

## SUPPLEMENTARY MATERIAL

### **Benzoylthiourea based polymers as new binding agents for diffusive gradients in thin films technique in labile mercury determination in freshwaters**

Siday Marrugo-Madrid<sup>a</sup>, Clàudia Fontàs<sup>b</sup>, Gülşah Kurt<sup>c</sup>, Carlos Salazar-Camacho<sup>d</sup>, Manuel Salas-Moreno<sup>d</sup>, Harry Gutierrez-Mosquera<sup>d</sup>, Jose Marrugo-Negrete<sup>e</sup>, Sergi Díez<sup>a,\*</sup>

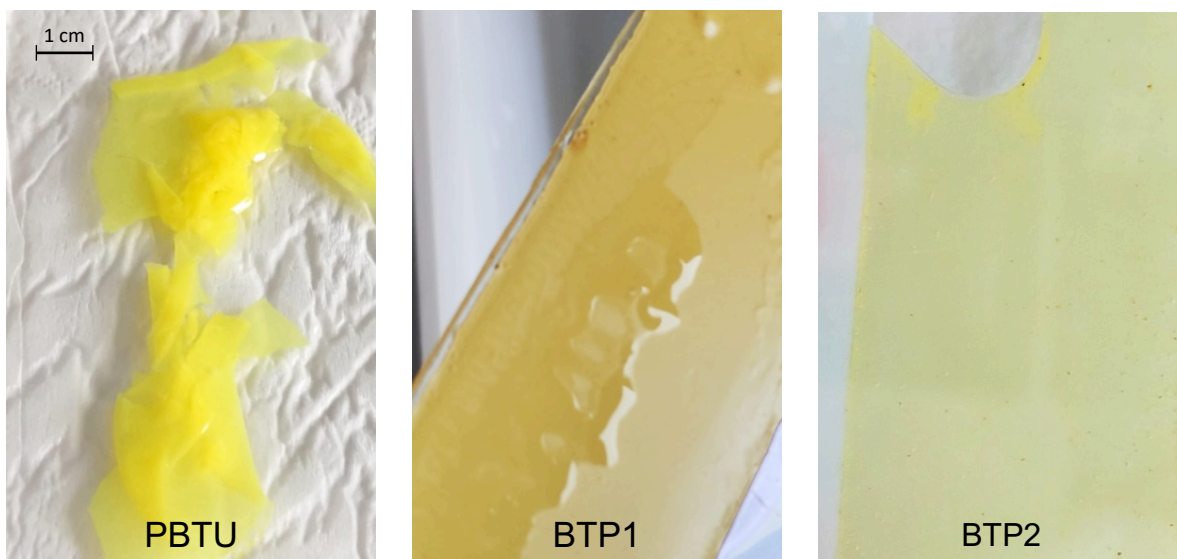
<sup>a</sup>Environmental Chemistry Department, Institute of Environmental Assessment and Water Research, IDAEA-CSIC, E-08034, Barcelona, Spain

<sup>b</sup>Department of Chemistry, University of Girona, C/Maria Aurèlia Capmany 69, 17003 Girona, Spain

<sup>c</sup>Department of Chemistry, Faculty of Arts and Sciences, Aksaray University, Aksaray, Turkey

<sup>d</sup>Faculty of Natural Sciences, Department of Biology, Technological University of Chocó, Quibdó, Colombia

<sup>e</sup>Department of Chemistry, Faculty of Sciences, University of Córdoba, Montería, Colombia



**Figure S1.** Photos of binding gels made from three polymeric materials derived from benzoylthiourea (PBTU, BTP1 and BTP2) mixed with a polyacrylamide gel solution at a ratio of 2.3% w/v

**Table S1.** Mean values  $\pm$  standard deviation (SD) of physic-chemical parameter: Temperature ( $^{\circ}\text{C}$ ), pH, dissolved oxygen (DO), conductivity, total dissolved solids (TDS), turbidity, and total mercury concentration in water (THg).

| Station   | N            | W           | T ( $^{\circ}\text{C}$ ) | pH            | DO ( $\text{mg L}^{-1}$ ) | Conductivity ( $\text{mS cm}^{-1}$ ) | TDS ( $\text{mg L}^{-1}$ ) | Turbidity (NTU) | THg in water ( $\mu\text{g L}^{-1}$ ) |
|-----------|--------------|-------------|--------------------------|---------------|---------------------------|--------------------------------------|----------------------------|-----------------|---------------------------------------|
| <b>S1</b> | 5°53.1'57.9" | 76°45'22.6" | 25.3 $\pm$ 0.2           | 8.2 $\pm$ 0.0 | 7.78 $\pm$ 0.26           | 9.5 $\pm$ 0.7                        | 1.7 $\pm$ 0.1              | 253 $\pm$ 18    | 0.342 $\pm$ 0.043                     |
| <b>S2</b> | 5°37'49.1"   | 76°44'10.5" | 25.5 $\pm$ 0.1           | 7.1 $\pm$ 0.3 | 6.88 $\pm$ 0.04           | 11.5 $\pm$ 0.7                       | 2.0 $\pm$ 0.1              | 258 $\pm$ 81    | 0.335 $\pm$ 0.040                     |
| <b>S3</b> | 5°39'58.8"   | 76°42'32.3" | 25.6 $\pm$ 0.1           | 6.6 $\pm$ 0.5 | 5.93 $\pm$ 0.78           | 12.0 $\pm$ 1.4                       | 1.7 $\pm$ 0.1              | 255 $\pm$ 95    | 0.299 $\pm$ 0.022                     |
| <b>S4</b> | 5°40'46.4"   | 76°40'37.8" | 25.7 $\pm$ 0.1           | 7.2 $\pm$ 0.3 | 5.60 $\pm$ 0.21           | 12.5 $\pm$ 2.1                       | 1.6 $\pm$ 0.1              | 264 $\pm$ 136   | 0.352 $\pm$ 0.044                     |
| <b>S5</b> | 5°40'50.3"   | 76°39'49.3" | 24.3 $\pm$ 0.5           | 7.2 $\pm$ 0.4 | 6.26 $\pm$ 0.23           | 29.0 $\pm$ 12.7                      | 2.0 $\pm$ 0.3              | 394 $\pm$ 45    | 0.262 $\pm$ 0.020                     |
| <b>S6</b> | 5°42'28.3"   | 76°40.19.5" | 25.2 $\pm$ 0.6           | 7.5 $\pm$ 0.3 | 5.45 $\pm$ 0.76           | 13.5 $\pm$ 3.5                       | 2.1 $\pm$ 0.6              | 322 $\pm$ 2     | 0.320 $\pm$ 0.036                     |