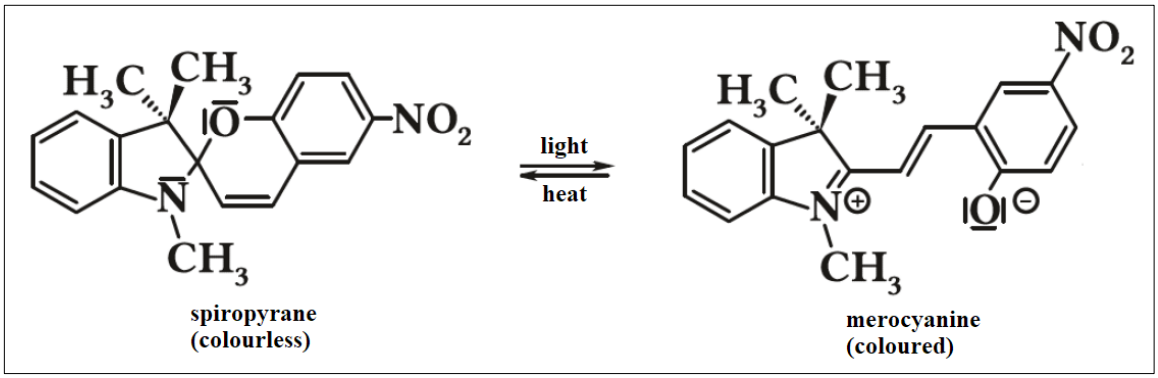
Name: _____ Date: _____

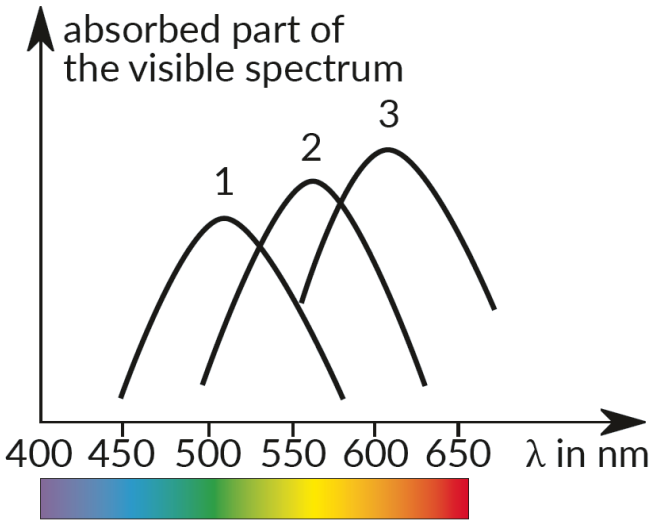
Solvatochromism (Sek. II/supper secondary level)

The solutions of the same substance in different solvents differ in colour

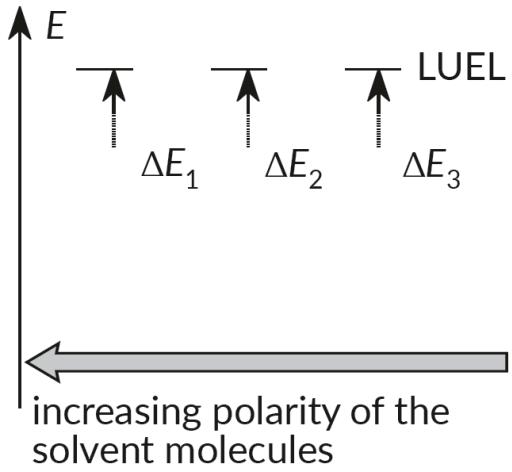
<u>Group 2: Energy level diagram</u>



E1 Assign the three absorption maxima of merocyanine (see *figure 1* below) to the three used solvents. Give reasons for your choice.



(*figure 1*)



(*figure 2*)

E2 With the help of E1, draw the **h**ighest **o**ccupied **e**nergy **l**evel HOEL for the merocyanine-molecule in each of the three solutions into the diagram above (*figure 2*).

E3 Carry out some research into the concepts of *bathochromic* and *hypsochromic shift* as well as the concepts of *positive* and *negative solvatochromism*. By means of your findings, explain your observations.