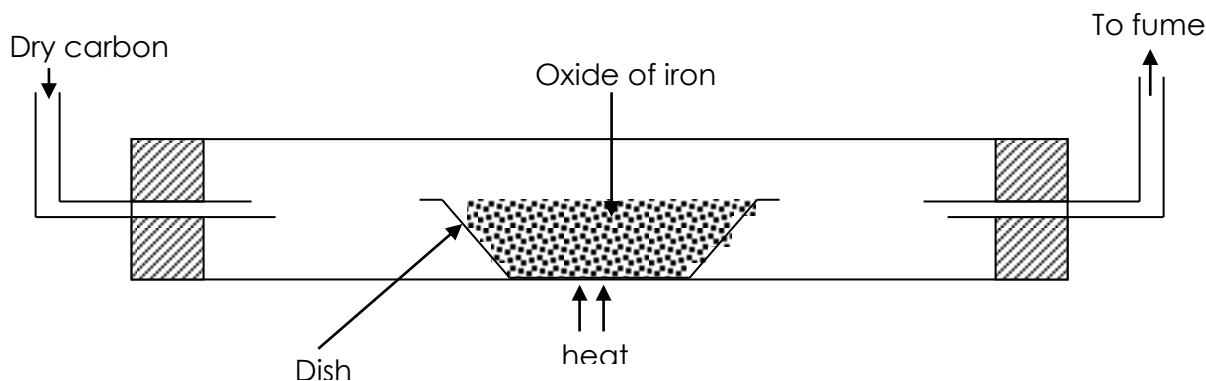


Competence test 02

Topic: mole concept

1. a) Excess carbon monoxide gas was passed over a heated sample of an oxide of iron as shown in the diagram below. Study the diagram and the data below it to answer the questions that follow.



Mass of empty dish = 10.98g

Mass of empty dish + oxide of iron = 13.30g

Mass of empty dish + residue = 12.66g

- i) Determine the formula of the oxide of iron. (Fe = 56 , O = 16) (3marks)
 - ii) Write an equation for the reaction which took place in the dish. (1 ½ marks)
- b) Rusting is a destructive process in which iron is converted into hydrated iron (iii) oxide.
- i) State two conditions necessary for rusting to occur. (1mark)
 - ii) one method used to protect iron from rusting (½ mark)

END