

Acquisition Conditions Reference Sheet for XPS1

Note that these parameters should only be considered as a reasonable starting point. Acquisition parameters may be optimized dependent on the overall experimental goal.

Spectroscopy Conditions

Measurement Area

Lens Mode (Magnification)	Aperture (Physical size and name in Software)	Spot Size on Sample
Hybrid	Slot	300um x 700um
FOV2 (Small Spot)	2mm	110um diameter circle
FOV2 (Small Spot)	1mm	55um diameter circle
FOV2 (Small Spot)	0.4mm	27um diameter circle
FOV2 (Small Spot)	0.15mm	15um diameter circle

Typical Settings

Spectra Type	Pass Energy (eV)	Step Size (eV)	# Sweeps
Survey	160	1.0	1
Region	20	0.1	>2 (depends on signal strength)
Valence Band	20 or 40	0.2	>2 (depends on signal strength)

Imaging Conditions

Settings

- For Elemental imaging use Pass Energy = 160eV
- For Chemical State imaging use Pass Energy = 40eV or 80eV

Goal	Magnification Setting	Imaged Area	Aperture Setting (Resolution)
General alignment	FOV1	900um x 900um	Imaging Low Res
Small area spectroscopy	FOV2	400um x 400um	Imaging Medium Res
Highest lateral Resolution	FOV3	250um x 250um	Imaging High Res

Charge Neutralizer Conditions.

The default settings are typically used, and should be good for just about all samples. However, the settings can be adjusted within the allowable ranges shown below:

	<u>Default Settings</u>	<u>Allowable Range</u>
Filament current	1.8 A	1.6 – 2.1 A
Charge balance	2.8 V	2.0 – 3.6 V
Filament Bias	0.8 V	0.8 – 1.8 V