Safety Documentation

Please select the forms you require by selecting the check boxes below.
You can select more than one.

☑ **Process Risk Assessment** ☑ **Method Statement** ☐ **Chemicals COSHH**

Once you have made your selections, scroll down and complete the forms.

Buttons: [+] will add a row to a list [X] will delete a row from a list

You may save this file to a local drive at any time.
When you have finished, save the file to a local drive and email it to your supervisor for authorisation.

Supervisors - There is a sign-off section at the end of the document set that must be completed.

Staff may "self authorise", (as a supervisor), but the forms must still be submitted to the DSO for approval.

IMPORTANT:

YOU ***MUST NOT*** START ANY PRACTICAL WORK UNTIL THESE FORMS HAVE BEEN RETURNED TO YOU WITH **BOTH** YOUR SUPERVISOR's AND DSO's APPROVAL SIGNATURES ATTACHED.

Please complete these fields

Department	Wolfson School of Mechanical, Electrical & Manufacturing Engineering
Name	Ignacio Martin-Fabiani
email address	i.martin-fabiani@lboro.ac.uk
Location	T208b
Project / Activity / Task	Atomic Force Microscopy of polymer and nanocomposite films

Version : 2.09

Loughborough University
Wolfson School of Mechanical, Electrical & Manufactur

Process Risk Assessment

Reference: CBE 118

Location: T208b

Originator: Ignacio Martin-Fabiani

Project / Activity / Task: Atomic Force Microscopy of polymer and nanocomposite films

What are the hazards associated with this process?

Category 1: Machinery & work equipment:

Design and Construction	Mechanical hazards	Electrical hazards	Radiation hazards	+
N/A	N/A	Electrical test labels current	Lasers	x

Category 2: Workplace	+
Other workplace hazards - Biohazards	x

Category 3: Hazardous and/or Harmful substances	+
N/A	x

Category 4: Work activity	+
N/A	x

Category 5: Work organisation	+
N/A	x

What are the risks associated with these hazards?

People / Groups at risk: Everyone in the room — x

	Impact	Probability	Risk Score
If PAT testing is not up to date (Atomic Force Microscope, Fluorescence Microscope and isolation platform) the equipment might cause fire	Very Harmful	Highly Unlikely	Medium

What are the control measures?	Lowers Impact	Lowers Probability	+	Overall Risk
Check pat label is valid and in date	Slightly	Significantly	x	Low

People / Groups at risk: Operator and people in proximity — x

	Impact	Probability	Risk Score
Laser (Class 1)	Slightly Harmful	Highly Unlikely	Low

What are the control measures?	Lowers Impact	Lowers Probability	+	Overall Risk
Do not look directly at the laser beam, use the visual screen on the AFM computer to align it.	Slightly	Significantly	x	Low
Laser filter placed in the Nikon microscope so it is safe to look through the binoculars when laser is on	Significantly	Significantly	x	

People / Groups at risk: Operator and people in proximity — x

Process Risk Assessment Form (Continued)

	Impact	Probability	Risk Score	
Presence of biohazards in the lab	Very Harmful	Highly Unlikely	Medium	
What are the control measures?	Lowers Impact	Lowers Probability	+	Overall Risk
Wear PPE (gloves, lab coat, googles)	Moderately	Significantly	x	Low
Do not get close to biosafety cabinets	Slightly	Significantly	x	

+ Add another Risk

Who may be at risk as a result of this activity?

Personnel Group	Maximum (Task setup/ Re-configuration)	High (Performing the task)	Medium (Observing the task)	Low (Present, but not involved)	Lone Working (Out of hours)	No Exposure Permitted	Total
Academic Staff	1	0	0	0	0	0	1
Technical Staff	0	0	0	1	0	0	1
Research Staff (PDRA)	0	0	0	0	0	0	0
Research Students (PhD)	0	1	0	0	0	0	1
Students (Undergraduate / MSc)	0	0	0	0	0	0	0
Visitors	0	0	0	0	0	0	0
Others - Over-type as needed	0	0	0	0	0	0	0
Total	1	1	0	1	0	0	3

☑ **This work involves the use of lasers**

With these controls in place, the risk is:

The activity is LOW RISK - and is effectively controlled

LASER DETAILS

Class	Class 1	Type	CW	Wavelength (nm)	980
System Classification	Class 1	Laser Illumination	Point Source		
Beam Delivery	Open Beam				

Process Risk Assessment Form (Continued)

PROCESS			
Metals		**Non Metals**	
☐ Cutting	☐ Drilling	☐ Cutting	☐ Drilling
☐ Welding	☐ Surface Treatment	☐ Welding	☐ Surface Treatment
Other		Other - AFM imaging	

Laser Use	
☐ Maintenance	☐ Research
☐ Standard Processing	☑ Illumination
☐ Measurement	

Loughborough University
Wolfson School of Mechanical, Electrical & Manufactur

Safety Method Statement

Reference: CBE118

Location: T208b

Originator: Ignacio Martin-Fabiani

Project / Activity / Task: Atomic Force Microscopy of polymer and nanocomposite films

What equipment will be used in this activity?

JPK Atomic Force Microscope, Nikon Fluorescence Microscope, Isolation Platform

What training must be completed to do this activity?

AFM and Fluorescence microscope (both already completed)

What chemicals are being used? (These must be included in the COSHH Form)

None

Spill and accident procedures.

N/A

Procedure in the event of an emergency. (How to leave the process in a safe condition in such an event)

Turn off all equipment and leave. Alert a technician.

References.

JPK Nanowizard User Manual

Detailed sequential description of the process

Process step	Precautionary measures and comments
No sample preparation required. Samples (polymer dry films on cover slips will be prepared in the Materials department and brought to the Wolfson lab ready for measuring. Please refer to the SOP of the JPK Nanowizard for AFM imaging procedure.	

Supervisor and Departmental Safety Office (DSO) Sign-off.

Supervisors

Please check the documents above and if you want to approve them:

1) Electronially sign this document
2) Save it to a local drive (You will be prompted to do this)
3) eMail the signed document to the DSO.

DSO

Please review the documents above and if you want to approve them:

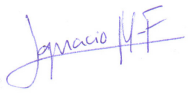
1) Enter the reference numbers as appropriate
2) Electronically sign this document
3) Save it to a local drive (You will be prompted to do this)
3) eMail the signed document to the originator

IF YOU DO NOT WANT TO AUTHORISE THE FORMS,

Please do not sign the form, but click the "Not Approved" check-box and return it to the originator by email stating why and what you expect them to do to put it right in the comments box below.

Not Approved ☐

Supervisors Signature



Digitally signed by Ignacio Martin-Fabiani
Date: 2017.07.06 10:57:09 +01'00'

Form Reference Numbers

Risk Assessment	Method Statement	COSHH Assessment
CBE 118	CBE118	

DSO Signature

Digitally signed by R I Temple
Date: 2017.07.24 11:44:28 +01'00'

This document set must be reviewed and re-approved at the following times:

1) After the first occurrence of the activity described above (Review only)
2) After any change to the procedure or reagents used
3) After any incident resulting from this activity
4) At least annually from the date of approval

Next Review: 06/07/2018

Review comments

Although the user is viewing pre-prepaird samples (dry polymer films) T.2.08b is a biological class .two containment area and as such aseptic tectonics must be flowed.
Air conditioning which is important for the stability of other equipment in the lab must be left on. As with other equipment in the lab must not be turned off fridges, freezers, incubators, BSC's ect this is a working lab.
Also there was an agreed footprint for the equipment if it has strayed outside that footprint and the space is required for other work expect items to be moved back into the agreed space.