CATAPOWER

APPLICATION NOTE

Olefin metathesis with the 1st Generation Grubbs Catalyst

The Grubbs family of olefin metathesis catalysts are powerful synthetic tools with a wide range of applications. The 1st generation benzylidene variant is useful in:

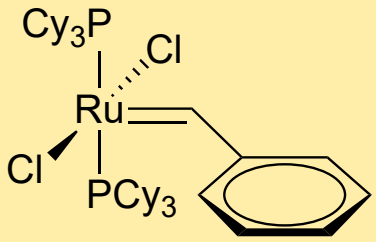
- Ring-opening and ring-closing metathesis
- Ring-opening metathesis polymerization
- Cross metathesis with a variety of substrates, including:
  - Terminal olefins
  - Primary allylic halides, ethers, esters, silanes, and boronates
  - Primary and secondary allylic alcohols
  - Styrenes
  - Vinyl boronates and dioxolanes

Reactions may be conducted in dichloromethane or in neat olefin. For maximum lifetime, this product should be stored under inert atmosphere.

Representative cross metathesis procedure:
Prepare a solution of 5 mol % catalyst in dichloromethane (20 mM in catalyst, 0.4 M in olefin) under inert atmosphere. Add 1.0 equiv of Olefin 1 and 1.0 equiv of Olefin 2 by syringe and stir the reaction at room temperature. When complete, purify by column chromatography or other means.

Further reading:
Chatterjee *et al.*, *Journal of the American Chemical Society* **2003**, *125*, 11360-11370. DOI: 10.1021/ja0214882

Product Highlight



Name:	Grubbs catalyst, 1st generation benzylidene
CAS:	172222-30-9
Formula:	$C_{43}H_{72}Cl_2P_2Ru$
MW:	822.96 g/mol
Catalog:	02-01-1001