

X-ray Safety Information

The safety information outlined in this manual is to ensure compliance with the rules and regulations of Boston College and to provide information concerning radiation safety. It

on a daily base by facility director.

Preparation:

1. Check all panels and doors are in place and secured before operation of the instrumentation.
2. Check the X-ray tube housing, collimator, water tubes and high voltage cables before operation of the instrument. If any part has been displaced or damaged then close enclosure, shut off the instrument and seek help.
3. Check the X-ray generator before operation of the instrument. If abnormal situation is seen then close enclosure, shut off the instrument and seek help.
4. Check all warning lights are "fail safe".

Start the BIS & BCP

5. Test the shutter: a distinct click noise will be heard and the shutter LEDs will change to red. If abnormal operation is seen then shut off the instrument and seek help.
6. Be sure shutter is closed before opening the enclosure door.
7. Check the enclosure safety switches. shutters should not open with door open.
8. Ensure the shutter is closed and mount the sample in the holder. **Keep your hands well below the primary beam area.**
9. Check the detector position and generator settings.

During Data Collection

10. Do not open enclosure doors.
11. Do not remove any instrument panels.
12. Avoid movement in or around the instrument.

Shutter/Enclosure Safety features

There are two X-ray shutters for each radiation source on the Bruker

Power Connection and Disconnection

Press the RED '0' button on the front columns of the diffractometer will disconnect the power to the x-ray generator. For emergent stop, press the RED 'STOP'