

Materials List for

Study of Protein Dynamics *via* Neutron Spin Echo Spectroscopy

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jove.com/video/61862

Materials

Name	Company	Catalog Number	Comments
Bovine MBP protein solution	Sigma-Aldrich	M1891	lyophilized powder reconstituted in D ₂ O
D ₂ O - heavy water	Sigma-Aldrich	Product No. 151882	liquid
Dionized water	in house	-	for washing / cleaning cells
DLS instrument	Zetasizer Nano ZS, FZ-Jülich	-	dynamic light scattering instrument
Elastic scattering standards	SNS-NSE, ORNL	-	Al ₂ O ₃ and Graphite powders
Ethanol	Sigma-Aldrich	65350-M	70% ethanol for cleaning cells
IgG protein solution	Sigma-Aldrich	I4506	lyophilized powder reconstituted in D ₂ O
KWS-2 instrument	JCNS outstation at the MLZ, Garching, Germany	-	small angle neutron instrument
Liquinox dish detergent	Alconox	-	Phosphate-free liquid lab glassware cleaner
Na ₂ HPO ₄ ·7H ₂ O	Sigma-Aldrich	Product No.S9390	disodium phosphate heptahydrate salt
NaCl	Sigma-Aldrich	Product No.S9888	sodium chloride salt
NaH ₂ PO ₄ ·H ₂ O	Sigma-Aldrich	Product No. S9638	monosodium phosphate monohydrate salt
Nanodrop spectrophotometer	Thermo Scientific	Catalog number: ND-2000	NanoDrop 2000/2000c Spectrophotometer
Neutron alignment camera	NeutronOptics, Grenoble	NOG210222	100 x 100 mm camera with Sony IMX249 CMOS sensor
Parafilm M - wax parafilm	Bemis	Parafilm M - 5259-04LC PM996	all-purpose laboratory film in cardboard dispenser
Phoenix-J-NSE Spectrometer	JCNS outstation at the MLZ, Garching, Germany	-	neutron spectrometer
SasView	https://www.sasview.org/		
SAXSpace, Anton Paar instrument	FZ-Jülich	-	small angle x-ray instrument
Slide-A-Lyzer dialysis membranes	Thermo Scientific	88400-88405	Slide-A-Lyzer mini dialysis devices tubes of 3.5 K MWCO
SNS Remote Analysis Cluster	Neutron Science Remote Analysis (sns.gov)	https://analysis.sns.gov	

SNS-NSE spectrometer	ORNL, Oak Ridge, TN, USA	-	neutron spectrometer
Sterile syringe filters	VWR	N.A. PN:28145-501	0.2 µm pore size filters
Temperature Forcing System (TFS)	SP Scientific	Part Number 100004055	sample environment equipment
Urea -d4	Sigma-Aldrich	Product No. 176087	deuterated Urea salt
Viscometer	FZ-Jülich	-	falling ball viscometer