Title: A Novel Atmospheric Pressure Photoionization – Mass Spectrometry (APPI-MS) Method for the Detection of Polychlorinated Dibenzo P- Dioxins and Dibenzofuran Homologues in Real Environmental Samples Collected within the Vicinity of Industrial Incinerators

Authors: R. McCulloch, A. Alvaro, A.M. Astudillo, J.C. del Castillo, M. Gómez, J.M. Martín, M. Amo-González

PII: S1387-3806(17)30046-5
DOI: http://dx.doi.org/doi:10.1016/j.ijms.2017.05.016
Reference: MASPEC 15807

To appear in: *International Journal of Mass Spectrometry*

Received date: 2-2-2017
Revised date: 23-5-2017
Accepted date: 24-5-2017

Please cite this article as: R.McCulloch, A.Alvaro, A.M.Astudillo, J.C.del Castillo, M.Gómez, J.M.Martín, M.Amo-González, A Novel Atmospheric Pressure Photoionization – Mass Spectrometry (APPI-MS) Method for the Detection of Polychlorinated Dibenzo P- Dioxins and Dibenzofuran Homologues in Real Environmental Samples Collected within the Vicinity of Industrial Incinerators, International Journal of Mass Spectrometryhttp://dx.doi.org/10.1016/j.ijms.2017.05.016

A Novel Atmospheric Pressure Photoionization - Mass Spectrometry (APPI-MS) Method for the Detection of Polychlorinated Dibenzo P- Dioxins and Dibenzofuran Homologues in Real Environmental Samples Collected within the Vicinity of Industrial Incinerators.

McCulloch, R.[1], Alvaro, A.[1], Astudillo, A.M.[1]., del Castillo, J.C.[1], Gómez, M.[2], Martín, J.M.[2], Amo-González, M.*[1]

[1]SEADM, C/ José Lázaro Galdiano, Madrid, Spain;
[2]CARTIF Technology Center, Parque Tecnológico de Boecillo, 205, Boecillo (Valladolid), Spain;

Highlights

The new technology described (field-free APPI-MS) has been shown to be suitable for the detection of trace environmental toxins,
This novel technology offers improved sensitivity, high throughput and reduced sample preparation requirements.
APPI is the most effective atmospheric pressure ion source for the analysis of highly non-polar compounds, utilizing the charge exchange mechanism. This is particularly effective for compounds like PAHs, etc.