

Materials List for:

Dissolution Dynamic Nuclear Polarization Instrumentation for Real-time Enzymatic Reaction Rate Measurements by NMR

Riccardo Balzan¹, Laetitia Fernandes¹, Arnaud Comment², Laetitia Pidial³, Bertrand Tavitian³, Paul R. Vasos¹

¹LCBPT - UMR8601, Institut de Chimie, Université Paris Descartes

²Institute of Physics of Biological Systems, EPFL

³PARCC - INSERM U970, Université Paris Descartes

Correspondence to: Riccardo Balzan at balzan.riccardo@parisdescartes.fr, Paul R. Vasos at paul.vasos@parisdescartes.fr

URL: <https://www.jove.com/video/53548>

DOI: [doi:10.3791/53548](https://doi.org/10.3791/53548)

Materials

Name	Company	Catalog Number	Comments
DNP polarizer	Vanderklink s.a.r.l (Switzerland)	///	Cryostat and electronic equipment for sample polarization
Vacuum system components	Edwards vacuum (France)	Various	- turbomolecular pumping setup - membrane pumping setup - high capacity roots pumping system - vacuum fittings and components
DNP 3.35T Magnet	Bruker (France)		
500 MHz NMR Spectrometer	Bruker (France)		
Origin 8.0	OriginLab (US)		Data analysis software
Chemicals			
SODIUM PYRUVATE-1-13C, 99 ATOM % 13C	Sigma Aldrich (France)	490709	
ETHANOL-D6, ANHYDROUS, 99.5 ATOM % D	Sigma Aldrich (France)	186414	
4-Hydroxy-TEMPO 97%	Sigma Aldrich (France)	176141	
Deuterium oxide	Sigma Aldrich (France)	151882	
reduced nicotinamide adenine dinucleotide (NADH)	Sigma Aldrich (France)		
ethylene-diaminetetraacetic acid (EDTA)	Sigma Aldrich (France)		
dithiothreitol (DTT)	Sigma Aldrich (France)		
phosphate buffer, pH = 7.0	Sigma Aldrich (France)		
LDH enzyme in	Sigma Aldrich (France)	L-2500	
bovine serum albumin, BSA	Sigma Aldrich (France)		