

Thermo Scientific Spectral Match provides unique matching capabilities for spectral analysis on the NORAN System 7 X-ray microanalysis system. Quickly and automatically match an unknown spectra to data stored in a spectral database to identify a compound or phase.

Spectral Match

NORAN System 7 optional software



Thermo Scientific Spectral Match software adds spectrum search capability to spectral analyses. A single click compares the current spectrum with all those residing in a spectral database. Using our unique digital top-hat filter and multiple-least-squares fitting technique, Spectral Match automatically finds, lists and ranks the top spectral candidates. The closest matching candidates are displayed in a results table and can be compared graphically using the Thermo Scientific NORAN System 7's Spectral Compare function. The comparison can be sent directly to the printer, or loaded into Microsoft® Word or PowerPoint® for reporting.

Using Spectral Match and Spectral Compare, you can visually compare the unknown with matched spectra in your database. In addition Spectral Match provides the ability to:

- **Match the unknown spectrum over a selected energy range:** If only certain elements or peaks are important for identification of an unknown sample, you can define a single energy range for the curve fit in Spectral Match or you can match over the entire acquired energy range.
- **Automatically run a complete spectral analysis after the acquisition:** Options allow you to automatically perform peak identification, quantitative analysis, and Spectral Match at the conclusion of each spectral acquisition. This provides the most detailed analysis of a spectrum available on any EDS system. Classification, peak identification, and compositional results are available for output with the spectrum in a single mouse click.

- **Compare candidate spectra with unknown samples:** Use the NORAN System 7's Spectrum Compare to overlay the matched spectra on the unknown for a quick visual comparison.
- **Create and manage databases of known spectra:** You have complete control of the spectrum databases you create. You can develop a customized database and populate it with any of the data placed into the Spectral Match spectrum collection. During the acquire-and-match process, you specify which database will be used. You can easily add spectra to or delete spectra from a database using the spectral database manager.

Benefits

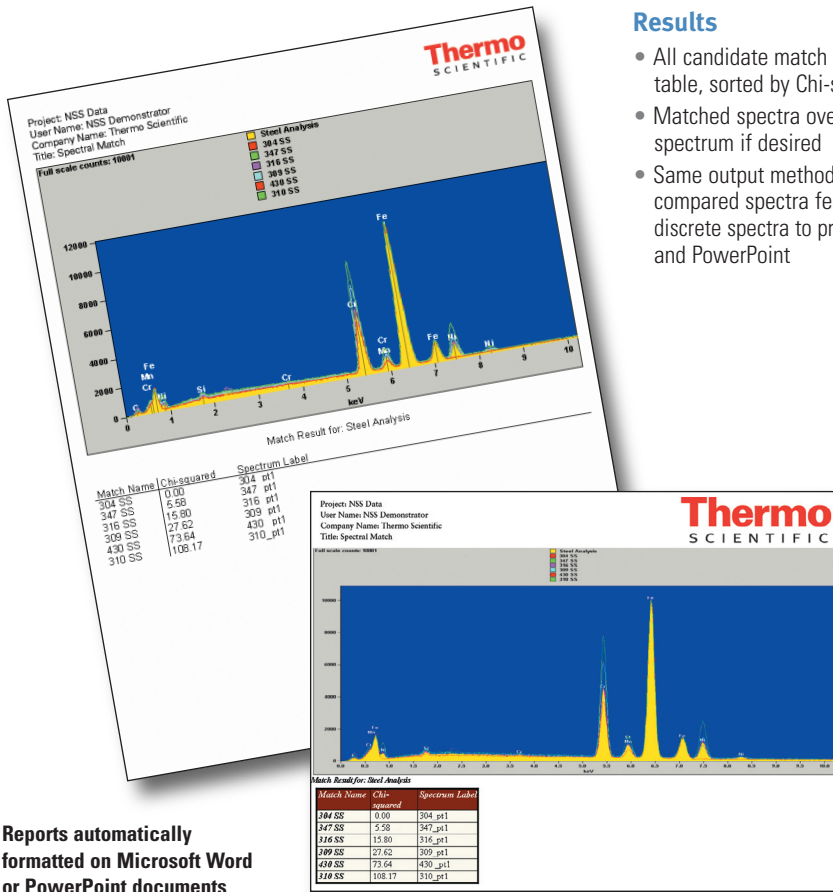
- Chemically identifies spectra
- Match an unknown spectrum with a database of known spectra
- Quickly compare unknown to matched spectra
- Provides a meaningful label for an acquired spectrum
- Use multiple spectral databases
- Manage access to spectral databases on a user-by-user basis

Requirements

NORAN System 7

Results

- All candidate match spectra listed in a table, sorted by Chi-squared value
- Matched spectra overlaid on acquired spectrum if desired
- Same output methods available as compared spectra feature: overlapped or discrete spectra to printer, Microsoft Word, and PowerPoint



Reports automatically formatted on Microsoft Word or PowerPoint documents

Database Manager

A complete Database Manager is provided to edit the Spectral Match spectra. An unlimited number of databases may be present on a system and an unlimited number of spectra can be included in each database. A simple method is provided to add new spectra to the currently selected EDS database.

