

Rigaku Miniflex 600

- 1. Supply the cooling water. Turn on the Rigaku cooling water unit located on the ground.
- 2. Start the Miniflex control PC.
- 3. Press the power on button (green button) on the front side of Miniflex.
- 4. The Door Lock button will blink, representing the status of the unlocked door. You can gently open the door, and mount your sample on the glass holder and onto the standard sample stage. Press the Door Lock button to lock the door, the blink yellow light will be off.



- 5. Make sure that the OPERATE lamp on the front side of Minflex turned yellow.
- 6. Start up SmartLab Studio II 👫 on the Miniflex control PC.
- 7. On the right bottom tab, Click Run to startup the X-ray tube. This can take ~ 17 mins.



8. Drag the [General Measurement] plugin tab to the [Sequence] in [Flow Editor] in SmartLab Studio. Left click on [General Measurement].

	UNT
The Home View Data Browser	COLLEGE OF SCIENCE DEPARTMENT OF PHYSICS
Vicard New Open Save Save Run Row Row Row Row As Flow- Package	DB VSF Revoter Database Print/Report Database Print/Print Post Parkage Startup/ Data HW Deplay Carrier Parkage Sta
XRD Measurement × Powder XRD × Data Manage	r × Logging × User Manager × DB Manager ×
Activities ? # >	Flow Editor
Package Activities 🕼 🗰 🔍	S S S
Administrator	
Package	
	4
Part Activities 🗿 🗰 🔍	Sequence
Measurement Activity	A General Measurement
General Measurement	
Alignment Activity Optics Alignment	
 Utility Activity 	
X Angle Correction Measurement	
Drex Center Position Correction	
Seam Absorber Adjustment Command Activity	
E External Program	
6 Manuarananat	
Es Message Fr Mann	
Activities NAW Streets	

9. Keep all values unchanged in [Optical Conditions]. Modify the [Measurement Conditions] to fit your experimental condition. Select the file path to your folder. Change the parameters as below:

Start: 3° (minimum 2.5°)

Stop: 90° (maximum 139°)

Step: 0.01° (**minimum step 0.005°**)

Speed: 10°/min (speed range 0.01 to 100 °/min)

Once finished setting, pay attention to the calculated scan duration at the bottom left, this is the period that your measurement will take.

and the second				General N	Aeasuremen	t			N	(2)
Optical conditions									13	C
lit system: 🔿 Variat	hie elit curtem ()	brickle E. I.D.						-		
ncident Soller:	Soller slit 5 0°	variable + Fixed slit	lystem			S Internet				
S:	13.0 mm(Onen)		IHS:	10 mm	Y	DS: 1.25	•	_		
Anochromatization	KR filter(x1.5)		Keceiving Soller:	Soller slit 5.0°	Y	RS: 13.0	mm(Open)	~		
Kp mer(x1.3)			1				Remember Optical Conditions			
feasurement conditi	ions									
can axis: 0/20	~	Scan mode: 1D(s	can)	Freeze mode Star	aland	100	1			
				theigy model stan	ciard	M		Remember Measur	rement Conditions	Preset Conditio
No. Exec.	File Path	File Name	= Sample Name	= Memo	Start, *	Stop, *	E Step, *	Speed, */min	Comment	Options
1 🛛 🕅		8	-		3.0000	90.0000	0.0100	10.0		- [=
+										
+ - 0	4	B								
+ - 0 Save measured da	ā A	8		•	Options					
+ - 0 Save measured da ulated scan duration	ð 👌 ta n:Smin 47s	B		•	Options					



- 10. Click the OK button to complete the settings.
- 11. Once the aging time is completed for the X-ray tube, you can start the measurement by clicking on the [Run] button from the [General Measurement] tab.
- 12. Data will be auto-saved after measurement.
- 13. Select [XG Off] and click the [Run] button to stop the X-ray generation.
- 14. When the X-ray generation stops, the orange X-ray warning lamp on top of the enclosure will turn off.
- 15. Wait at least **three minutes** after X-ray generation stopped, and press the Power off button (a white button) on the front side of Miniflex.
- 16. Take your data and shut down the control PC.
- 17. Wait for at least **five minutes** and the cooling water temperature shown on the panel is **below 74 F**, then stop the cooling water.
- 18. Fill in your name, date, time in, and time out on the XRD logbook.

Learning materials:

[1] SmartLab Studio II User Manual is accessible at [File] – [Manual] on the ribbon in SmartLab Studio.

[2] MiniFlew 600 instruction manual is accessible at [Home] – [Help Viewer].