

## Physico-chemical characteristics of airborne radio cesium from the Fukushima accident

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Data on the size of radionuclides and their mixing state with other aerosol components have not yet been reported since the occurrence of Fukushima Dai-ichi nuclear power plant accident. The activity size distributions of <sup>134</sup>Cs and <sup>137</sup>Cs in aerosols collected 47 days after the accident have been measured at Tsukuba, Japan. We found that the activity of these radio cesium reside in the accumulation mode size range and overlapped with the mass size distribution of non-sea-salt sulfate aerosol. From the results, we can regard that sulfate is the main transport medium of these radionuclides, and re-suspended soil particles that attached radionuclides were not the major airborne radioactive substances at the time of measurement. The extraction experiment of radio cesium from the collected aerosol deposits on the filter media by use of water and HCl solution are also presented.

Keywords: radio cesium, size distribution, internal mixture, sulfate, aerosol