

Supplementary Material

Determination of sub-pico-molar levels of platinum in the pristine Krka River estuary (Croatia) using improved voltammetric methodology

Jasmin Pađan,^A Saša Marcinek,^A Ana-Marija Cindrić,^A Nicolas Layglon,^B Cedric Garnier,^B Pascal Salaün,^C Antonio Cobelo-García^D and Dario Omanović^{A,E}

^ARuđer Bošković Institute, Division for Marine and Environmental Research, Bijenička cesta 54, 10000 Zagreb, Croatia.

^BAix Marseille Université, CNRS/INSU, Université de Toulon, IRD, Mediterranean Institute of Oceanography (MIO), UM 110, 13288 Marseille, France.

^CDepartment of Earth and Ocean Sciences, University of Liverpool, Brownlow Street, Liverpool L69 3GP, UK.

^DGrupo de Bioquímica Mariña, Instituto de Investigacións Mariñas (IIM-CSIC), 36208 Vigo, Spain.

^ECorresponding author. Email: omanovic@irb.hr

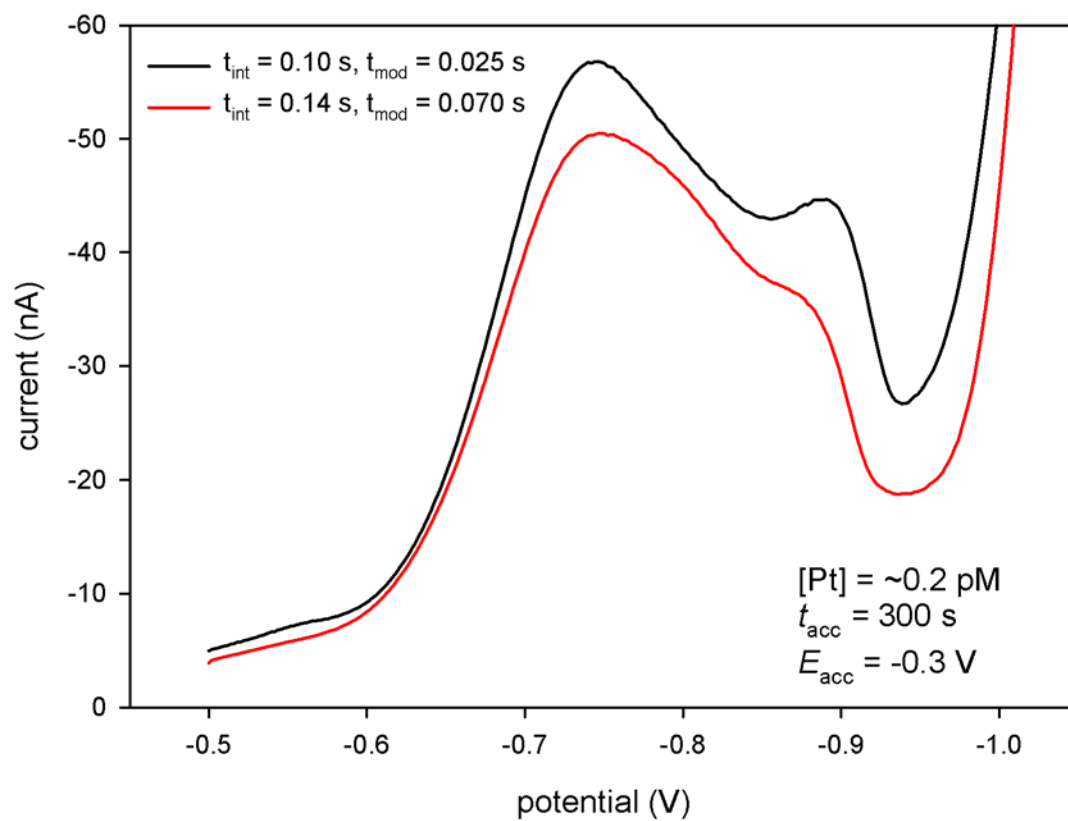


Figure S1. Voltammograms of Pt obtained under two different experimental parameters.

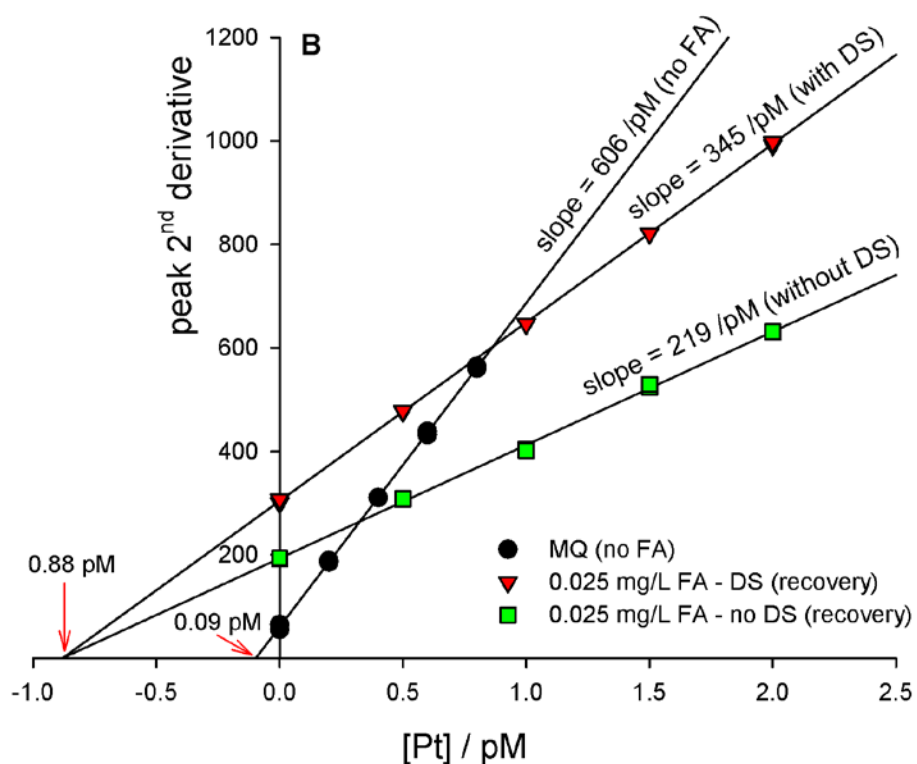
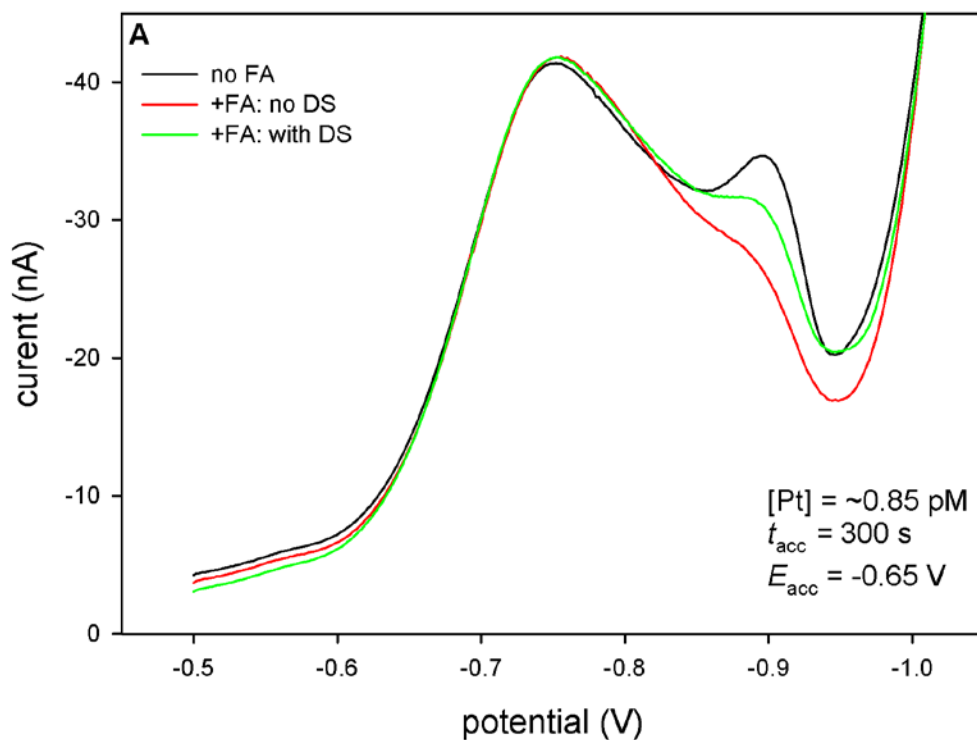


Figure S2. (A) Voltammograms of Pt obtained without added fulvic acid (FA) and with added FA (0.025 mg/L) applying (or not) short desorption step (DS) ($E_{ds} = -1.35$ V, 2 s). (B) Standard addition plots of Pt in MilliQ water without added FA, and recovery plots (with and without DS) of Pt after addition of FA.

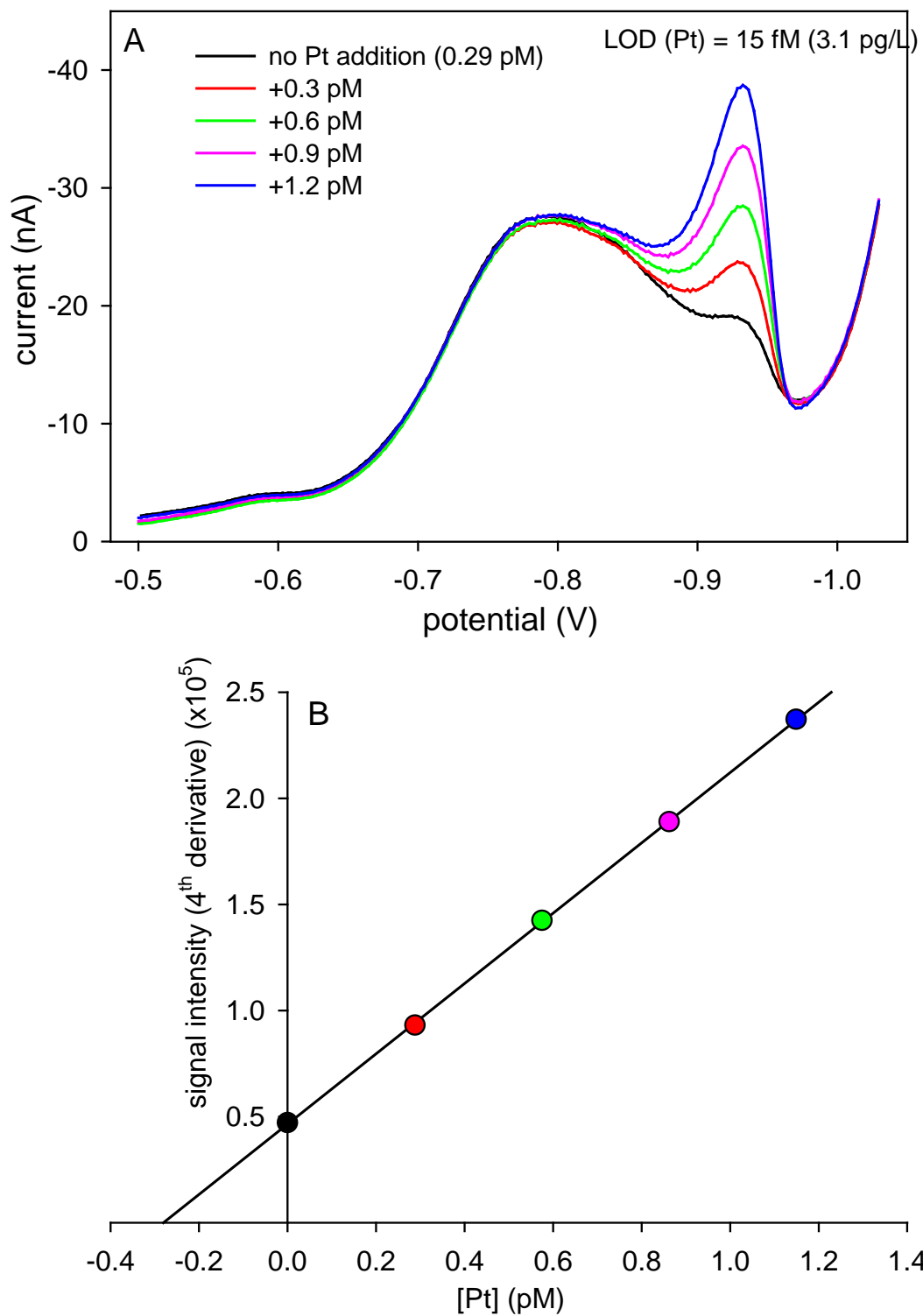


Figure S3. (A) Typical voltammograms of Pt obtained during analysis using standard addition method, along with (B) the corresponding standard addition plot.

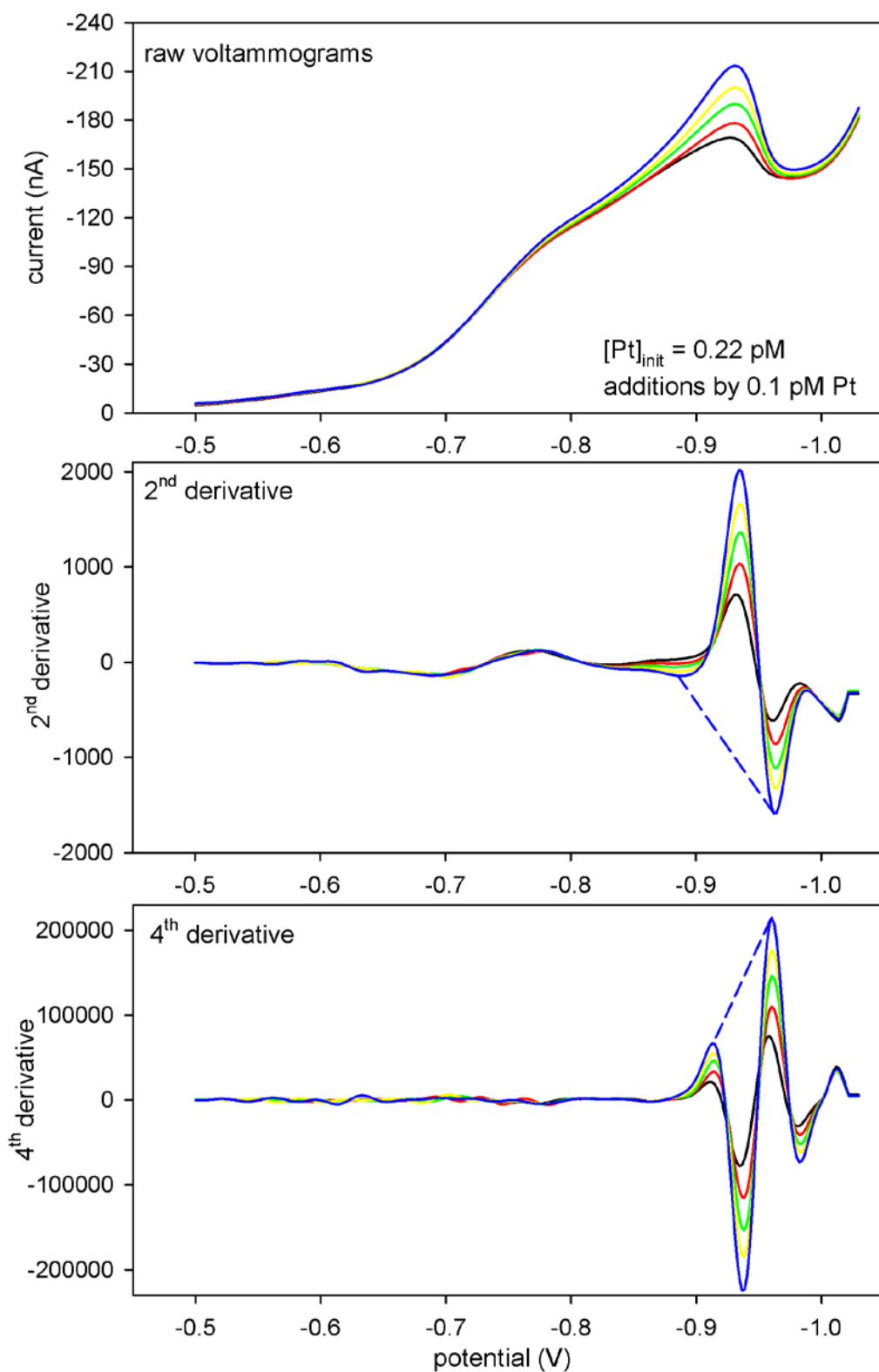


Figure S4. Forward current of DP voltammograms and corresponding 2nd and 4th derivative transformations. Blue dashed line approximates the "tangent fit" line used for peak determination.

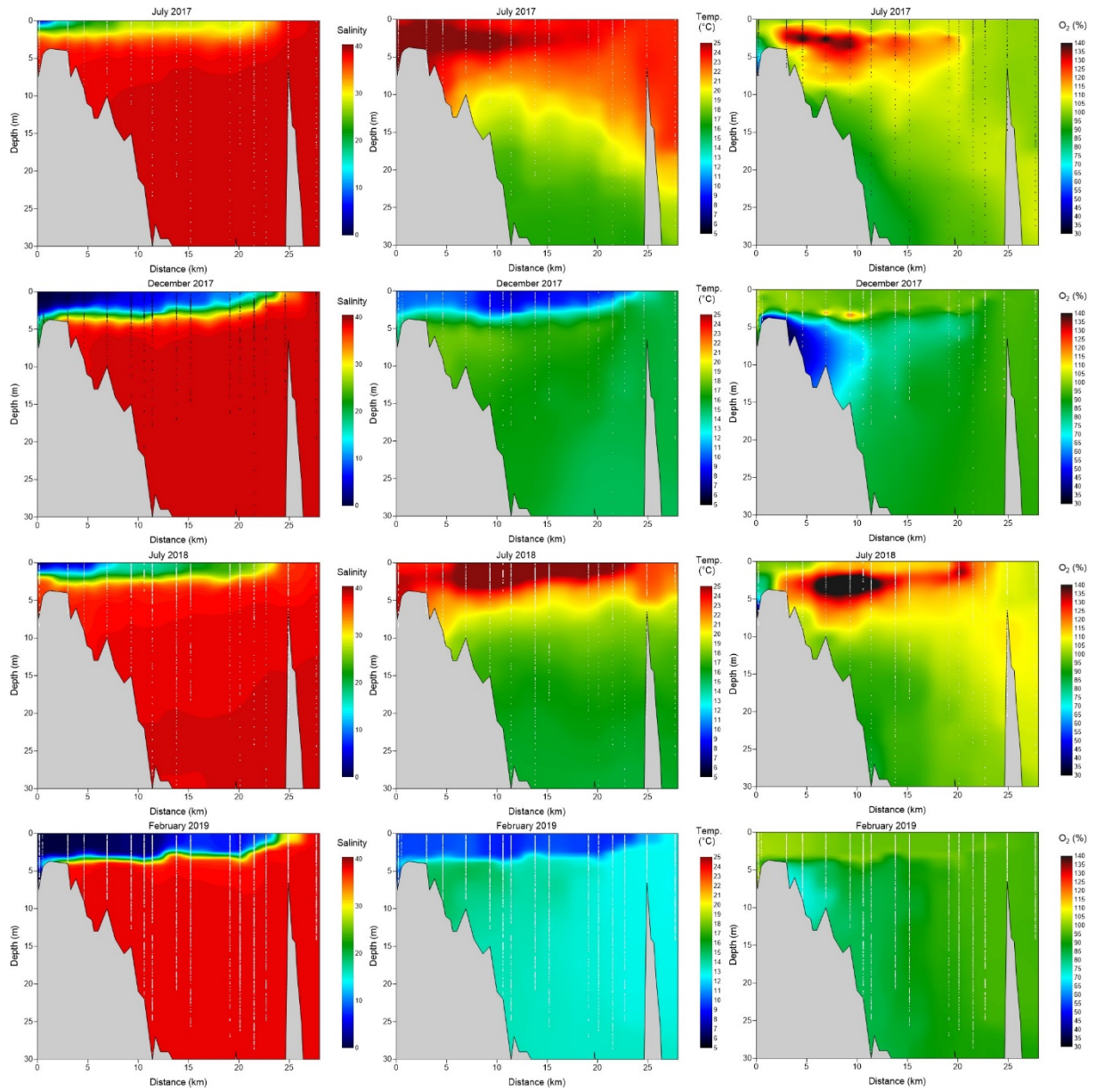


Figure S4. Contour plots of salinity, temperature and oxygen saturation for examined sampling campaigns.

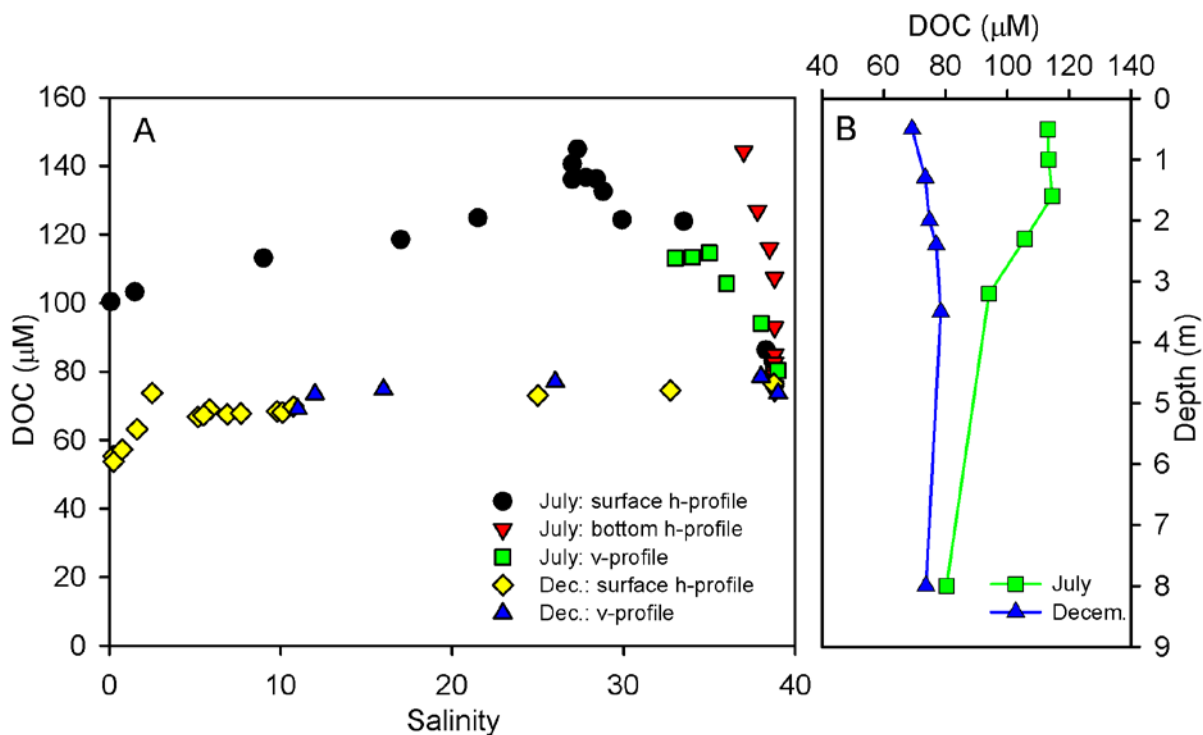


Figure S5. (A) Typical horizontal and (B) vertical profiles of dissolved organic carbon (DOC) for winter and summer period in the Krka River estuary ("h" - horizontal; "v" - vertical)

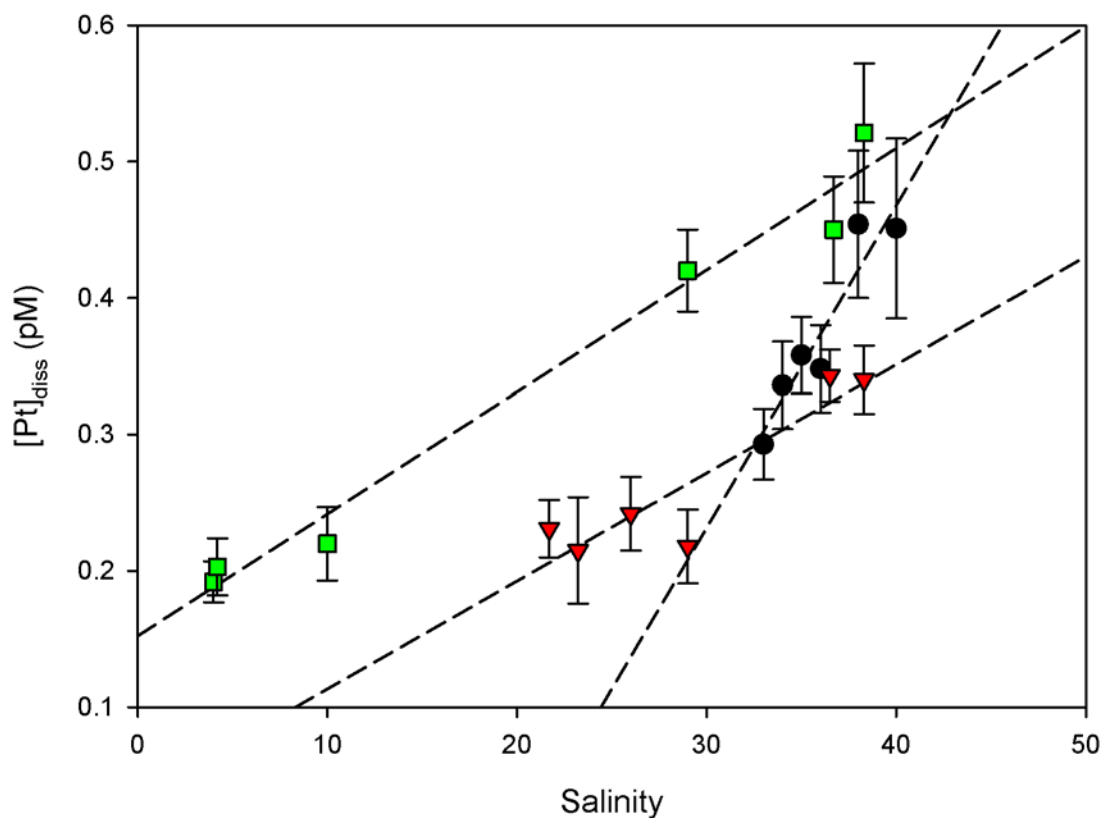


Figure S6. Relationship of dissolved Pt with salinity for examined vertical profiles presented in Fig. S5