

## InBody520, more convenient, more useful



Nice looking design fits your interior.



Color LCD screen and background music makes measurement more pleasant.



Data storage function enables re-print of past result data.



Body shape graph tells where to treat with special care.

## InBody520, innovative design for your convenience

- High resolution color TFT LCD
- Sound option during measurement or stand-by
- Data storage function to enable re-print of past result data
- USB driver for additional data storage
- Easy upgrade through USB driver
- Quick set-up menu

## InBody520, with a very powerful result sheet, tells why it has a world leading technology.

- Advertisement of your business: name of business, address and contact number.
- Option to choose a plain paper(A4 size) result sheet
- Easy looking graph for Muscle - Fat Analysis
- Double line lean blance graph
- Check boxes to see the health status of your customer at a glance
- Individual standard range of body composition
- Body composition history to see the past body composition data

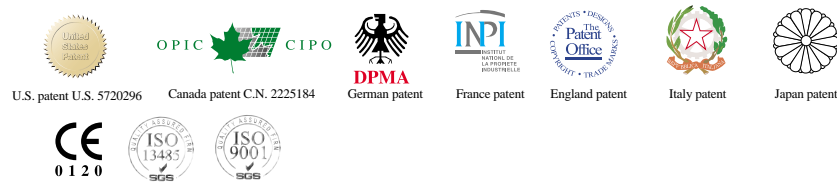


## Specifications

Measurement Method	Direct Segmental Multi-frequency Bioelectrical Impedance Analysis Method, DSM-BIA Method	
Measurement Items	Impedance(Z)	15 Impedance Measurements by Using 3 Different Frequencies (5 <sub>KHz</sub> , 50 <sub>KHz</sub> , 500 <sub>KHz</sub> ) at Each 5 Segments (Right Arm, Left Arm, Trunk, Right Leg, Left Leg)
Electrode Method	Tetrapolar 8-Point Tactile Electrode System	
Body Composition Calculation Method	No Empirical Estimation	
Outputs	Total Body Water, Protein, osseous / non-osseous Mineral, Body Fat Mass, Skeletal Muscle Mass Soft Lean Mass, Fat Free Mass, Weight BMI, Percent Body Fat, Waist-Hip Ratio(WHR) Segmental Soft Lean Mass, The Ratio of Segmental Soft Lean Mass Body Shape Graph Nutritional Evaluation(Protein, Mineral, Fat, Edema) Body Balance, Body Strength Target Weight, Weight Control, Fat Control, Muscle Control, Fitness Score Obesity Degree, BCM, BMC, BMR, AC, AMC Body Composition History Impedance of Each Segments & Frequencies	
Applied Rating Current	400 $\mu$ A	
Adapter	Power Input	AC100-240V, 50/60Hz, 1.2A
	Power Output	DC 12V, 3.5A
Display Type	640 $\times$ 480 Color TFT LCD	
External Interface	RS - 232C 3EA, USB Slave 1EA, USB Host (Transferring database to external device)2EA, Ethernet (10T) 1EA	
Printer Interface	USB	
Compatible Printer	Laser / Inkjet Printer (the printers recommended by Biospace)	
Dimensions	20.6(W) $\times$ 33.2(L) $\times$ 36.8(H) : inch	
	522(W) $\times$ 843(L) $\times$ 935(H) : mm	
Machine Weight	57lbs.(26kg)	
Measurement Duration	about 50 seconds	
Operation Environment	10 ~ 40 $^{\circ}$ C(50 ~ 104 $^{\circ}$ F), 30 ~ 80% RH, 500 ~ 1060hPa	
Storage Environment	0 ~ 40 $^{\circ}$ C(32 ~ 104 $^{\circ}$ F), 30 ~ 80% RH, 500 ~ 1060hPa	
Weight Range	22 ~ 551lbs.(10 ~ 250kg)	
Age Range	6 ~ 99years	
Height Range	3ft. 7.4in. ~ 7ft. 2.6in.(110 ~ 220cm)	

© The aforementioned information is subject to change without prior notice.

## Certifications and patents obtained by Biospace



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## **InBody520 guides you to the right direction as a faithful partner, wherever health is concerned.**

InBody, a trust maker between you and your customer.

- ❖ Simple check box for assessment of body condition at a glance
- ❖ Easy diagnosis of obesity on muscle, fat and obesity
- ❖ Segmental lean balance bar for the segmental muscle strength and weakness, which easily identifies areas to improve
- ❖ Bar graphs for quick monitoring of body composition changes
- ❖ Body shape graph for easy detection of segmental improvements

InBody connects you and your customer for a common goal.



Result sheet, tells the level of technology.  
Experience the variety of information at InBody result sheet.  
It has the state-of-the-art technology.

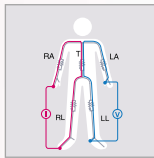
InBody520's result sheet provides the individual standard range for your easy reading of result data.

## Core Technology

### Direct Segmental Measurement

Biospace patented technology makes the measurement absolutely accurate by producing impedance for each different segment: 4 limbs and trunk.

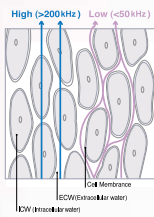
- Accurate impedance measurement at trunk segment is a key of bioimpedance measurement
- No empirical factor such as gender or age is used.



### Multi-frequency Measurement

Multi-frequency measurement provides precise amount of body water: ICW (Intracellular Water) and ECW (Extracellular water)

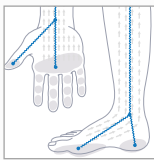
- Exact measurement of body water guarantees accuracy.
- Evaluation of Edema is important to monitor the balance of body water.



### 8 - point tactile electrode system

It enhances accuracy by fixing the measuring location of current and voltage.

- The fixed measuring location makes measurements reproducible.
- It also prevents the errors caused by touching electrodes with different spots of hands or feet.



### No use of empirical estimation

Thanks to Biospace's superior technology (direct segmental measurement and 8 point tactile electrode system), it is no need to use empirical estimation.

- No estimation is needed due to the accurate segmental measurement of trunk.
- Gender or age does not affect the result.

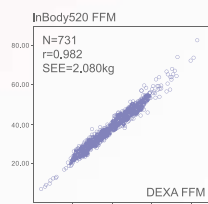
## The most comprehensive result sheet

### 1. Business Information: advertisement tool of your business

Your business name, address, and contact number are automatically displayed whenever you print out a result sheet.

### 2. Body Composition Analysis

It provides the basic information of body composition into 4 compartment ways.



Correlation study with DEXA shows that InBody is absolutely accurate ( $r = 0.98$ ).

\*Male : 343, Female : 388

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

### 3. Muscle-Fat Analysis

It shows fat loss and muscle gain at a glance.



The 'C' type shows low skeletal muscle mass and high body fat mass, which stands for weak body.



The 'D' type shows high skeletal muscle mass and proper body fat mass, which stands for healthy body.

### 4. Obesity Diagnosis

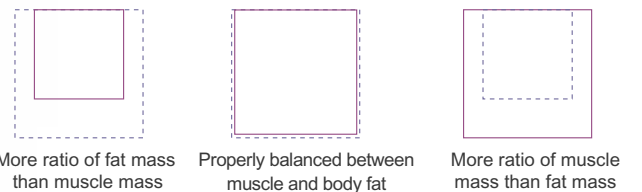
BMI can not tell anything about obesity. More important is body fat, percent body fat and WHR (waist hip ratio). Obesity Diagnosis makes easy diagnosis on obesity.

### 5. Lean Balance

It shows segmental muscle mass by double bar graphs. The double bar graphs can identify the amount of muscle mass in each segment (4 limb and trunk) as well as show the ideal ratio of each segmental lean.

### 6. Body shape graph

It helps accurate evaluation of body shape. It tells how a body shape is developed: a body with full of muscle or full of fat by providing the ideal and real shape.



Shape of square is changing for upper/lower body development.



### 7. Overall Evaluation

Check box provides easy determination of health status at a glance.

### 8. Weight Control

It suggests objective goal of weight control by providing the amount to lose or gain muscle (or fat) after the evaluation of individual body composition. The Fitness Score shows the current status of overall body strength based on the measured muscle and fat mass for the motivation of your customer.

### 9. Additional Data

Obesity Degree, BCM (Body Cell Mass), BMC (Bone Mineral Content), BMR (Basal Metabolic Rate), AC (Arm Circumference), AMC (Arm Muscle Circumference)

### 10. Body Composition History

10 measurement records are stored in the system.

Only InBody offers you. The double-line Lean Balance graph

With the double-line lean balance and body shape graph, you can evaluate segmental muscle mass and body shape more effectively.

It enables to distinguish muscular type / body fat excessive type / developed upper & lower body type / weak upper & lower body type / unbalanced right & left body type / unbalanced upper & lower body type.

The result sheet confirms that InBody uses direct segmental measurement and multi-frequency BIA method. Impedance

In case of real direct segmental and multi-frequency measurement, it must be able to detect all segmental impedances at each frequency separately. InBody520 displays 15 impedance indexes in total, each impedance index of 5 segments at 3 frequencies.

# InBody 520 Body Composition Analysis

LD MS65241      AGE 25    HEIGHT 170cm    GENDER F    DATE/TIME 2005.02.01/11:23:38(0027)

## 1 B. Hospital

Doctor Lee

### 2 Body Composition Analysis

Compartments	Values	Total Body Water	Soft Lean Mass	Fat Free Mass	Weight	Normal Range
<b>T B W</b> Total Body Water (l)	30.8	30.8	39.4	42.0	59.1	31.0 ~ 37.8
<b>Protein</b> (kg)	8.1					
<b>Mineral</b> (kg)	3.07	osseous: 2.56		2.86 ~ 3.50		
<b>Body Fat Mass</b> (kg)	17.1			12.1 ~ 19.4		

► Mineral is estimated.

### 3 Muscle-Fat Analysis

	Under	Normal	Over	UNIT: %	Normal Range
<b>Weight</b> (kg)	55 70 85 100 115 130 145 160 175 190 205	59.1			51.6 ~ 69.8
<b>S M M</b> Skeletal Muscle Mass (kg)	70 80 90 100 110 120 130 140 150 160 170	22.3			23.2 ~ 29.4
<b>Body Fat Mass</b> (kg)	40 60 80 100 160 220 280 340 400 460 520	17.1			12.1 ~ 19.4

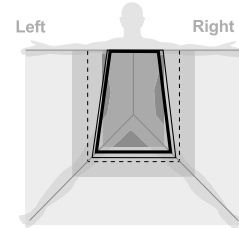
### 4 Obesity Diagnosis

	Under	Normal	Over	UNIT: %	Normal Range
<b>B M I</b> Body Mass Index (kg/m <sup>2</sup> )	10 15 18.5 21.5 25 30 35 40 45 50 55	20.4			18.5 ~ 25.0
<b>P B F</b> Percent Body Fat (%)	8 13 18 23 28 33 38 43 48 53 58	29.0			18.0 ~ 28.0
<b>W H R</b> Waist-Hip Ratio	0.65 0.70 0.75 0.80 0.85 0.90 0.95 1.00 1.05 1.10 1.15	0.76			0.75 ~ 0.85

### 5 Lean Balance

	Under	Normal	Over	UNIT: %
<b>Right Arm</b> (kg)	0 20 40 60 80 100 120 140 160 180 200 220 240	1.48 78.4		
<b>Left Arm</b> (kg)	0 20 40 60 80 100 120 140 160 180 200 220 240	1.39 73.7		
<b>Trunk</b> (kg)	50 60 70 80 90 100 110 120 130 140 150 160 170	18.9 90.3		
<b>Right Leg</b> (kg)	50 60 70 80 90 100 110 120 130 140 150 160 170	6.95 97.5		
<b>Left Leg</b> (kg)	50 60 70 80 90 100 110 120 130 140 150 160 170	6.95 97.5		

### 6 Body Shape Graph



— Lean — Lean / Ideal Lean x 100 (%)  
■ Under ■ Normal ■ Over ..... Standard

### 7 Nutritional Evaluation

**Protein**  Normal  Deficient

**Mineral**  Normal  Deficient

**Fat**  Normal  Deficient  Excessive

**Edema**  Normal  Slight Edema  Edema

### Weight Management

**Weight**  Normal  Under  Over

**SMM**  Normal  Strong  Under

**Fat**  Normal  Under  Over

### Obesity Diagnosis

**B M I**  Normal  Under  Over  Extremely Over

**P B F**  Normal  Over  Extremely Over

**W H R**  Normal  Over  Extremely Over

### Body Balance

**Upper**  Balanced  Slightly Unbalanced  Extremely Unbalanced

**Lower**  Balanced  Slightly Unbalanced  Extremely Unbalanced

**Upper-Lower**  Balanced  Slightly Unbalanced  Extremely Unbalanced

### Body Strength

**Upper**  Normal  Developed  Weak

**Lower**  Normal  Developed  Weak

**Muscle**  Normal  Muscular  Weak

### 10 Body Composition History

DATE / TIME	Weight	SMM	Fat	Score
05/01/02 11:15	61.5	20.5	19.9	69
05/01/15 11:10	60.2	20.8	18.7	70
05/02/01 11:23	59.1	22.3	17.1	72

### 9 Additional Data

	(Normal Range)
Obesity Degree = 97%	90 ~ 110
B C M = 26.7 kg	27.5 ~ 33.5
B M C = 2.56 kg	2.36 ~ 2.88
B M R = 1276 kcal	1186 ~ 1367
A C = 25.5 cm	
A M C = 21.6 cm	

### 8 Weight Control

Target Weight	60.7 kg
Weight Control	+1.6 kg
Fat Control	-3.2 kg
Muscle Control	+4.8 kg
Fitness Score	72 Points

### Impedance

Z	RA	LA	TR	RL	LL
5kHz	486.4	504.4	26.8	261.7	260.2
50kHz	451.9	469.9	24.0	242.1	241.7
500kHz	401.4	421.1	19.5	217.5	217.1