



Turnkey systems for Dielectric Analysis from 3 μ Hz - 3 GHz

Top class Broadband Dielectric Spectrometers:

- **Turnkey broadband dielectric spectrometers** (DETA test method) with temperature control and data acquisition system
- **Broadest frequency range: 3 μ Hz ... 3 GHz**
- **Highest accuracy bases on high resolution ALPHA dielectric analyzer and frequency material analyzer**
- **Data acquisition system** with IEEE 488 interface
- **Software package** includes:
 - + **WinDETA** for automatic measurements
 - + **WinPLOT** for 2D and 3D data presentation
 - + **WinTEMP** for automatic temperature control
 - + **WinFIT** for analysis of measured data
- Choice of 3 **temperature control systems**:
 - + **QUATRO Cryosystem**: -160°C to +400°C
 - + **NOVOCOOL Cryosystem**: -100°C to +250°C
 - + **NOVOTHERM System**: +25°C to +400°C

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The Perfect Concept For Your Research

	Frequency range	Temperature range	Temperature stability	Maximum heating/cooling rate	Sample cell
Concept 10	3 μ Hz – 300 kHz	-160 ... +400°C	\pm 0.01°C	20°C/Min.	ZGS
Concept 20	3 μ Hz – 3 MHz	-160 ... +400°C	\pm 0.01°C	20°C/Min.	ZGS
Concept 40	3 μ Hz – 20 MHz	-160 ... +400°C	\pm 0.01°C	20°C/Min.	ZGS
Concept 50	3 μ Hz – 40 MHz	-160 ... +400°C	\pm 0.01°C	20°C/Min.	ZGS
Concept 70	1 MHz – 3 GHz	-160 ... +400°C	\pm 0.01°C	20°C/Min.	ZGS + BDS 2200
Concept 80	3 μ Hz – 3 GHz	-160 ... +400°C	\pm 0.01°C	20°C/Min.	ZGS + BDS 2200
Concept 11	3 μ Hz – 300 kHz	-100 ... +250°C	\pm 0.2°C	10°C/Min.	ZGS
Concept 21	3 μ Hz – 3 MHz	-100 ... +250°C	\pm 0.2°C	10°C/Min.	ZGS
Concept 41	3 μ Hz – 20 MHz	-100 ... +250°C	\pm 0.2°C	10°C/Min.	ZGS
Concept 51	3 μ Hz – 40 MHz	-100 ... +250°C	\pm 0.2°C	10°C/Min.	ZGS
Concept 71	1 MHz – 3 GHz	-100 ... +250°C	\pm 0.2°C	10°C/Min.	ZGS + BDS 2200
Concept 81	3 μ Hz – 3 GHz	-100 ... +250°C	\pm 0.2°C	10°C/Min.	ZGS + BDS 2200
Concept 12	3 μ Hz – 300 kHz	+25 ... +400°C	\pm 0.3°C	20°C/Min.	ZGS
Concept 22	3 μ Hz – 20 MHz	+25 ... +400°C	\pm 0.3°C	20°C/Min.	ZGS
Concept 42	3 μ Hz – 20 MHz	+25 ... +400°C	\pm 0.3°C	20°C/Min.	ZGS
Concept 52	3 μ Hz – 40 MHz	+25 ... +400°C	\pm 0.3°C	20°C/Min.	ZGS
Concept 72	1 MHz – 3 GHz	+25 ... +400°C	\pm 0.3°C	20°C/Min.	ZGS + BDS 2200
Concept 82	3 μ Hz – 3GHz	+25 ... +400°C	\pm 0.3°C	20°C/Min.	ZGS + BDS 2200

All measuring systems up to 40 MHz include the high resolution frequency analyzer ALPHA-A providing the highest accuracy in generated voltage, frequency and measured complex impedance.

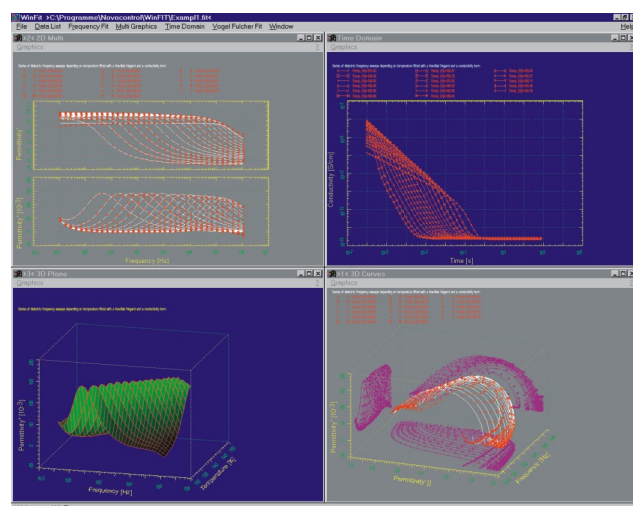
The resolution in tangent delta in this frequency range is 10^{-5} .

Measuring systems up to 3 GHz provide an additional RF material analyzer with RF test station, precision extension line and RF sample cell.

The RF test station with extension line and sample cell is mounted into the sample position of the temperature control system by a high-precision motor-driven top-loading mechanism. The resolution in tangent delta in this frequency range is 10^{-3} .

NOVOCONTROL Technologies sets a new standard in accuracy and functionality by launching turnkey analytical instrumentation for materials research.

All measuring systems mentioned above include sophisticated Windows-based software including higher harmonics measurements.



Each measuring system is verified to meet its specification and ready for turnkey operation. NOVOCONTROL Technologies offers installation, training and application support by factory trained engineers.