

Chemical composition and source identification of fine particle in coastal site of the
Mediterranean, Tipaza, Algeria

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Abstract:

Several high-quality epidemiological studies (Shauer 2002) (Buchanan 2002) indicated that finer particules play a vital role in urban photochemical smog, global climate change, acid rain, and ozone depletion through heterogeneous photochemical reaction of NMVOCs, NO_x, OH radical, ...etc

In 2011, an observatory of atmospheric chemical composition has been set up in Algeria as a contribution to MISTRALS (Mediterranean Integrated Studies at Regional and Local Scales)-CHARMEX (Chemistry-Aerosols Mediterranean Experiment) Mediterranean Network. The observatory station, namely Bou-Ismaïl station (Tipaza), 40 Km west of Algeria, the in-situ aerosol measurements conducted since July 2012 enabled the chemical characterisation of particulate air pollution

and better understanding of their chemical transformation. On the other hand, the chemical characteristic of the pollution North Africa to Europe is still scarcely studied, be it the local pollution and desert dust.

This study reports for the first time detailed chemical aerosol mass closure in southwest of Mediterranean (Algeria) during the period July 2011-June 2012. The concentrations of water-soluble ions (WSI) in particle matter (PM_{< 0.49μ}) ranged from 0.049μg m⁻³ to 9.751μg m⁻³.

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