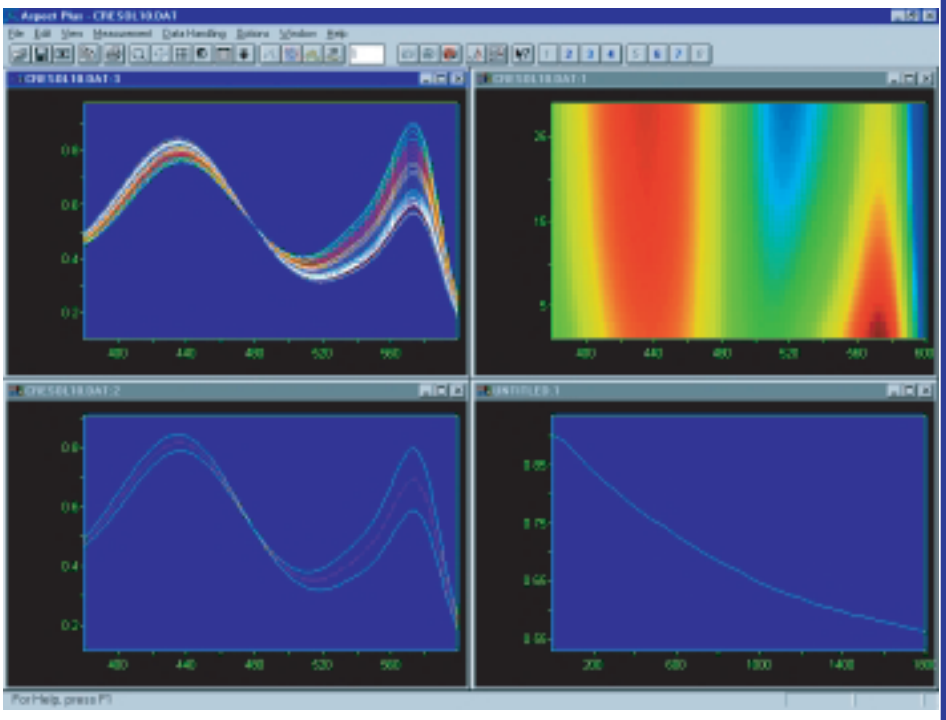
Aspect Plus
Software Package

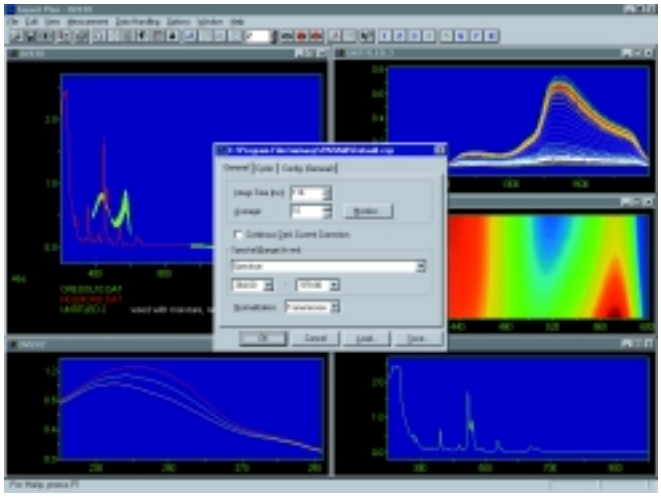


株式会社　スペクトラ・コープ
〒164-0011 東京都中野区中央4-4-5第一小林ビル
Tel:03-5328-2858　Fax:03-5328-2859
URL http://www.spectra.co.jp

Product Information

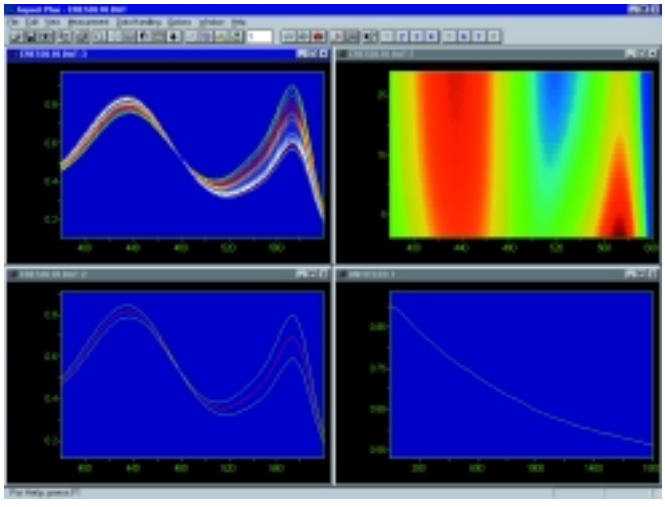
Aspect

Aspect Plus is a flexible, modular spectral analysis software package that runs under MS Windows. Extensions are available to support specific applications and to implement standard diagnostic tests. Using Aspect Plus, spectral measurements and processing can be carried out for the Zeiss MCS 5xx and CORONA-series spectrometers. An extensive set of functions are available both by menu and macro to perform measurements, process data and format displays and printout.



File

The File menu contains operations that are used for managing files that have been created using Aspect Plus or other compatible programs. Aspect Plus supports the import/ export of GRAMS (spc) ASCII (csv) and JCAMP format files.

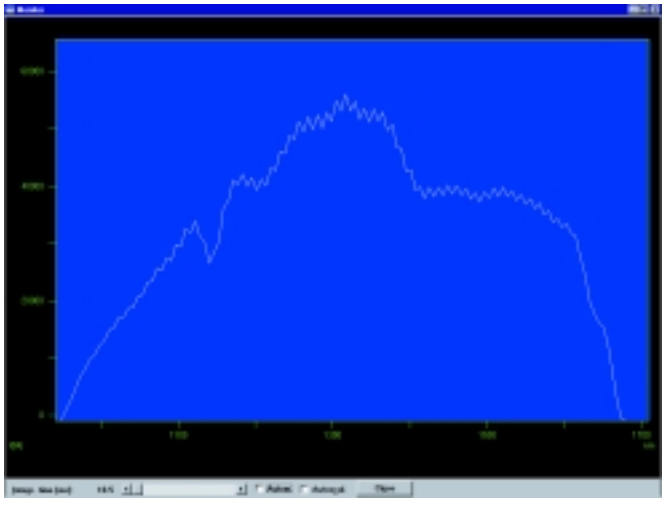


Edit

The Edit menu contains operations that are useful for inter-program transfer of data. A Copy command allows a spectrum to be easily inserted into Windows-based programs such as word processors.

View

The View menu contains operations that can be used to alter the visual display of spectra and the set-up of the screen.



Measurement

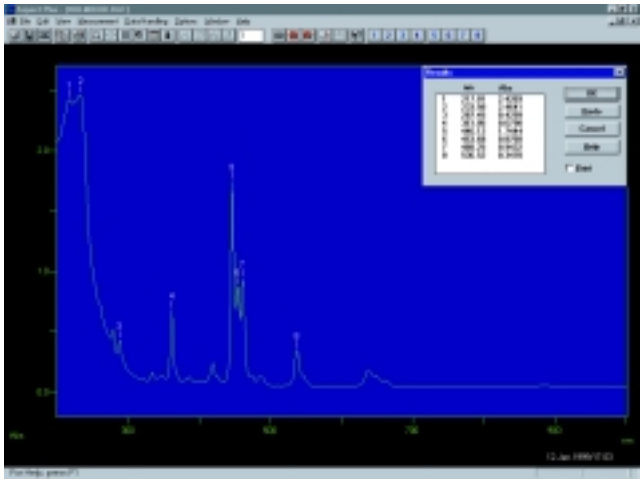
The Measurement menu contains the commands that are used to operate the spectrometer. Sample, reference and dark spectra can be measured, saved and restored. Parameter files can be created, loaded and edited. Kinetic data measurements can be defined and started.

Data Handling

The Data Handling menu allows the user to process saved spectra using different arithmetic operations. Standard available options include:

- Multiplication by or addition of a constant
- Conversion, e.g.%T - Abs, nm - cm-1
- 1st ... 4th derivative
- Smoothing
- Interpolation
- Normalization
- Addition, subtraction, multiplication, division of two spectra

In addition to providing for manipulation and analysis of spectra, the Data Handling menu provides a log record of the operations performed.

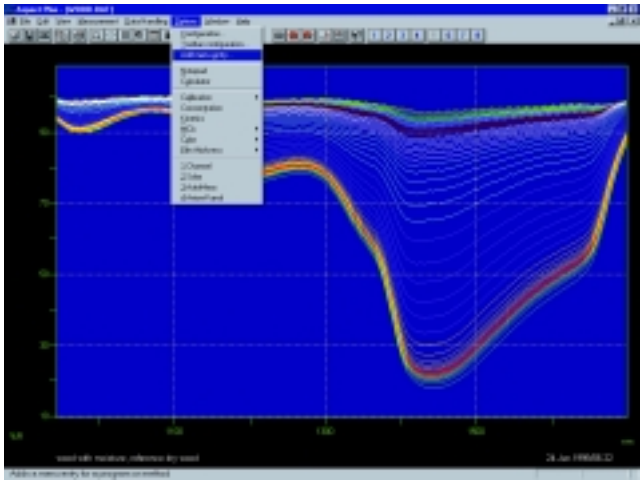


Options

The Options Menu provides access to a variety of useful external programs and methods. These include the creation of calibration files, the estimation of concentrations and the measurement and evaluation of the kinetics of reactions. A Windows Notepad editor and Calculator can be accessed from this menu.

The kinetics software module includes the ability to calculate kinetic constants from spectra using the following models:

- $y=bx$
- $y=a+bx$
- $y=a+bx+cx^2$
- $y=a+be^{-kx}$
- $y=a+bx+ce^{-kx}$
- $y=a+b(1-e^{-kx})$
- $y=a+bx+cx^2+dx^3$
- $y=a+bx+cx^2+dx^3+ex^4$

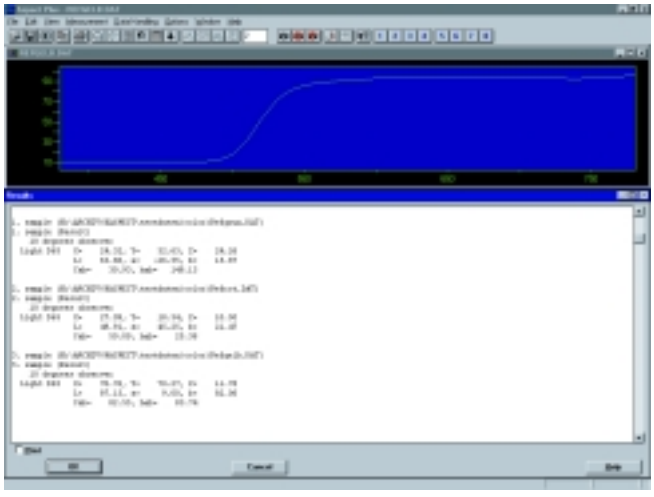


Optional Software

A variety of optional software packages are available to provide specialized analytical or methods. These are included as menu items under the Options menu. They include Multi-component Analysis, Color Analysis and Film Thickness Analysis.

Multi-component Analysis

MCA can be used to perform a classical least square analysis and estimation of the concentrations for up to eight constituents of a liquid mixture.

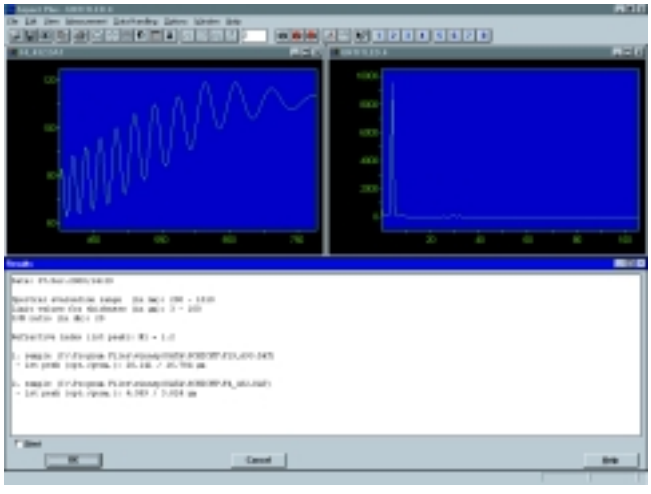


Color

The Color software package provides colorimetric evaluation of spectra. It operates on transmission spectra of transparent solid or liquid samples and reflectance spectra of solids, powders and opaque samples. The color algorithms can be applied to spectra covering the wavelength range from 380 nm to 780 nm.

The color data that can be calculated are:

- Tristimulus values X, Y and Z
- Chromaticity coordinates x and y
- Color spaces: CIELAB and CIELUV
- Index of metamerism
- Color difference
- White/yellow index (or degree of whiteness)



Method Development Module

The Method Development Module provides a macro development environment that allows for the automation of measurements, evaluation and result recording. The Module allows macros to be recorded, edited and executed.

Thickness Measurement

The Thickness Measurement software package provides layer thickness calculation from spectra of transparent layers.

For further details, please contact:

Carl Zeiss Jena GmbH
Spektralsensorik

D-07740 Jena
Telefon: ++49 (03641)64 2838
Telefax: ++49 (03641)64 2485
E-Mail: info.spektralsensorik@zeiss.de
Internet: http:// www.zeiss.de/spectral