

# Liquid Phase Hydrogenation of Benzalacetophenone: Effect of Solvent, Catalyst Support, Catalytic Metal and Reaction Conditions

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**摘要** Innovative catalysts based on a “porous glass” support material were developed and investigated for the reduction of benzalacetophenone. The easy preparation conditions and possibility to use different metals (e.g. Pd, Pt, Rh) for impregnation gave a broad variety of these catalysts. Hydrogenation experiments with these supported catalysts were carried out under different hydrogen pressures and temperatures. Porous glass catalysts with Pd as the active component gave chemoselective hydrogenation of benzalacetophenone, while Pt- and Rh-catalysts tended to further reduce the carbonyl group, especially at elevated hydrogen pressures and temperatures. Kinetic analysis of the reactions revealed these had zero order kinetics, which was independent of the type of porous glass support and solvent used.

关键词: [chalcone](#) [hydrogenation](#) [porous glass](#) [supported catalyst](#)

**Abstract:** Innovative catalysts based on a “porous glass” support material were developed and investigated for the reduction of benzalacetophenone. The easy preparation conditions and possibility to use different metals (e.g. Pd, Pt, Rh) for impregnation gave a broad variety of these catalysts. Hydrogenation experiments with these supported catalysts were carried out under different hydrogen pressures and temperatures. Porous glass catalysts with Pd as the active component gave chemoselective hydrogenation of benzalacetophenone, while Pt- and Rh-catalysts tended to further reduce the carbonyl group, especially at elevated hydrogen pressures and temperatures. Kinetic analysis of the reactions revealed these had zero order kinetics, which was independent of the type of porous glass support and solvent used.

Keywords: [chalcone](#), [hydrogenation](#), [porous glass](#), [supported catalyst](#)

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