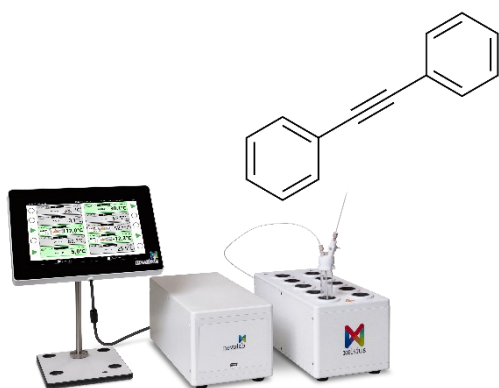


# Selective hydrogenations of diphenylacetylene



Keywords: Hydrogenation, Lindlar catalyst,

## Summary

Selective hydrogenation reactions of diphenylacetylene in Ethanol at 50°C under magnetic stirring (700 rpm) for a long time in a hydrogen atmosphere.

## Equipment

Item #	Description
8053 000 100	XELSIUS Basic Unit, Software Version: 2.44
8053 000 202	HV Vial Starter Kit, 1 -30 ml
8053 000 207	5-Port-Reaction Cap config set

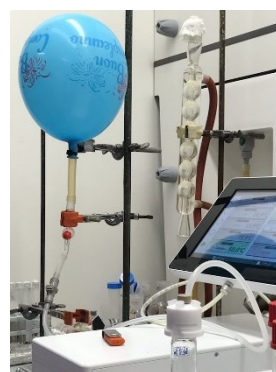
## Chemicals

	Description
0.5 – 2.5 mmol	Diphenylacetylene – 98% – CAS: 501-65-5
2.5 -10 mg	Lindlar catalyst – CAS: 7440-05-3. ....
1 atm	Hydrogen Gas – 99%
5 to 10ml	Ethanol

## Methode

Temp. (°C)	Duration (h)	Stirrer (rpm)
Start: 50°C	4/6 h	700
End:	-	OFF

Selective hydrogenation reactions of diphenylacetylene in ethanol medium at 50°C under magnetic stirring (700 rpm); reaction time: 4/6 h. Inside vessel atmosphere replaced with hydrogen, linked to the reaction by multi-tasking cap. Hydrogen was inserted through a simple Ballon: 1 atm



## Best practice working with Xelsius:

Best results were achieved using 2.5 mmol of alkyne at 50°C with a 100% conversion and 85% selectivity.

### References:

Synthesis of trans-stilbene through the hydrogenation of diphenylacetylene  
 Takayuki Komatsua, Kaori Takagib, Ken-ichi Ozawaa  
 Department of Chemistry and Materials Science,  
 Tokyo Institute of Technology, 2-12-1-E1-10  
 Ookayama, Meguro-ku, Tokyo 152-8550, Japan  
 Department of Chemistry, Tokyo Institute of  
 Technology, 2-12-1-E1-10 Ookayama, Meguro-ku,  
 Tokyo 152-8550, Japan

Data provided by: nevoLAB GmbH in cooperation with  
 LabTech Srl, IT [www.labtechsrl.com](http://www.labtechsrl.com)