ABSTRAK

ANALISIS SIANIDA PADA DAUN PEPAYA JEPANG *(Cnidoscolus aconitifolius)* SEGAR DAN OLAHAN DENGAN MENGGUNAKAN METODE SPEKTROFOTOMETRI VISIBEL

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Pepaya jepang juga merupakan bahan pangan, biasanya digunakan sebagai sayuran atau lalaban. Pepaya jepang terbukti memiliki aktivitas antimikroba dan antioksidan. Pepaya jepang memiliki banyak manfaat tetapi dia juga memiliki potensi yang merugikan karena adanya kandungan senyawa glikosida sianogenik. Penelitian ini bertujuan untuk mengindentifikasi dan menetukan kadar sianida pada daun pepaya jepang *(Cnidoscolus aconitifolius)* segar dan olahan (rebusan). Pengujian kualitattif dilakukan dengan metode kimia dengan menggunakan kertas asam piktrat 10%. Validasi metode analisis memberikan nilai linieritas r2=0,9936, BD=2,51 μg/mL, BK=8,36 μg/mL, %perolehan kembali 93,36 ±1,67 dan RSD =7,47%. Penetapan kadar dilakukan dengan metode spektrofotometri Visibel, terlebih dahulu dilakukan derivatisasi sianida dengan reagen ninhidrin. Hasil penelitian menunjukan bahwa daun pepaya jepang teridentifikasi menganudng sianida. Kadar sianida daun pepaya jepang segar lebih besar dibandingkan daun pepaya jepang olahan. Daun papaya jepang segar memiliki kandungan sianida sebanyak 29,94 µg/g dan daun papaya jepang olahan yang direbus selama 40 menit memiliki kandungan senyawa sianida 12,36 µg/g. Proses perebusan daun pepaya jepang selama 40 menit terbukti mampu menurunkan kadar sianida sebanyak 58%.

Kata Kunci **:** Daun papaya jepang, penetapan kadar sianida.

ABSTRACT

ANALYSIS OF CYANIDE IN FRESH AND PROCESSED JAPANESE PAPAYA (Cnidoscolus aconitifolius) LEAVES USING VISIBLE SPECTROPHOTOMETRY METHOD

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Japanese papaya is also a food ingredient, usually used as a vegetable or lalaban. Japanese papaya has been shown to have antimicrobial and antioxidant activity. Japanese papaya has many benefits but it also has the potential for harm due to the presence of cyanogenic glycoside compounds. This study aims to identify and determine cyanide levels in fresh and processed Japanese papaya (Cnidoscolus aconitifolius) leaves (decoction). Qualitative testing was carried out by chemical method using 10% picric acid paper. Validation of the analytical method gave a linearity value of r2=0.9936, BD=2.51 g/mL, BK=8.36 g/mL, %recovery 93.36 ±1.67 and RSD = 7.47%. The assay was carried out using the visible spectrophotometric method, first, cyanide derivatization was carried out with ninhydrin reagent. The results showed that the Japanese dun papaya was identified as containing cyanide. The cyanide content of fresh Japanese papaya leaves is greater than that of processed Japanese papaya leaves. Fresh Japanese papaya leaves contain cyanide as much as 29.94 g/g and processed Japanese papaya leaves which are boiled for 40 minutes contain cyanide compounds of 12.363 g/g. The process of boiling Japanese papaya leaves for 40 minutes was proven to reduce cyanide levels by 58%.

Keywords: Japanese papaya leaves, determination of cyanide levels.