

## Specifications

Parameters	Weight, Skeletal Muscle Mass, Body Fat Mass, Total Body Water, Fat Free Mass, BMI, Percent Body Fat, Waist-Hip Ratio (WHR), Basal Metabolic Rate (BMR), Segmental Analysis of Fat and Lean (Right arm, Left arm, Trunk, Right leg, Left Leg), Fat Control, Muscle Control, Impedance of Each	
Electrode System	Tetrapolar 8-Point Tactile Electrodes	
Frequency	20, 100 kHz	
Applied Current Rating	330 $\mu$ A	
Power Supply	Power Input	AC100-240V, 50/60Hz, 1.2A
	Power Output	DC 12V, 3.5A
Input Interface	Keypad	
External Interface	RS-232C 1EA, USB Slave 1EA, USB Host 1EA	
Printer	Printers recommended by Biospace, Thermal (optional)	
Dimensions	356(W) X 843(L) X 984(H) mm	
Unit Weight	14.5kg approx.	
Measuring Time	30 seconds	
Operation Conditions	10 ~ 40C°, 30 ~ 80%RH, 500 ~ 1060hPa	
Storage Conditions	0 ~ 40C°, 30 ~ 80%RH, 500 ~ 1060hPa	
Weight Capacity	10 ~ 250 kg	
Age Range	3 ~ 99 years	
Height Range	85 ~ 220 cm	

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# BIOSPACE

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**BIOSPACE**

Health Care & Human Care

**InBody230**



## The most ideal and convenient system for health care

The revolutionary technology in BIA has created a new standard

Leading novel technology provides the accurate results you can trust

- Body Composition
- Obesity Diagnosis: BMI, Percent Body Fat, WHR
- Segmental Analysis for Fat and Lean Mass
- Guidance for weight management

Advanced design and features to fulfill your needs

- Easy to carry and install
- Easy to operate
- Easy to transfer the results through a USB memory stick
- Free download of a data management program, Lookin'Body Simple®
- Useful accessories and much more

## Manage all clients' results at your fingertip

Free download of Lookin'Body Simple; InBody230 comes with a perfect solution to organize all personal results in your own computer.



## Available Options

### Thermal Printer



A small and handy printer can be attached to the InBody230.

### SD400



A solution to connect InBody with more than one compatible device

### InBody Bag



Specially designed bag helps to store and carry InBody230.

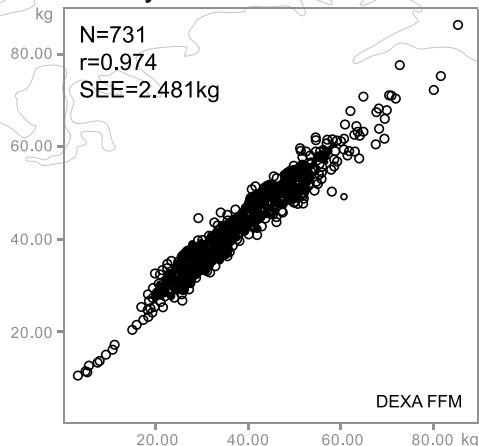
**Correlation study with DEXA shows that InBody is highly accurate (r=0.974).**

InBody is the only body composition analyzer which offers the high correlation coefficient near 0.98 comparing with DEXA.

Male : 343, Female : 388

	N	Minimum	Maximum	Mean	Std. Deviation
Age (years)	731	5.00	88.00	40.09	17.54
Height (cm)	731	106.50	193.00	162.42	10.43
Weight (kg)	731	17.30	118.30	60.60	13.59

**InBody230 FFM**



World's patented technology is right near you.





**Direct Segmental Measurement**

Biospace's segmental analysis method is world widely patented technology. It makes measurements absolutely accurate by producing impedance values for each different segment: 4 limbs and trunk.

- Accurate impedance measurement of trunk is the key to bioimpedance technology.
- No population specific statistics (empirical factors) are used in calculation.

**8-Point Tactile Electrode System**

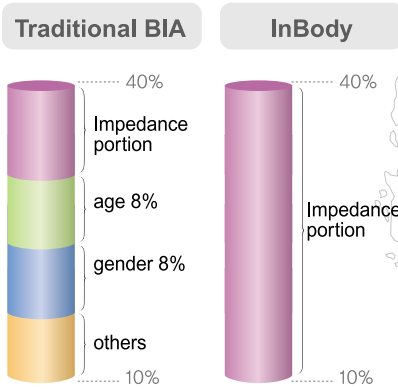
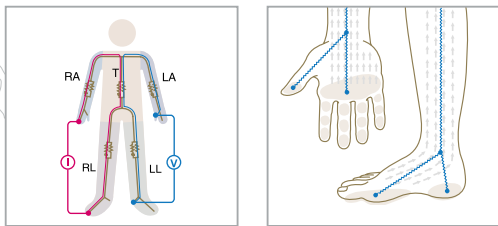
It has enhanced accuracy by fixing the measuring region.

- The fixed measuring regions of the body guarantee high reproducibility.
- It also minimizes error rates due to different placement of electrodes in hands and feet.

**No Use of Empirical Estimation**

With direct segmental measurement and 8-point tactile electrode system, the InBody does not need empirical factors in calculation.

- High accuracy is guaranteed by precisely assessing the trunk.
- All the data solely depend on the measurements, not relying on gender or age.



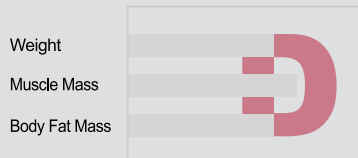
# Results Interpretation

## Body Composition

Pay attention to the shape formed by bars of Weight / Skeletal Muscle Mass / Fat Mass.



'C' shape : Fat mass is relatively more than muscle content.



'D' shape : Muscle mass has been increased and fat mass has been reduced. Expect a stronger body.

## Obesity Diagnosis

BMI alone can not judge obesity. BMI and Percent Body Fat must be considered together for accurate obesity diagnosis.

	Value	Normal Range
<b>BMI</b> Body Mass Index (kg/m <sup>2</sup> )	20.0	18.5 ~ 25.0
<b>PBF</b> Percent Body Fat (%)	29.0	18.0 ~ 28.0

Normal BMI with high PBF ;  
Sarcopenic and Obese Body

	Value	Normal Range
<b>BMI</b> Body Mass Index (kg/m <sup>2</sup> )	26.0	18.5 ~ 25.0
<b>PBF</b> Percent Body Fat (%)	24.0	18.0 ~ 28.0

High BMI but normal PBF ;  
Well- built Body

	Value	Normal Range
<b>BMI</b> Body Mass Index (kg/m <sup>2</sup> )	20.0	18.5 ~ 25.0
<b>PBF</b> Percent Body Fat (%)	24.0	18.0 ~ 28.0

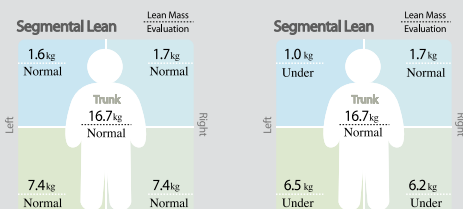
Both BMI and PBF are normal;  
Healthy Body

	Value	Normal Range
<b>BMI</b> Body Mass Index (kg/m <sup>2</sup> )	26.5	18.5 ~ 25.0
<b>PBF</b> Percent Body Fat (%)	31.0	18.0 ~ 28.0

Both BMI and PBF are high;  
Obese Body

## Segmental Lean

Maintain Segmental Lean Mass in the either "Normal" or "Over" and check body balance between upper and lower and between left and right.

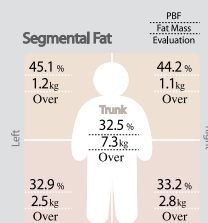


A well-balanced body with enough muscle in each segment.

Imbalance between the 2 arms and not enough muscle in legs.

## Segmental Fat

Monitor Percent Body Fat of each segment and manage it in the "Normal".



Result of the evaluation says "Over" meaning excessive fat is stored in each segment. Try to lower the Percent Body Fat.

\* Segmental fat analysis is estimated calculation based on other results and it can not be measured directly by the BIA method.

## Results from the Thermal Printer

Time 2006/06/21 15:22:11  
ID SKM00079-0008  
Gender Female Age 28  
Height 160.0cm Weight 50.9kg

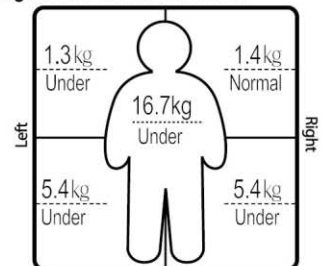
### Body Composition

Weight	50.9kg	(45.7~61.8)
Muscle	18.1kg	(20.3~24.9)
Fat	16.7kg	(10.8~17.2)
TBW	25.0kg	(27.4~33.5)
FFM	34.2kg	(34.9~44.6)

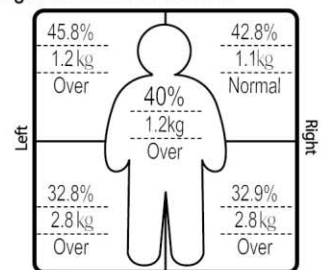
### Obesity Diagnosis

BMI	19.9 kg/m <sup>2</sup>	(18.5~23.0)
PBF	32.8 %	(18.0~28.0)
WHR	0.81	(0.70~0.80)
BMR	1109 kcal	(1132~1301)

### Segmental Lean Distribution



### Segmental Fat Distribution



### Muscle-Fat Control

Muscle +7.2kg Fat -4.3kg

\*Segmental Fat is estimated.

The Results Sheet

## InBody

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ID SKM00079-0008  
Age 28

Height 160cm  
Gender Female

Date 2006.6.21  
Time 15:22:11

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### Body Composition

	Under	Normal	Over	UNIT:kg	Normal Range
Weight				50.9 kg	45.7 ~ 61.8
Muscle Mass <small>Skeletal Muscle Mass</small>				18.1 kg	20.3 ~ 24.9
Body Fat Mass				16.7 kg	10.8 ~ 17.2

**T B W**  
Total Body Water

25.0 kg (27.4~33.5)

**F F M**  
Fat Free Mass

34.2 kg (34.9~44.6)

### Segmental Lean

Lean Mass Evaluation

\* Segmental Lean is estimated.

### Obesity Diagnosis

	Value	Normal Range
<b>B M I</b> <small>Body Mass Index (kg/m<sup>2</sup>)</small>	19.9	18.5 ~ 23.0
<b>P B F</b> <small>Percent Body Fat (%)</small>	32.8	18.0 ~ 28.0
<b>W H R</b> <small>Waist-Hip Ratio</small>	0.81	0.70 ~ 0.80
<b>B M R</b> <small>Basal Metabolic Rate (kcal)</small>	1109	1132 ~ 1301

**BMI** =  $\frac{\text{Weight, kg}}{(\text{Height, m})^2}$

**PBF** =  $\frac{\text{Fat, kg}}{\text{Weight, kg}} \times 100$

**WHR** =  $\frac{\text{Waist circumference, cm}}{\text{Hip circumference, cm}}$

### Segmental Fat

PBF Fat Mass Evaluation

\* Segmental Fat is estimated.

### Muscle-Fat Control

Muscle Control	+ 7.2 kg	Fat Control	- 4.3 kg
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### Impedance

Z	RA	LA	TR	RL	LL
20kHz	476.8	514.6	31.7	324.0	324.7
100kHz	439.3	477.0	28.3	296.2	297.0

Space for consultation notes

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