

## Submitting the list of investigators and ERA:

### 1. Investigators:

List all the people who would be attending the experiment. You will only be able to add people who are (i) registered on the UAS, and (ii) have a valid safety test. If your experiment is remote, then the 'remote' box should be ticked for all participants

Diamond needs to know who will be involved with your session and what their role will be.

- If you would like Diamond to book accommodation for you, please select the nights you require.
- If investigators are anticipated to be involved in night shift work, please select the "Night Shifts?" box for those investigators (max 4).
- It may be possible for Diamond to pay your expenses while you are here. See **Subsistence** for more information. Normally, a maximum of three investigators are eligible for subsistence. Four may be covered for a complex experiment or for safety reasons.
- Please consider requesting accommodation for the night your experiment concludes, if you believe your working hours will make it unsafe to drive home.
- All investigators are expected to have confirmed their details are correct within the past year and those attending must pass the Diamond safety test before you can submit investigators. Those investigators that cannot be submitted will be indicated in the table. Click the "Email Invalid Investigators" button to invite people to take the test and/or confirm their details.

ALL PARTICIPATING TEAM MEMBERS BOTH ON-SITE AND REMOTE - PLUS OTHERS REQUIRING DATA ACCESS ONLY

Name	Team Role	Remote	Subsistence Request	Arrival	Transport	Night Shifts?	Access Card Pickup	All Nights	8 Mar	9 Mar	10 Mar	11 Mar
<small>Must pass safety test Personal details must be confirmed as up to date by the user</small>	Leader	<input type="checkbox"/>	User pay	09:00 Tue 9 Mar 2	Car	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Taxi requests  
None

Taxis are only available outside of office hours. Transfers from airports are only authorised if all users are travelling together.

### 2. ERA

#### a. Samples

Click on 'Create New Sample'. The following window will pop-up.

UNDEFINED SAMPLE

Cancel & Close Save Sample Authorise & Submit Sample

Sample Material or Protein\*  
Copper

Acronym  
None

SAMPLE HAZARDS  BIOLOGICAL MATERIAL  CHEMICAL/SUBSTANCE/MATERIAL  RADIOLOGICAL MATERIAL  NON-HAZARDOUS MATERIAL

CHEMICAL/SUBSTANCE/MATERIAL

Sample Type\*  
crystal  
powder  
solid  
liquid/solution  
nanoparticles  
Hold down CTRL key to select more than one item.

Maximum individual sample quantity\*  
< 10g or 10ml

Concentration\*  
Please enter a value

Composition\*  
Please enter a value

CAS number  
None

Reaction Hazards  
None

Please list all components, include chemical formulae & isotopes. Materials with similar composition should be grouped as one.

Please list any potentially hazardous substances/reactions generated during the process.

Fill in the risk assessment for your sample and save. Once you have filled all the info, click 'Authorize & Submit Sample'.

#### b. Equipment

Here you should list any equipment that will be used during the experiment. If your samples are just going to be mounted on one of our standard sample holders and measured ex-situ, you don't have to fill anything in this tab.

If you are using any of our other sample environments, e.g. electrochemical cell, high temperature capillary furnace, microreactor, cryostat or the likes, click on 'Create New Equipment', and enter all the information relevant to your equipment and provide a risk assessment. For e.g.:

CERAMIC CAPILLARY FURNACE

Equipment Name  
Ceramic Capillary Furnace

EQUIPMENT HAZARDS  HIGH PRESSURE  EXTREMES OF TEMPERATURE  LASER  GAS  OTHER

EXTREMES OF TEMPERATURE

What is the source of extreme temperature? Heater on the ceramic block  
What temperature (°C) will your experiment reach? > 100

EXTREMES OF TEMPERATURE RISK

SAFETY CONTROL MEASURES

Detail any overheating automatic cut off controls  
Thermocouple to monitor temperature at all times

Safety control measures you will have in place  
 Guarding in place  
 Equipment used within scope of manufacturer's instructions  
 No modifications to equipment  
 Emergency stop  
 PAT Testing  
 Kevlar gloves

Detail any other safety control measures or additional information  
A sign to say when the heater is on.

CERAMIC CAPILLARY FURNACE

RISK ASSESSMENT

Diamond Health & Safety Comments  
None

GAS

Flow rate of gas  
< 100cc/min

What is the maximum quantity of gas (stp) that will be held in the equipment?  
< 500cc

Specify gases  
N2

GAS HAZARD RISK

HAZARD

Hazard group(s)  
 Flammable  
 Oxidiser  
 Corrosive  
 Toxic

CERAMIC CAPILLARY FURNACE

Hazard group(s)  
 Flammable  
 Irritant/Harmful  
 Oxidiser  
 Pyrophoric  
 Corrosive  
 Inert  
 Toxic

SAFETY CONTROL MEASURES

What detection does your system have for identifying leaks?  
None

Safety control measures you will have in place  
 Risk of release of agent/substance minimised  
 Two persons in attendance  
 Equipment used within scope of manufacturer's instructions  
 No modifications to equipment  
 Emergency stop  
 PAT Testing

Detail any other safety control measures or additional information  
None

RISK ASSESSMENT

Diamond Health & Safety Comments  
None

c. Experimental Methods

Here you must describe how your experiment is going to be performed. For e.g.

The screenshot shows a web form titled 'PELLET SAMPLES'. At the top, there is a 'Name' field with the text 'Pellet samples'. Below this, the form is divided into two main sections: 'SAMPLE PREPARATION' and 'BEAMLINE EXPERIMENT AND ENVIRONMENT'. Each section contains a 'Sample Method Statement' text area, a 'Diamond Health & Safety Comments' text area, and an 'Overall method risk rating' section with radio buttons for 'Low', 'Medium', and 'High'. The 'SAMPLE PREPARATION' section's method statement reads: 'Samples (<300mg) will be ground using a mortar and pestle in a fume cupboard to minimize exposure to dust and pressed into a pellet using a die set. Lab coats, safety glasses and gloves will be worn.' The 'BEAMLINE EXPERIMENT AND ENVIRONMENT' section's method statement reads: 'Pellets will be placed in a sample rack and transferred to the beamline, where they will be measured at room temperature. After measurement samples will be removed and disposed off into containers provided.'

d. Lab access

Do you need the labs in Diamond to prepare your samples for the experiment? If yes, select 'Yes'.

The screenshot shows a web form titled 'Submit Session ERA'. At the top, there are buttons for 'Cancel Changes', 'Save Changes', 'Authorise & Submit Session ERA', and 'Emergency Instrument Move'. Below these are two sections: 'Submit Session ERA' (Due: Tue 16 Feb 2021) and 'Submit Investigators' (Due: Tue 23 Feb 2021). A sidebar on the left lists various form sections: 'Investigators', 'ERA', 'Samples', 'Equipment', 'Experimental Methods', 'Lab Access' (highlighted), 'ERA Summary', and 'Notes'. The 'Lab Access' section is active, showing a question: 'Will you need to use any of Diamond's peripheral labs to prepare samples for your experiment?'. A dropdown menu is open, showing options: 'Please select', 'Please select', 'No', and 'Yes'. At the bottom, there are buttons for 'Cancel Changes', 'Save Changes', 'Authorise & Submit Session ERA', and 'Emergency Instrument Move'.

The following window will pop up in which you need to list out all the processes that will be carried out in the lab and the risk assessment for the same.

Make sure you tick all the relevant boxes in the following section. **If you require a glove box, and do not request it in the lab form, it will NOT be reserved for your experiment and you will NOT be able to use it.**

PERIPHERAL LAB

Free form step

**HAZARD**

All investigators coming to Diamond should be familiar with the lab standard risk assessments (LSRA) that relate to their experiments. These documents can be found on the [Diamond website](#). If lab access is required for any of these purposes, please identify the relevant LSRA(s) within the "All processes proposed for the peripheral lab" text box and complete the highest risk rating as indicated in the LSRA(s).

All processes proposed for the peripheral lab\* Please enter a value Overall activity risk rating\* Please select a risk rating

Provide any extra safety information e.g. Laser Class, biological containment level

**How could the sample enter the person's body; consider all steps of the process**

Inhalation  Injection  Skin contact  Eye contact  
 Ingestion

**Hazards associated with the proposed peripheral lab work**

Asphyxiant  Biological  Carcinogen  Corrosive  
 Cryogen  Environmental pollutant  Explosive  Flammable  
 Hot surfaces  Ionising radiation  Irritant  Laser  
 Mutagen  Nanoparticles  Non-ionising radiation  Oxidiser  
 Pressurised gas  Sensitiser  Teratogen  Toxic

**SAFETY CONTROL MEASURES**

**Safety control measures you will have in place**

Labelled samples  Hands washed  Disinfectant available  Shielding in place  
 Guarding in place  Inert glovebox  Fume cupboard  Powder cabinet  
 (Micro) biological safety cabinet  General ventilation  Suitable storage  Gas monitoring – specify the species  
 Sharps bin  Additional external signage - specify  Access control / restricted access  Clean or dispose of PPE  
 Clean down of work areas

**Personal Protective Equipment**

Safety glasses  Disposable gloves  Face shield  Lab coats  
 Safety shoes  LASER eye protection  Safety goggles  Cryo gloves  
 Thermal gloves  Chemical resistant gloves  Cut / puncture / abrasion resistant gloves  Disposable lab coat

**Emergency measures**

Fire extinguisher - specify type  Bucket of sand  Spill kit  First aider  
 Lone worker alarm / arrangements

**Other**

Other - specify

Detail any other safety control measures or additional information None

Please note that if your experiment involves the use of gases, do not add them to the lab form.

e. ERA summary

Check the summary to make sure you have listed all the samples, methods and their risk assessments and click on 'Authorise and submit'.