

Central Instrument Facility, IIT (BHU), Varanasi-221 005 <u>Internal Requisition Form NMTS</u>



User Information:		Date:
Requisition Number		
Name of the user		
Department		
UG/PG/IDD/PhD. /PDF/Project/ Consultancy/ Indus	stry	
Contact number		
Email address		
Name of supervisor		
Employee ID of supervisor		
Sample Information:		
No. of Sample:		
Sample Type (Metallic/Ceramic/Polymer/Bio/Thin	Film):	
The sample size should be within $10 \times 10 \times 5$ mm (I		
Measurement to be performed		
1. Indentation		
2. Property mapping		
3. Nano wear		
4. DMA		
A. For Nanoindentation:		B. For Property Mapping
Load (<10 mN)		
Loading/Unloading rate(μN/s)		
Location of indent in case of multiphase materials		
Roughness of all samples (<200 nm) mandatory		
SPM imaging required (Yes/No)		
Total number of indents		
C. For Wear test: (Low load <10mN)		
Load (100 nN – 1 mN)		
Wear Track Size (< 40 μm x 40 μm)		
Sample roughness (<200 nm) mandatory		
SPM imaging required (Yes/No)		·
Total number of wear test		

D. For Nano Dynamic Mechanical Analysis: For Dynamic Load Test: (Fixed frequency) i) Frequency of test (< 300 Hz)		
i) Frequency of test (< 300 Hz)		
ii) Range of load (< 5 mN)		
For Dynamic Frequency Test (Frequency sweep):		
i) Applied load (< 5 mN)		
ii) Range of frequency (< 300 Hz)		
Specify how many tests per sample for DMA		
Note: The sample must remain stable and not vaporize at the specified experimental temperature.		
➤ The sample should not vaporize at the given experimental temperature.		
Nano-indentation results are highly dependent on surface preparation. For accurate measurements,		
the sample surface should be flat and polished to a mirror-like finish. It is highly advisable to perform		
final polishing using electro-polishing for conductive samples, and colloidal silica polishing for non-		
conductive ones.		
➤ The sample should not be mounted in epoxy before being submitted for nano-indentation testing.		
➤ The Sample should be mounted on a steel disc with the help of Feviquik for strong adhesion.		
Pl. Specify if the sample is Toxic/ Hazardous/ Explosive/ etc.: Do you want to present during the characterization or not? Sample required to be preserved or not: Yes/ No (If NO mode of disposal): Signature & Remark of Operator: Date & Time.		
Payment:		
A. Research Support Grant / CPDA		
Project Contingency (Project code)		
B. Department/School Operating Grant		
Pl. Deduct Rs.		
CIF: Professor In charge Signature with the seal of the Faculty Member/		
FOR USE IN FINANCE OFFICE PASSED FOR PAYMENT/ ADJUSTMENT		
Expenditure may be debit/credit to: For Rupees		
Minor Head: IDF Minor Sub Head: Income from CIF Asst. S.O. A.R. D.R.		