



Identifying Ni-complexed natural organic matters in a relatively stagnant river water

Sumin Cho^a, Dongjin Lee^b, Byungjin Lim^b, Jaeweon Cho^{a,*}

^a*School of Environmental Science and Engineering, Gwangju Institute of Science and Technology (GIST), 261 Cheomdan-gwagiro, Buk-gu, Gwangju 500-712, Korea*

Tel. +82 62 715 2449; Fax +82 62 715 2434; email: jwcho@gist.ac.kr

^b*Yeongsan River Environmental Research Center, 208-5 Cheomdan-gwagiro, Buk-gu, Gwangju, Korea*

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ABSTRACT

Pretreatment protocols, using preparative liquid chromatography (prep-LC), and high resolution mass spectrometer methods, were developed to identify potential Ni-natural organic matter (NOM) complexation, for a relatively stagnant river water sample. The former and the latter were performed, using a large separation column, packed with C18 and size exclusion resin media, and ion trap-time of flight (IT-TOF) mass spectrometer, respectively. The NOM samples were effectively fractionated into four different peaks, with helps of both RI and UV detections, and further subjected to mass analyses using the IT-TOF, which provided distinct m/z peaks pairs in mass spectra, with m/z peaks difference of ca. 58, as evidence of Ni-complexed NOM.

Keywords: Ni-NOM complexation; Preparative LC; Ion trap-time of flight (IT-TOF)

*Corresponding author.