

## \* ESCA PERFORMANCE ON Ag 3d<sub>5/2</sub>

### ESCA Peak Sensitivity

Specified performance is obtained with a single Mg anode operating at 20 mA and 15 kV (300W) on a sample of clean silver. Performance for a selected aperture size will meet or exceed the curve defined by the following values. The sensitivity is defined as the counts per second in the data channel for the Ag 3d<sub>5/2</sub> peak intensity.

### Analysis Area

The analysis area is selected by an externally adjustable 4 position aperture plate and computer controlled analyzer lens voltages. For the three small area apertures, the analysis area diameter is defined as the distance between the points at which the Ag 3d<sub>5/2</sub> signal amplitude is 16% and 84% of the maximum value as a silver-coated knife edge is translated across the analysis area in a direction perpendicular to the input lens axis. The area specification applies to all analyzer pass energies below 90 eV.

#### LARGE AREA, SMALL SOLID ANGLE ANALYSIS

<u>Size of Analysis Area</u>	<u>Resolution FWHM (eV)</u>	<u>Position Sensitive Detector Peak Sensitivity (CPS)</u>	<u>Single Channel Detector Peak Sensitivity (CPS)</u>
3 x 10 mm	1.40	1,250,000	562,000
3 x 10 mm	1.00	500,000	247,000
3 x 10 mm	0.80	50,000	30,000

#### SMALL AREA, LARGE SOLID ANGLE ANALYSIS

<u>Diameter of Analysis Area</u>	<u>Resolution FWHM (eV)</u>	<u>Position Sensitive Detector Peak Sensitivity (CPS)</u>	<u>Single Channel Detector Peak Sensitivity (CPS)</u>
1.1 mm dia	1.40	500,000	247,000
1.1 mm dia	1.00	200,000	100,000
1.1 mm dia	0.80	20,000	19,000
0.6 mm dia	1.40	200,000	67,000
0.6 mm dia	1.00	100,000	37,000
0.6 mm dia	0.80	10,000	5,200
0.2 mm dia	1.40	10,000	4,500
0.2 mm dia	1.00	5,000	2,200
0.2 mm dia	0.80	1,000	370