

Specifications for Code 541 Energy Dispersive x-ray Fluorescence (EDXRF) System:

In order to be considered for procurement, any Energy Dispersive X-ray Fluorescence (EDXRF) system must have capabilities that are equivalent or exceed the features of the Oxford Instruments X-Strata 920. A summary of these features is listed below:

- Ability to measure plating thickness of Electroless Nickel/Immersion Gold (ENIG) on flat printed circuit boards per IPC-4552
- Benchtop system capable of measuring samples at least 6" in height
- Automatic z-axis travel of minimum of 1.7"
- Internal chamber size no less than of 6" h x 11 "w x 20" d
- Thickness measurement of at least 4 layers (plus base) and 15 elements with automatic correction for x-ray line overlaps
- Multi-element identification covering elements from titanium (Ti) to uranium (U)
- Simultaneous composition analysis of up to 25 elements
- Complies with International Organization for Standardization (ISO) 3497 and American Society for Testing and Materials (ASTM) B568.
- Uses a laser to accurately pin-point the optimum tube/detector to sample distance
- Single click operation to move the analysis head to the optimum distance
- Color camera with 30X magnification lens with 200%, 300%, and 400% digital zoom
- Focused X-ray beam to enable the analysis of small samples or small features on a sample with high precision
- Standard 12 mil diameter collimator
- Secondary beam mechanism and one Cobalt secondary beam filter for x-ray line overlap correction
- 4096 channel digital multi-channel analyzer
- System software that allows for the display of the sample, data collection operations, and data analysis capabilities, both semi-quantitative and quantitative. Software should have a report generating feature included.