Materials and methods that allow fingerprint analysis and DNA profiling from the same latent evidence

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DNA-STR profiles from individual fingerprints on non-porous surfaces

Five fingerprints were detected with black powder and five fingerprints were detected by fuming (vaporized cyanoacrylate) and Rhodamine 6G staining. These samples were individually collected and processed as described in Materials and Methods, but without using the lysis chamber. Table 1 shows percent recovery of alleles (Identifiler PCR amplification kit). Photographs of the fingerprints and the corresponding electropherograms are on pages 2 - 5.

Table 1. DNA recovery from fingerprints on non-porous surfaces

<table>
<thead>
<tr>
<th>Sample</th>
<th>Identification Method</th>
<th>Recovered Alleles (50 RFU peak height cut-off)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Black powder</td>
<td>100%</td>
</tr>
<tr>
<td>2</td>
<td>Black powder</td>
<td>100%</td>
</tr>
<tr>
<td>3</td>
<td>Black powder</td>
<td>94%</td>
</tr>
<tr>
<td>4</td>
<td>Black powder</td>
<td>84%</td>
</tr>
<tr>
<td>5</td>
<td>Black powder</td>
<td>91%</td>
</tr>
<tr>
<td>6</td>
<td>Cyanoacrylate</td>
<td>100%</td>
</tr>
<tr>
<td>7</td>
<td>Cyanoacrylate</td>
<td>100%</td>
</tr>
<tr>
<td>8</td>
<td>Cyanoacrylate</td>
<td>56%</td>
</tr>
<tr>
<td>9</td>
<td>Cyanoacrylate</td>
<td>94%</td>
</tr>
<tr>
<td>10</td>
<td>Cyanoacrylate</td>
<td>100%</td>
</tr>
</tbody>
</table>

Average: 92%
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Fingerprints on plastic detected with DNA-free black powder

GeneScan images of electropherograms (Identifiler)
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