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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.

(2H4 + Hz -> (2H6

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

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