

March 04-05, 2019  
Berlin, Germany

Int J Drug Dev & Res 2019, Volume 11  
DOI: 10.21767/0975-9344-C1-006

## Development and in-house validation of an analytical method for multi residue determination of 202 pesticides residues in tomato, orange and tea using QuEChERS-LC-MS/MS

**Adil Chahid**

ONSSA, Morocco

**A** simple, efficient, sensitive, accurate and reliable multi-residue analytical method was developed and validated for the determination of 202 residual pesticides in three matrices: tomato, orange and tea using modified QuEChERS method with liquid chromatography coupled to triple quadrupole mass spectrometer (LC-MS/MS) for qualitative and quantitative analysis according to the international standard concepts. The optimization and validation method of the mass spectrometry parameters was performed by injecting pesticide standard solutions into the electrospray ion (ESI) source according to the

European SANTE/11813/2017 guideline. The specificity of the developed method is considered satisfactory. Good linearity ( $R^2 > 0.99$ ) was obtained for all pesticide matrix calibration curves within the range of 0.005–0.15  $\mu\text{g}\cdot\text{kg}^{-1}$ . The limit of quantification (LOQ) of this method is far lower than the non-detectable level (0.01 mg/kg) recommended by the regulation. Mean recoveries of all target analyte was within the acceptable range of 70–120%; the relative standard deviations were less than 20%.

chahidadilster@gmail.com