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Advanced Body Composition Analyzer

The MA601 Body Composition Analyzer applies artificial neural network algorithms to Bioelectrical Impedance Analysis (BIA), for more reliable and accurate measurement of body composition. Featuring advanced output parameters such as muscle quality for improved evaluation health, our results are formulated and validated with clinical trials, providing medical professionals with accurate and reproducible measurement data.

www.chardermedical.com

Advanced Body Composition Analysis Outputs

Body Type Analysis

Low or normal BMI isn't necessarily an indication of good health. If body fat percentage is high, risk for obesity-related diseases remains high - utilize the body type analysis to identify if subject has hidden obesity risk.

* Hung SP et al. Combine body mass index and body fat percentage measures to improve the accuracy of obesity screening in young adults. Obesity Research & Clin Practice, 2017. Vol 11;1,pp.11-18

Segmental Analysis

Muscle imbalance may increase the risk of injury and soreness. Through training aimed at improving muscle balance, risk for falls can be reduced.

* Wang HK et al. Mobility impairment, muscle imbalance, muscle weakness, scapular asymmetry and shoulder injury in elite volleyball athletes. J Sports Med Phys Fitness 2001. Sep;41(3):403-10

Phase Angle

Body composition quantity is insufficient for evaluations of health. Measure and track changes in phase angle to get a better indicator of subject's cellular health!

* Gonzalez MC et al. Phase angle and its determinants in healthy subjects: influence of body composition. Am J Clin Nutr 2016; 103:712-6
* Marra M et al. Bioelectrical impedance phase angle in constitutionally lean females, ballet dancers, and patients with anorexia nervosa. ECJN 2009; 63, 905-908

Muscle Quality

Through measurement of cellular health, the MA601 can estimate muscle quality, for a more effective indicator of sarcopenia and mobility deterioration. By comparing projected grip strength with actual grip strength, effective evaluation of muscle quality can be made.

* Cruz-Jentoft AJ et al. Sarcopenia: European consensus on definition and diagnosis. Age and Ageing 2010; 39:412-423

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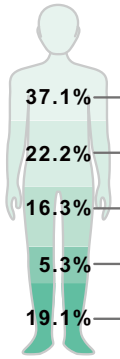
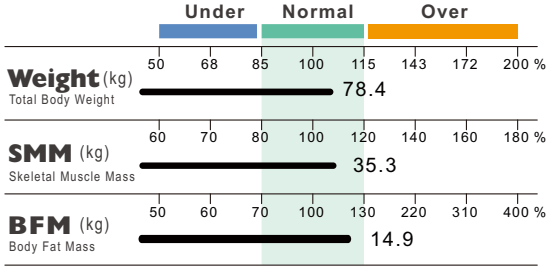
Name	ID	Ethnicity	Height	Gender	Age	Measured Time
Tim	7347204161	Asian	182.5 cm	Female	33	2021.03.15 11:53

1 Body Composition Analysis



Compartments	Values	TBW	SLM	FFM	Weight	Normal Range
ICW Intracellular Water (L)	29.1	46.5	59.8	63.5	78.4	25.4 ~ 31.0
ECW Extracellular Water (L)	17.4					15.6 ~ 19.0
Protein (kg)	12.8					10.0 ~ 13.7
Mineral (kg)	4.1					2.6 ~ 4.4
BFM Body Fat Mass (kg)	14.9					7.8 ~ 15.7

2 Muscle - Fat Analysis



4 Body Balance Evaluation

Upper	Lower	Upper-Lower	
☑	☑	☑	Balanced
☐	☐	☐	Slightly Unbalanced
☐	☐	☐	Extremely Unbalanced

8 Fitness Parameters

Basal Metabolic Rate	1740	kcal
Total Energy Expenditure	2472	kcal/d
Phase Angle(50 KHz)	5.7	°
Fat-free Mass Index	19.1	kg/m²
SMI	10.6	kg/m²
ASMI	8.1	kg/m²

9 Healthy Score

74.9 /100

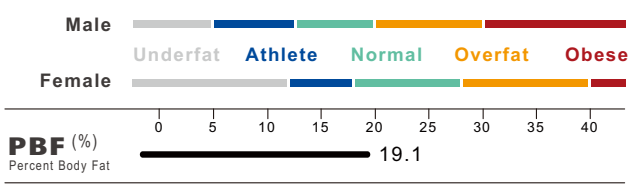
10 Control Guide

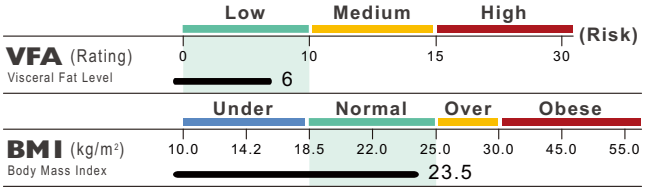
Target Weight	77.2 kg
Weight Control	-1.2 kg
Fat Control	-3.2 kg
Muscle control	+2.0 kg

Impedance

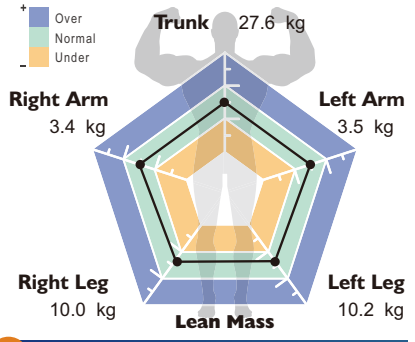
	RA	LA	TR	RL	LL
5kHz	345.0	336.4	26.7	264.2	260.0
50kHz	305.9	299.4	22.1	229.8	227.6
250kHz	279.8	275.5	18.9	208.7	206.8

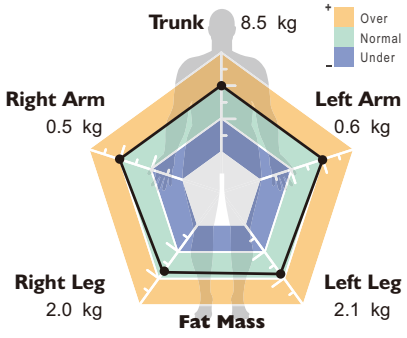
3 Obesity Analysis





Segmental Lean, Fat and Body Type Analysis





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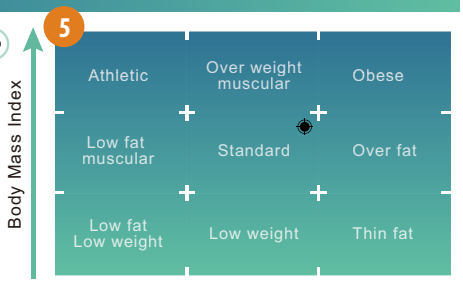

Body Type Analysis: Standard

6 Muscle Quality

Right Hand	Left Hand
395 ~ 482 N	366 ~ 447 N
40 ~ 49 kgf	37 ~ 45 kgf

Muscle Quality Score 82 /100 Points

7 Body Composition History

	2021.01.25 10:27	2021.02.04 08:47	2021.02.11 14:15	2021.02.18 10:49	2021.02.25 10:57	2021.03.02 15:26	2021.03.09 09:40	2021.03.15 11:53
Weight (kg)	78.1	78	77.8	77.8	78.5	78	77.9	78.4
FFM (kg)	65.3	64.2	63.9	64	64	63.9	63.8	63.5
SMM (kg)	33.7	34.2	34.7	34.7	35	35	34.9	35.3
PBF (%)	16.7	17.5	17	17	17.5	17.5	17.2	19.1

Introduction to the Body Composition Result Sheet

1 Body Composition Analysis

Reliable, non-invasive Bioelectrical Impedance Analysis makes it easier to conduct regular monitoring of Body Composition. The calculated estimated weights of the body's compositional elements can be compared with standard results for context.

2 Muscle-Fat Analysis

Measurement of weight is important, but incomplete without further analyzing the amount of muscle and fat in a subject. Understanding skeletal muscle and body fat proportions can help healthcare professionals formulate muscle and fat control recommendations.

3 Obesity Analysis

The MA601 categorizes body fat ranges into those commonly seen for Underfat, Athlete, Normal, Overfat, and Obese populations. With more precise ranges, fat control goals and progress can be tracked more accurately.

4 Segmental Analysis & Body Balance Evaluation

Measure muscle and fat more precisely with segmental analysis of the trunk, upper body, and lower body. Identify imbalances and track changes to better observe the effects of rehabilitation or disease.

5 Body Type Analysis

The body type analysis chart combines BMI and Percent Body Fat to determine the subject's body type. Body composition changes needed to achieve ideal body type can be clearly determined using this clear and simple chart.

6 Muscle Quality

Muscle Quality and estimation of grip strength provides a valuable muscle quality indicator that can point to changes more quickly and noticeably than a simple measurement and tracking of muscle mass.

7 Body Composition History

By selecting the same user ID prior to measurement, changes in body composition can be tracked automatically (Weight, Fat-Free Mass, Skeletal Muscle Mass, and Percent Body Fat)

8 Fitness Parameters

The MA601 provides multiple body composition output parameters of particular relevance for fitness, and includes various indexes used as early warning signs for malnutrition and sarcopenia. Make use of Phase Angle for evaluation of cellular health, and analyze health status in more detail.

9 Health Score

The Result Sheet provides normal ranges for a variety of output, as well as an overall health score that takes into account a combination of results.

10 Control Guide

The Control Guide calculates a recommended amount of muscle and fat control in order to reach an ideal, healthy body type.

Take your practice to the next level with clinical application of advanced BIA Body Composition Analysis

Sports Medicine

Monitor Rehabilitation Progress

Utilize Phase Angle to track progress and recovery at a cellular level, helping you determine when it's safe to allow an injured athlete to resume training and tough workouts.

Fluid Management

Track changes in body fluid

Precise tracking and management of extracellular and intracellular fluid is of utmost importance in a wide variety of diseases, including but not limited to cardiac and renal deficiency. Compare ECW:ICW proportion to evaluate imbalance, and track body water changes as frequently as needed.

Obesity Treatment

Detect hidden obesity risk

Utilize body type analysis, which combines BMI and Percent Body Fat, providing medical professionals with an additional tool for evaluation of hidden obesity risk.

Evaluation of Sarcopenia

Track changes in quality, not quantity

In elderly populations, muscle strength can decline much more rapidly than muscle mass. By evaluating muscle effectiveness through evaluation of cellular health, healthcare professionals now have a more useful indicator that may provide early warning for fall risk.

MA601 Body Composition Analyzer

Key Specifications

Bioelectrical Impedance Analysis (BIA)	15 Impedance Measurements: 3 frequencies (5kHz, 50kHz, 250kHz) for 5 segments (Right Arm, Left Arm, Trunk, Right Leg, Left Leg)
Electrodes	8-point Tactile Electrode Design
Display	800 x 480 pixels, 7-inch color touchscreen LCD
Capacity / Graduation	Max Capacity 300kg (0.1kg graduation)
Applicable Age	6-85 years old
Output / Transmission	USB 2.0 x2, Bluetooth (optional), Wi-Fi, RJ45 Ethernet
Data Storage	50,000 Measurements (data transfer available via USB, Bluetooth, or Wi-Fi)
Measurement Duration	Less than 45 seconds
Device Dimensions	580 (L) x 450 (W) x 1025 (H): mm 22.8 (L) x 17.7 (W) x 40.4 (H): inches
Device Weight	About 12kg (27lbs)

Result Sheet Output

Body Composition Analysis	Intracellular Water, Extracellular Water, Total Body Water, Protein, Mineral, Body Fat Mass, Soft Lean Mass, Fat-Free Mass, Weight
Muscle-Weight Analysis	Weight, Skeletal Muscle Mass, Body Fat Mass
Obesity Analysis	Percent Body Fat, Body Mass Index
Segmental Analysis	Lean Mass (Right Arm, Left Arm, Trunk, Right Leg, Left Leg) Fat Mass (Right Arm, Left Arm, Trunk, Right Leg, Left Leg)
Body Type Analysis	Utilizes BMI and Percent Body Fat
Muscle Quality	Estimated grip strength (N, kg), Muscle Quality Score
Body Composition History	Weight, Fat-Free Mass, Skeletal Muscle Mass, Percent Body Fat (Last 8 results)
Body Balance Evaluation	Analysis of balance between Upper, Lower, and Upper-Lower body segments.
Fitness Parameters	Basal Metabolic Rate, Total Energy Expenditure, Phase Angle (50kHz), Fat-Free Mass Index, Skeletal Muscle Index
Health Score	Combined evaluation of body composition results
Control Guide	Target Weight, Weight Control, Fat control, Muscle Control
Impedance	5kHz, 50kHz, 250 kHz

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