

- Brings quantification to your visualization
- Adds a dimension to your materials characterization
- Paired with Octane detectors for highest throughput and enhanced productivity
- Seamless interface with TEAM™ EDS software for optimal results
- Full suite of 3D thresholding tools to define regions of interest

Historically, 3D visualization software has focused on taking a stack of image slices through a sample to produce a 3D volume. Elemental maps could be displayed simultaneously by color coding according to intensity. The usual rotate, tilt and zoom functions designed for simple images were adapted for elemental maps, but provided little additional interpretative information.



Figure 1. The typical 2D elemental maps of the primary elemental lines of a rare-earth modified steel sample.

EDAX has now partnered with a sister company within AMETEK to provide TEAM™ 3D IQ, a 3D solution for EDS data, which performs both imaging and analysis operations within the same software package. The developers have extended the source of typical 3D EDS data sets from simple elemental maps to full spectral imaging data sets for each slice. When sub-sets of the data are extracted for interpretation, a complete spectrum is also extracted, from which full quantification can be performed, allowing the most comprehensive visual and analytical interpretation of EDS data available.

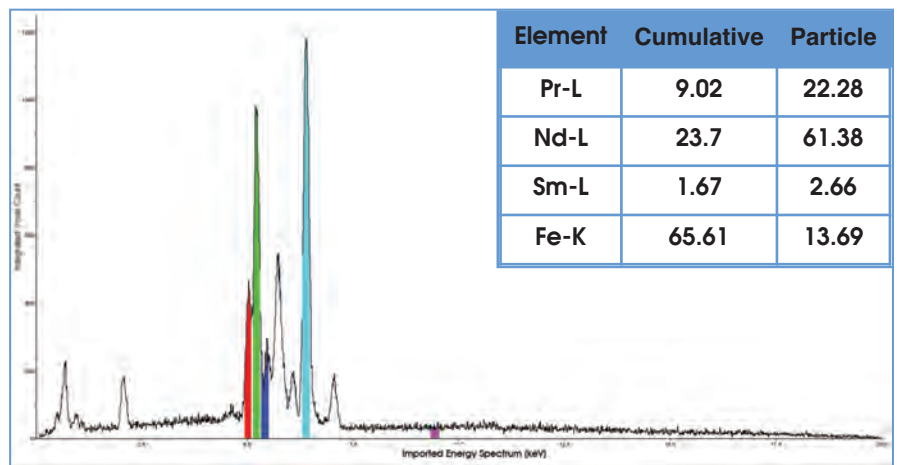
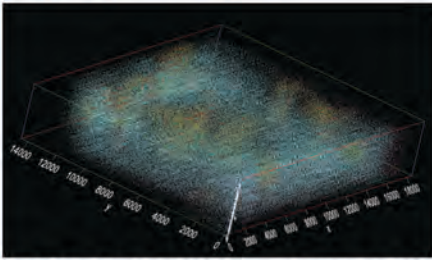
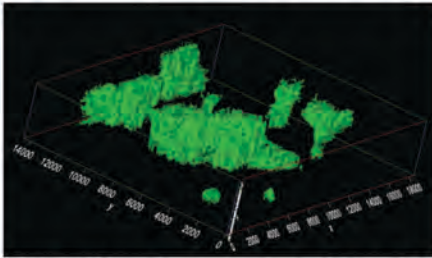


Figure 2. Spectral and Quant results extracted from 3D EDS data set.

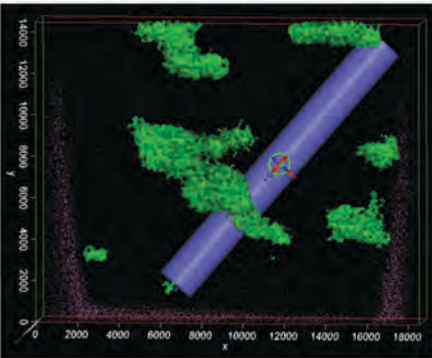
## Display Examples



The 3D distribution of all the X-rays as dots



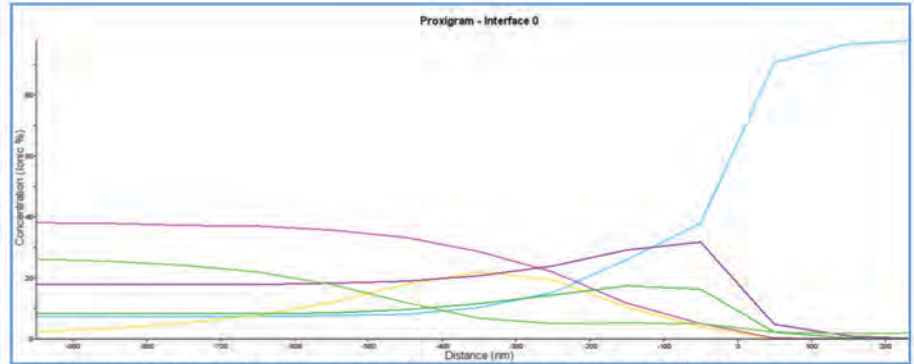
A 3D distribution showing only the Nd-L enriched regions



A cylindrical volume of a defined sub-volume within the data set

## Compatible EDS Detectors

- Octane Pro, Plus, Super and Ultra
- Resolutions down to 121 eV
- Resolution stability >90% up to 200 kcps
- Count rates up to 1.6 Mcps with throughput rates of 800 kcps
- SDD modules up to 100 mm<sup>2</sup>



A proxigram showing the elemental distributions normal to the O-K interface

## Features and Benefits

### Brings quantification to your visualization

- Ability to quantify defined 3D renderings
- Phase mapping of 3D structures for full chemical understanding
- Line scans and elemental maps available

### Adds a dimension to your analysis

- Full elemental quantification in 3D
- Provides depth to your materials understanding

### Compatible with the Octane Silicon Drift Detector series

- High throughput technology to enable fast data collection
- Highest quality EDS data for 3D volumes

### Seamless interface with TEAM™ EDS Analysis for optimal results

- One click data transfer between TEAM™ EDS and TEAM™ 3D IQ

## Conclusion

TEAM™ 3D IQ uses 3D visualization software to assemble the series of 2D serial sections into a single data set and utilizes the TEAM™ Quant Engine to quantify the data, allowing for true microanalysis of individual features within the 3D structure. Offering both imaging and quantification results, TEAM™ 3D IQ will give you the most comprehensive visual and analytical interpretation of your 3D EDS data available.