BATIXT
BATTERY INDEX TECHNOLOGY

CLARITY

EIS SCANNER FOR ADVANCED BATTERY TESTING
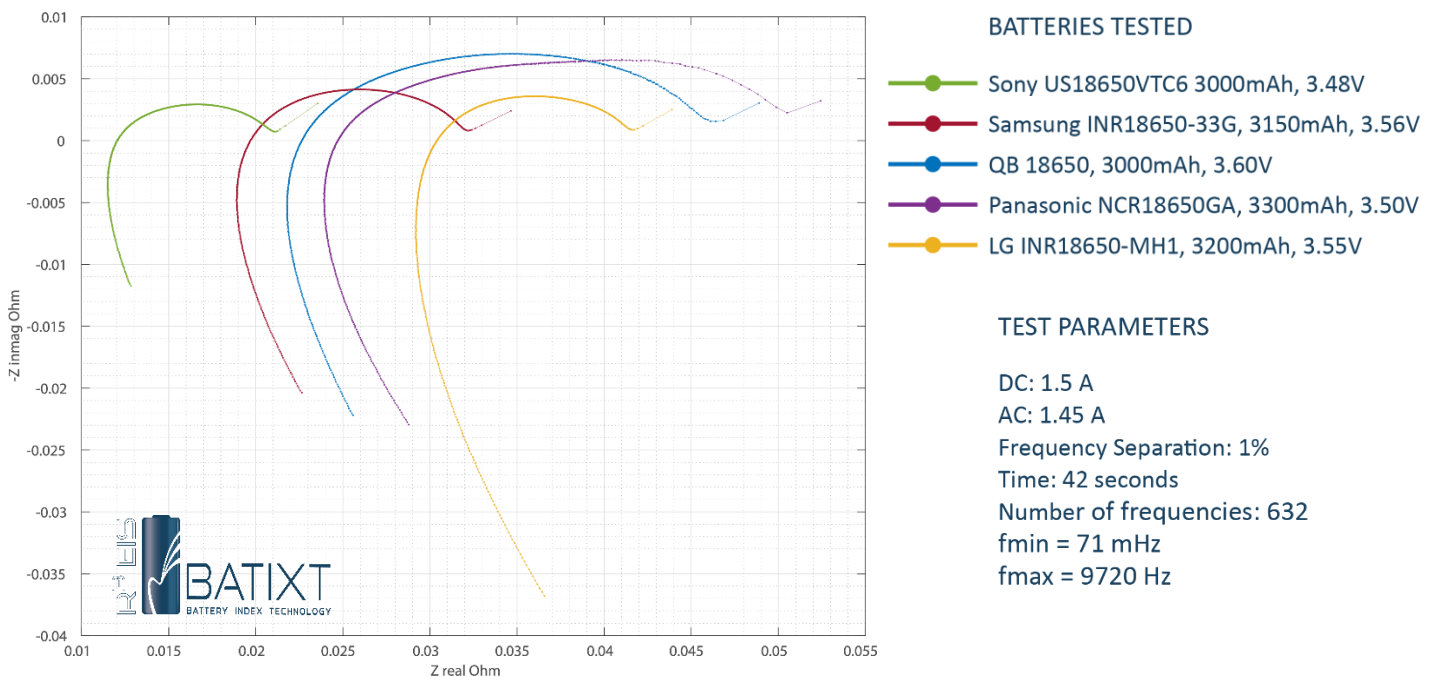
COMING SPRING 2025

EIS SCANNING FEATURES

- R^3 EIS technology
- Multi-sine scans with hundreds or thousands of frequencies
- Charge or discharge cycling of batteries
- User-friendly script editor where you can combine charge and discharge routines with multi-sine EIS scans at required intervals.
- Choice of fixed measurement times (20 – 160 seconds) or user specified measurement times
- User choice settings for current and frequency separation

OUTPUT/ANALYTICS

- Nyquist, Step Response and relaxation data output on request
- Choice of data output formats
- Nyquist single- or multi-scan plotting
- Nyquist carpet plotting (multiple multi-sine scans)

INTERFACES

- Battery holder for cylindrical cells
- Possible to connect to other types of batteries
- USB cable connection

BATTERIES TESTED

- Sony US18650VTC6 3000mAh, 3.48V
- Samsung INR18650-33G, 3150mAh, 3.56V
- QB 18650, 3000mAh, 3.60V
- Panasonic NCR18650GA, 3300mAh, 3.50V
- LG INR18650-MH1, 3200mAh, 3.55V

TEST PARAMETERS

DC: 1.5 A
AC: 1.45 A
Frequency Separation: 1%
Time: 42 seconds
Number of frequencies: 632
fmin = 71 mHz
fmax = 9720 Hz

Electrochemical Impedance Spectroscopy (EIS) is a non-destructive and advanced measurement technique used to gain deep insight into battery properties

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SPECIFICATIONS FOR EIS SCANNER CLARITY

CURRENT AND VOLTAGE

Battery Capacity:	1-10 Ah
Battery Voltage:	2.5 – 5 V
Current Applied/Drawn:	0-5 A (DC level up to 2.5A)
Calibration:	Yes

EIS MEASUREMENT

EIS Method:	Galvanostatic, on charge or discharge
Frequency Range	10 mHz – 10 kHz
Number of Frequencies:	From single sine to multi-sine signal, up to hundreds or thousands of frequencies in one EIS scan
Quality Indicators:	Scatter is calculated and displayed
Accuracy:	Both actual current and actual voltage are measured, why relative accuracy is assured
Output:	Nyquist and Step-Response, separated Relaxation

DATA ACQUISITION

DAQ Method:	Single EIS scan or multiple scans via user defined script. For example, full SoC Sweep with 100+ EIS scans on charge or discharge.
Sampling Rate:	200 kHz, 18 bits
Measurement Time:	Fixed times can be chosen for efficiency, or time may be user defined.
Measurement Resolution:	0.0005% of full range, including oversampling
Noise and Ripple:	Low