PeakFit v4.0 for Windows 95, 3.1, and NT

SWD-PEAKFIT
$595

Separate Your Peaks... With Ease!

Nonlinear Peak Separation and Analysis for Spectroscopy, Chromatography and Electrophoresis

- **Find and separate overlapping peaks** that out-dated and inaccurate numerical integration methods miss with PeakFit's state-of-the-art nonlinear curve fitting techniques.

- **Save hours** with PeakFit's fully automated peak finding and fitting routines. PeakFit has three different procedures to easily, accurately, and consistently quantify normal and hidden peaks.

- **Stay in complete control** by using PeakFit's fully graphical interface to override the automation at any time.

- **Accurately process noisy data** with PeakFit's highly advanced data smoothing and manipulation techniques.

- **Analyze up to 100 peaks of any form** by using any combination of PeakFit's 82 built-in nonlinear equations (18 specific to spectroscopy and 8 for chromatography). PeakFit also allows you to use up to 15 User Defined Functions.

- **Easily find and subtract your baseline** with PeakFit's constant zero second derivative baseline fitting routine.

- **Remove instrument-induced data smearing** with PeakFit's revolutionary deconvolution techniques.

- **Utilize the full power of Windows 95 and NT** with PeakFit's 32-bit code and Windows 95 interface. PeakFit is also fully capable on Windows 3.1.

With PeakFit, your accuracy will increase, and you'll find and fit your peaks faster than ever before. Don't rely on the inaccurate results of numerical integration techniques.
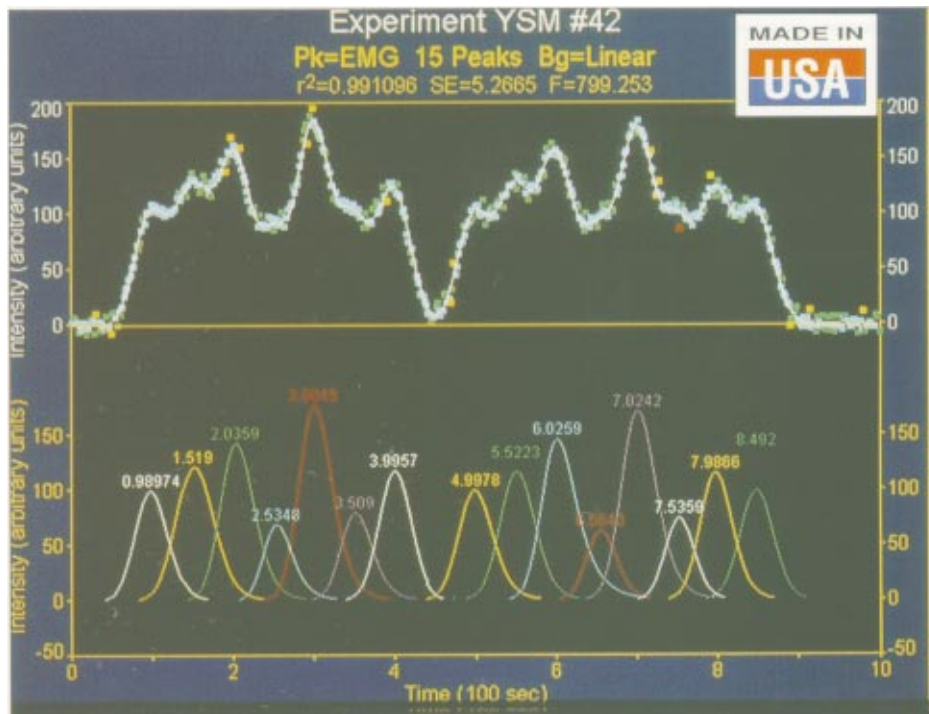
PeakFit far surpasses any other peak analysis package made!

PeakFit is the automatic choice for Spectroscopy, Chromatography, and Electrophoresis

For Spectroscopy . . .

PeakFit lets you accurately detect, separate and quantify hidden peaks that standard instrumentation misses. PeakFit includes 18 different nonlinear spectral application line shapes, including the Gaussian, the Lorentzian, and the Voigt. As a product of the curve fitting process, PeakFit reports amplitude (intensity), area, center and width data for each peak. Overall area is determined by integrating the peak equations in the entire model. Also, PeakFit can deconvolve your spectral instrument response so that you can analyze your data without the smearing that your instrument introduces.

For Chromatography . . .

PeakFit includes 8 different built-in equations for asymmetric peaks typically found in chromatography data including the Exponentially-Modified Gaussian, the Haarhoff-Van der Linde, the NLC, the Giddings and even a Half-Gaussian Modified Gaussian, an experimental model similar to the EMG, but used to describe intra-column originated asymmetry. The peak area is computed directly as a parameter within each of these functions, ensuring accuracy and enabling computation of confidence limits. PeakFit reports column efficiency, resolution, first moment (center of mass), second moment, center (mode), as well as peak width at base and half maximum, and asymmetry at base and 10% of maximum. PeakFit can also deconvolve your chromatographic detector response, allowing you to analyze your data without the smearing that your instrument introduces.PeakFit supports AIA data file input.

For Electrophoresis . . .

PeakFit gives the electrophoresis user the ability to quickly and easily separate, locate and measure up to 100 peaks (bands), even if they overlap. With 82 nonlinear peak models to choose from, you're almost guaranteed to find the best equation for your data. The sophisticated array of baseline types lets you integrate only the significant portion of the bands in your data. The results of these measurements are then automatically recorded in a PeakFit-generated report, or they can be shown graphically.

Nonlinear curve fitting is *essential* for accurate peak analysis and conclusive findings.

Why should you use nonlinear curve fitting?

Nonlinear curve fitting is by far the most accurate way to reduce noise and quantify peaks. Many instruments come with software that only approximates the fitting process by simply integrating the raw data numerically. When there are shouldered, or hidden, peaks, a lot of noise, or a significant background signal, this can lead to the wrong results. (For example, a spectroscopy dataset may appear to have a peak with a 'raw' amplitude of 4,000 units, but may have a hidden shoulder peak that distorts the amplitude by 1,500 units!)
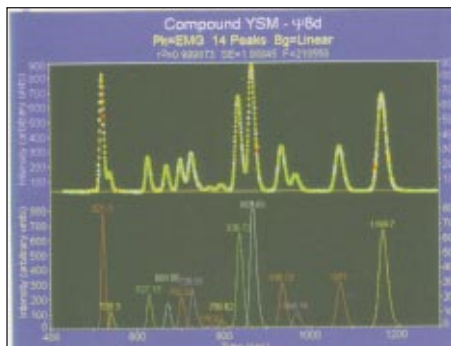
PeakFit helps you to separate overlapping peaks by statistically fitting numerous peak functions to one data set, finding even some of the most obscure peaks in your data. The background can be fit as a separate polynomial, exponential, logarithmic, hyperbolic or power model. This baseline is then subtracted before peak characterization data (such as areas) is calculated, which gives much more accurate results. And any noise that might bias raw data calculations is filtered simply by the nonlinear curve fitting process. Nonlinear curve fitting is essential for accurate peak analysis and accurate research.
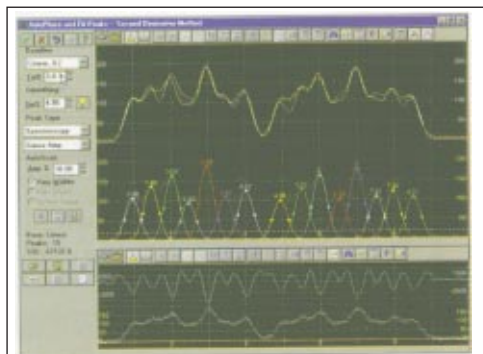
PEAKFIT automatically places peaks in three ways...

PeakFit uses three procedures to automatically place hidden peaks; while each is a strong solution, one method may work better with some data sets than others.

1. The **Residuals** procedure initially places peaks by finding local maxima in a smoothed data stream. Hidden peaks are then optionally added where peaks in the residuals occur.

2. The **Second Derivative** procedure searches for local minima within a smoothed second derivative data stream. These local minima most likely represent a hidden peak.

3. The **Deconvolution** procedure uses a Gaussian response function width with a Fourier deconvolution/filtering algorithm. A successfully deconvolved spectrum will consist of "sharpened" peaks of equivalent area. The goal is to enhance the hidden peaks so that each represents a local maximum.

Allows you to place and fit peaks graphically...

If you want to override PeakFit's automation, you can place and fit peaks graphically with only a few mouse clicks. Each placed function has "anchors" that adjust even the most highly complex functions, automatically changing that function's specific numeric parameters. PeakFit's graphical placement options handle even the most complex peaks as smoothly as Gaussians.

Offers Sophisticated Data Manipulation...

With PeakFit's visual FFT filter, you can inspect your data stream in the Fourier domain and discard the lowest magnitude points while immediately seeing the results in the time-domain. This smoothing technique allows for superb noise reduction while maintaining the integrity of the original data stream. PeakFit also includes an automated FFT method as well as Gaussian convolution, the Savitzky-Golay method, and the Loess algorithm for smoothing. AI Experts throughout the smoothing options and other parts of the program automatically help you to set many adjustments. And, PeakFit even has a digital data enhancer which helps to analyze your data with few points. There is no other program which allows for so many different methods for data manipulation.

And includes a highly advance baseline subtraction technique.

PeakFit can automatically subtract 9 built-in baseline equations, or any baseline that you've developed and stored in a file.

PEAKFIT-an essential part of your research

For most data sets, PeakFit does all the work for you. What once took hours now takes minutes and is so easy that novices can learn to use PeakFit in no time. And if you have extremely complex or noisy data sets, the sophistication and depth of PeakFit's data manipulation techniques is unequaled.

Specifications

System Requirements: IBM 486 or higher, Windows 95, NT & 3.1, 8 MB RAM required, 12 MB recommended, math coprocessor recommended.

Import Files: ASCII text. files, Lotus 123, Quattro Pro Windows, SigmaPlot, AIA Chromatography, dBase III+, dBase IV, DIF.

Export Files: ASCII text files, SigmaPlot graph files, Lotus 123, Excel, Quattro Pro Windows

Graph Output: Clipboard or file in BMP or WMF

To Order *(Specify Model Number)*		
Model No.	**Price**	**Description**
SWD-PEAKFIT	**$595**	Peak analysis software

Comes with complete operator's manual.
Ordering Example: *SWD-PEAKFIT peak analysis software, **$595**.*