Highly sensitive LC-MS/MS method for the quantification of pesticide residue in pepper using the SCIEX Triple Quad™ 3500 LC-MS/MS System

A robust, rapid, selective and sensitive LC-MS/MS method has been developed for the quantification of acetamiprid and prochloraz residues in complex pepper matrix using SCIEX Triple Quad™ 3500 System. Due to the complexity of the matrix, a modified QuEChERS method was used to reduce the matrix effect and improve the sensitivity. A detection limit of 0.05 ppb was achieved in the aqueous. A calibration range of 1.00 – 100 ppb was attained in the matrix. The method achieved 10 times below the MRL level as per Indian regulations.

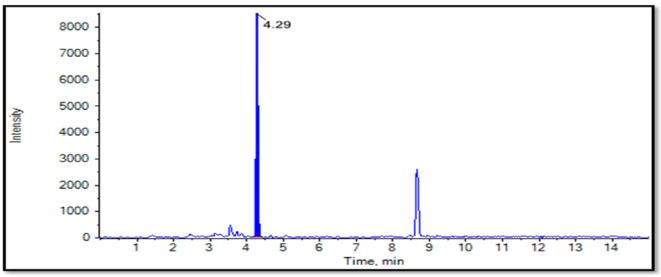


Figure 1. Acetamiprid at LOQ level 1.000 ppb.

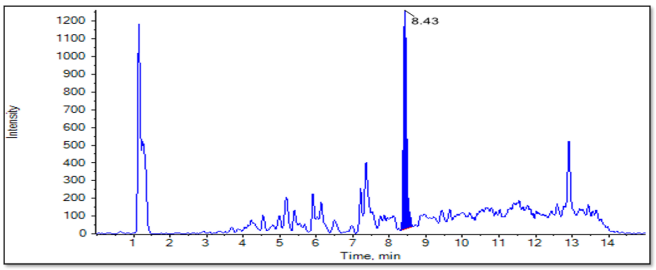
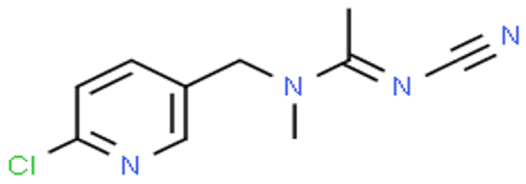
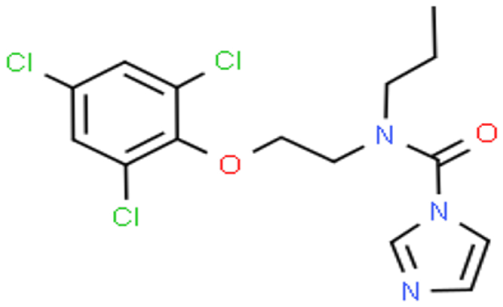


Figure 2. Prochloraz at LOQ level 1.000 ppb.



Structure of Acetamiprid



Structure of Prochloraz

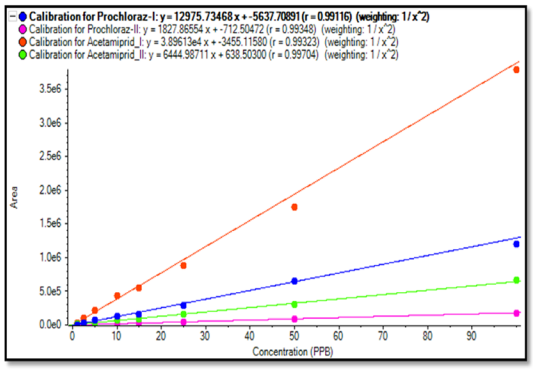


Figure 3. Calibration curve for Acetamiprid and Prochloraz range from 1.000 to 100 ppb.

To learn more about this method please email: Marketing.India@sciex.com

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