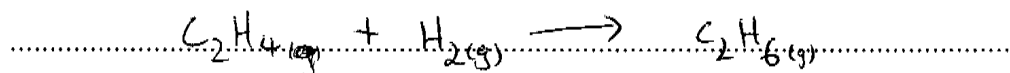


**Question 24** (4 marks)

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



..... ~~Hydrogenation~~, addition reaction .....

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

..... Bromine water test, as if all of the ethene  
..... is converted, the mixture (after being first liquefied) will not  
..... react at all with Bromine water in the absence of  
..... UV light, thus showing that it had all been converted to  
..... ethane .....

S2  
5/6  
✓