

Parameter validation of analytical methods of insecticide residue analyses in foods of animal origin, feed and water

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The study was conducted to examine the interrelationship and coherence of analytical parameters in method validation. Recovery, sensitivity, linearity, precision and limits of detection (LOD) were tested in six methods for organochlorine and organophosphate insecticides. Compounds that fell out of the stipulated recovery, 70–120%, in a matrix have concurrently failed to meet the requirements for sensitivity (C0.7), linearity (R2 0.99) and precision (\0.2) in the same matrix. Highest LOD was recorded in those compounds and matrices. Different from the conventional point estimate, a new approach was introduced for setting upper and lower confidence limits of the LOD in quantitative analyses.

Keywords: Analytical methods, Parameters, LOD

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