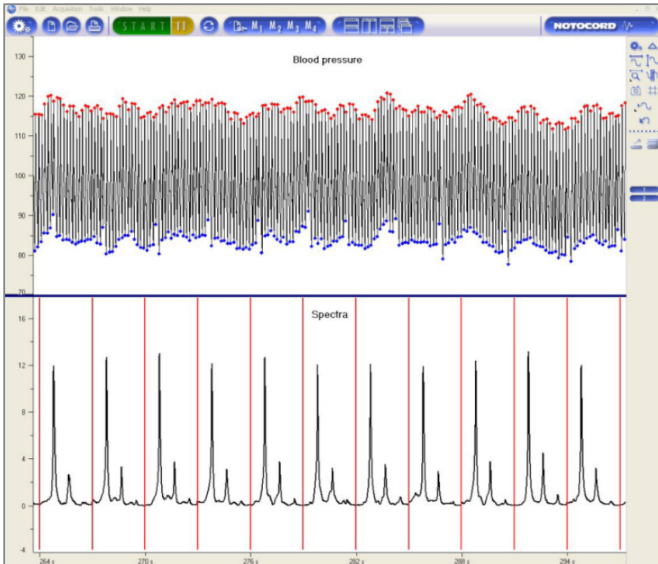


SPECTRAL ANALYSIS OF CONTINUOUS AND DISCRETE SIGNALS



Spectral analysis of blood pressure with SPA10a

KEY FEATURES

- User-defined window duration
- User-defined selection of frequency bands
- Computation of absolute and relative power for each frequency band
- Continuous display of spectra along raw signal on a universal chart display
- Extraction of analysis results in Excel[®] and MATLAB[®]

ANALYZING BRAIN ACTIVITY

Spectral analysis is widely used to study **periodic** patterns in a signal, finding applications in the following experiments :

- Heart rate variability
- Pressure signal variability
- Doppler analysis
- ECG, EEG, EMG signal analysis
- Signal analysis for filter design

DISCOVER SPA10a

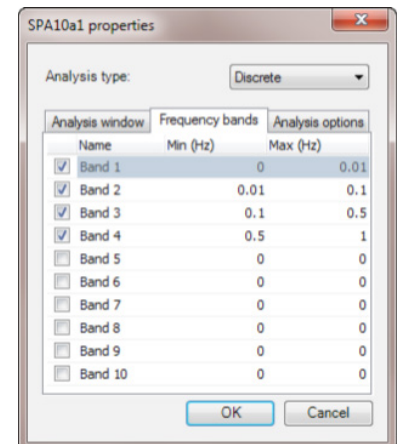
Our software module **SPA10a** performs spectral analysis of physiological time series using **Fourier transformation** and **autoregressive** methods.

CUSTOMIZED ANALYSIS

Compatible with **continuous** and **discrete** signals, SPA10a allows identification of many **physiological** parameters such as blood flow velocity, neuromuscular activity and electrophysiological signal properties.

Sympathetic and parasympathetic activities can be assessed continuously, using several **frequency bands** and ratios, for variability of heart rate and blood pressure.

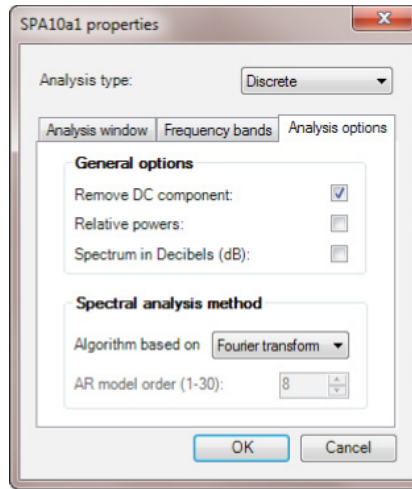
Users can select up to **10 bands** of interest and define their lower and upper values



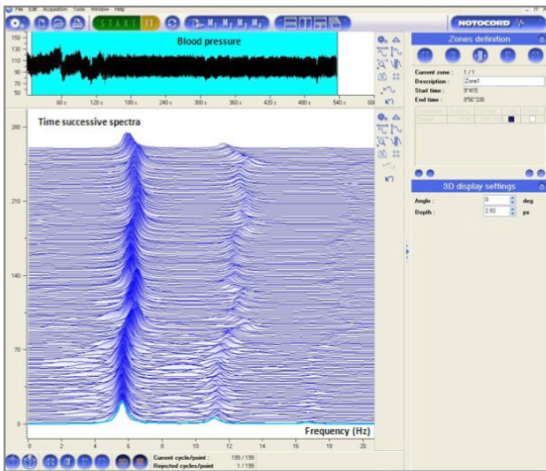
Frequency bands selection

SPA10A CHARACTERISTICS

- Spectra can be computed from continuous (value) and discrete (time-value) signals
- Users can select their own frequencies of interest and window duration
- Results can be averaged on a user-defined number of consecutive windows
- Spectra from raw signals and computed parameters can be displayed together on a CTD60a/v or XYD30a display



SPA10a properties



3D-display of blood pressure successive spectra

Visualize spectra changes on user-defined zones with XYD30a, our 3D-display module.

SPA10a coupled with XYD30a improves spectra readability since results are plotted on a frequencies X axis.

This combination allows fast 3D visualization of spectra changes over time.

+ Related products

- | | |
|----------|---|
| CTD60a/v | Universal chart display / with video |
| MPI10a | MATLAB® link for NOTOCORD-hem™ |
| XYD30a | XY scope with 3D display and curve fitting capabilities |

SPA10a

EUROPE - Headquarters

NOTOCORD SAS
Tel. +33 (0)1 34 80 00 00
information@notocord.com

NORTH AMERICA

NOTOCORD Inc.
Tel. +1 888 204 7770
information@notocord.com

JAPAN

PRIMETECH Corp.
Tel. +81 (0)3 3816 0851
sales@primetech.co.jp

SOUTH KOREA

IWOO Scientific Corp.
Tel. + 82 (0)2 3473 2332
sale@iwoo.co.kr

SEJONG-BIO

Tel. + 82 (0)4 2826 9473
sales@sejong-bio.co.kr

TAIWAN

MESONICS Systems Ltd.
Tel. + 886 2 2736 4066
info@mesonics.com.tw

CHINA

B&E Teksystems Ltd
Tel. + 86 10 8758 5773
bandetek@hotmail.com

INDIA

BIO-DOT Scientific, New Delhi
Tel: +91 11 2636 3490
upkar@biodotscientific.com

Working in a GLP environment?

21 CFR Part 11 compliance is achieved via our AccessManager security application, activating a highly secure and compliant Audit Trail.

www.notocord.com
information@notocord.com
+33(0) 1 34 80 00 00



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