

**Job Safety Analysis (JSA)**

Case and doc. no in ePhorte:  
2012/11454-30

Page : 1 of 2

Prepared by :  
HSE staff, OPA

Date : 24.09.2012  
Edition : 1

**Unit:** Rigaku Dual Beam Synergy-S single-crystal X-ray diffractometer **Date:** \_\_\_/\_\_\_/20\_\_\_

**Job task to which this Job Safety Analysis applies:** Analytical characterization of geological materials with a Rigaku Dual Beam Synergy-S single-crystal X-ray diffractometer

**Responsible employer:** \_\_\_\_\_

**Time of performance of the work:** \_\_\_\_\_

**Persons involved in performance of the work:** \_\_\_\_\_

**Description of the work:** Crystal structure analysis and/or qualitative phase identification (Gandolfi)

**Training required:** Introduction to the operation of the Rigaku Dual Beam Synergy-S single-crystal X-ray diffractometer (length of the training variable according to the user experience).

**PPE and other protective equipment to be used:** gloves (during sample preparation)

**Analysis:**

Sub-tasks	Hazards	Preventive Measures
Operation	Ionization radiation	SXRD is regularly serviced and safety checked.  There should be no exposure to X-rays or to the ionization radiation.  The operator is not exposed to any radiation under normal working mode. Never deviate from normal mode or try to override the interlock.  If you are a regular user of the lab, use your dosimeter.
	Electrocution	Do not remove the protective covers from the SXRD instrument. Do not open other components of the

**Job Safety Analysis (JSA)**

Case and doc. no in ePhorte:  
2012/11454-30

Page : 2 of 2

Prepared by :  
HSE staff, OPA

Date : 24.09.2012  
Edition : 1

		equipment. Do not touch cables and wires. Do not let water or other objects come in contact with electric components of the equipment.
Introducing and/or removing samples in the SXR	Personal injury caused by jamming body parts (hands)	Make sure hands and/or other body parts are clear of the chamber when closing the chamber door.
Prolonged use	Eye strain	Do regular breaks (10 min/h during operation)
	Tiredness	Do regular breaks (10 min/h during operation)
	Musculoskeletal strain or injury	Do regular breaks (10 min/h during operation)  Adjust height of the seat, so that the back and neck and upright

**Participants in the analysis and signatures**

<b>Role</b>	<b>Name</b>	<b>Date/signature</b>
Lab Manager/deputy	_____	_____/_____
	_____	_____/_____
	_____	_____/_____

**The Job Safety Analysis has been read** (signatures of users who will perform or be affected by the work)

<b>Name</b>	<b>Date/signature</b>
_____	_____/_____
_____	_____/_____
_____	_____/_____