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**Multielemental chemical characterisation of fine urban aerosols
collected in Buenos Aires and Tokyo by plasma-based techniques**

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ABSTRACT

In the framework of a collaborative project, a comprehensive chemical characterisation of urban fine aerosols collected in the antipodal cities of Buenos Aires and Tokyo was performed. Twenty three elements namely, Al, As, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, K, Li, Mg, Mn, Mo, Na, Ni, Pb, Sb, Se, Ti, V and Zn were determined by plasma-based techniques after microwave-assisted digestion of the airborne particulate matter. An acid mixture containing HNO₃, H₂O₂ and HF (6:1:3) was used for sample treatment. In samples collected in Buenos Aires concentrations varied between 0.1 µg g⁻¹ equivalent to 0.001 ng m⁻³ (Be) and 36,000 µg g⁻¹ equivalent to 480 ng m⁻³ (Na) while in Tokyo minimum and maximum determined concentrations varied from 0.6 µg g⁻¹ equivalent to 0.01 ng m⁻³ (Co) to 52,000 µg g⁻¹ equivalent to 1,200 ng m⁻³ (Na). For both cities,

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