient are required. One food material that has this issue is jack bean (*Canavalia ensiformis L.*), which contains hydrogen cyanide (HCN) and is toxic, therefore requiring proper processing. This study aimed to analyze the effect of High Pulsed Electric Field (HPEF) treatment with variations in electric field strength on HCN content, protein content, and moisture content of jack bean flour. The study employed an experimental method using One Way ANOVA design consisting of control (P1), HPEF at 30 kV/cm (P2), and HPEF at 10 kV/cm (P3). The results showed that HPEF treatment had a significant effect on HCN content ($p < 0.05$). The HCN content of the control was 146.90 ± 0.01 ppm and decreased to 103.30 ± 0.05 ppm in P2 and 88.70 ± 0.06 ppm in P3. The treatment also had a highly significant effect on protein content ($p < 0.01$), ranging from 26.30 to 27.11% on a dry basis. The moisture content ranged from 7.37 to 7.98%, and met the standard for dry flour ($< 14\%$). The results indicate that HPEF has potential as an effective alternative method to reduce HCN content without reducing the nutritional quality of jack bean flour.*

Keywords: HPEF, jack bean flour, HCN, protein, moisture content.