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.

\[ \text{C}_2\text{H}_4 + \text{H}_2\text{O} \rightarrow \text{C}_2\text{H}_5\text{OH} \]

\[ \text{This is an example of a hydration reaction} \]

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

...pour...some...of...the...product...into...a...bowl...

...and...ight...it...if...it...burns...it...all...then...its...all...been...

...converted...to...ethanol...if...not...then...there...is...still...some...

...ethene...