

Validasi Metode Penetapan Kadar Deltametrin dalam Kubis (*Brassica oleracea* var. *capitata*) Menggunakan Kromatografi Gas dengan Detektor Ionisasi Nyala

Abstrak :

Method validation for the determination of deltamethrin in cabbage using gas chromatography-Flame Ionization Detector (GC-FID) has been performed. The GC method for multiresidue synthetic pyrethroids pesticide analysis of AOAC was used as standard procedure. But, FID was employed instead of ECD. The extraction solvents were hexane, acetone and acetonitrile. The Deltamethrin extract was not purified with column chromatography prior to injection into GC-FID. Using GC-FID modified condition (i.e. inlet temperature, carrier gas flow rate, and programmed column temperature), obtained deltamethrin's retention time (tR) of

26.56 minutes. Deltamethrin was separated from other components that existed before and after deltamethrin peak with α of 1.08 and 1.11, respectively. Selectivity of the modified condition was fulfilled the validation requirement (Resolutions >1.5).

Deltamethrine respons have linear correlation with the concentrations at the range of 9.94 to 99.4 ppm (correlation coefficient, r , was 0.9991). Detection and quantitation limits were 2.185 ppm and 6.625 ppm, respectively. Accuracy of the method was 64.35 % with variation coefficient of 7.41%. Precision of instrument was 3.76%.

Keyword :

deltamethrin, gas chromatography, FID, method validation

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