



## Highly sensitive LC-MS/MS method for the quantification of pesticides in tea matrix using the QTRAP® 4500 LC-MS/MS System

Demand for analysis of pesticides in food has increased many folds in recent years to meet the regulations introduced by EU or FDA and other regulatory authorities. A multi-residue pesticide analysis method was developed using QTRAP® 4500 System in tea matrix. Quantitative and qualitative study was performed to determine and confirm the presence of the 46 pesticides, overcoming the challenges related to the interference from the matrix. The method was found reproducible at the LOD for all the analytes and the %CV was found to be less than (n=6) 10 % for all the pesticides. The LOQ of 1.00 ppb was achieved in the extracted sample.



Figure 1. iDQuant™ Standard Kit with mixture of pesticides.

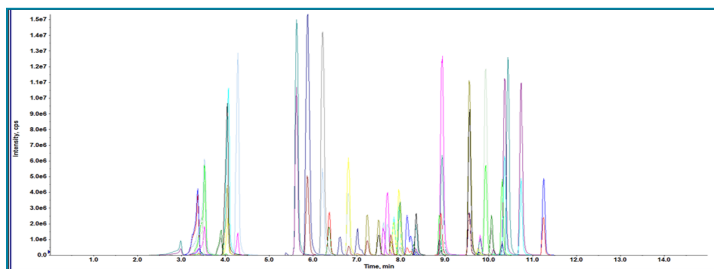


Figure 2. TIC for all the 46 pesticides.

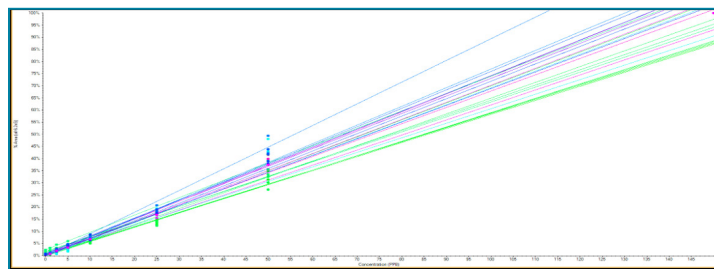


Figure 3. Linearity range is 1.000 to 150 ppb.

S.No.	Pesticide	S.No.	Pesticide	S.No.	Pesticide	S.No.	Pesticide
1	Accephate	13	Ethiprole	25	Methomyl	37	Tebufenpyrad
2	Acetamiprid	14	Etoxazole	26	Methoxyfenozide	38	Teflubenzuron
3	Ametryn	15	Fenazaquin	27	Monocrotophos	39	Tetraconazole
4	Azoxystrobin	16	Fenbuconazole	28	Penconazole	40	Thiacloprid
5	Buprofezin	17	Fenpyroximate	29	Propargite	41	Thiamethoxam
6	Carbendazim	18	Fonicamid	30	Propiconazole	42	Triadimenol
7	Chlorantraniliprole	19	Flubendiamide	31	Spinetoram	43	Trifloxystrobin
8	Clothianidin	20	Hexaconazole	32	Spinosad A	44	Pyriproxyfen
9	Diflubenzuron	21	Hexythiazox	33	Spinosad D	45	Fipronil
10	Dimethoate	22	Indoxacarb	34	Spiromefesin	46	Fluazinam
11	Dinotefuran	23	Kresoxim-methyl	35	Tebuconazole		
12	Emamectin Benzoate	24	Metalaxyl	36	Tebufozide		

Table 1. List of 46 pesticides

To learn more about this method please email: [Marketing.India@sciex.com](mailto:Marketing.India@sciex.com)

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