

Supplementary Information (SI)

A Facile HPLC-UV-Based Method for Determining the Concentration of the Bacterial Universal Signal Autoinducer-2 in Environmental Samples

Kibaek Lee¹, Chung-Hak Lee², and Kwang-Ho Choo^{3, 4,*}

¹ Department of Biotechnology and Bioengineering, Chonnam National University, Gwangju 61186, Re-public of Korea; kibaek@jnu.ac.kr

² School of Chemical and Biological Engineering, Seoul National University, Seoul 08826, Republic of Korea; leech@snu.ac.kr

³ Department of Environmental Engineering, Kyungpook National University, Daegu 41566, Republic of Korea; chookh@knu.ac.kr

⁴ Advanced Institute of Water Industry, Kyungpook National University, Daegu 41566, Republic of Korea; chookh@knu.ac.kr

* Correspondence: Kwang-Ho Choo; E-mail: chookh@knu.ac.kr; Tel.: +82-53-950-7585

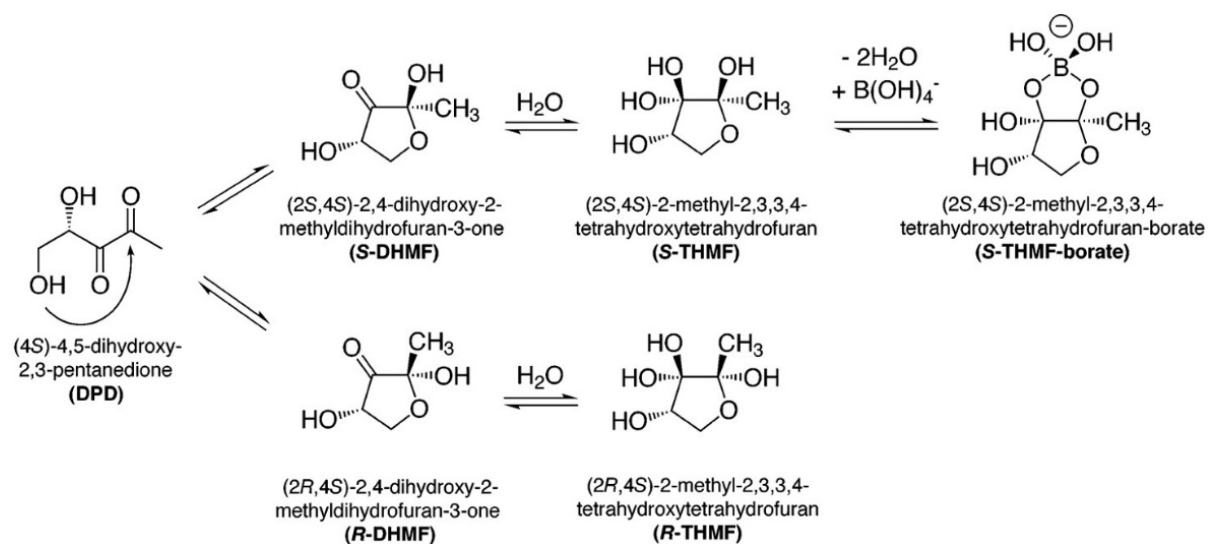
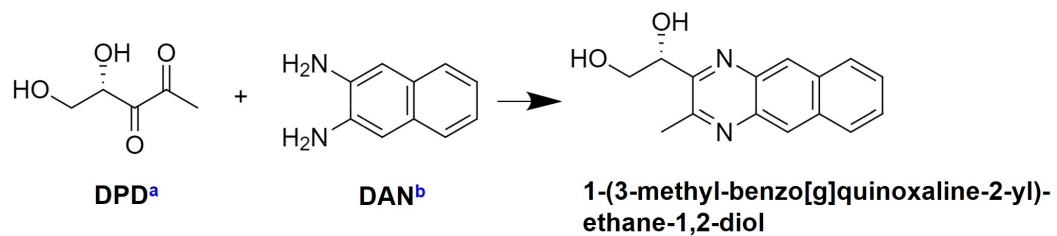


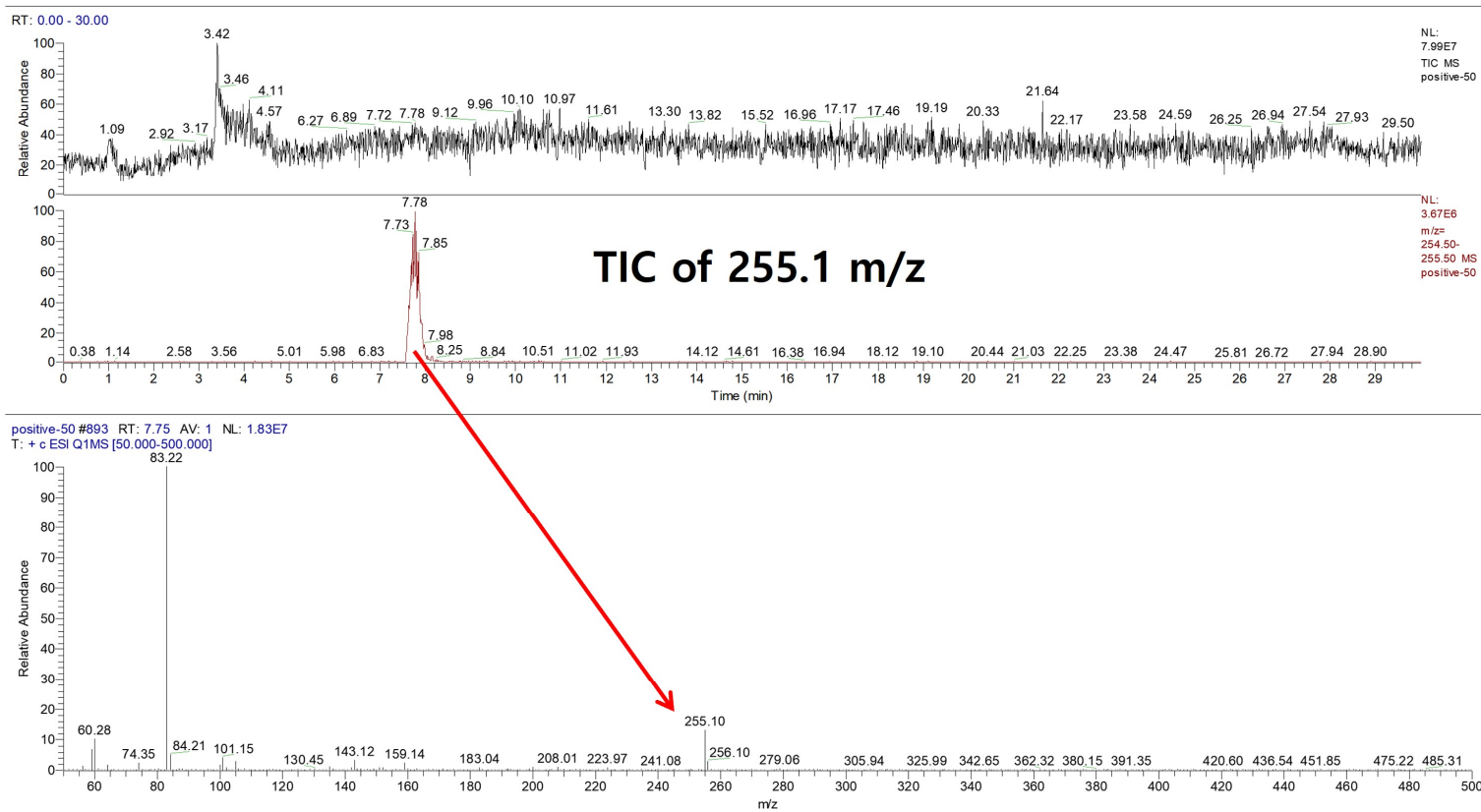
Figure S1. Equilibrium form of (S)-4,5-dihydroxy-2,3-pentandione (DPD) and its derivatives in water and in the presence of borate.



a

^a 4,5-dihydroxy-2,3-pentanedione

^b 2,3-diaminonaphthalene



b

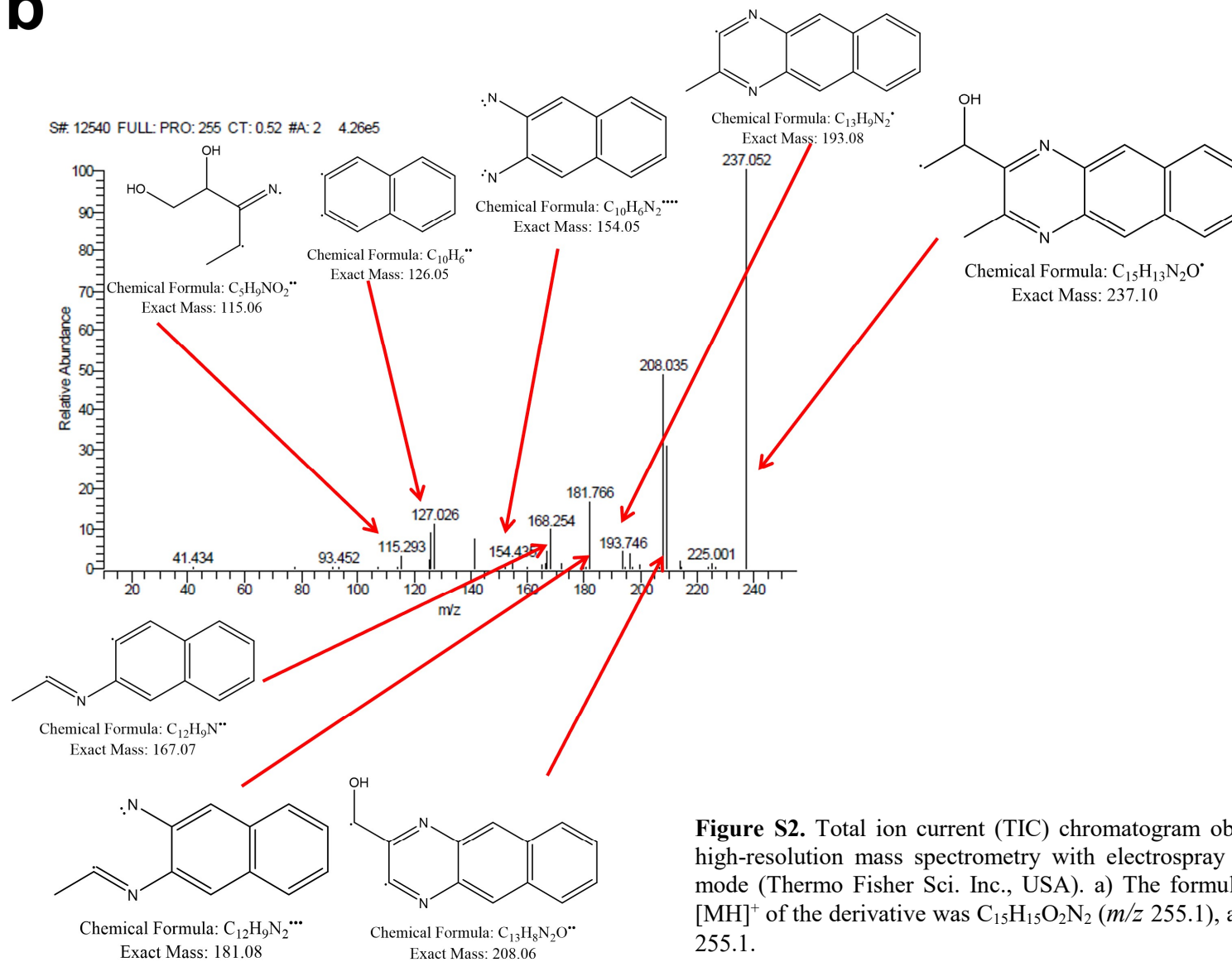


Figure S2. Total ion current (TIC) chromatogram obtained with LTQ XL Orbitrap high-resolution mass spectrometry with electrospray ionization (ESI) in a positive mode (Thermo Fisher Sci. Inc., USA). a) The formula of the protonated molecules $[MH]^+$ of the derivative was $C_{15}H_{15}O_2N_2$ (m/z 255.1), and b) fragment patterns of m/z 255.1.