

## 7Ed Chromatography

**4 a** Black ink contains blue, purple and red dye; brown ink contains yellow and red dye; red ink contains red and yellow dye; green ink contains blue and yellow dye; blue ink contains blue and purple dye; orange ink contains yellow and red dye.

**b** red

**5** The solvent carries the substances at different speeds so they are spread out.

**7 a** tartrazine, carotene, natural orange

**b** Orange drink 3 because the chromatogram shows that it does not contain any tartrazine.

**8** Any two suitable examples, such as: forensic analysis, testing for banned drugs, water analysis, food analysis.