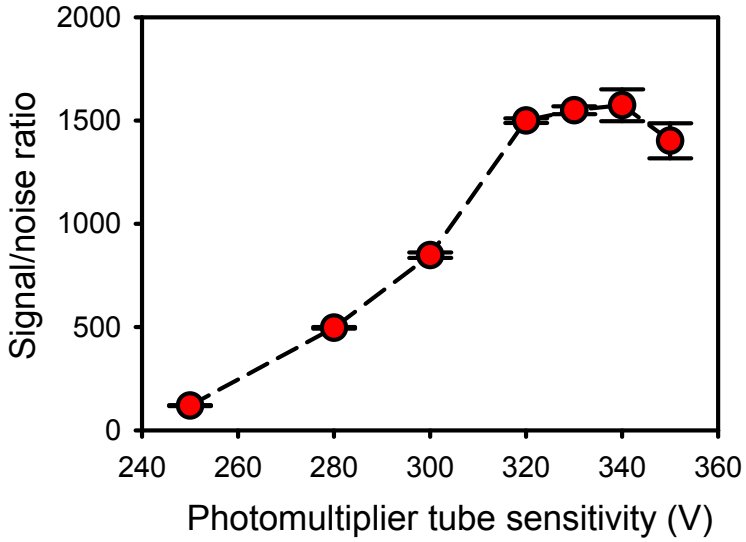
Electronic Supplementary Information (ESI)

Selection of the instrumental parameters

The optimization of the instrumental parameters was carried out following a univariate approach, observing the changes of the solid-phase fluorescence intensity/noise ratio when each parameter is modified, and selecting the value which maximizes the signal/noise ratio. It was observed that an increase in both the emission and excitation slit widths produces a better response from the fluorescent product, but does also significantly affect the blank signal. Therefore, values of 4 nm were selected for excitation and emission slits. The PMT voltage was also optimized in order to increase the signal/noise ratio, and a value of 320 V was selected for this parameter (Fig. S1).

ESI Figure S1 Solid-phase fluorescence/noise ratio after filtering 10.0 mL of 4.00 ng mL^{-1} Hg^{2+} through FC1 doped nylon membranes as a function of voltage detector. λex = 505 nm, λem = 560 nm. Error bars correspond to duplicates.



ESI Figure S2 Elliptical joint regions (at 95 % confidence level) for the slopes and intercepts of the regressions of predicted vs. nominal plots applying cold vapor-atomic absorption spectroscopy (dotted blue line) and the method here proposed (red line) to environmental waters. A black circle in the elliptical plots marks the theoretical (intercept = 0, slope = 1) point.