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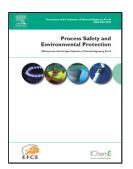
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### ACCEPTED MANUSCRIPT

# Evaluation for the thermokinetics of the autocatalytic reaction of cumene hydroperoxide mixed with phenol through isothermal approaches and simulations

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#### HIGHLIGHTS

- Kinetics model of CHP decomposition was created based on isothermal data.
- Kinetics approach and appropriate heat balance for scale up simulation.
- Safety parameters from results can provide information for loss prevention.
- Kinetics parameters determined through model-fitting method.
- Simulation method for SADT determination was confirmed.

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