

Supporting Information

Chemoselective Heterogeneous Iridium Catalyzed Hydrogenation of Cinnamalaniline

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Concentration and Selectivity Profiles From Solvent Screening.

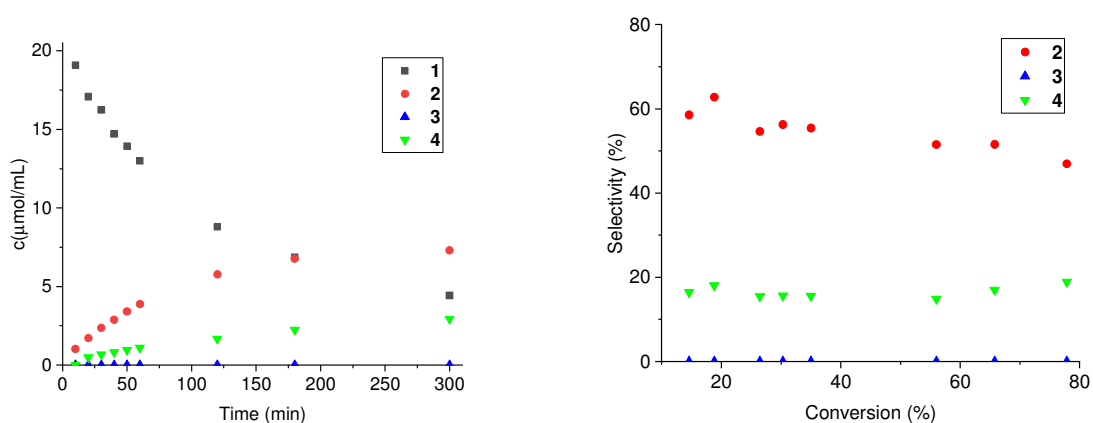


Figure 1. 1 mol-% Ir/Al₂O₃ catalyst in cinnamalaniline **1** hydrogenation using 2-propanol as solvent at 40 °C. Left: Concentration vs. Time; right: Selectivity vs. Conversion.

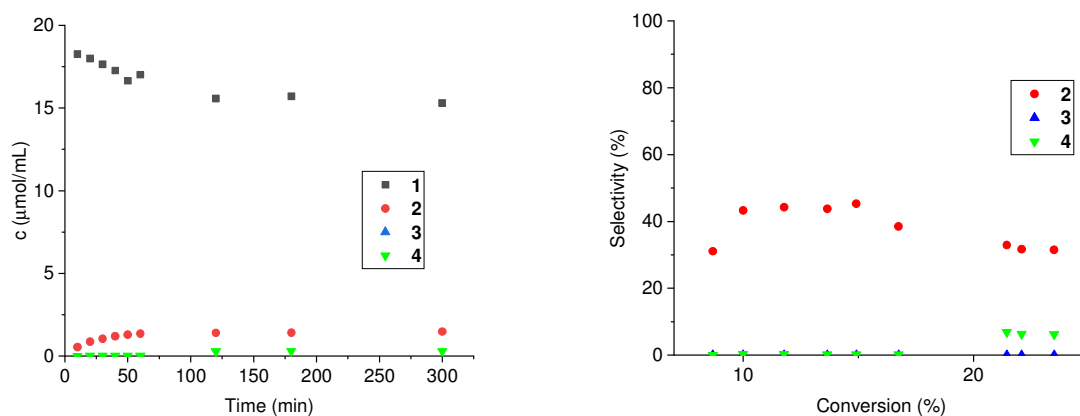


Figure 2. 1 mol-% Ir/Al₂O₃ catalyst in cinnamalaniline **1** hydrogenation using MTBE as solvent at 40 °C. Left: Concentration vs. Time; right: Selectivity vs. Conversion.

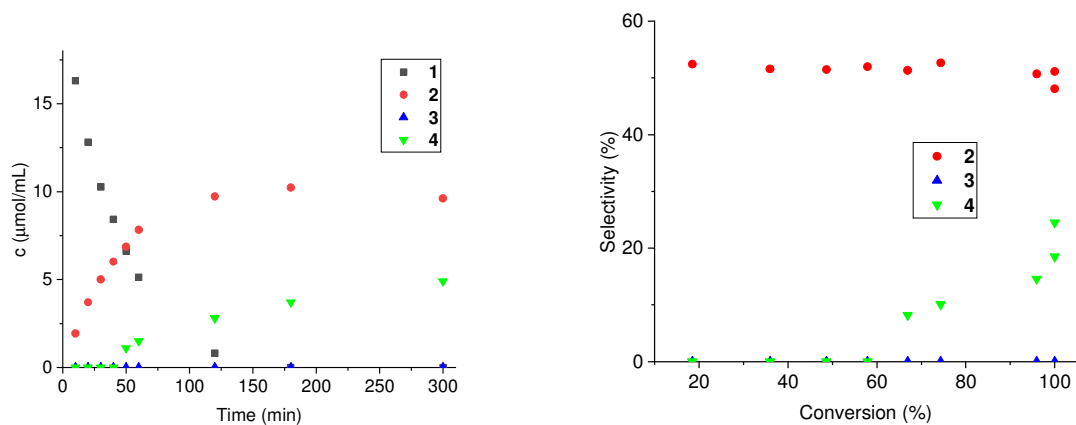


Figure 3. 1 mol-% Ir/ZrO₂ catalyst in cinnamalaniline **1** hydrogenation using methanol as solvent at 40 °C. Left: Concentration vs. Time; right: Selectivity vs. Conversion.

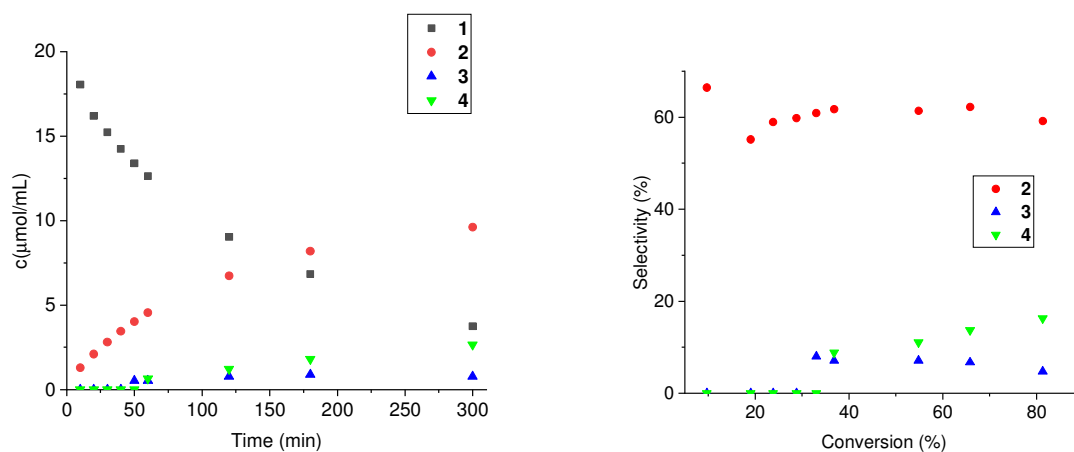


Figure 4. 1 mol-% Ir/ZrO₂ catalyst in cinnamalaniline **1** hydrogenation using toluene as solvent at 40 °C. Left: Concentration vs. Time; right: Selectivity vs. Conversion.

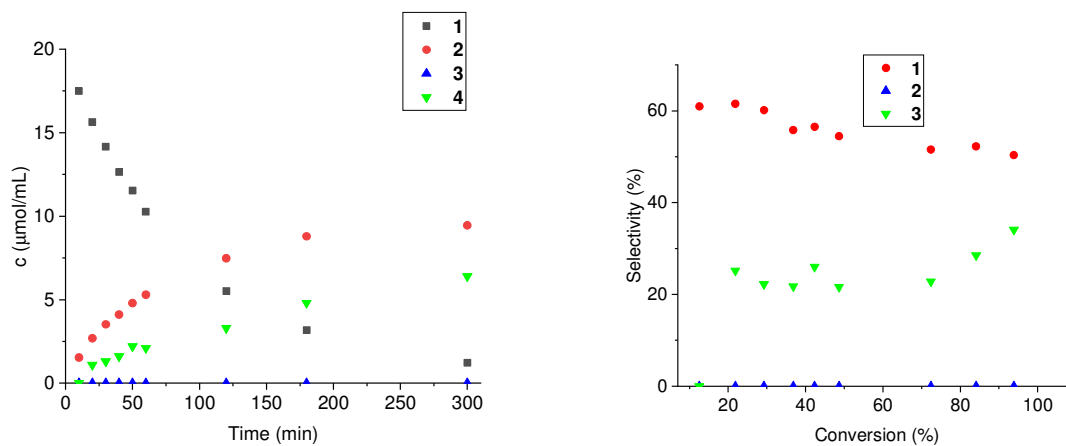


Figure 5. 1 mol-% Ir/ZrO₂ catalyst in cinnamalaniline **1** hydrogenation using 2-propanol as solvent at 40 °C. Left: Concentration vs. Time; right: Selectivity vs. Conversion.

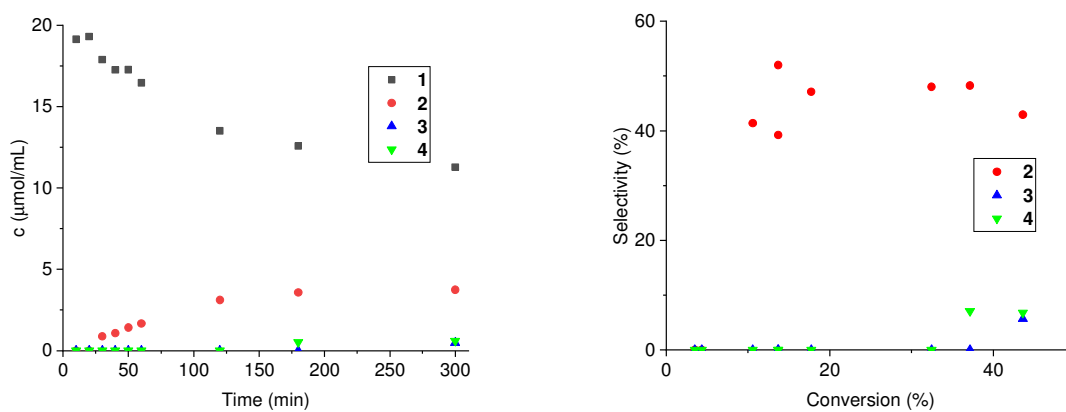


Figure 6. 1 mol-% Ir/ZrO₂ catalyst in cinnamalaniline **1** hydrogenation using MTBE as solvent at 40 °C. Left: Concentration vs. Time; right: Selectivity vs. Conversion.

Concentration and Selectivity Profiles From Temperature Experiments.

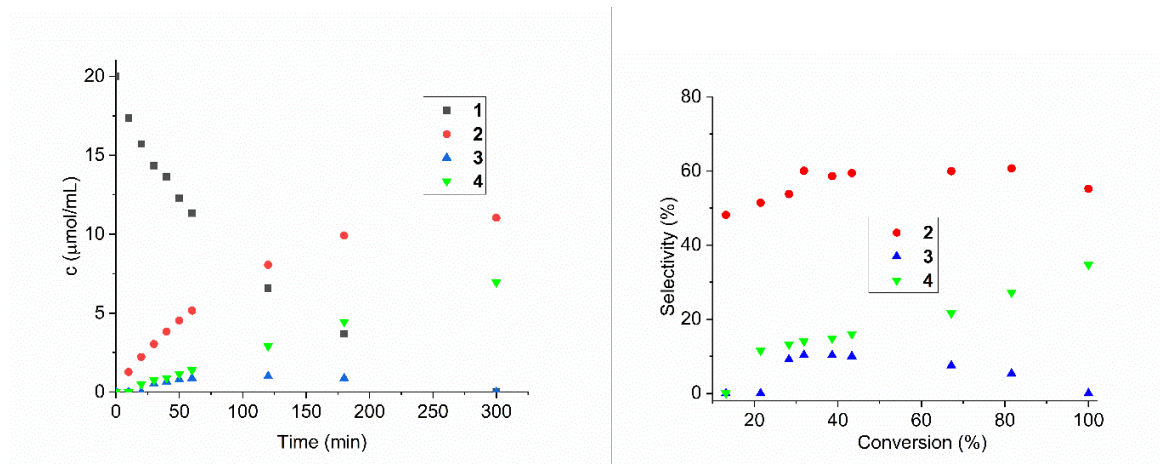


Figure 7. 1 mol-% Ir/ Al_2O_3 catalyst in cinnamalaniline **1** hydrogenation using Toluene as solvent at 80 °C. Left: Concentration vs. Time; right: Selectivity vs. Conversion.

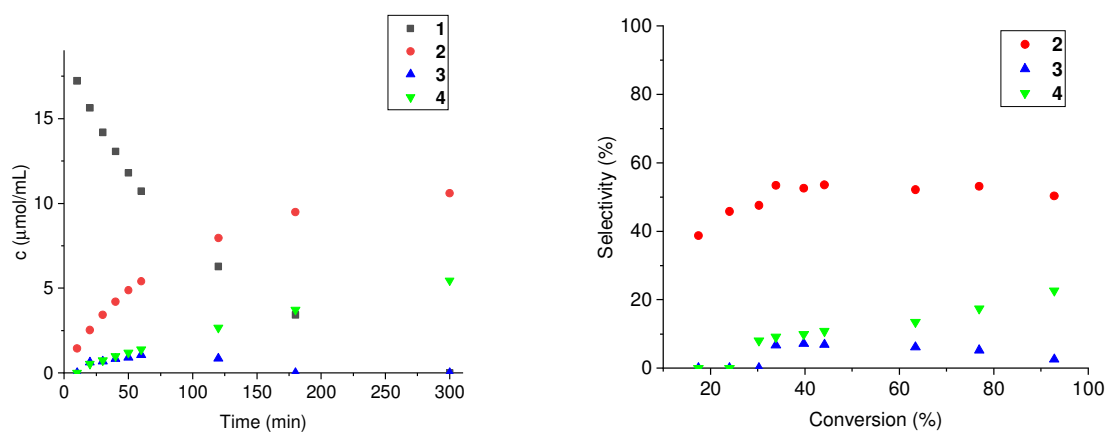


Figure 8. 1 mol-% Ir/ ZrO_2 catalyst in cinnamalaniline **1** hydrogenation using Toluene as solvent at 60 °C. Left: Concentration vs. Time; right: Selectivity vs. Conversion.

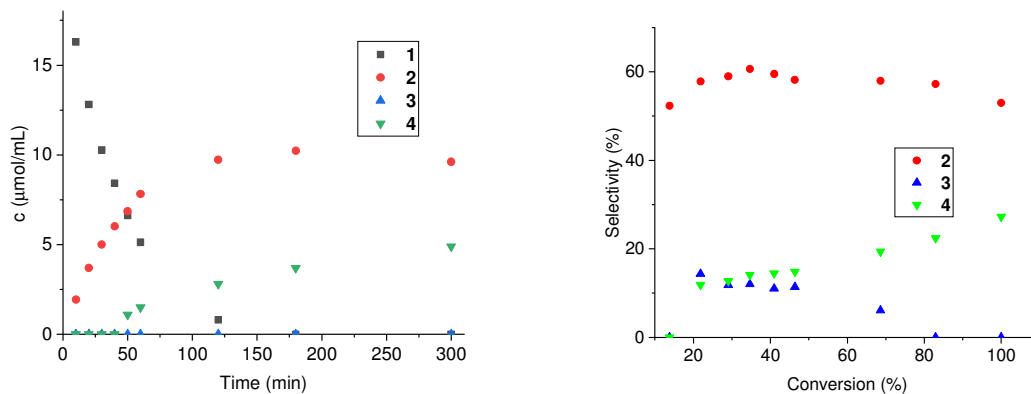


Figure 9. 1 mol-% Ir/ZrO₂ catalyst in cinnamalaniline **1** hydrogenation using Toluene as solvent at 80 °C. Left: Concentration vs. Time; right: Selectivity vs. Conversion.

Selected Carbon Nitride Catalyst in Toluene at 60 C

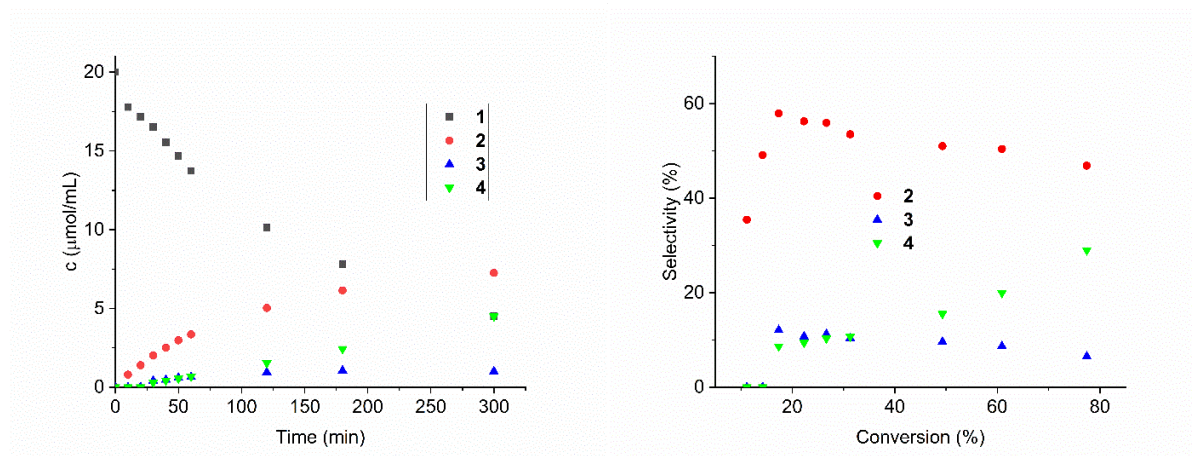


Figure 10. 1 mol-% Ir/C₃N₄-NH₄Cl catalyst in cinnamalaniline **1** hydrogenation using Toluene as solvent at 60 °C. Left: Concentration vs. Time; right: Selectivity vs. Conversion.

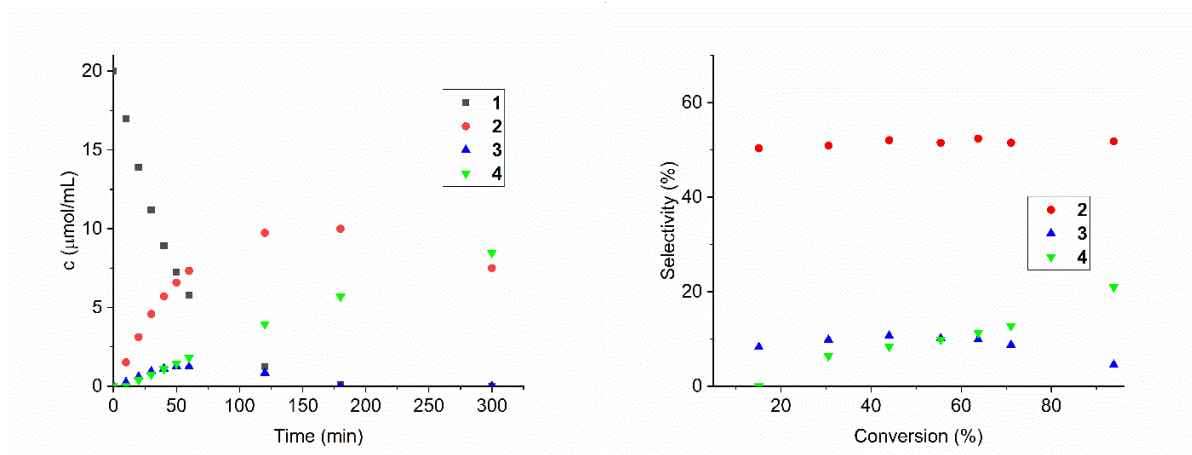


Figure 11. 1 mol-% Ir/C_xN_y-KIT-6 catalyst in cinnamalaniline **1** hydrogenation using Toluene as solvent at 60 °C. Left: Concentration vs. Time; right: Selectivity vs. Conversion.

Catalyst Recycling

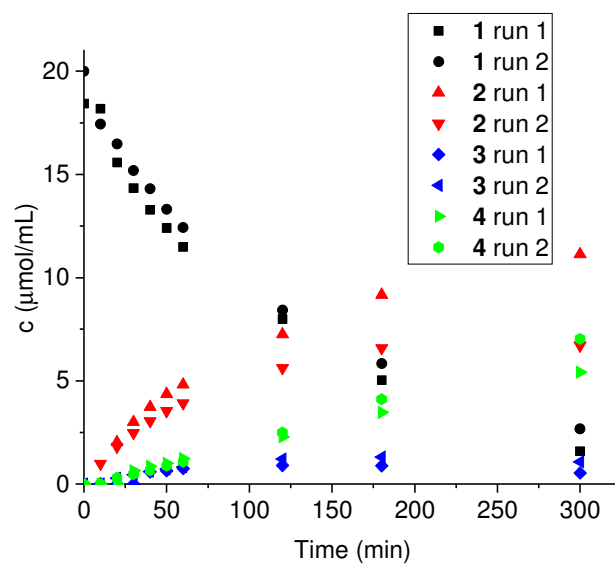


Figure 12. 1 mol-% Ir/Al₂O₃ catalyst in cinnamalaniline **1** hydrogenation using Toluene as solvent at 60 °C.

Hot Filtration Test

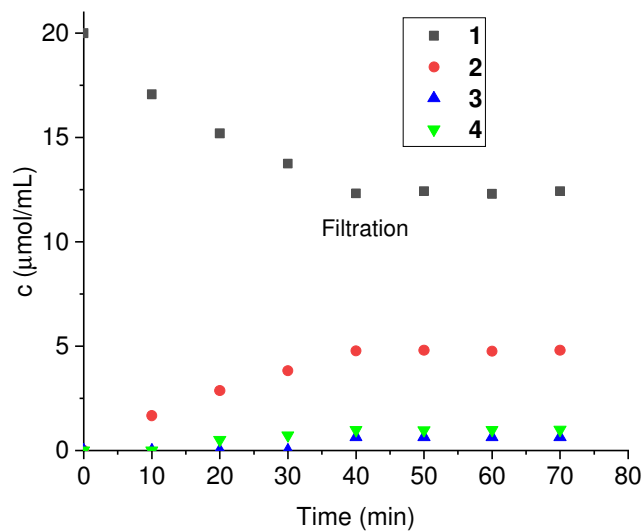


Figure 12. 1 mol-% Ir/Al₂O₃ catalyst in cinnamalaniline **1** hydrogenation using Toluene as solvent at 60 °C. Filtration of the Catalyst at 40 min.

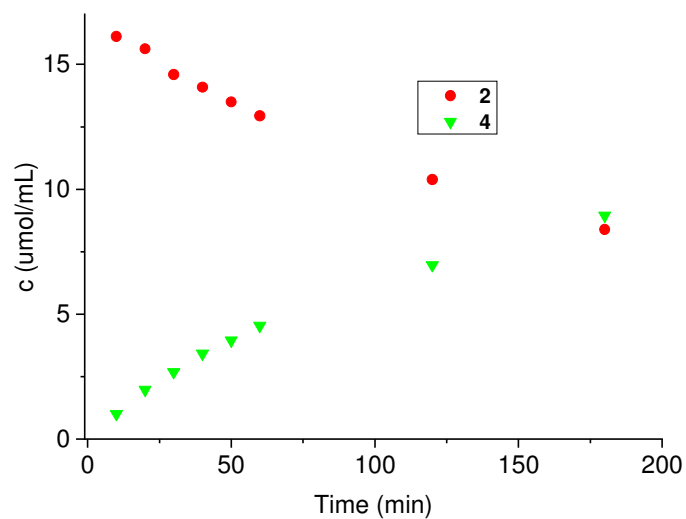
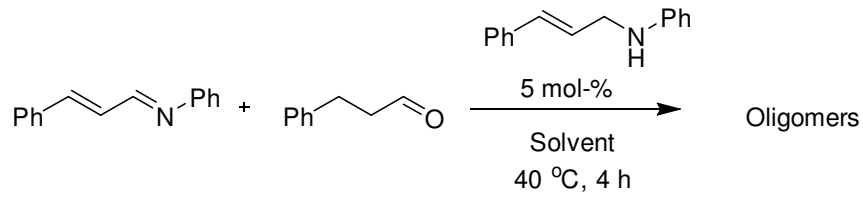
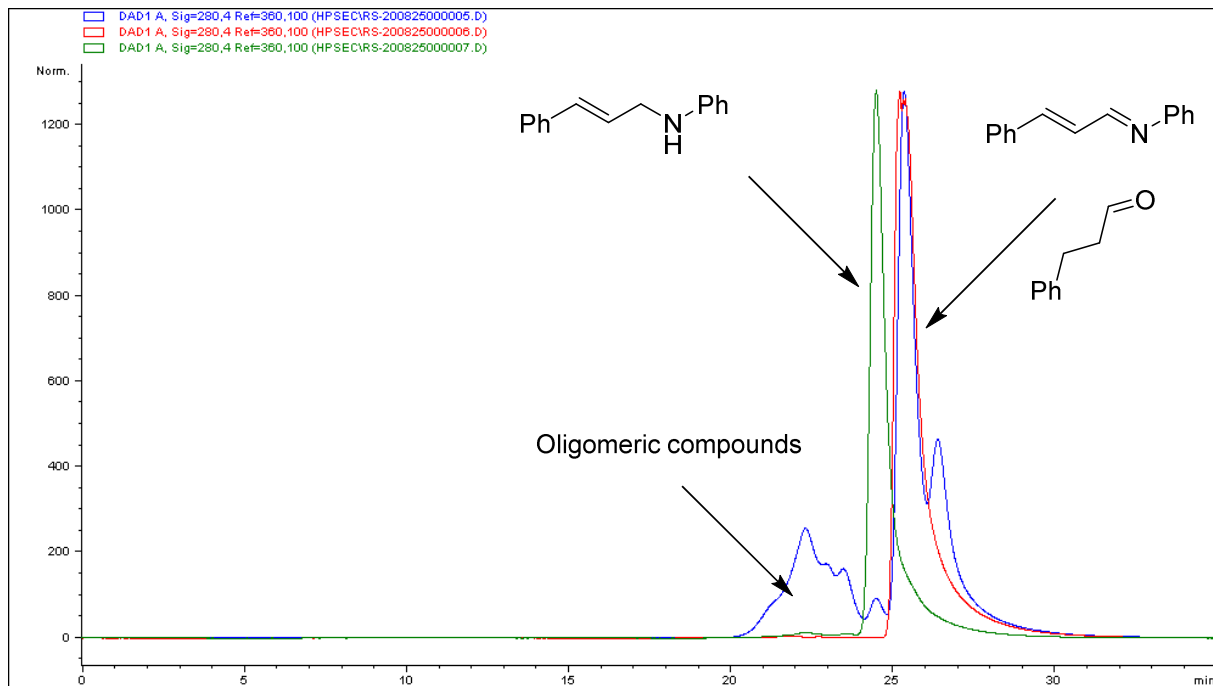


Figure 13. 1 mol-% Ir/Al₂O₃ catalyst in compound **2** hydrogenation using toluene as solvent at 40 °C.

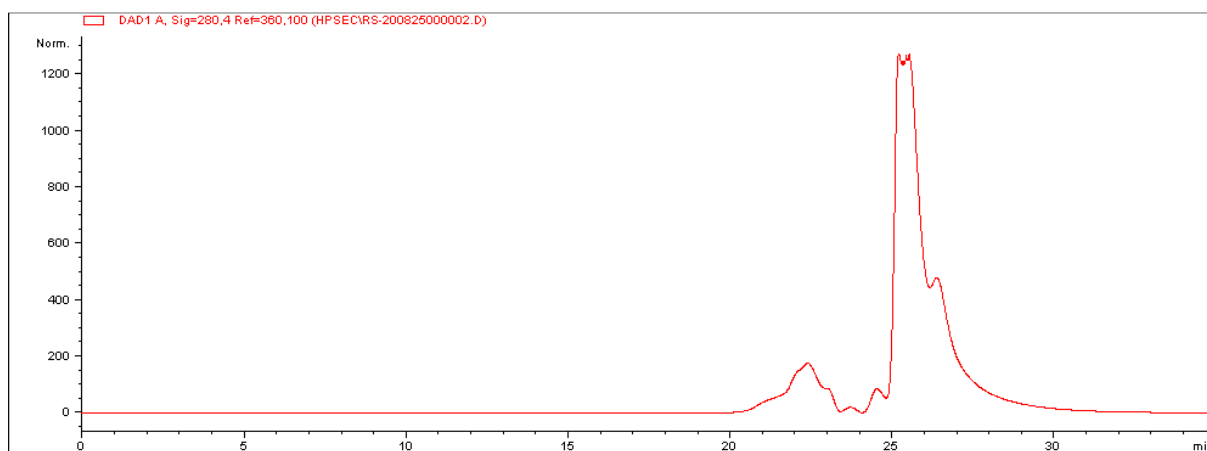
HP-SEC Chromatograms



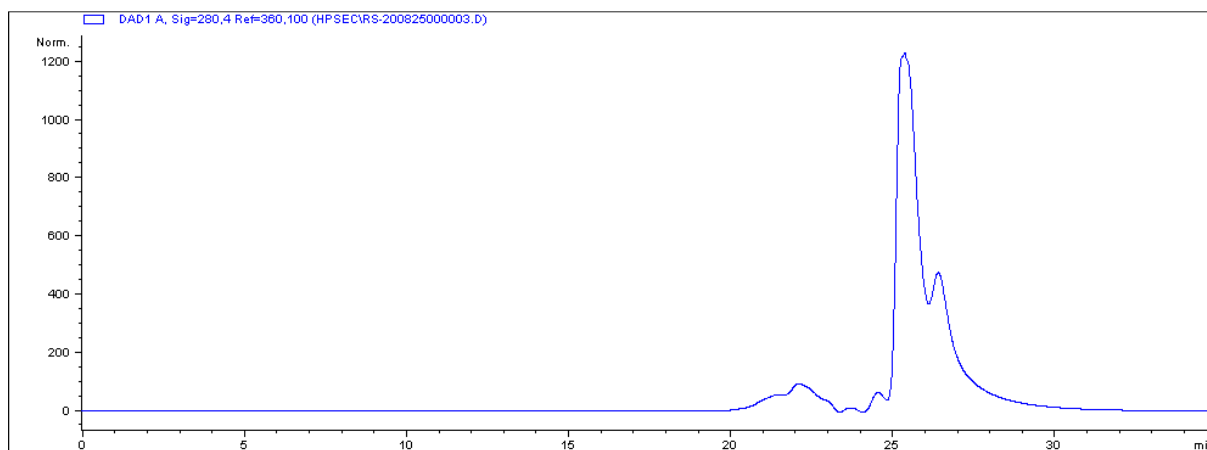
Solvent: Methanol



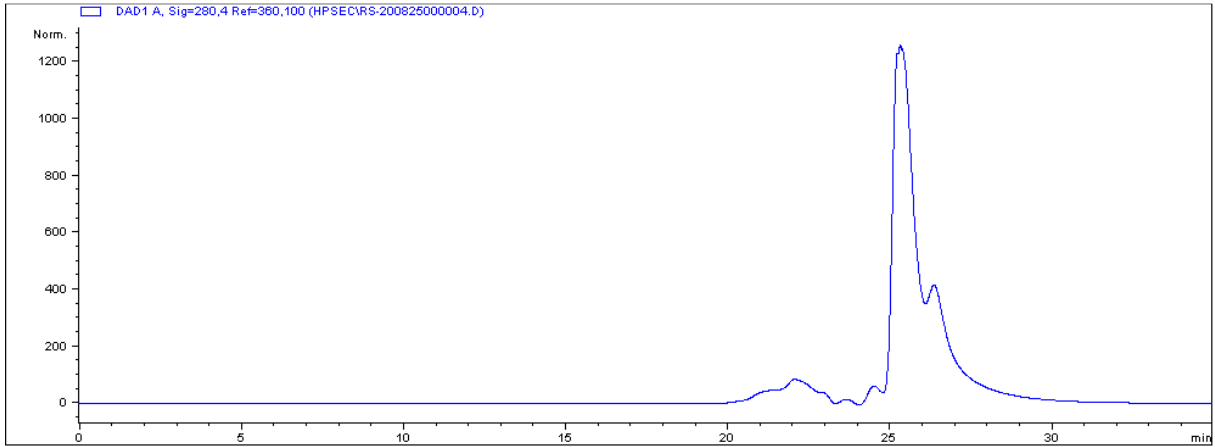
Solvent: Toluene



Solvent: MTBE



Solvent: 2-Propanol



Ir/Al₂O₃ MTBE 5 hour 40 °C

