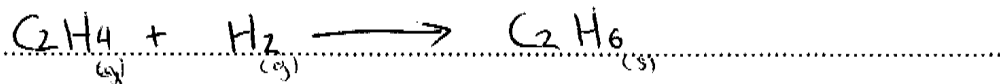


**Question 24** (4 marks)

In the margarine industry, alkenes are often hydrogenated to convert unsaturated oils into solid fats that have a greater proportion of saturated molecules.

- (a) Using ethene as an example, write an equation for this reaction and state the type of reaction this represents. 2



∴ this reaction represents a hydration and redox reaction.

- (b) Describe a test that could be used to confirm that all the ethene has been converted. 2

A test that could be used is the bromine water test. The bromine water acts as an indicator indicating whether it is an alkene or alkane. The bromine water will turn colour in the presence of an alkene. However, bromine water will not change colour if it is an alkane. Therefore by carrying this test, it can be confirmed if all the ethene has been converted ethane, if there is no colour change.

4/5<sup>sd</sup>

S2

