Natural cotton fibers as adsorbents for solid-phase extraction of polycyclic aromatic hydrocarbons in water samples

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Supplementary Materials

2. Experimental

2.5 HPLC-FLD analysis

Table S-1 Time program of emission and excitation wavelength of fluorescence detection

<table>
<thead>
<tr>
<th>Time (min)</th>
<th>Emission wavelength (nm)</th>
<th>Excitation wavelength (nm)</th>
<th>PAH determined</th>
<th>PAH structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0-12.0</td>
<td>340</td>
<td>260</td>
<td>Flu</td>
<td></td>
</tr>
<tr>
<td>12.0-15.0</td>
<td>370</td>
<td>250</td>
<td>Ant</td>
<td></td>
</tr>
<tr>
<td>15.0-17.5</td>
<td>462</td>
<td>289</td>
<td>FlA</td>
<td></td>
</tr>
<tr>
<td>17.5-21.0</td>
<td>380</td>
<td>320</td>
<td>Pyr</td>
<td></td>
</tr>
<tr>
<td>21.0-25.0</td>
<td>403</td>
<td>266</td>
<td>BaA</td>
<td></td>
</tr>
<tr>
<td>25.0-32.0</td>
<td>430</td>
<td>294</td>
<td>BbF</td>
<td></td>
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<tr>
<td>25.0-32.0</td>
<td>430</td>
<td>294</td>
<td>BkF</td>
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</tr>
</tbody>
</table>
3. Results and discussion

3.1.1. Optimization of desorption conditions

Figure. S1 Effect of eluting solvent volume on SPE performance. Extraction conditions: sample volume, 50 mL; extraction time: 60 min; eluent solvent, acetonitrile; ultrasonic desorption time, 10 min.
Figure. S2 Effect of ultrasonic desorption time on SPE performance. Extraction conditions: sample volume, 50 mL; extraction time: 60 min; eluent solvent, acetonitrile; volume of elution solvent, 3×2 mL.
3.1.2. Effect of salt concentration and organic modifier

Fig. S3 Effect of salt concentration on SPE performance. Extraction conditions:

- Sample volume: 50 mL
- Extraction time: 60 min
- Eluent solvent: acetonitrile
- Volume of elution solvent: 3×2 mL
- Ultrasonic desorption time: 5 min
3.1.7. Effect of volume of organic modifier.

Fig. S4 Effect of organic modifier volume on SPE performance. Extraction conditions: sample volume, 50 mL; extraction time: 60 min; eluent solvent, acetonitrile; volume of elution solvent, 3×2 mL; ultrasonic desorption time, 5 min.