India’s Minamata

Singrauli, the powerhouse of India with massive coal reserves and many thermal power plants, should have been prosperous. But it is poor and polluted. People complain of unexplained ailments. Nonprofit Centre for Science and Environment decided to investigate and found that mercury, a deadly toxin in coal, is slowly entering people’s homes, food, water and even body.

**Table: Mercury Levels**

- **Obra Township**
  - Average Blood mercury: 27.38 ppb
  - Hair mercury: 2.673 ppm
  - Nail mercury: 0.0026 ppm
  - Maximum Blood mercury: 29.92 ppb
  - Hair mercury: 6.85 ppm
  - Nail mercury: 0.026 ppm
  - Soil mercury: 0.42 ppm

- **Dhibulganj**
  - Average Blood mercury: 32.41 ppb
  - Hair mercury: 16.758 ppm
  - Nail mercury: 0.418 ppm
  - Maximum Blood mercury: 61.47 ppb
  - Hair mercury: 31.32 ppm
  - Nail mercury: 2.09 ppm
  - Soil mercury: 1.75 ppm

- **Anpara**
  - Average Blood mercury: 25.9 ppb
  - Hair mercury: 4.0275 ppm
  - Nail mercury: 1.2125 ppm
  - Maximum Blood mercury: 78.68 ppb
  - Hair mercury: 30.66 ppm
  - Nail mercury: 1.215 ppm
  - Soil mercury: 1.75 ppm

- **Renukut**
  - Soil mercury: 0.57 ppm
  - Drinking water mercury: 0.01 ppm

- **Turripipki**
  - Soil mercury: 0.56 ppm
  - Drinking water mercury: 0.01 ppm

- **Kushmaha**
  - Soil mercury: 0.57 ppm

- **Raiharhi - Kirwani**
  - Average Blood mercury: 25.9 ppb
  - Hair mercury: 4.0275 ppm
  - Nail mercury: 1.2125 ppm
  - Maximum Blood mercury: 78.68 ppb
  - Hair mercury: 30.66 ppm
  - Nail mercury: 1.215 ppm
  - Soil mercury: 1.75 ppm

- **Chilika Daad**
  - Average Blood mercury: 25.9 ppb
  - Hair: 4.0275 ppm
  - Nail: 1.2125 ppm
  - Maximum Blood mercury: 78.68 ppb
  - Hair: 30.66 ppm
  - Nail: 1.215 ppm
  - Soil: 1.75 ppm

Mercury standard

<table>
<thead>
<tr>
<th>SAMPLES</th>
<th>STANDARD</th>
<th>SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blood</td>
<td>5.8 ppb</td>
<td>United States Environment Protection Agency (USEPA)</td>
</tr>
<tr>
<td>Hair</td>
<td>6.0 ppm</td>
<td>Health Department, Canada</td>
</tr>
<tr>
<td>Nail</td>
<td>no standard</td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td>0.001 ppm</td>
<td>Bureau of Indian Standard (BIS)</td>
</tr>
<tr>
<td>Effluent</td>
<td>0.01 ppm</td>
<td>Environment Protection Act, 1986</td>
</tr>
<tr>
<td>Soil</td>
<td>no standard</td>
<td></td>
</tr>
</tbody>
</table>

Methyl Mercury standard

<table>
<thead>
<tr>
<th>SAMPLES</th>
<th>STANDARD</th>
<th>SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fish</td>
<td>0.25 ppm</td>
<td>Food Safety and Standard Authority of India (SSAI)</td>
</tr>
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