

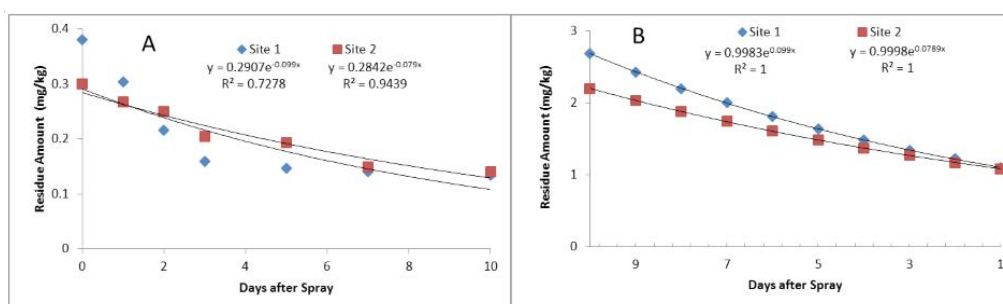
# CHROMATOGRAPHY

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## Residue analysis of amisulbrom in oriental melon (*Cucumis melo* L. var. *makuwa*) cultivated in plastic house conditions: Dissipation kinetics, pre-harvest residue limits, and risk quotients assessment

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Amisulbrom residue levels in oriental melon were determined using liquid chromatography-ultraviolet detector (LC-UVD). Real sample mass confirmation was performed with liquid chromatography-mass spectrometry (LC-MS/MS). Samples were prepared using liquid-liquid extraction (LLE) and cleaned up with solid phase extraction (SPE) florisil (1 g, 6 cc). The standard showed good instrument response linearity. Its determination coefficient  $R^2=0.9999$  and recovery ranged from 87.5% to 97.3%. The dissipation patterns of this pesticide were determined using samples from two different sites. Half-lives were assessed at 7.0 d and 8.8 d for site 1 and site 2, respectively. A pre-harvest residue limit graph was also constructed from the data. It indicated that if the residue levels were less than 0.55-0.59 mg/kg 3 d before harvest or less than 0.61-0.74 mg/kg 7 d before harvest, then they would be lower than the maximum residue levels. Risk assessments showed that the risk quotient was 4.39-3.47% at 0 d and declined to 1.53-1.63% at 10 d. Therefore, the experimental data indicate that the amisulbrom dosage recommended for oriental melon is unlikely to induce adverse health effects in Korean consumers.



### Biography

Md Humayun Kabir completed his BSc (Hons) and MS degree in Chemistry from University of Dhaka, and working as Scientific Officer at Bangladesh Council of Scientific and Industrial Research, Bangladesh. Currently, he is pursuing PhD under the supervision of Professor Shim Jae Han at Chonnam National University, Republic of Korea. He is interested in food safety from harmful materials such as pesticides and antibiotics. He participated in many projects to develop the analytical method for determining pesticides and antibiotics in several matrices such as vegetables and fruits.

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