



# BWA 2.0S

## 3MHz Technology

Remarkable precision with world's first 3 MHz frequency technology

## Ergonomic Clamp Electrodes

Enhanced user experience with painless, reusable clamp electrodes

## 190+ Health Data

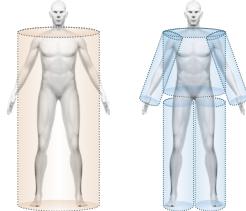
190+ health data in 30 seconds for thorough analysis

# InBody Technology

InBody uses Bioelectrical Impedance Analysis (BIA) technology to measure human body composition. Impedance is the resistance of the human body generated when a micro alternating current flows through the human body. The human body is made of water that conducts electricity well, and the resistance varies depending on the amount of water. BIA is a technology that quantitatively measures body water through impedance that occurs when an electric current flows through the human body. InBody provides diverse information on body composition based on the measured body water.

## Direct Segmental Measurement-BIA

Each of our body segments is different in length and cross-sectional area. Arms and legs are longer and narrower in comparison to the trunk, so their impedance values are higher than the trunk. On the other hand, the trunk is shorter and wider than the arms and legs, so its impedance value is lower. However, the trunk muscle mass accounts for almost half of the whole body muscle mass, which is why a small impedance change in the trunk has a greater impact on the amount of whole body muscle mass. Therefore, the trunk must be measured separately in order to measure the whole body muscle mass accurately.



## High Reproducibility and Accuracy Assured by 16-Point Clamp Electrodes

The 16-Point Clamp Electrodes were developed in a way so that the electrodes can be positioned on the wrist and ankle bone. It allows the instructor to place the electrode in the proper position and secures the reproducibility by minimizing the measurement errors. This technology also exempted the resistance from the hands and feet, which secures a more accurate results. With the 16-Point Clamp Electrodes, two different measurement modes are provided which enables users to choose between Research (Distal) and Medical (Proximal), depending on their purposes.

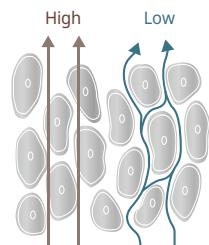


## Simultaneous Multi-Frequency for In-Depth Analysis

Low frequencies do not pass through the cell membranes well so they mainly reflect ECW, while high frequencies pass through the cell membranes and therefore reflect both ECW and ICW.

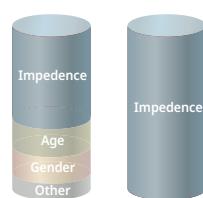
By using multi-frequencies, InBody measures ECW and ICW separately and measures TBW accurately to check the water balance. As the newest technological advancement, InBody utilizes the 3Mhz frequency, which enables the precise measurement of a more diverse range of patients and subjects with special body compositions. Furthermore, the technology that enabled the utilization of 3MHz also ensures the measurement stability from other frequencies even when there are outside interferences.

\* ECW: Extracellular Water, ICW: Intracellular Water, TBW: Total Body Water



## No Estimations or Empirical Estimations on Measured Values

InBody does not rely on empirical estimations based on age, gender, and more to ensure the accuracy of the measured data. In the past, empirical estimations were applied to the equations to ensure accuracy due to technological limitations. However, this resulted in lower accuracy when the measured population group changes. InBody overcame these limitations with technological developments such as direct segmental measurement-BIA to measure and analyze accurate body composition without applying empirical estimation. Therefore, InBody devices can provide data regardless of population and can reflect changes in the body with higher sensitivity.



## Body Composition Evaluation by Age Based on InBody Big Data

Drawing on data from 10 million InBody assessments, InBody provides averages and standard deviation charts for each body composition parameters across various age groups. This approach enables a more accurate and objective analysis, allowing you to compare your results with both younger individuals (T-score) and peers of the same age (Z-Score).



# With Over 5,500 Research Studies and Counting

## **Study 1 HIGH ACCURACY AND REPRODUCIBILITY OF FAT FREE MASS & PERCENT BODY FAT MEASUREMENTS COMPARED WITH DEXA**

The measurement (mean  $\pm$  SD) for FFM with DXA was  $52.8 \pm 11.0$ , and BIA was  $53.6 \pm 11.0$ , Delta (S-MFBIA vs DXA) was  $0.8 \pm 2.2$  (5 % limits of agreement  $-3.5$  to  $+5.2$ ), and concordance correlation coefficient (CCC) was  $0.98$  (95 % CI,  $0.97$ – $0.98$ ).

The measurements (mean  $\pm$  SD) for PBF with DXA was  $37.5 \pm 10.6$  % and S-MFBIA was  $36.6 \pm 11.3$  %. Delta (S-MFBIA vs DXA) was  $-0.9 \pm 2.6$  (5 % limits of agreement  $6.0$  to  $+4.2$ ), and CCC was  $0.97$  (95 % CI,  $0.96$ – $0.98$ ).

*Hurt, Ryan T, et al., "The Comparison of Segmental Multifrequency Bioelectrical Impedance Analysis and Dual-Energy X-ray Absorptiometry for Estimating Fat Free Mass and Percentage Body Fat in an Ambulatory Population," Journal of Parenteral and Enteral Nutrition (2020).*

## **Study 2 HIGH CORRELATION WITH D2O DILUTION METHOD FOR TOTAL BODY WATER**

The study concluded that the BIA device InBodyS10 showed good test-retest precision (%CV = 5.2 raw; 1.1 after outlier removal) and high accuracy to D<sub>2</sub>O for Total Body Water[TBWD<sub>2</sub>O = 0.956 TBWBIA, R<sup>2</sup> = 0.92, root mean squared error (RMSE) = 2.2 kg]. %Fat estimates from DXA, ADP, D<sub>2</sub>O, and BIA all showed high correlation with the Lohman model.

*Ng, Bennett K, et al., "Validation of rapid 4-component body composition assessment with the use of dual-energy X-ray absorptiometry and bioelectrical impedance analysis," The American journal of clinical nutrition 108.4 (2018):708-715.*

## **Study 3 HIGH ACCURACY WITH COMPUTED TOMOGRAPHY FOR MUSCLE MASS**

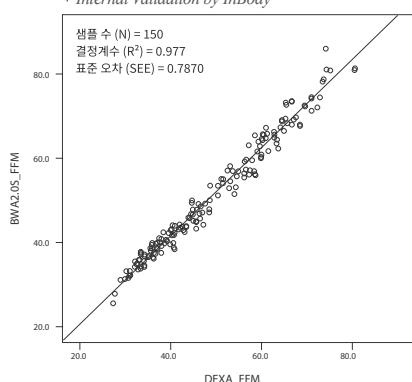
It was suggested that estimating muscle mass using DXA and BIA (InBody720) is a preferred method for diagnosis of sarcopenia in kidney transplant recipients. Both DXA and InBody showed high correlation with CT.

*Yanishi, M., et al., "Dual energy X-ray absorptiometry and bioimpedance analysis are clinically useful for measuring muscle mass in kidney transplant recipients with sarcopenia," Transplantation proceedings. Vol.50.No.1. Elsevier, 2018.*

## **Study 4 HIGH CORRELATION OF FAT FREE MASS BETWEEN DEXA AND BWA2.0S**

Total of 150 results were analyzed, excluding duplicate data from the same subject. Fat Free Mass measured by BWA2.0S had a very high correlation with DEXA of R<sup>2</sup>=0.977 or higher. (P value < 0.05)

\* Internal Validation by InBody



\* Total: 150 Male: 74, Female: 76

FFM(kg)	Total	Male	Female
	Mean $\pm$ SD (range)	Mean $\pm$ SD (range)	Mean $\pm$ SD (range)
DEXA	$49.09 \pm 12.95$ (27.2–80.8)	$59.49 \pm 9.19$ (37.6–80.8)	$38.97 \pm 6.42$ (27.2–57.6)
BWA2.0S	$50.88 \pm 13.61$ (25.4–86.0)	$61.82 \pm 10.00$ (38.6–86.0)	$40.23 \pm 6.17$ (25.4–58.1)

# BWA2.0S Application

## Nutrition

Monitor body composition change for nutritional evaluation.

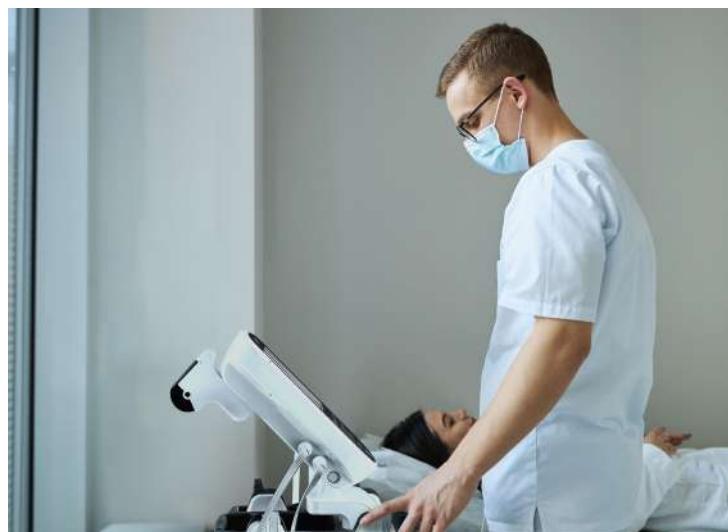
*Kim, H.S., Lee, E.S., Lee, Y.J., Jae Ho Lee, C., T.L., & Cho, Y.J (2015) Clinical Application of Bioelectrical Impedance Analysis and its Phase Angle For Nutritional Assessment of Critically Ill Patients. Journal of the Korean Society for Parenteral and Enteral Nutrition, 7(2), 54-61*



## Nephrology

Gain valuable insights into the hydration and nutrition status of dialysis patients.

*Ando, M., Suminaka, T., Shimada, N., Asano, K., Ono, J., I., Jikuya, K., & Mochizuki, S., (2018). Body water balance in hemodialysis patients reflects nutritional, circulatory, and body fluid status. Journal of Biorheology, 32(2), 46-55.*



## Geriatric

Monitor muscle mass to screen sarcopenia with SMI, which are related to risks of fall and frailty.

*Yoshimura, Y., Wakabayashi, H., Bise, T., & Tanoue, M., (2018). Prevalence of sarcopenia and its association with activities of daily living and dysphagia in convalescent rehabilitation ward inpatients. Clinical Nutrition, 37(6), 2022-2028.*



## Rehabilitation

Monitor injury and post-surgical recovery.

*Yoshimura, Y., Bise, T., Nagano, F., Shimazu, S., Shiraishi, A., Yamaga, M., & Koga, H., (2018). Systemic inflammation in the recovery stage of stroke: its association with sarcopenia and poor functional rehabilitation outcomes. Progress in Rehabilitation Medicine, 3, 20180011.*



## Cardiology

Pre-screen the risk factors of cardiovascular disease.

*Thomas, E., Gupta, P., P., Fonarow, G., C., & Horwitz, T., B., (2019). Bioelectrical impedance analysis of body composition and survival in patients with heart failure. Clinical cardiology, 42(1), 129-135.*



## Professional Sports

Manage body composition to enhance performance and minimize injury risk.

*Almăjan-Guță, B., Rusu, A., M., Nagel, A., & Avram, C., (2015). Injury frequency and body composition of elite Romanian rugby players. Timisoara Physical Education and Rehabilitation Journal, 8(15), 17-21.*



# BWA2.0S Highlights

## InBody's Accurate 3MHz Measurement Technology

The 3 MHz frequency penetrates cell membranes more effectively, providing a clearer reflection of Total Body Water. This technology allows for a more accurate distinction between Intracellular and Extracellular Water, particularly benefiting patients with unstable body water balance. It also enables precise measurements across a wide range of individuals, including athletes and those with extreme conditions, ensuring reliable results.



## Clamp Electrode for High Reproducibility

The Clamp Electrode is a combination of two ergonomics electrodes, which acts as an indicator attached to the wrist and ankle for high reproducibility. The flexible design of the clamp ensures the electrodes to closely adhere to wrist and ankle even during the articular movements.



## Covering Wide Range of Subjects / Patients and Conditions

More precise results can be obtained and utilized by entering the patient status information such as amputation, paralysis, lymphedema, and vascular access region.

## Extensive Research Parameters for Professionals

Select from a range of distinct optional parameters for clinical and research purposes.

- Water Control Calculator: to set target ECW Ratio
- Age-specific graph: to evaluate and compare the body composition result by age
- BIVA (Bioelectrical Impedance Vector Analysis): Used to evaluate the hydration and nutritional status in comparison to their demographic group.

# Comprehensive Parameters for Professionals

## Body Water Balance

### *ECW Ratio Analysis*

Whole Body ECW (Extracellular Water) Ratio and Segmental ECW Ratio offer a precise assessment of health status regarding the body water balance. This ratio is calculated by dividing Total Body Water (TBW) into Extracellular Water (ECW). And only in a healthy population, a balanced ratio between ECW and Intracellular Water (ICW) is maintained.

When health issues arise, this ratio can become imbalanced, indicating potential health concerns.

## Cell Health Marker

### *Phase Angle*

The human body comprises 36 trillion cells, and understanding cell health is crucial for overall well-being. The Phase Angle is a key parameter in assessing cell health and overall physiological status. It reflects the relationship between resistance in Total Body Water and reactance in cell membrane. A higher Phase Angle indicates better cell membrane integrity, and well-balanced fluid, suggesting healthier cells. Last but not least, with the addition of Whole Body Phase Angle History, users can intuitively track and monitor their health trends over time.

## Sarcopenia Assessment

### *SMI(Skeletal Muscle Mass Index)*

Sarcopenia, assigned the diagnosis code M62.84 by WHO, is acknowledged as a disease rather than just a natural phenomenon. It can be easily assessed and evaluated using the Skeletal Muscle Mass Index (SMI)\* and Hand Grip Strength\*\*, allowing for comprehensive evaluation and personalized consultations.

\* Skeletal Muscle Mass Index (SMI) is calculated by taking the sum of the Appendicular Muscle Mass (in kilograms) and dividing it by the square of the person's height (in meters).

\*\* Hand Grip Strength is available with connections to the InBody Handgrip Dynamometer (IB-HGS, optional).



## InBody Big Data Solution

### *Evaluation Result Sheet*

The InBody Big Data is consisted of over 130 million\* body composition measurements collected globally. This extensive InBody's Big Data provides deeper insights for health solutions by comparing individual measurements with many other measurement variables.

\* Over 130 million Data as of August 2024.

# Extensive Research Parameters for Professionals

Select from a range of optional parameters for clinical and research purposes



## Water Control Calculator

Set the Target ECW Ratio depending on the hydration status of dialysis and heart failure patients.

Water Control Calculator

Today ECW Ratio

Calculator

Today ECW Ratio	0.401
Target ECW Ratio (Min 0.340 / Max 0.420)	- 0.385 +

APPLY

Target ECW Ratio: 0.385

Over Hydration (L): -0.9 (-0.99--0.81)

Target Weight (kg): 76.2

[Print Thermal Result Sheet](#)

Exit

## Up to 20 Optional Parameters

Provides up to 20 optional parameters for a customized experience. Select from parameters, such as age-specific graph, segmental analysis, and body composition results that are available at a glance.

Impedance	Body Water	Muscle,Fat	Etc.
Total : 20 (4/4)			
<input checked="" type="checkbox"/> Whole Body ECW Ratio			
<input checked="" type="checkbox"/> ECW Ratio(ECW/TBW) Balance			
<input checked="" type="checkbox"/> Total Body Water/Weight			

Done

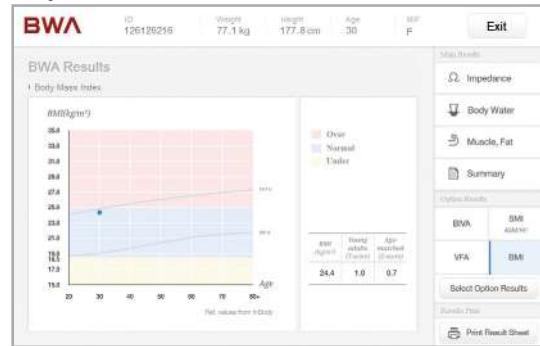
Impedance	Body Water	Muscle,Fat	Etc.
Total : 20 (4/4)			
<input checked="" type="checkbox"/> Percent Body Fat	<input checked="" type="checkbox"/> Fat Free Mass Index		
<input checked="" type="checkbox"/> Skeletal Muscle Mass and ECW Ratio	<input checked="" type="checkbox"/> Lean Mass Balance		
<input checked="" type="checkbox"/> Skeletal Muscle mass Index and ECW Ratio	<input checked="" type="checkbox"/> Fat Mass Index		
<input checked="" type="checkbox"/> Skeletal Muscle mass Index	<input checked="" type="checkbox"/> Skeletal Muscle Mass devided by WT		

Done

### Skeletal Muscle mass Index



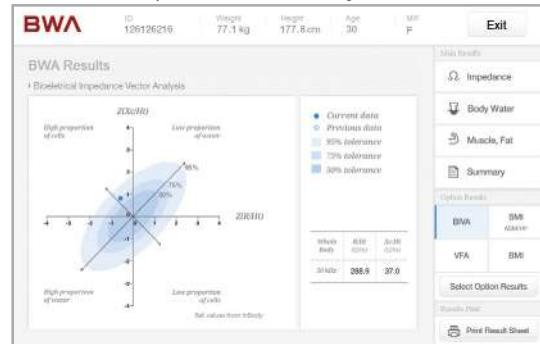
### Body Mass Index



### ECW Ratio (ECW/TBW) Balance



### Bioelectrical Impedance Vector Analysis



# Device Overview

Various Features and Optional Components of BWA2.0S



**LCD**  
Sharp 10.1" touch screen



**Battery**  
BWA2.0S battery for mobile use



**Test Posture**  
Measurable in a lying, seated or standing position



**InBody USB**  
Easy data back up with InBody USB



**Thermal Printer (Optional)**  
Easy printout BWA2.0S results



**Clamp Electrode**  
Patented dual-structured Clamp Electrodes ensure high reproducibility



**BWA2.0S Cart**  
Customized BWA2.0S Cart to easily arrange the Clamp Electrodes



**BWA2.0S Portable Case (Optional)**  
Convenient way to carry BWA2.0S for enhanced mobility



**Adhesive Electrodes and Tape (Optional)**  
BWA2.0S Electrode Tapes for patients with difficulty in using Clamp Electrode





# Result Sheet Interpretation

## 1 Body Water Composition

50-70 % of our body is composed of water. Body Water is distributed between all the cells and fluids in our body. Most of it is present in the cells while the rest is in the form of blood and interstitial fluid. The water inside the cell membrane is called Intracellular Water, and the water outside the cell membrane is called Extracellular Water.

## 2 ECW Ratio Analysis

The Extracellular Water Ratio shows the balance status of body water. The ratio between Intra and Extracellular Water remains constant at about 3:2 ratio in healthy individuals, and when this balance is broken down edema may occur.

## 3 Segmental Body Water Analysis

Segmental Body Water Analysis helps to understand the water balance by analyzing the Total Body Water in each segment of the body. Changes in Body Water corresponds to the changes in muscle mass. However, in the case of a subject who has health issue, the amount of Body Water may increase even if there is no increase in muscle mass. Therefore, it is necessary to check whether Extracellular Water Ratio is normal in segments.

## 4 Segmental ECW Ratio Analysis

Segmental ECW Ratio is displayed in a graph so you can easily determine if the ICW and ECW are balanced. By analyzing the ECW Ratio, you can assess if there is a problem with Body Water circulation. This can help monitor the recovery of post-surgery or hemodialysis patients.

## 5 Body Water Composition History

Body Water History provides the changes in Weight, Skeletal Muscle Mass, Intracellular Water, Extracellular Water, Extracellular Water Ratio. Take the BWA2.0S Test periodically to monitor your progress.

## 6 Logo Customization

The Customized Logo can be applied on the Result Sheet. URL can also be applied at the bottom of the Result Sheet as well.

## 7 Body Composition Analysis

Body composition is a method of describing what the body is made of. BWA2.0S offers quantitative values and normal ranges for four core body components: Body Water, Protein, Minerals, and Fat.

## 8 Muscle-Fat Analysis

The balance between Skeletal Muscle Mass and Body Fat Mass is a key health indicator. Muscle-Fat Analysis shows this balance by comparing the length of the bars for Weight, Skeletal Muscle Mass, and Body Fat Mass.

## 9 Obesity Analysis

Accurate obesity analysis cannot be performed using BMI, but the ratio of Body Fat compared to the weight, which is called the Percent Body Fat, must be assessed. The InBody BWA2.0S can detect hidden health risks like Sarcopenic Obesity, in which a person appears slim on the outside but has a high Percent Body Fat.

## 10 Research Parameters

Various nutritional outputs are provided such as Fat Free Mass, Basal Metabolic Rate, Visceral Fat Level, Recommended Calorie Intake per day and more.

## 11 Whole Body Phase Angle

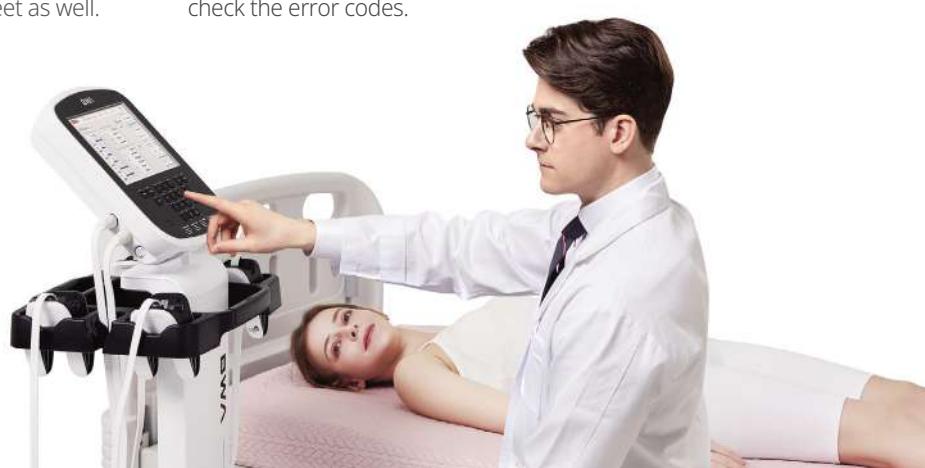
Phase Angle is related to the health status of the cell membrane. Strengthening of the cellular membrane and structural function will increase the Phase Angle, while damage or a decrease in function will result in a decrease in the Phase Angle.

## 12 Segmental Body Phase Angle

Segmental Phase Angle indicates the Phase Angle of each part of the body, representing the level of structural integrity and function of the cell membrane.

## 13 Impedance

Impedance is the resistance that occurs when weak alternating current is applied to the human body. BWA2.0S visualizes the impedance with the graph, so you can easily detect if there is reversed impedance error by checking crossed lines in the impedance graph. Below the impedance graph, you can also check the error codes.



# Body Composition Result Sheet



[BWA2.0S]

ID	Height	Age	Gender	Test Date / Time
John Doe	173cm	41	Male	10.25.2025 15 : 44

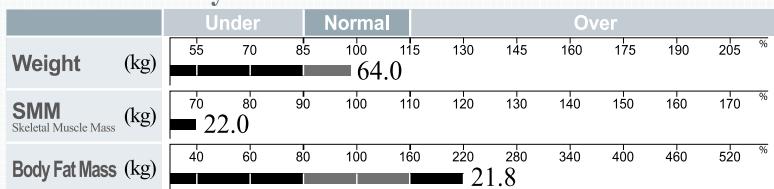
InBody

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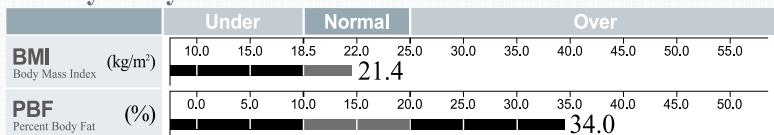
## Body Composition Analysis

	Values	Total Body Water	Soft Lean Mass	Fat Free Mass	Weight
Total Body Water(L)	31.4 (37.0 ~ 45.2)	31.4	39.8 (47.5 ~ 58.1)	42.2 (50.4 ~ 61.6)	
Protein (kg)	7.9 (9.9 ~ 12.1)				64.0 (55.9 ~ 75.7)
Minerals (kg)	2.91 (3.43 ~ 4.19)				
Body Fat Mass (kg)	21.8 (7.9 ~ 15.8)				

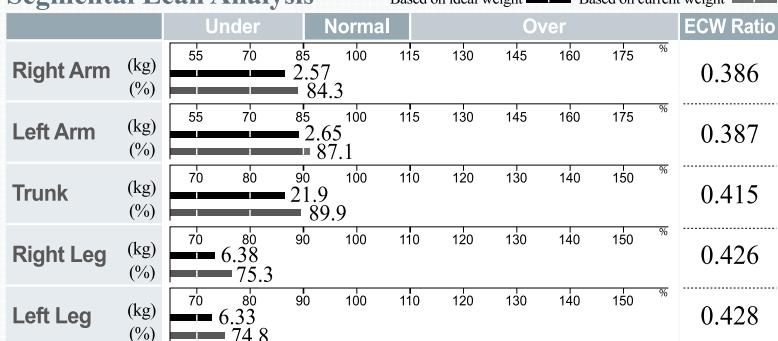
## Muscle-Fat Analysis



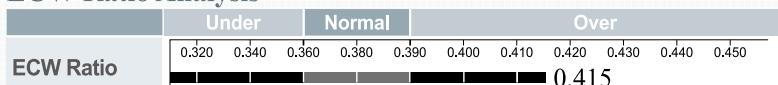
## Obesity Analysis



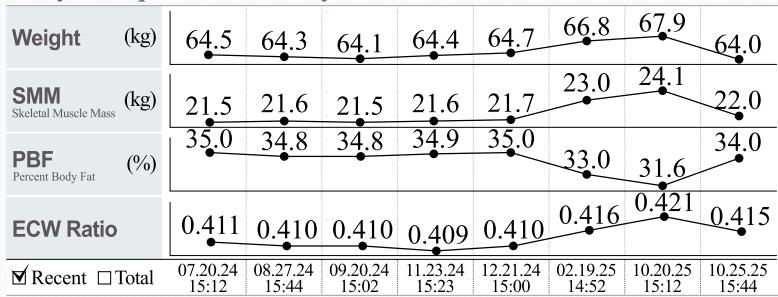
## Segmental Lean Analysis



## ECW Ratio Analysis



## Body Composition History

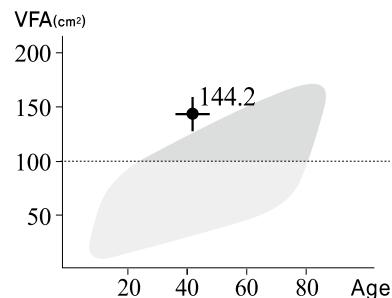


## InBody Score

69 / 100 Points

\* Total score that reflects the evaluation of body composition. A muscular person may score over 100 points.

## Visceral Fat Area



## Weight Control

Target Weight	65.8 kg
Weight Control	+ 1.8 kg
Fat Control	- 11.9 kg
Muscle Control	+ 13.7 kg

## Research Parameters

Intracellular Water	18.4 L	(23.0~28.0)
Extracellular Water	13.0 L	(14.0~17.2)
Basal Metabolic Rate	1282 kcal	(1428~1663)
Waist-Hip Ratio	1.15	(0.80~0.90)
Body Cell Mass	26.3 kg	(32.8~40.2)

## Whole Body Phase Angle

Proximal  $\phi(^\circ)$  50 kHz | 3.8°

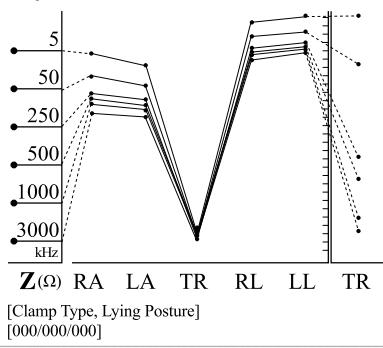
## Segmental Phase Angle

Proximal	RA	LA	TR	RL	LL
$\phi(^\circ)$ 5 kHz	2.2	2.0	2.2	1.6	1.5
50 kHz	4.9	4.8	5.0	2.8	2.6
250 kHz	4.8	4.7	5.9	3.1	2.8

## Sarcopenia Parameters

SMI	6.0 kg/m <sup>2</sup>	( < 7.0 )
HGS	23.7 kg	( < 28.0 )

## Impedance



# Evaluation Result Sheet

## BWA Evaluation

ID	Height	Age	Gender	Test Date / Time
John Doe	173cm	41	Male	03.20.2025 15:44

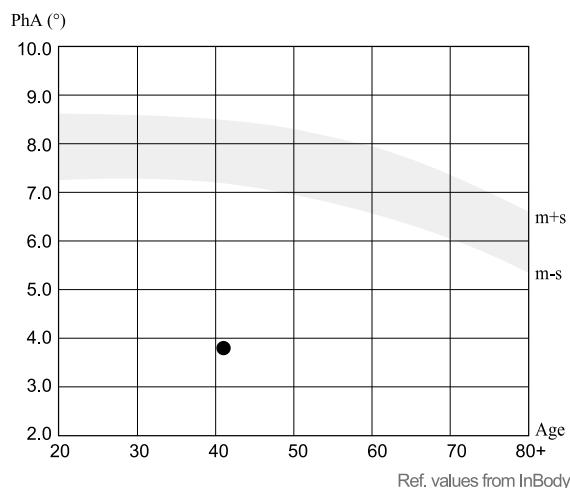
[BWA2.0S]

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### Research Parameters

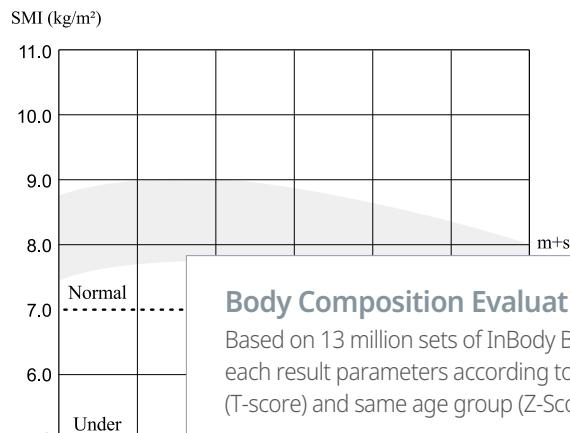
#### Whole Body Phase Angle\_50kHz



PhA (°)	Young adults (T-score)	Age-matched (Z-score)
3.8	- 6.1	- 6.1

### Muscle • Nutrition Evaluation

#### Skeletal Muscle mass Index

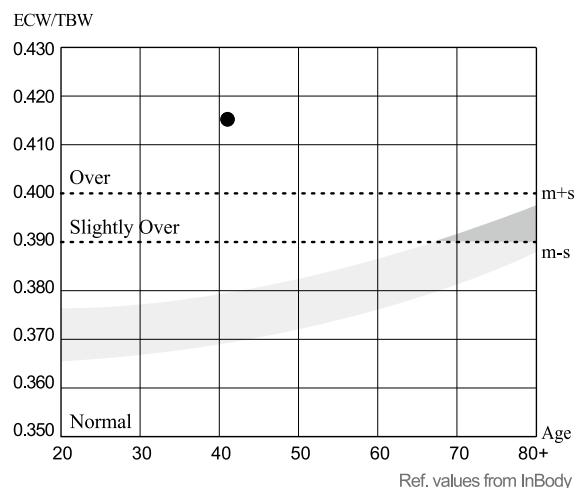


SMI (kg/m<sup>2</sup>)

6.0

### Body Water Evaluation

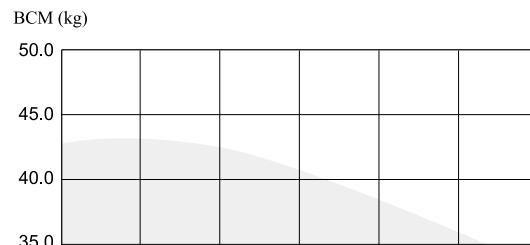
#### Whole Body ECW Ratio



ECW/TBW	Young adults (T-score)	Age-matched (Z-score)
0.415	8.7	7.8

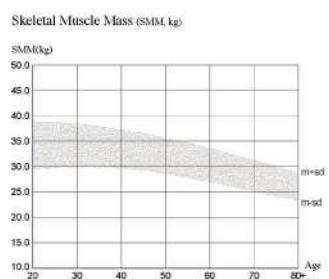
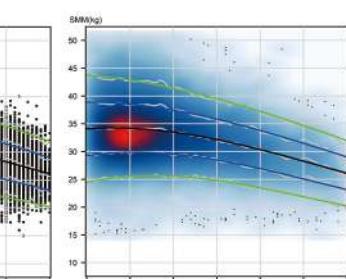
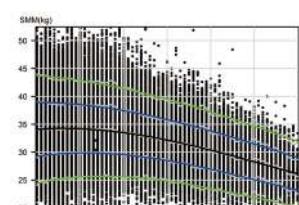
### Research Parameters

#### Body Cell Mass



### Body Composition Evaluation by Age Based on InBody Big Data

Based on 13 million sets of InBody Big Data, InBody provides averages and standard deviation graphs for each result parameters according to age. It allows for comparative evaluation between young age group (T-score) and same age group (Z-Score) for a more objective body composition analysis.



\* InBody Big Data is used for the evaluation by age which is shown as T-Score and Z-score that indicate the relative position of subject.  
It does not affect the subjects' body composition analysis result.

\* Depending on the country, the graph will be set differently.

# Research Result Sheet



[BWA2.0S]

ID	Height	Age	Gender	Test Date / Time
John Doe	173cm	41	Male	03.20.2025 15:44



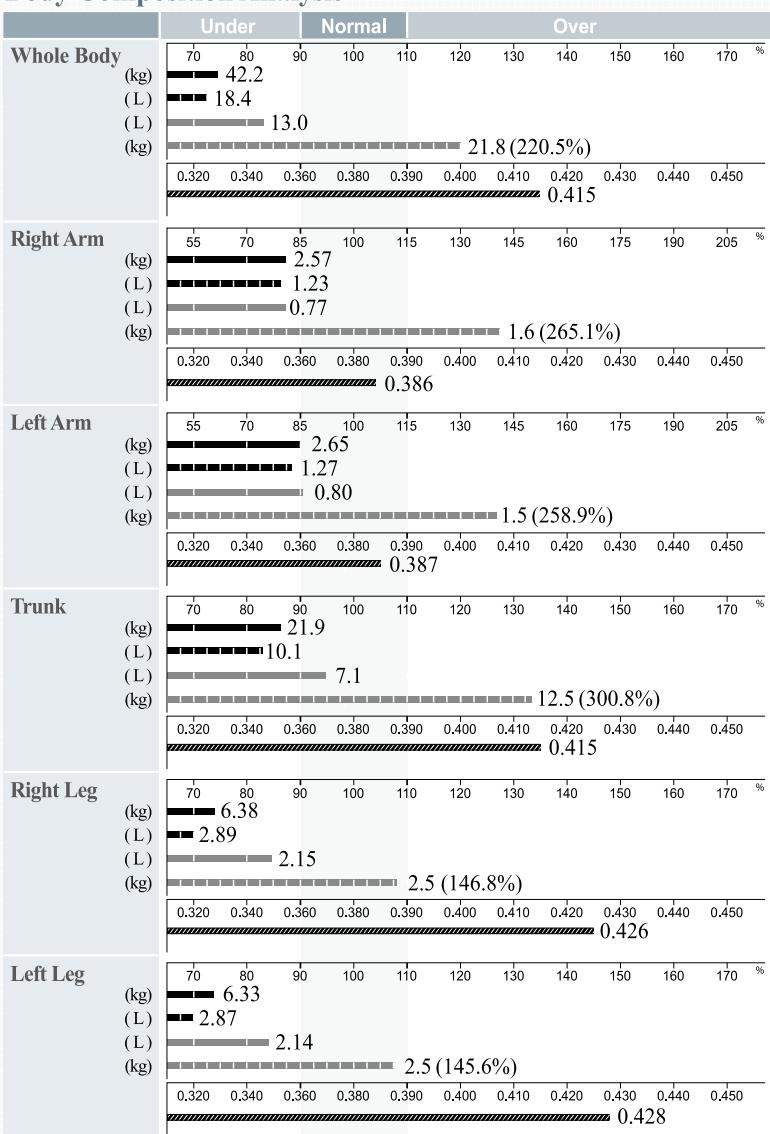
inbody.com

## Body Composition Summary

	FFM-Lean Mass	FM	ICW	ECW	TBW	ECW/TBW
Right Arm	2.57 kg	1.6 kg	1.23 L	0.77 L	2.00 L	0.386
Left Arm	2.65 kg	1.5 kg	1.27 L	0.80 L	2.07 L	0.387
Trunk	21.9 kg	12.5 kg	10.1 L	7.1 L	17.2 L	0.415
Right Leg	6.38 kg	2.5 kg	2.89 L	2.15 L	5.04 L	0.426
Left Leg	6.33 kg	2.5 kg	2.87 L	2.14 L	5.01 L	0.428
Whole Body	42.2 kg	21.8 kg	18.4 L	13.0 L	31.4 L	0.415
Weight		64.0 kg				

\* The difference between the whole body values and sum of segmental values are from the craniocervical region.

## Body Composition Analysis



## Research Parameters

Body Mass Index	21.4 kg/m <sup>2</sup> (18.5~25.0)
Percent Body Fat	34.0 % (10.0~20.0)
Skeletal Muscle Mass	22.0 kg (28.2~34.4)
Soft Lean Mass	39.8 kg (47.5~58.1)
Protein	7.9 kg (9.9~12.1)
Minerals	2.91 kg (3.43~4.19)
Bone Mineral Content	2.37 kg (2.82~3.44)
Basal Metabolic Rate	1282 kcal (1428~1663)
Waist Hip Ratio	1.15 (0.80~0.90)
Waist Circumference	100.1 cm
Visceral Fat Area	144.2 cm <sup>2</sup>
Obesity Degree	97 % (90~110)
Body Cell Mass	26.3 kg (32.8~40.2)
Arm Circumference	30.3 cm
Arm Muscle Circumference	27.2 cm
TBW/FFM	74.4 %
Fat Free Mass Index	14.1 kg/m <sup>2</sup>
Fat Mass Index	7.3 kg/m <sup>2</sup>
Skeletal Muscle mass Index	6.0 kg/m <sup>2</sup>

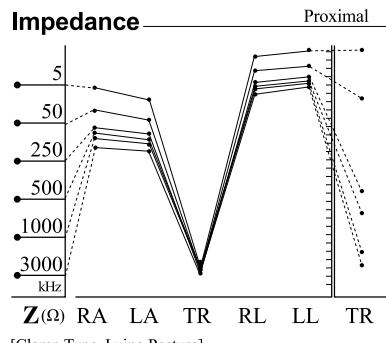
## Whole Body Phase Angle

Proximal  
 $\phi$  (°) 50 kHz | 3.8°

## Segmental Phase Angle

Proximal	RA	LA	TR	RL	LL
$\phi$ (°)	2.2	2.0	2.2	1.6	1.5
5 kHz	4.9	4.8	5.0	2.8	2.6
50 kHz	4.8	4.7	5.9	3.1	2.8
250 kHz					

## Impedance



[Clamp Type, Lying Posture]  
[000/000/000]

# Comparison Result Sheet

**BWA** Comparison

[BWA2.0S]

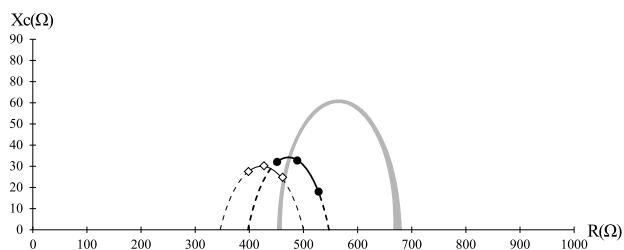
**InBody**

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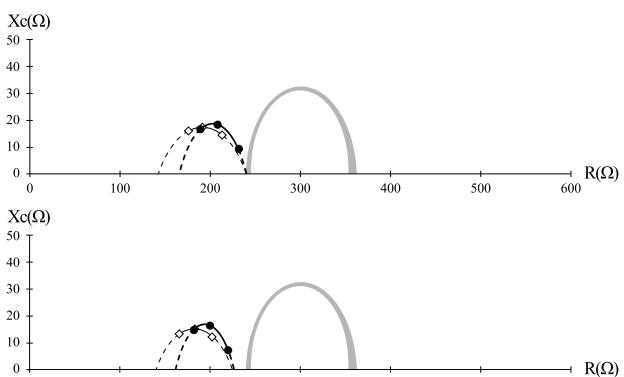
ID	Height	Age	Gender	Test Date / Time
John Doe	173cm	41	Male	10.25.2025 15:44

— Standard median curve    —●— Today's Results    —◇— Recent Results  
(10.25.2025 15:44)

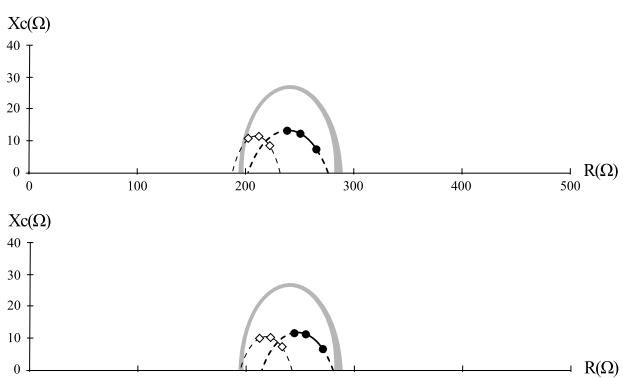
Whole Body		Today	Recent	Difference
Weight	(kg)	64.0	67.9	-3.9
SMM	(kg)	22.0	24.1	-2.1
Body Fat Mass	(kg)	21.8	21.5	+0.3
ECW Ratio		0.415	0.421	-0.006
Phase Angle	(°)	3.8	3.9	-0.1



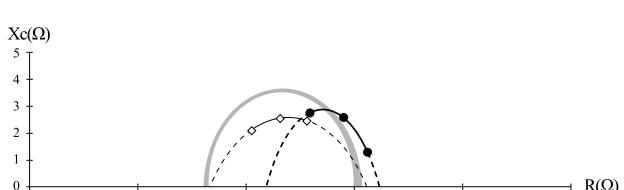
Right Arm		Today	Recent	Difference
Lean Mass	(kg)	2.57	2.82	-0.25
ECW Ratio		0.386	0.389	-0.003
Phase Angle	(°)	4.9	4.8	+0.1
Left Arm		Today	Recent	Difference
Lean Mass	(kg)	2.65	2.95	-0.30
ECW Ratio		0.387	0.388	-0.001
Phase Angle	(°)	4.8	4.7	+0.1



Right Leg		Today	Recent	Difference
Lean Mass	(kg)	6.38	6.86	-0.48
ECW Ratio		0.426	0.432	-0.006
Phase Angle	(°)	2.8	2.9	-0.1
Left Leg		Today	Recent	Difference
Lean Mass	(kg)	6.33	6.73	-0.40
ECW Ratio		0.428	0.433	-0.005
Phase Angle	(°)	2.6	2.6	0.0



Trunk		Today	Recent	Difference
Lean Mass	(kg)	21.9	23.2	-1.3
ECW Ratio		0.415	0.422	-0.007
Phase Angle	(°)	5.0	6.0	-1.0



# Body Composition Result Sheet for Children



[BWA2.0S]

ID	Height	Age	Gender	Test Date / Time
John Doe Jr.	139.4cm	10	Male	03.31.2025 16:40



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## Body Composition Analysis

Total amount of water in my body	<b>Total Body Water</b>	(L)	21.5 ( 18.0 ~ 22.0 )
What I need to build muscles	<b>Protein</b>	(kg)	5.5 ( 4.9 ~ 5.9 )
What I need for strong bones	<b>Minerals</b>	(kg)	1.55 ( 1.66 ~ 2.04 )
Where my excess energy is stored	<b>Body Fat Mass</b>	(kg)	6.4 ( 3.8 ~ 7.7 )
Sum of the above	<b>Weight</b>	(kg)	35.0 ( 27.3 ~ 36.9 )

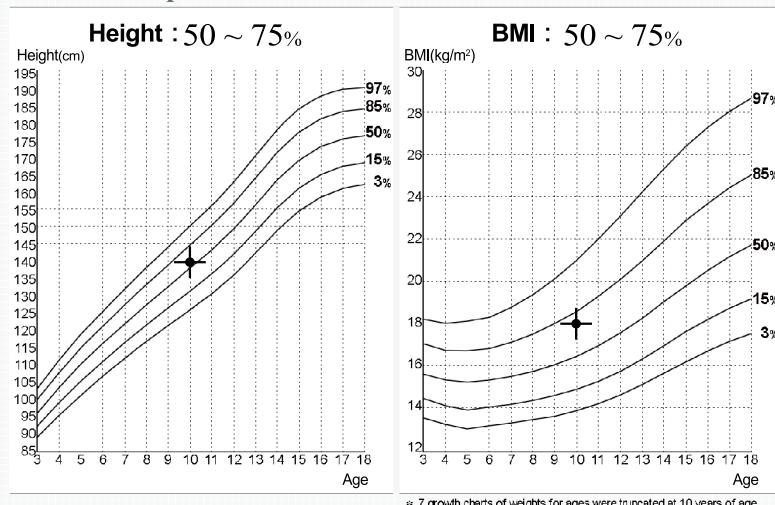
## Muscle-Fat Analysis

Weight (kg)	Under		Normal		Over		%				
	55	70	85	100	115	130	145	160	175	190	205
35.0											
SMM (kg) Skeletal Muscle Mass	70	80	90	100	110	120	130	140	150	160	170
14.9											
Body Fat mass (kg)	40	60	80	100	160	220	280	340	400	460	520
6.4											

## Obesity Analysis

BMI (kg/m <sup>2</sup> ) Body Mass Index	Under		Normal		Over		%				
	7.9	10.9	13.9	16.4	18.6	20.2	22.2	24.2	26.2	28.2	30.2
18.0											
PBF (%) Percent Body Fat	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0	45.0	50.0
18.2											

## Growth Graph



## Body Composition History

Height (cm)	134.5	135.2	136.4	137.2	137.9	138.5	139.0	139.4
Weight (kg)	30.8	31.3	32.0	32.8	33.5	34.0	34.4	35.0
SMM (kg) Skeletal Muscle Mass	12.5	12.7	12.8	13.0	13.1	13.1	13.2	13.3
PBF (%) Percent Body Fat	20.4	20.7	21.6	22.3	23.1	24.3	25.1	25.6
<input checked="" type="checkbox"/> Recent <input type="checkbox"/> Total								
07.15.24 14:22								11.19.24 09:30
11.19.24 09:30								01.29.25 15:18
01.29.25 15:18								03.15.25 11:00
03.15.25 11:00								06.21.25 15:00
06.21.25 15:00								09.19.25 14:52
09.19.25 14:52								12.20.25 15:12
12.20.25 15:12								03.31.25 16:40

## Growth Score

**97** / 100 Points

\* If tall and within great body comparison standards, the growth score may surpass 100 points.

## Nutrition Evaluation

Protein	<input checked="" type="checkbox"/> Normal	<input type="checkbox"/> Deficient
Minerals	<input type="checkbox"/> Normal	<input checked="" type="checkbox"/> Deficient
Body Fat	<input checked="" type="checkbox"/> Normal	<input type="checkbox"/> Deficient <input type="checkbox"/> Excessive

## Obesity Evaluation

BMI	<input checked="" type="checkbox"/> Normal	<input type="checkbox"/> Under	<input type="checkbox"/> Slightly Over	<input type="checkbox"/> Over
PBF	<input checked="" type="checkbox"/> Normal	<input type="checkbox"/> Slightly Over	<input type="checkbox"/> Over	

## Body Balance Evaluation

Upper	<input checked="" type="checkbox"/> Balanced	<input type="checkbox"/> Slightly Unbalanced	<input type="checkbox"/> Extremely Unbalanced
Lower	<input checked="" type="checkbox"/> Balanced	<input type="checkbox"/> Slightly Unbalanced	<input type="checkbox"/> Extremely Unbalanced
Upper-Lower	<input checked="" type="checkbox"/> Balanced	<input type="checkbox"/> Slightly Unbalanced	<input type="checkbox"/> Extremely Unbalanced

## Segmental Lean Analysis

Right Arm	1.53 kg
Left Arm	1.50 kg
Trunk	15.0 kg
Right Leg	5.18 kg
Left Leg	5.16 kg

## Research Parameters

Child Obesity Degree 109 % ( 90~110 )

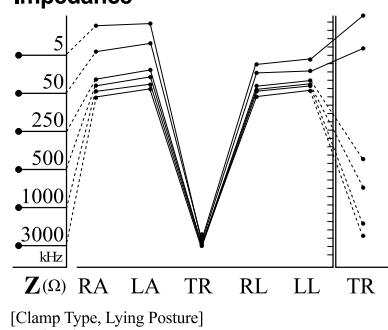
## Whole Body Phase Angle

Proximal  $\phi(^\circ)$  50 kHz 4.4°

## Segmental Phase Angle

Proximal	RA	LA	TR	RL	LL
$\phi(^\circ)$ 50 kHz	1.8	1.7	4.7	1.7	1.6
50 kHz	4.5	4.1	5.7	4.0	3.8
250 kHz	4.3	3.8	5.6	2.9	2.9

## Impedance



# Thermal Result Sheet

**BWA**

10/25/2015 15:44

ID : John Doe  
Height : 173cm Age : 41  
Gender: Male Weight : 64.0kg

[Clamp Type, Lying Posture]

## Muscle-Fat Analysis

**Weight** 64.0 kg  
Normal Range (55.9~75.7)

**Skeletal Muscle Mass** 22.0 kg  
Normal Range (28.2~34.4)

**Soft Lean Mass** 39.8 kg  
Normal Range (47.5~58.1)

**Body Fat Mass** 21.8 kg  
Normal Range (7.9~15.8)

## Obesity Analysis

**BMI** 21.4 kg/m<sup>2</sup>  
Normal Range (18.5~25.0)

**Percent Body Fat** 34.0 %  
Normal Range (10.0~20.0)

## Segmental ECW Ratio Analysis

**Right Arm** 0.386  
Normal Range (0.360~0.390)

**Left Arm** 0.387  
Normal Range (0.360~0.390)

**Trunk** 0.415  
Normal Range (0.360~0.390)

**Right Leg** 0.426  
Normal Range (0.360~0.390)

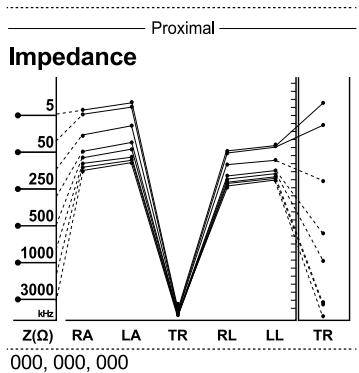
**Left Leg** 0.428  
Normal Range (0.360~0.390)

## Body Water Analysis

**Intracellular Water** 18.4 L  
Normal Range (23.0~28.0)

**Extracellular Water** 13.0 L  
Normal Range (14.0~17.2)

**Total Body Water** 31.4 L  
Normal Range (37.0~45.2)



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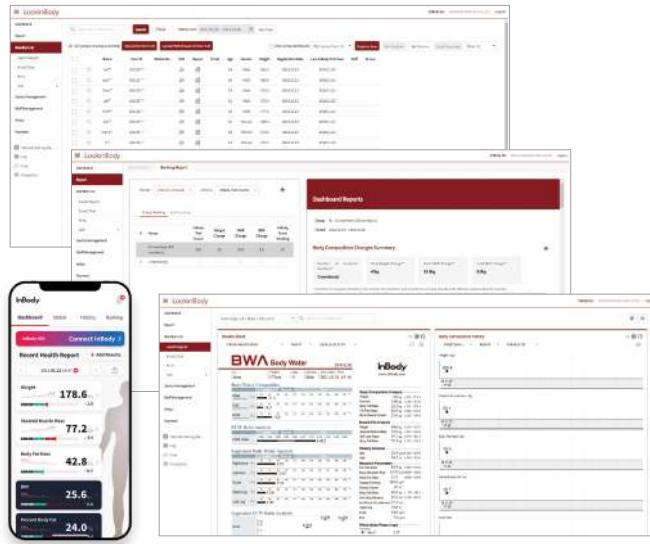


# Data Management Program



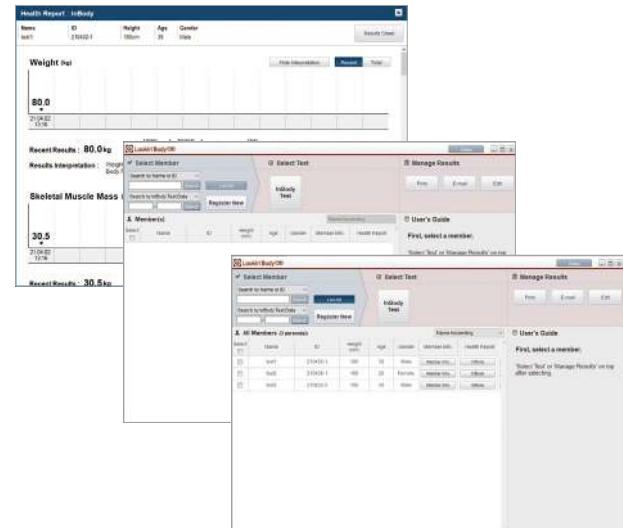
## LookinBody WEB (Cloud)

A cloud-based client and data management solution designed to optimize performance and deliver a better user experience. Try a free 1-month demonstration by contacting regional managers.

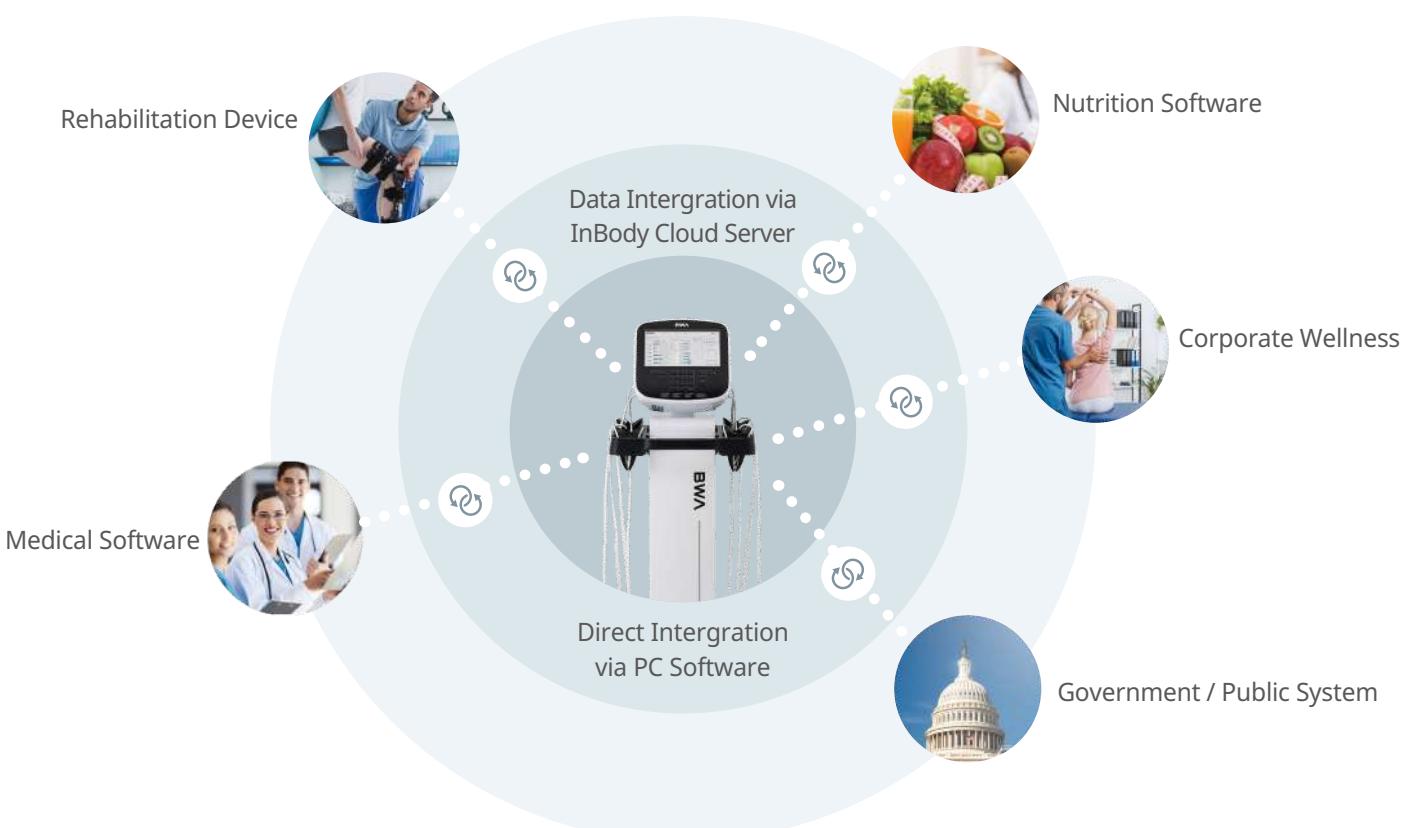


## LookinBody120 (PC Software)

LookinBody120 allows you to view and manage all BWA2.0S data generated from your BWA2.0S device.

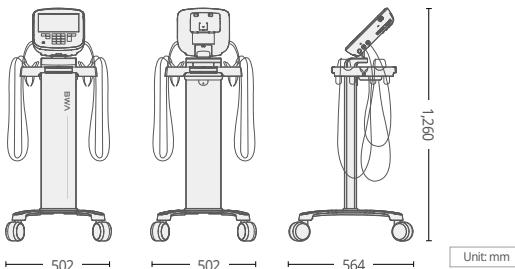


## InBody Integration Solution



# Specifications

# BWA 2.0S Body Water Analyzer



bioelectrical impedance analysis (BIA) measurement outputs	Impedance (Z)	30 Impedance Measurements by Using 6 Different Frequencies (5 kHz, 50 kHz, 250 kHz, 500 kHz, 1 MHz, 3 MHz) at Each of 5 Segments (Right Arm, Left Arm, Trunk, Right Leg, and Left Leg)	Outputs (InBody Result Sheet for Children)	· Segmental ECW Analysis · Results and Interpretations · Body Composition Analysis (Total Body Water, Protein, Mineral, Body Fat Mass, Weight) · Muscle-Fat Analysis (Weight, Skeletal Muscle Mass, Body Fat Mass) · Obesity Analysis (Body Mass Index, Percent Body Fat) · Growth Graph (Height, Weight, BMI) · Body Composition History (Height, Weight, Skeletal Muscle Mass, Percent Body Fat) · Whole Body Phase Angle (History) · SMI (History) · Growth Score · Weight Control (Target Weight, Weight Control, Fat Control, Muscle Control) · Nutrition Evaluation (Protein, Minerals, Body Fat) · Obesity Evaluation (BMI, Percent Body Fat) · Body Balance Evaluation (Upper, Lower, Upper-Lower)	· Impedance (Each Segment and each frequency) · Segmental Lean Analysis (Right Arm, Left Arm, Trunk, Right Leg, Left Leg) · Segmental Body Water Analysis (Right Arm, Left Arm, Trunk, Right Leg, Left Leg) · Research Parameters (Intracellular Water, Extracellular Water, Skeletal Muscle Mass, Fat Free Mass, Basal Metabolic Rate, Child Obesity Degree, Bone Mineral Content, Body Cell Mass, FFMI, FMI, SMM/WT, ECM/BCM, TBW/WT) · Sarcopenia Parameters (SMI, HGS) · Blood Pressure (Systolic, Diastolic, Pulse, Mean Artery Pressure, Pulse, Rate Pressure Device) · QR code · Results Interpretation QR code · Whole Body Phase Angle (50 kHz) · Segmental Phase Angle (5 kHz, 50 kHz, 250 kHz: Right Arm, Left Arm, Trunk, Right Leg, Left Leg) · Impedance Graph (Each segment and each frequency)
	Phase Angle ( $\emptyset$ )	15 Phase Angle Measurements by Using 3 Different Frequencies (5 kHz, 50 kHz, 250 kHz) at Each of the 5 Segments (Right Arm, Left Arm, Trunk, Right Leg, and Left Leg)			
	Z0, Z $\infty$	At zero frequency, current does not pass through the cell membrane, so the impedance at this frequency reflects Extracellular Water. At infinite frequency, the current reflects both Intracellular and Extracellular Water.			
Measurement Method		· Direct Segmental Multi-Frequency Bioelectrical Impedance Analysis (DSM-BIA) · Simultaneous Multi-Frequency Bioelectrical Impedance Analysis (SMF-BIA)			
Electrode Method		16-Point Clamp Electrodes			
Body Composition Calculation Method		No use of Empirical Estimation			
Types of Result Sheet		Body Water Result Sheet, Body Composition Result Sheet, Evaluation Result Sheet, Research Result Sheet, Comparison Result Sheet, Result Sheet for Children, and Thermal Result Sheet			
Digital Results		LCD Screen, LookinBody Web, LookinBody120			
Data Storage		Test results can be saved using the member ID. The InBody can save up to 100,000 results.			
Test Mode		Medical Mode, Research Mode			
Test Duration		About 30 Seconds for Medical Mode, about 60 Seconds for Research Mode *Test duration may vary depending on the measurement posture or external environment.			
Weight Range		2 - 250 kg (4.4 - 551.2 lb)			
Height Range		95 - 220 cm (3 ft 1.4 in - 7 ft 2.6 in)			
Age Range		3+ years			
Administrator Menu		· Setup: Settings Configuration and Data Management · FAQ: Additional Guidance for Using the InBody			
USB Thumb Drive		Copy, Back Up, or Restore the InBody Test Data (which can be viewed in Excel or with LookinBody data management software).			
Backup Data		Backup data from the device using an InBody USB or a USB thumb drive, and restore results as needed.			
Dimensions		322 (W) x 282 (L) x 81.5 (H): mm 12.7 (W) x 11.1 (L) x 3.2 (H): in			
Device Weight		2.8 kg (6.17 lb, BWA2.0S only)			
Applied Rating Current		300 $\mu$ A ( $\pm$ 30 $\mu$ A)			
Operation Environment		10 - 40 °C (50 - 104 °F), 30 - 75 % RH, 70 - 106 kPa			
Storage Environment		-10 - 70 °C (14 - 158 °F), 10 - 80 % RH, 50 - 106 kPa (No Condensaiotn)			
Display Type		1280 x 800 10.1inch Color TFT LCD			
Internal Interface		Touchscreen, Keypad			
External Interface		RS-232C 4 EA, USB Host 2 EA, USB Slave 1 EA, LAN(10/100 T) 1 EA, Bluetooth 1 EA, Wi-Fi (2.4 G / 5 G) 1 EA			
Adapter	DELTA	Power Input AC 100 - 240 V, 50 - 60 Hz, 1.5 A - 0.75 A Power Output DC 12 V , 5.0 A			
	Mean Well (GSM 40A12)	Power Input AC 100 - 240 V, 50 / 60 Hz, 1.0 A - 0.5 A Power Output DC 12 V , 3.34 A			
Wireless Connection		Bluetooth, Wi-Fi			
Compatible Items		Stadiometer, Blood pressure monitor, Thermal Printer (TP100), Serial Distributor (SD400), InGrip, BWA2.0S Portable Case, BWA2.0S Adhesive Electrodes and Tape, BWA2.0S Battery Pack			
Compatible Printer		Laser/Inkjet PCL 3 or above and SPL			
Notification Sounds and Voice Guidance		Notification sounds (test in progress, saving settings, personal information, etc.) and voice guidance during the test			
Logo Display		Name, address, and contact information can be shown on the InBody Result Sheet.			
QR Code		By scanning QR Code, you can send and verify the InBody results			
Language Support		InBody supports over 30 languages.			

\* The above content is subject to change without prior notice for the purpose of improving device appearance and performance.

\* Note that this is a medical device, and use it with proper care and knowledge of its precautions and instructions.

\* The results about Blood Pressure or Hand Grip Strength are only available when integrated with InBody Blood Pressure Monitor (BPBIO Series) or InBody Handgrip Dynamometer (InGrip).

\* "QR Code" is registered trademark of DENSO WAVE INCORPORATED.

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\* Note that this is a medical device, and use it with proper care and knowledge of its precautions and instructions.

\* The results about Blood Pressure or Hand Grip Strength are only available when integrated with InBody Blood Pressure Monitor.

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# InBody

See what you're made of

## The power of InBody

InBody maintains a high brand position with the highest level of technology.



## Certifications obtained by InBody

InBody complies with the quality management system according to international standards. We satisfy country-specific regulatory requirements that apply to product safety and performance, and provide related services.



1639



NAWI



ISO9001



ISO13485



MDSAP



GMP

## InBody's Intellectual Property Rights

InBody owns patents and intellectual property rights around the world(Korea, U.S, China, Japan) and provides products with high accuracy and reproducibility based on this technology.

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