

Trial for the BC source identification by using direct observation of trace metals with ICP-MS

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Direct mass spectrometric analysis for inorganic elements of atmospheric aerosols has become possible by using a gas converter (GED) coupled with inductively coupled plasma mass spectrometry (ICP-MS). This versatile and novel analysis technique would make us possible to assess more about source, transport, mixing and modification of the atmospheric aerosols. In this presentation, trials of BC source identification was carried out by using tracers of many metallic elements determined by the GED-ICP-MS in the actual field. Black carbon was observed by using Aethalometer along with GED-ICP-MS measurement. With PMF statistical analysis as well as meteorological analysis gave major sources of BC during a week of the observation campaign.

Keywords: ICP-MS, on-site measurement, trace metal, black carbon, PMF analysis