

Bioimpedance spectroscopy systems ...
for body composition research.



Hydra 4200

Bioimpedance spectroscopy (BIS)

XiTRON Hydra 4200 Specifications

Frequency

5 to 1000 kHz

Number of frequencies

50

Impedance range

100 to 1000 Ω

Impedance accuracy

$(0.005 \cdot Z) + 0.4 + (0.01 \cdot Z/F) +$
 $(0.00001 \cdot Z \cdot F) + (0.001 \cdot F)$ ohms

Phase resolution

0.01°

Portability

Full on-board computing and modeling

Measurement time

Less than 3 seconds, less than 2 minutes with modeling

Software

Windows-compatible software provided (Win 95, 98, XP)

Calculated data

Fat-free mass (FFM), intracellular fluid (ICF), extracellular fluid (ECF), total body water (TBW), raw data access

Printed data

ECF resistivity, ICF resistivity, ECF, ICF, TBW, ECF/ICF ratio, ECF/TBW ratio, FFM, fat percentage, Re, Ri, Alpha, Td, characteristic frequency (Fc), fit quality

Dimensions

L = 246mm (9.7in), W = 104mm (4.1in)
H = 160mm (6.3in)

Weight

1.8kg (4lbs)

Power requirements

85-250 VAC, 47-63Hz

XiTRON
TECHNOLOGIES

An ImpediMed company

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XiTRON Hydra 4200: BIS accuracy, laboratory verified

The Hydra 4200 is a 3rd generation, single-channel, tetra polar BIS device that scans 50 frequencies between 5kHz and 1MHz. You can depend on the results you get from the Hydra 4200 ECF/ICF technology. Its accuracy compared to the tedious laboratory dilution methods has been reported numerous times in scientific journals. Scientific studies have also shown the technology to be repeatable and sensitive to small changes, able to detect the volume distribution differences between subjects.



XiTRON Hydra 4200 kit includes:

- XiTRON Hydra 4200 device
- XiTRON Hydra PC Utilities
- IS4000, Disposable Electrodes (200 ea)
- TS4201, Verification Module
- LS4200, Subject Cable
- CA98A, RS-232 to USB Adapter
- RC4200, RS-232 Serial Cable
- CP4200, Power Cord
- User Manual

Options and Accessories
IS4000, Disposable Electrodes
CC, Carrying Case

XiTRON Hydra 4200: Single Measurement or Continuous Modes

XiTRON Hydra 4200 Single Measurement Mode

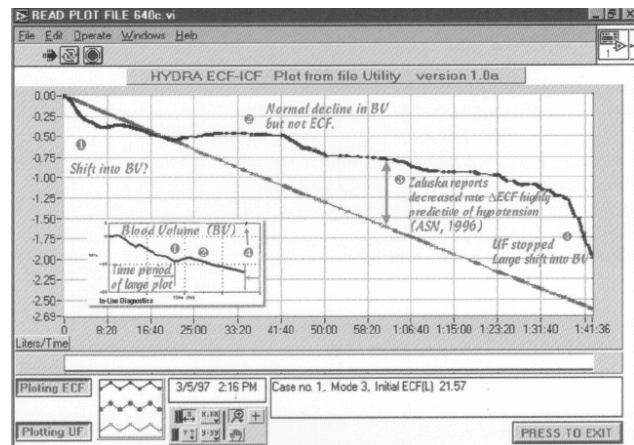
In the single frequency measurement mode, and once ECF and ICF volumes are determined, the device computes the ECF-ICF ratio, body cell mass (BCM), total body water (TBW), and fat-free mass (FFM). Results can be printed at the conclusion of the test or at any other time using the Data Storage Memory feature.

HYDRA MEASUREMENT REPORT	
XiTRON Technologies Inc	
Case #	: 00001
Date	: 31/10/07
Time	: 9:39
Object	: ECF and ICF
Method	: Whole Body by Wrist-Ankle
Mode	: Single Measurement
Gender	: Male
Height	: 175.0 cm
Weight	: 70.0 kg
ECF Resistivity	: 40.5 Ohm.cm
ICF Resistivity	: 273.9 Ohm.cm
Extra Cellular Fluid	: 16.04 Liter
Intra Cellular Fluid	: 29.92 Liter
Total Body Water	: 45.95 Liter
ECF/ICF	: 0.536
ECF/TBW	: 0.349
Fat-Free Mass	: 63.24 kg
Fat percentage	: 9.7%
Rs, Ri, Cm, Alpha, Td, Fc	: 677.9Ohm, 912.7Ohm, 3.23nF, 1.000, -18.01ns, 31.0kHz
Model Conformance	: Excellent Fit

A report can either be printed or saved at the conclusion of each single measurement.

XiTRON Hydra 4200 Continuous Measurement Mode

In the continuous measurement mode, the device automatically measures ECF and ICF every 5 seconds for up to approximately 8 hours. The data is stored in the device for post printing of ECF and ICF versus time plots. The results can also be viewed in real time either digitally on the device display or graphically on a computer screen using the Hydra PC utilities program. The device calculates and displays real-time ECF rate of change. All data can be sent to a host computer using the Hydra PC utilities via RS-232 or by using the included RS232-to-USB adapter.



Ordering information Hydra 4200

To find out more, visit www.xitrontech.com or contact XiTRON Technologies / ImpediMed.

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