DNA-shaped silver(I) coordination polymer based micro-solid phase extraction for
determination of Amaranth and Brilliant Blue FCF in food and water samples

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Fig. S1. pH\textsubscript{PZC} plot of silver(I)-CP sorbent.

![pH\textsubscript{PZC} plot](image)

$\text{pH}_{\text{PZC}}=6.5$

Fig. S2. The experimental values (%) plotted against the predicted values (%) derived from the model of AM and BB recovery (%). The long dash line is the regression line with regression coefficient $R^2 = 0.99822$ (AM) and 0.99878 (BB). Each point refers to the experiment number listed in Table 1.

![Experimental vs Predicted Values](image)
Fig. S3. Response surface plots for AM and BB recovery efficiency as a function of two independent variables.
Fig. S4. Graphs for experimental, predicated and desirability function values for the extraction of AM and BB.
### Table S1. The overall comparison of the new method and reported methods.

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Method</th>
<th>Detection</th>
<th>Precision (% RSD)</th>
<th>LOD (ng mL⁻¹)</th>
<th>Linear range (ng mL⁻¹)</th>
<th>Contact time (min)</th>
<th>References</th>
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</thead>
<tbody>
<tr>
<td>AM</td>
<td>SPE</td>
<td>DPV</td>
<td>&lt;3.0%</td>
<td>5.0</td>
<td>50–5000</td>
<td>40</td>
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<td></td>
<td>CPE</td>
<td>UV-Vis</td>
<td>&lt;4.5%</td>
<td>13.0</td>
<td>20-1600</td>
<td>30</td>
<td>[42]</td>
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<tr>
<td></td>
<td>UA-D-μ-SPE</td>
<td>UV-Vis</td>
<td>&lt;5.0%</td>
<td>3.83</td>
<td>20-5000</td>
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<tr>
<td>BB</td>
<td>CPE</td>
<td>UV-Vis</td>
<td>&lt;5%</td>
<td>1.7</td>
<td>2-350</td>
<td>30</td>
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<tr>
<td></td>
<td>ILLLME</td>
<td>HPLC</td>
<td>&lt;6.5%</td>
<td>0.051–0.074</td>
<td>0.81–2000</td>
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<td>IL-IDLLME</td>
<td>UV-Vis</td>
<td>&lt;1%</td>
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<td>1.5–150</td>
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<td>UA-D-μ-SPE</td>
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<td>2.28</td>
<td>15-6000</td>
<td>5.0</td>
<td>This work</td>
</tr>
</tbody>
</table>

DPV: Differential Pulse Voltammetry  
CPE: Cloud Point Extraction  
IL-IDLLME: Ionic liquid independent disperse liquid–liquid microextraction  
ILLLME: Ionic liquid liquid–liquid microextraction  
HPLC: High-performance liquid chromatography  
SPE: Solid-Phase Extraction  
MSPE: Magnetic solid-phase extraction  
CE: Capillary electrophoresis  
CSPE: Column solid-phase