

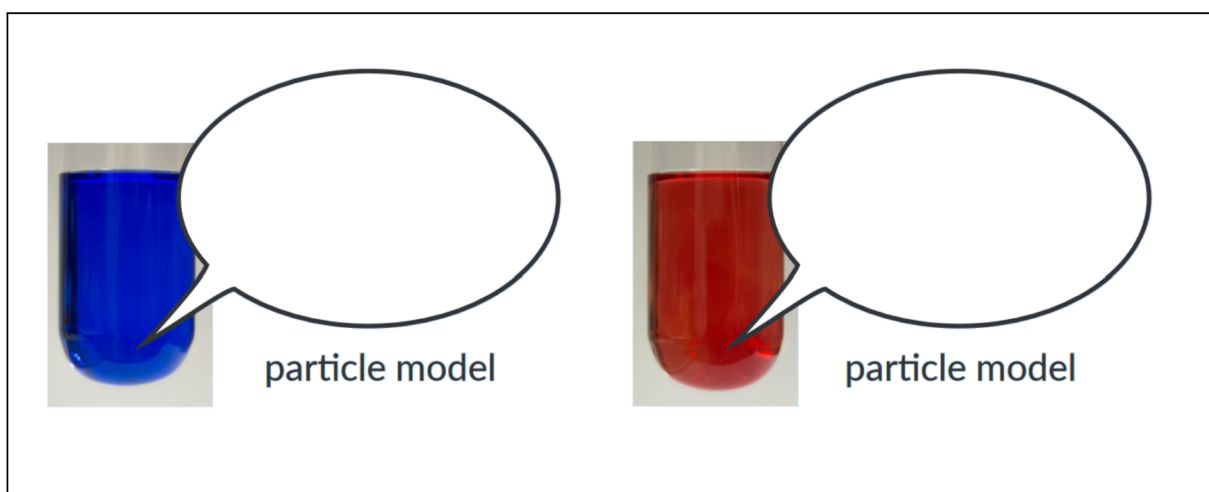
**Colour is (not) a characteristic material property****Colour – part 2****Experiment:**

Irradiate each of the test tubes, which all contain the same substance in different solvents, with a UV-LED torch for one minute. Write down the resulting colours immediately after the irradiation.

**Colour of the irradiated solutions:**

n-heptane-solution	acetone-solution	ethanol-solution

**A3** After the irradiation, all three solutions contain the same dissolved substance called **merocyanine**. This substance has been produced by supplying light energy. Draw particle models for the two solutions (cf. diagrams below). Use a circle for each particle and label each circle with a letter (**h**, **a**, **e**, **m**) for the respective substance (n-heptane, acetone, ethanol, merocyanine).



**A4** Observe the colour of the two solutions three minutes after you have switched off the lamps. Name the differences and then make suggestions how to explain these differences.

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**A5** “The colour of a substance is a characteristic property of this substance.” Assess this statement by taking into consideration all experiments and analyses.

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