

## Supercritical Water Synthesis of Terephthalic Acid in Batch Process

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Terephthalic acid (TPA) was synthesized by using subcritical and supercritical water in batch process. It is known that the synthesis of TPA under supercritical conditions occurs in a few seconds. Longer reaction time can cause excessive oxidation and generation of unwanted compounds such as benzoic acid. Therefore the time for reaching the design temperature inside the reactor should be shortened. In this study, we investigated the effect of time for reaching the design temperature on the yields of TPA using different batch reactors. Some key process variables such as temperature and reaction time were also varied for the experiments.