

PLAGIAT MERUPAKAN TINDAKAN TIDAK TERPUJI

INTISARI

Timbal yang diemisikan bersama asap knalpot kendaraan bermotor menyebabkan polusi udara dan dapat mencemari tanaman yang ditanam dekat pinggir jalan. Timbal merupakan logam berat yang bersifat toksik. Tujuan penelitian untuk mengetahui pengaruh jarak tanam pohon pepaya (0-25; 25-50; 50-75; 75-100 meter) dari pinggir jalan terhadap kadar timbal di dalam buah pepaya. Selain itu, untuk mengetahui apakah metode yang digunakan telah memenuhi parameter validasi.

Penelitian ini merupakan penelitian eksperimental rancangan deskriptif. Instrumen yang digunakan spektrofotometer serapan atom. Validasi metode ditentukan berdasar akurasi, presisi, linearitas, LOD, LOQ dan spesifikasi.

Hasil validasi pada baku 0,25 ppm (% *recovery* = 91,66-95,06%; KV = 1,86%), baku 1,5 ppm (% *recovery* = 100,78-102,38%; KV = 0,80%), dan baku 3,0 ppm (% *recovery* = 102,28-105,92%; KV = 1,76%). % *recovery* standar adisi = 97,89-100,95% dan KV = 1,65%. Nilai *r* = 0,9998. Metode ini dapat dikatakan valid untuk penetapan kadar timbal dalam buah pepaya.

Rata-rata kadar timbal kelompok 1 = 0,46256 mg/kg; kelompok 2 = 0,11197 mg/kg; kelompok 3 = 0,09207 mg/kg. Analisis statistik menunjukkan ada perbedaan kadar yang bermakna untuk antar kelompok. Terjadi kenaikan kadar timbal diikuti jarak yang semakin dekat dengan pinggir jalan.

Kata kunci : Validasi metode, penetapan kadar, timbal, buah pepaya, spektrofotometri serapan atom.

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ABSTRACT

Lead is emitted with the exhaust fumes of motor vehicles cause air pollution and can contaminate plants that are planted near the roadside. Lead is a toxic heavy metal. Research objectives were to determine the effect of papaya tree spacing (0-25; 25-50; 50-75; 75-100 meters) from the roadside to the lead levels in papaya fruit. In addition, to determine whether the method used meets the validation parameters.

This research is a descriptive experimental design. The instrument used an atomic absorption spectrophotometer. Validation of the method is determined based on accuracy, precision, linearity, LOD, LOQ and specificity.

The results of validation on the standard 0.25 ppm (% recovery = 91.66 to 95.06%, CV = 1.86%), raw 1.5 ppm (% recovery = 100.78 to 102.38%; KV = 0 , 80%), and standard 3.0 ppm (% recovery = 102.28 to 105.92%; KV = 1.76%). % Recovery = 97.91 to 100.95% adduct standards and the KV = 1.65%. Value of $r = 0.9998$. This method can be said to be valid for the determination of lead content in papaya fruit.

The average lead levels of group 1 = 0.46256 mg/kg; group 2 = 0.11197 mg/kg; group 3 = 0.0920 mg/kg. Statistical analysis showed no significant differences in levels for between groups. An increase in lead levels followed a short distance closer to the roadside.

Keywords: Validation of methods, determination, lead, papaya fruit, atomic absorption spectrophotometry.