



**MALTRON**

*a new approach to lifestyle disease prevention*

# BioSCAN 920 Multi-Frequency

SCREENING TOOLS PROVIDING  
AN INSIGHT INTO HEALTH



- Multi-frequency
- Impedance
- Resistance
- Reactance
- Phase Angle
- Capacitance
- Multi-channel (optional)
- Whole body
- Segmental (optional)
- Thorax region
- Large colour display
- Bluetooth
- Medically isolated USB
- 8 Additional configurable frequencies (optional)

Maltron Instruments use scientific method of measuring Bioelectrical Impedance. A total of four electrodes are used (tetrapolar). 2 electrodes are applied to the hand and two to the foot. A low-level battery current is passed through the body and the absolute measurement of impedance, phase, resistance, reactance and capacitance are made.

***BioScan 920 stores 999 patients' results and the USB interface enables downloading of the measured data directly into the PC using the fast high speed USB. The measured data is downloaded in blocks of 100.***

Using the measured raw data, Maltron Instruments perform a complete analysis in less than 5 seconds.

Displaying parameters such as Extracellular and Intracellular fluids, Total Body Water, Fat and Fat Free Mass, Dry Weight and many others including mineral composition.

The patient information is provided without the need of complex clinical techniques like radioisotope dilution.



*The future of impedance analysis used in monitoring body composition, nutrition, hydration and mineral assessments in diverse clinical settings*

# CLINICAL APPLICATIONS

- AIDS / Wasting
- Anorexia Nervosa / Bulimia
- Assessment in Pre / Postmenopausal Women
- Assessment of Body Composition in Over Weight Patients
- Body Composition Assessments
- Body Composition Assessment during Pregnancy
- Burns Units
- Cardiovascular Disease
- Community Nursing
- Critically Ill
- Crohn's Disease
- Cystic Fibrosis
- Diabetics
- Dieticians
- Eating Disorders
- Endocrinology
- Epidemiological Studies
- Gastroenterology
- Haemodialysis
- ICU
- Liver Disease
- Lungs
- Malnutrition Treatment / Research
- Medical Research
- Nephrology / Dialysis
- Nutritionists
- Obesity
- Oedema
- Paediatric
- Parenter Enteral
- Postoperative Fluid Status
- Renal Failure
- Rheumatoid Arthritis
- The Elderly
- Tissue Characterisation
- Tropical Disease
- Scientific Research
- Stroke
- Weight Reduction

# THE FUTURE OF PATIENT MONITORING

## A COMPLETE CLINICAL ASSESSMENT

### BIOSCAN 920 RESULTS DISPLAYED AT 50 KHz

#### ABSOLUTE MEASUREMENTS

Absolute measurements have been highly correlated to changes in the human body and have been shown to be good indicators in predicting mortality.

- Impedance
- Phase Angle
- Resistance
- Reactance
- Capacitance

#### DRY WEIGHT

Under and over estimation of dry weight is important and has been shown to impair the survival and quality of life of haemodialysis patients.

- Dry Weight

#### BODY COMPOSITION

Nutritional assessment of children and adults in clinical and field settings is important in order to identify potential causes of inadequate nutrition status, including the risk of malnutrition. Performing nutritional assessments in diseased patients enable medics to identify related disorders and to monitor the effects of any treatment.

- Fat %
- Fat Mass
- Fat Free Mass
- Fat Free Mass %
- Body Volume
- Body Density
- Body Mass Index
- Resting Metabolic Rate
- Target Fat (min / max) %
- Target Weight (min / max)
- Target Water (min / max) %

#### GFR

An important indicator of Kidney function. A rate at which waste is removed from our kidneys. High correlation was found using BioScan 916 in the estimation of GFR, avoiding the necessity of 24 hour urine collection or calculating using CC or MDRD formulas.

- Glomerular Filtration Rate

#### MINERALS AND PROTEIN

Bone, soft tissue and protein content of the body. Inorganic compounds containing an abundance of metals. In clinical patients the assessment of the loss of minerals is important.

- Total Body Potassium
- Total Body Calcium
- Protein Mass
- Mineral Mass

#### GLYCOGEN MASS

The primary storage form of carbohydrates found in the cytoplasm of most cells.

- Glycogen Mass

#### FLUID STATUS

Intracellular & Extracellular body fluids in both healthy and diseased patients is of significant importance. Extracellular Water (ECW) increases in different diseases and oedema is the most common sign of ECW expansion. Monitoring these changes in patients can provide us with detailed information and understanding of changes as a result of disease.

- Extracellular Fluid
- Intracellular Water Volume
- Extracellular Water Volume
- Extracellular Water Lt
- Total Body Water Volume
- Intracellular Water Lt
- Intracellular Water %
- Extracellular Water %
- Total Body Water Lt
- Total Body Water %
- Extracellular Mass
- Extracellular Solids
- Extracellular / Intracellular Water
- Extracellular Water / Total Body Water
- Intracellular Water / Total Body Water
- Interstitial-Fluid Extravascular
- Plasma-Fluid (Intravascular)

#### CREATININE

Creatinine estimations can be performed using the BioScan 916, avoiding 24 hour urine collections.

- Creatinine

#### BCM

Body Cell Mass is an accurate method of establishing a healthy subjects nutritional status or a patients degree of malnutrition. BCM is used for normalisation of energy expenditure and other metabolic measures.

- Body Cell Mass
- Muscle Mass

## BioScan 920 Technical Specifications

<b>Technique:</b>	Bioelectrical Impedance Analyser
<b>Frequency:</b>	Multi-frequency (5kHz, 50kHz, 100kHz, 200kHz)
<b>Impedance Range:</b>	5 - 1100 Ohms
<b>Impedance Resolution:</b>	5 - 100R range : 0.1R 100 - 1100R range : 1R
<b>Impedance Accuracy:</b>	Impedance to within 0.5% of F.S.D. +/- 3R across 5 - 1100 R range
<b>Phase range:</b>	1° - 30°
<b>Phase Resolution:</b>	0.05°
<b>Phase Accuracy:</b>	1% of F.S.D. +/- 0.1°
<b>Resistance Range:</b>	5 - 1100R
<b>Resistance Resolution:</b>	5 - 100R range : 0.1R 100 - 1100R range : 1R
<b>Reactance Range:</b>	0R - 580R
<b>Reactance Resolution:</b>	0.1 ohms
<b>BioScan 920 Estmiation of</b>	<b>DATA OUTPUT RESOLUTION</b> TBW - ECW - ICW in increments of 0.1 litres (0.1pints) FFM - FM in increments of 0.1Kg (0.1lbs) BCM 0.1Kg (0.1lb)
<b>Ambient Temperature Environment:</b>	+10°C to 40°C
<b>Relative Humidity:</b>	30% to 75% non-condensing
<b>Atmospheric Pressure:</b>	700hPa to 1060hPa
<b>Test Current:</b>	0.8mA approx
<b>Power:</b>	Mains adapter or 4 X NiMH rechargeable cells
<b>Battery Current:</b>	max 350mA
<b>Weight:</b>	1.825 kgs
<b>Dimensions:</b>	272 x 302 x 130 mm (10.7 x 11.9 x 5.1ins)
<b>Service:</b>	No serviceable parts
<b>Guarantee:</b>	12 months Parts and Labour (excluding disposable items, Cables & Electrodes)



WOMEN DURING PREGNANCY AND PEOPLE FITTED WITH PACEMAKER, LIFE SUPPORTING APPARATUS SHOULD NOT BE TESTED.



This device is manufactured to conform with EEC Medical Devices Directive.

CE 0473

ISO 9001-2000  
REGISTERED COMPANY

EN ISO 13485  
REGISTERED COMPANY



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