

**Highly Selective Detection of Histidine Using *o*-Phthaldialdehyde Derivatization  
After the Removal of Amino Thiols Through Tween 20-capped Gold Nanoparticles**

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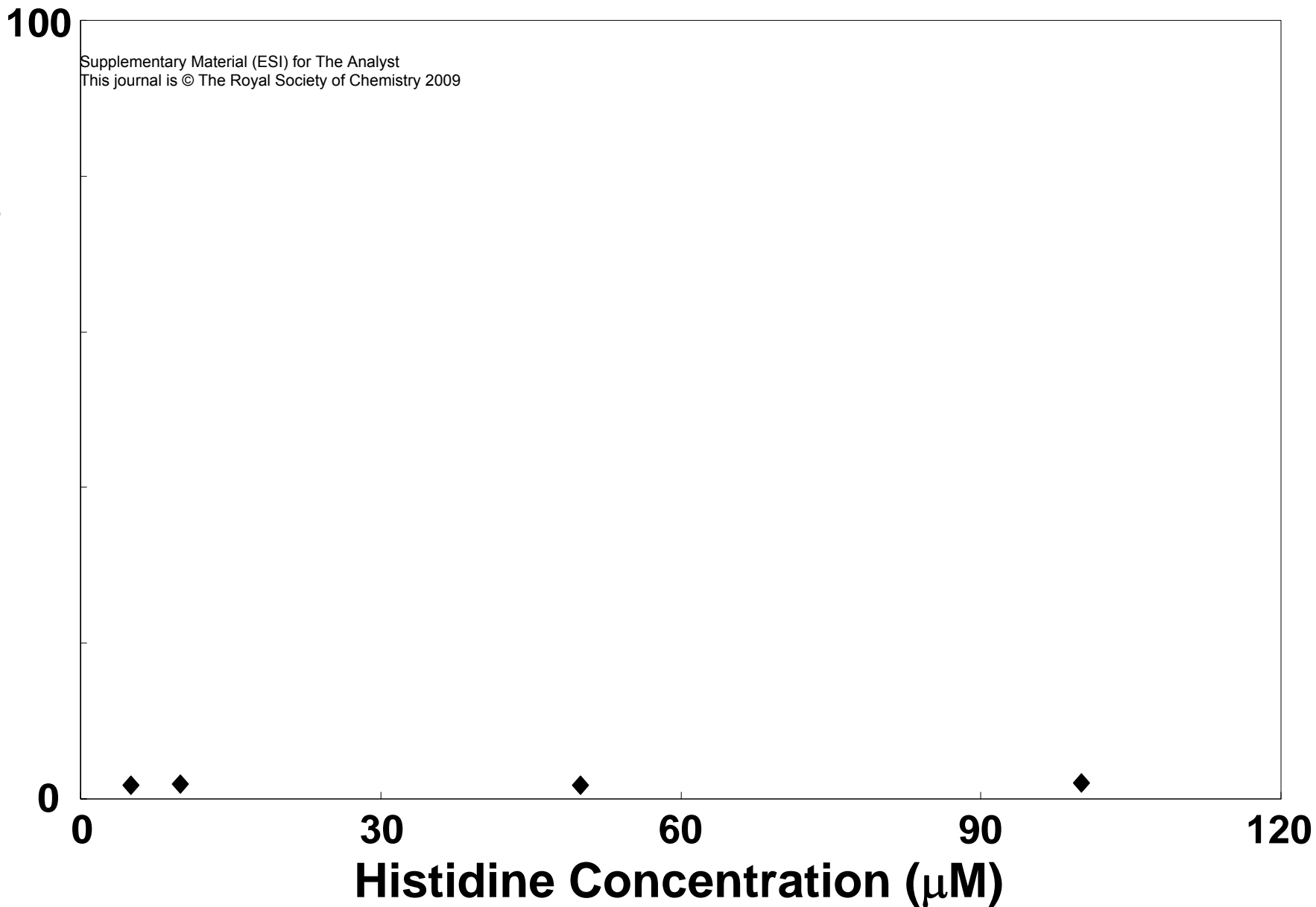
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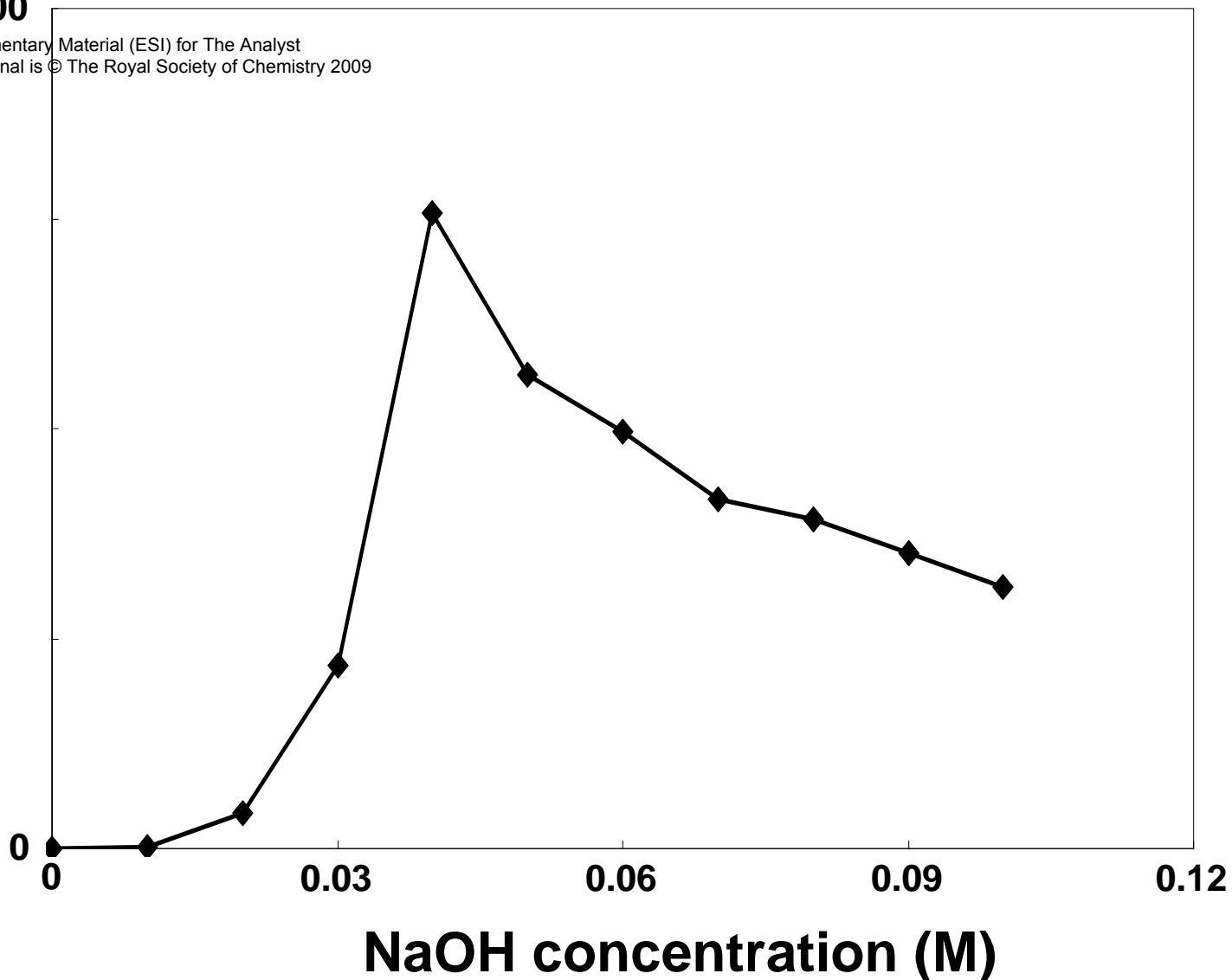
**Fax:** 011-886-7-3684046.

Electronic supplementary information (ESI) available: the optimal conditions for the  
derivatization of histidine with OPA

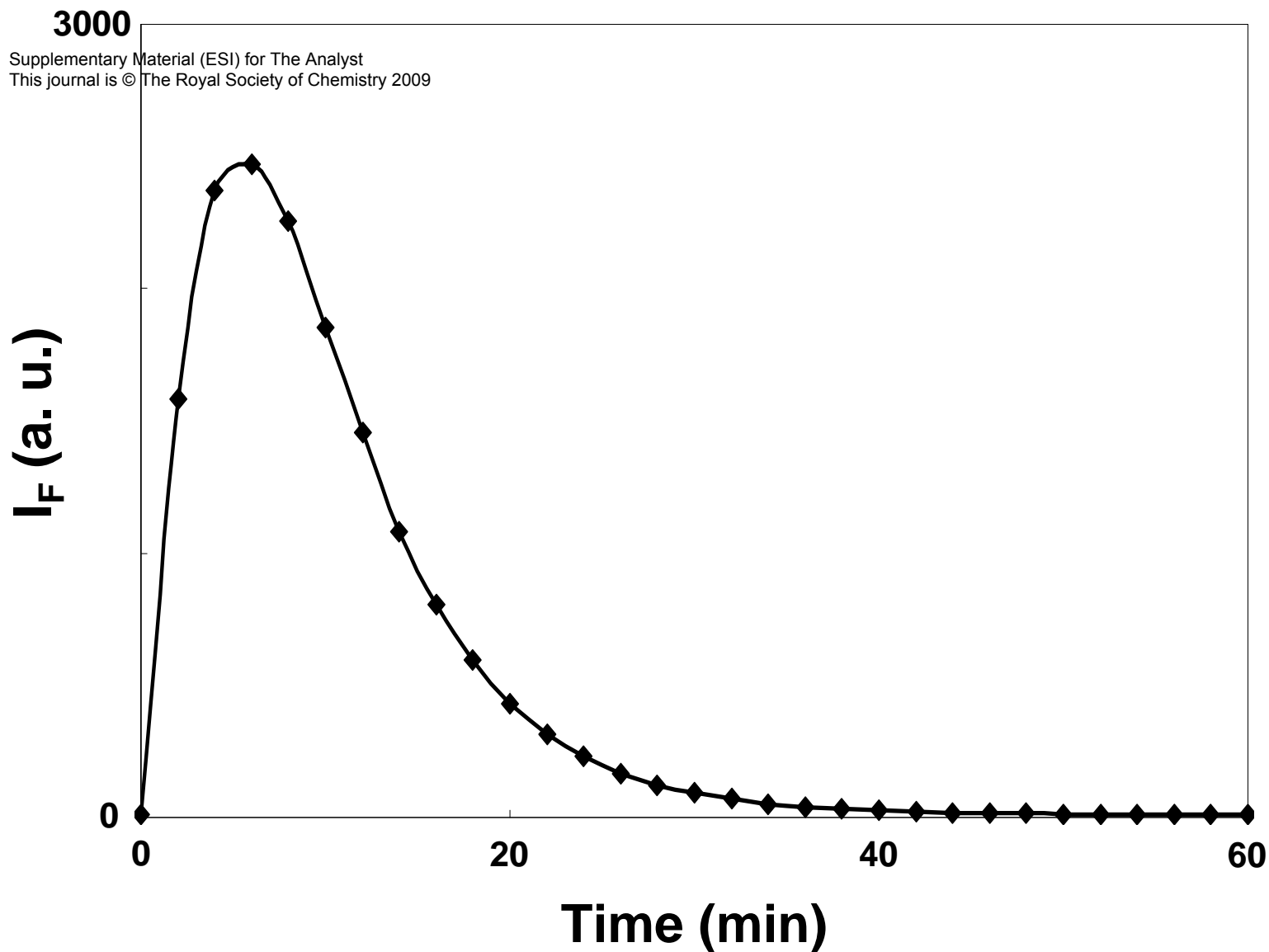


**Figure S1.** Effect of histidine concentration on the removal of histidine with Tween 20-AuNPs. The supernatant was obtained by centrifugation of a solution containing 5-100  $\mu\text{M}$  histidine, 48.0 nM Tween 20-AuNPs and 0.1 mM CTAB. Then, the supernatant was derivatized with a solution of 1 mM OPA and 0.05 M NaOH. After 10 min, the fluorescence intensity (IF) of OPA derivatives was measured by excitation at 360 nm.

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Supplementary Material (ESI) for The Analyst  
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**Figure S2.** The effect of NaOH on the OPA derivatization of histidine. The supernatant was obtained by centrifugation of a solution of 10  $\mu$ M histidine, 48.0 nM Tween 20-AuNPs and 0.1 mM CTAB. Then, the supernatant was derivatized with a solution of 1 mM OPA and 0–0.1 M NaOH. Tween 20-AuNPs were prepared in 40 mM phosphate solution at pH 2.0. The excitation wavelength was set at 360 nm.



**Figure S3.** The time evolution of fluorescence intensity of OPA-derivatized histidine. The supernatant was obtained by centrifugation of a solution of 10  $\mu$ M histidine, 48.0 nM Tween 20-AuNPs and 0.1 mM CTAB. Then, the supernatant was derivatized with a solution of 1 mM OPA and 0.04 M NaOH. Tween 20-AuNPs were prepared in 40 mM phosphate solution at pH 2.0. The excitation wavelength was set at 360 nm.