

Assessment of Atmospheric PM_{2.5} and PCDD/Fs Collected by Different High-volume Ambient Air Sampling Systems

Supplementary Material

**Shih Yu Pan¹, Hung Wei Chen¹, Shih Chieh Hsu², Charles C.-K.
Chou², Yu Chi Lin³, Yuan Wu Chen⁴, Kai Hsien Chi^{1*}**

¹Institute of Environmental and Occupational Health Sciences, National Yang Ming

Chiao Tung University, Taipei 112, Taiwan.

²Research Center for Environmental Changes, Academia Sinica, Taipei 115, Taiwan.

³School of Applied Meteorology, Nanjing University of Information Science &

Technology, Nanjing, China.

⁴Environment Protection Administration, Environment Analysis Laboratory,

Zhongli, 320, Taiwan

*Corresponding author: Kai Hsien Chi, email: khchi@nycu.edu.tw

Tel: +886-2-2826-7352 ; Fax: +886-2-2827-8254

Supplementary Table 1. The method of HRGC-HRMS in the analysis of PCDD/Fs.

Mode	Splitless, purge flow rate: 10 mL/min; purge time: 4 min
Injection volume	1.5 μ L
Carrier gas	Helium
Carrier gas flow rate	0.9 mL/min
Column	DB-5 MS (60 m x 0.25 mm x 0.25 μ m, J&W)
Initial oven temperature	150 $^{\circ}$ C
Heating conditions	Initial temperature at 150 $^{\circ}$ C for 1.5 min and then increased to 210 $^{\circ}$ C for 15 min, followed by 230 $^{\circ}$ C for 5 min, 310 $^{\circ}$ C for 15 min.
Final oven temperature	310 $^{\circ}$ C
Detection	Electron ionization mode MS transfer line temp.: 280 Ion source temp.: 260 Collision Energy: 40 eV
Quantitation	Selected Ion Monitoring (SIM)