

ABSTRACT

Method Validation of Gas Chromatography with Flame Ionization Detector for Organochlorine Pesticides Residue Analysis in Turmeric Rhizome (Research Study Using QuEChERS Kit)

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The extensive use of pesticides in farming cause soil and water contamination. Organochlorine is a kind of the pesticides that still used in farming. Organochlorine characteristic is persistent in water and soil. This characteristic can lead contamination in turmeric rhizome. The purpose of this research is obtaining validated method of gas chromatography with flame ionization detector for organochlorine pesticides residue analysis in turmeric rhizome using QuEChERS kit. Gas chromatography is widely used to analysis semi-volatile substances like organochlorine. The use of QuEChERS kit is to enhance the effectivity and efficiency in method preparation including extraction and clean up. The method is only analysis two kinds of organochlorine pesticide in turmeric rhizome, which is dieldrin and DDD. Both substances gave a required result in parameters of selectivity, linearity and accuracy. DDD and dieldrin precision parameter out of the requirement limit.

Keywords : Method validation, organochlorine pesticides, turmeric rhizome, gas chromatography, QuEChERS kit