

Year 12 Chemistry Depth Study

NESA #: 34364338

October 17, 2021

Abstract

This depth study report explores the role of equilibrium systems and reversible reactions within industrial applications, including the Contact Process and the Solvay Process.

1 Contact Process

The Contact Process is a four-step industrial process used to produce sulfuric acid.

1. Produce sulfur dioxide from sulfur and excess oxygen
2. Convert sulfur dioxide to sulfur trioxide
3. Dissolve sulfur trioxide in concentrated sulfuric acid to produce oleum (fuming sulfuric acid)
4. React diluted sulfuric acid with water to produce twice as much sulfuric acid

1.1 Producing sulfur dioxide

In order to produce sulfur dioxide, a non-reversible combustion reaction between sulfur and oxygen is used to produce sulfur dioxide.



2 Bibliography

Clark, Jim 2021, *The Contact Process*, Truro School in Cornwall, viewed 17 October 2021,
<<https://chem.libretexts.org/@go/page/3838>>

British Broadcasting Corporation 2021, Sulfuric acid and the contact process, viewed 17 October 2021,
<<https://www.bbc.co.uk/bitesize/guides/zb7f3k7/revision/1>>