Panalytical X-ray Powder Diffractometer

Operations safety induction and checklist

Name:

Supervisor:

Date:

Email:

Estimated leaving date:

Safety induction of the Panalytical X'pert Pro

If the tube light is on, X-rays are being produced:

- ☐ Demonstrated to the user where the X-ray on indicators are
- ☐ Demonstrated to the user where the tube settings are displayed on the instrument

The door is locked when closed and the interlocks are engaged.

- ☐ Explained to the user the purpose of the interlock system
- ☐ Shown the user how to unlock the doors

The instrument can be shut down quickly by turning the high voltage key

- ☐ Shown the user the emergency shutdown procedure and explained the circumstances it might be necessary

The room contains a recirculating water system

- ☐ Explained to user to contact the facility supervisor if water leak is present and turn off the instruments if appropriate

Panalytical and Bruker sample holders are different

- ☐ Shown the user the difference between the two sample holders

Samples should be transported in a secure box, pre prepared and clean at every point they should be held. Samples must be secure on their holders. Do not wear gloves or labcoats in the room or coming to the room.

If there is a problem with the instrument, place the Do not use sign up and contact simon.cassidy@chem.ox.ac.uk

Safety induction of the Panalytical X'pert Pro

Booking time is currently on the paper booking sheets outside the room

All samples must be labelled and secure. Samples must not be placed on the computer tables, and should only be found on the instrument or on the sample preparation table

☐ Explain to the user the dangers of loose powders

☐ demonstrated some correct sample preparations

You may need to change the sample stage:

- remove any sample
- Instrument -> disconnect
- Tools -> exchange sample stage. Follow the wizard's instructions
- Do not hold the spinner by the motor
- Instrument -> connect to the changed stage.

Running samples can be carried out by preparing a program (File -> open program) and then measuring (measure -> program).

☐ Demonstrated how to start a measurement

Save your data to the D drive on the computer, this will be backed up every 2 hours to : \\Chem.ox.ac.uk\SRF\X-ray\Powder

Fill in the log book!

Collect your sample as soon as possible after it is measured.

User Rules

- Start on time and do not overrun, aim to finish a few minutes before your time ends.
- Label and Check your samples. Label with your first name, group initials and the date.
- Leave the lab tidy and collect samples within 24 hours of data collection (during the working week).
- If you see anything different or unusual then DO NOT try to fix it yourself. Ask Simon Cassidy for assistance.
- If you have forgotten some of your training, do not hesitate to ask for a refresher training and only use the instrument if you are confident doing so.
- It is a legal requirement that all users working with X-ray sources are registered with the ionising radiation safety office. Users will need to fill out a registration form and attend the next available "Safe Use of X-ray Generators, Sealed Sources & Accelerators" training course. This only needs to be done once.