

Visit Chaieed 2012: Variation of Concentration and Ionic Compositions of PM10 along Bangkok Mass Transit System. Master of Science (Environmental Science), Major Field: Environmental Science, College of Environment. Thesis Advisor: Assistant Professor Surat Bualert, Ph.D. 133 pages.

The study focused on concentrations of ionic species and variation of seven ionic compositions of PM10 were SO_4^{2-} , NO_3^- , Cl^- , Na^+ , NH_4^+ , K^+ and Ca^{2+} . Water –soluble ions were measured by ion chromatography. The samples were collected from the roadside and general area. The roadside area were collected air sampling the sky train stations (BTS) from Sala Daeng Station, Chong Nonsi Station and Civil Aviation Training Center. The general areas were collected air sampling from Sanghiran School, Bangkok Christian College and Saint Louis Hospital . The sampling period was January 2010 to October 2011 (8 months). The result showed the ionic species concentration of road side was higher than general areas significantly ($p < 0.05$). The seasonal period variations were also observed, the ionic species concentration in dry season is higher than rainy season in order to the precipitation diluted the concentration. The dominant species of this study found SO_4^{2-} , NO_3^- and K^+ with an average concentration of 2.32 , 0.85 , 0.99 $\mu\text{g}/\text{m}^3$ respectively. The fractions of the dominant were 42% , 15% ,17% respectively.

Student's signature

Thesis Advisor's signature