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**

$CH_2CH_2(g) + H_2O(l) \xrightarrow{\text{dilute } H_2SO_4} CH_3CH_2OH(l)$

Hydration reaction with dilute sulfuric acid.

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

The test that could confirm that all ethene is been converted is by adding dilute H_2SO_4 and if there is any precipitate formed

2/3

Sample 1

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