

## Composition analysis of secondary organic aerosol from the photooxidation of toluene using LC-MS technique

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The molecular composition of aerosol from the photooxidation of toluene was investigated from a series of laboratory chamber experiments. Aerosols produced in the chamber were collected on a Teflon filter and then were analyzed using liquid chromatograph-mass spectrometry. As constituents of aerosol, nitrocresols, furandions, and oxocarboxylic acids as well as polymers with molecular weight less than 800 were found. The populations in aerosol for nitrocresols, frandions, oxocarboxylic acids, and polymers were determined to be 3, 1, 55, and 11 wt%, respectively. The reaction pathways concerning aerosol formation will be discussed on the basis of present results and previous results of gaseous products.