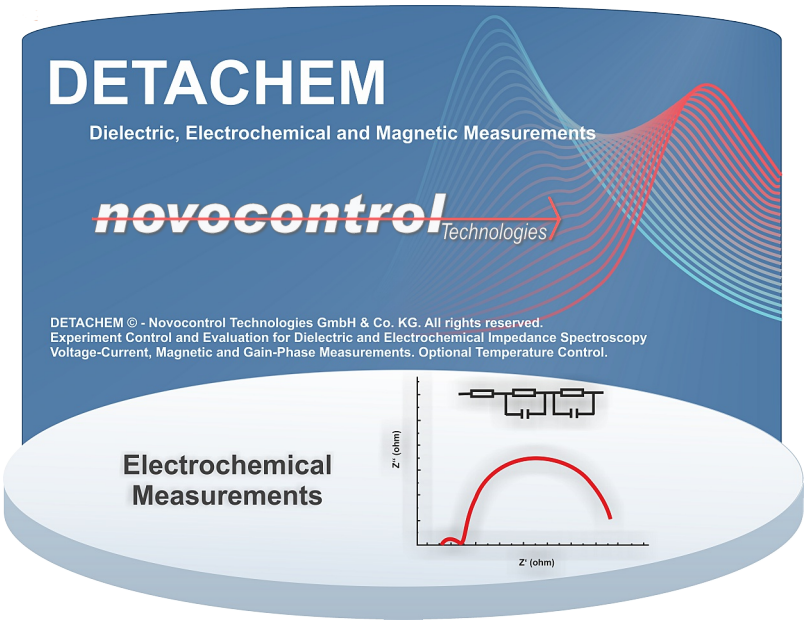


DETACHEM: Control and Evaluation Software for Electrical Materials Characterisation

- Powerful control and evaluation software for broadband dielectric/impedance spectroscopy (BDS) and electrochemical impedance spectroscopy (EIS)
- All electrochemical standard time domain experiments included
- Rapid access to dielectric and impedance data of polymers, glasses, ceramics, semiconductors, ion conductors, liquid crystals, batteries, fuels cells, materials under corrosion, sensors, supercapacitors, biomedical and biological systems
- Supports up to 18 different impedance analyzers, six Novocontrol temperature control systems and various third-party controllers
- Data acquisition via IEEE488 interface and Ethernet
- Fully automatic device and measurement control
- Sophisticated data visualisation (2D/3D)
- Extensive context-sensitive online help function
- Multi-channel version available

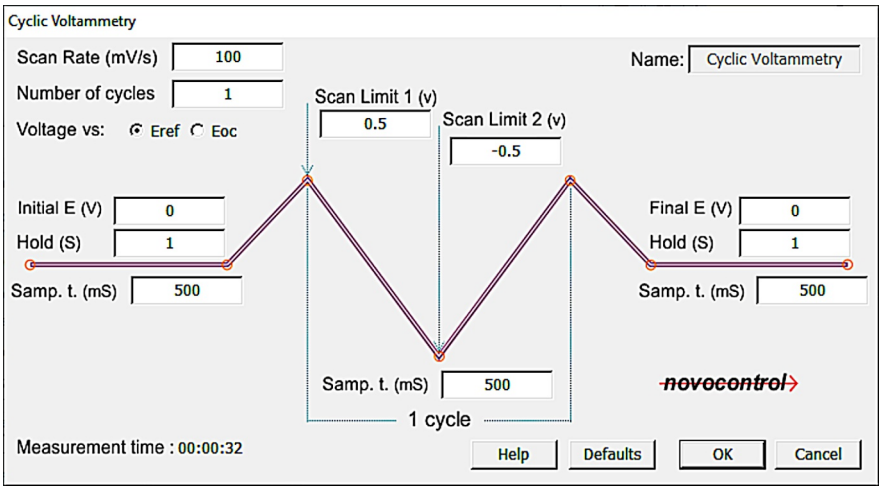
novocontrol Technologies
Novocontrol Technologies
GmbH & Co. KG
Aubachstr. 1
56410 Montabaur
Germany
Phone: +49 2602 9196690
Fax: +49 2602 91966933
e-mail: novo@novocontrol.de
web: http://www.novocontrol.de

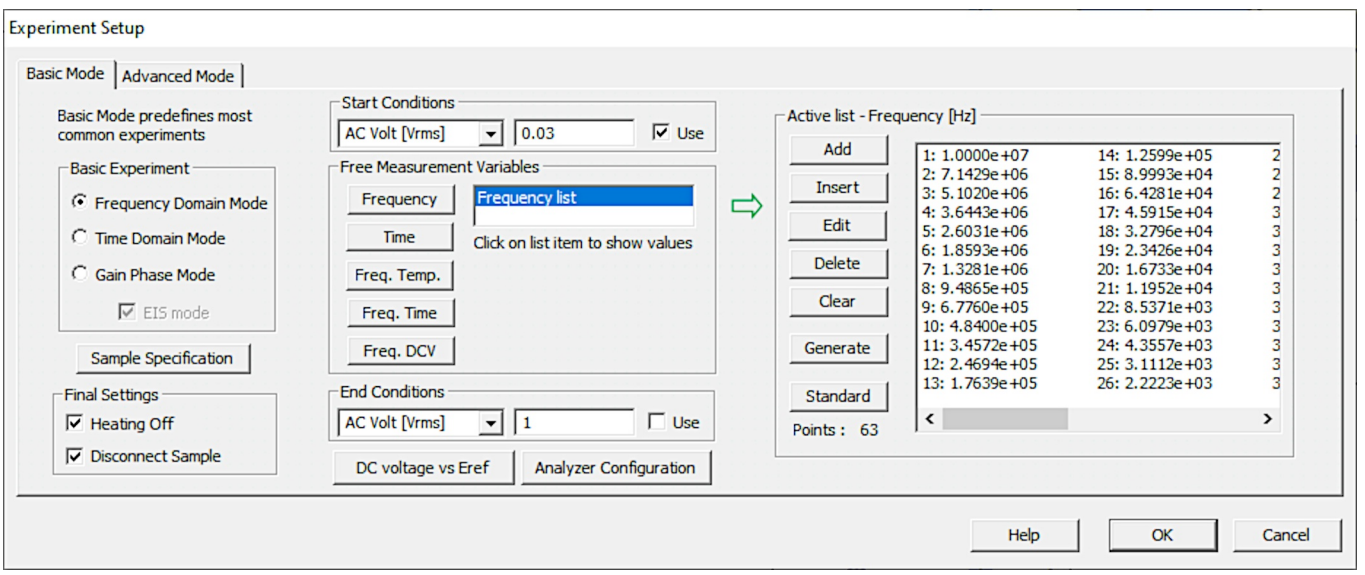
DETACHEM

NOVOCONTROL DETACHEM

The New Solution

DETACHEM is our easy-to-learn and powerful control and evaluation software for dielectric and electrochemical impedance spectroscopy as well as time domain measurements (dc voltage/current). DETACHEM offers a uniform user interface nearly independent of the particular hardware, supporting the most important dielectric or impedance analyzers and temperature controllers. In addition, it widely supports automatic calibration procedures for the sample cells and devices.





Features

- Laboratory standard control and evaluation multitasking software for broadband dielectric spectroscopy and electrochemical impedance spectroscopy (EIS)
- Keyboard shortcuts for all frequently used operations
- New Multigraphics features (extended zooming, predefined plots, multiple data display windows, ...)
- Automatic detection of supported impedance analyzers and temperature control systems
- Uniform user interface for various impedance analyzers and temperature controllers nearly independent of hardware
- Flexible experiment set-up: control of frequency, temperature, dc bias and time in any multi dimensional arrangement
- Beyond impedance, more than 30 different electric quantities are evaluated, including permittivity, conductivity, inductance, ...
- Graphical online display of measured data, temperature curve and system status
- Integrated plot software to display multiple data sets in a single graph, 3D diagrams, Bode and Cole-Cole plots
- Automatic calibration of hardware devices and sample cells
- Exports/imports data in several flexible user-defined ASCII formats
- Optional curve fitting software WinFIT for equivalent circuit modelling, data transformations like WLF, Havriliak-Negami, and time domain conversion

Setup Modes

- Basic Mode: Easy setup of standard experiments, accomplished within minutes
- Advanced Mode: More sophisticated configurations. Allows to create, setup, and run measurements of different type sequentially. Further options include grouping of measurement steps and repeating both single measurements and groups of measurements.

Experiment Types

- Frequency Domain: Dielectric and Electrochemical Impedance Spectroscopy.
- Time Domain: All voltage/current measurements with predefined waveforms of voltage or current (potentiostatic and galvanostatic modes, respectively).
- Gain Phase: Uses an ac signal and detect two complex voltage signals probed at two different parts of a device under test.