

Medical Diagnostic Device

# ACCUNIQ BC310

## Body Composition Analyzer

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The BC310 is a multi-frequency, whole body and segmental Body Composition Analyzer that utilizes innovative BIA technology to ensure accurate and precise results. This cutting edge technology utilizes harmless, low-level frequencies to offer quick and easy total body composition assessments through the LCD touch screen, printouts and client tracking software.

The results sheet displays an easy-to-read graphical analysis to help maintain healthy body composition and whole body health trending.





# + ACCUNIQ

## Medical Devices to Help Promote Health & Longevity

ACCUNIQ medical devices are manufactured by SELVAS Healthcare, a global company that incorporates the most advanced technology available to provide accurate and reliable results. We are committed to partner with our customers to provide high quality products to help their patients and clients monitor and improve their health.

Crazy Fit, Incredible Life  
Our one and only desire - a perfect body!



**History**

- 2016 Corporate name changed to SELVAS Healthcare, Inc., and listed in KOSDAQ
- 2015 World’s first dual-type sphygmomanometer system approved by the US FDA
- 2014 Grand Prize, 1st People’s Happiness Premium IT-incorporated Korean Medical Device Awards  
Popularity Award, Analysis and Diagnosis System Segment 2014 Selected by “Health & Beauty,” a German fitness magazine
- 2010 Advanced Venture Company Award
- 2006 Director’s Award by the Korea Food and Drug Administration (KFDA)
- 2005 Bronze Prize, 13th Republic of Korea Technical Awards  
Silver Prize, Venture Design Awards  
Bronze Medal of Industrial Effort, 35th Precision Technology Promotion Contest
- 2004 Body Fat Analyzer Selected as a World-Class Product (Ministry of Commerce Industry and Energy)
- 2003 Director’s Award by the Korea Food and Drug Administration (KFDA)
- 2001 Prime Minister’s Award, Trade Day  
KGMP(Korea Good Manufacturing Practice)-Certified
- 2000 Top Prize, Leaders’ Venture Awards  
President Kim, Dae-Jung and First Lady visited our company
- 1999 Presidential Award in National Venture Awards  
Selected as a World Top-class Company

**Certifications and Awards**



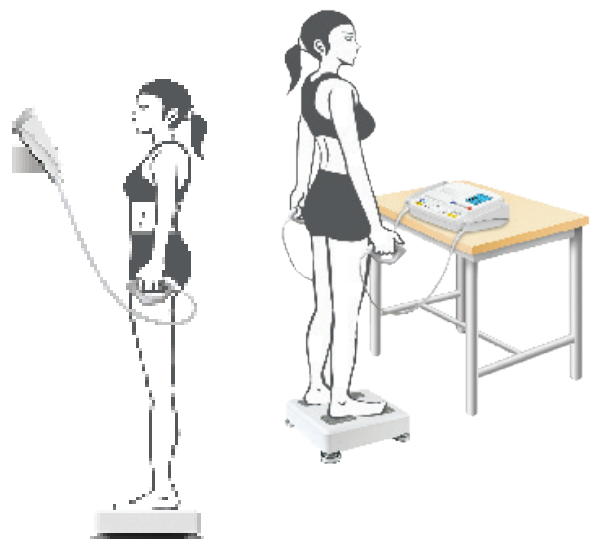
ACCUNIQ medical devices have been used globally to measure and analyze overall health results with our healthcare and fitness professionals in mind where accuracy is of the utmost importance. They are currently used globally in hospitals, medical facilities, doctor's offices, weight loss centers, Fitness Centers, nursing homes, public health facilities, and retail locations.



- Monographic LCD
- 3 Available Frequencies: 5,50,250 KHz
- Built in Thermal Printer
- User Configurable Modes-Adult, Athlete, Wrestler and Goal Setter
- Client Tracking Software Provided (ACCUNIQ MANAGER)
- USB and RS232 ports for computer or printer interface



Multi-Use B.C.A. BC310  
Desk Type / Wall Type / Stand Type  
for Versatile Arrangement



Adjust the brightness of  
Mono Graphic LCD, Keypad



Upper  
part of the body



Whole Body  
Measurement



Lower  
part of the body



# + Diverse Range of Options

ACCUNIQ body composition analyzers offer multiple options to meet multiple end-user requirements.



## Fully Automatic Sphygmomanometer

Connect our fully automatic sphygmomanometer for hospitals to control your blood pressure in connection with your body fat, which can help you manage your body weight more efficiently.



## A4 Result Sheet

The output results are displayed systematically and clearly.



## Thermal Printer

Use the thermal printer to quickly and easily print the analysis.



## Column (Support)

# Various Results and Descriptions

**ACCUNIQ**

BC310

ID / NAME : SELVAS HEALTHCARE123 / Michael

Height : 170.6 Age : 35 years Gender : Male Test Date/Time : 21 - 09 - 2016 09:34



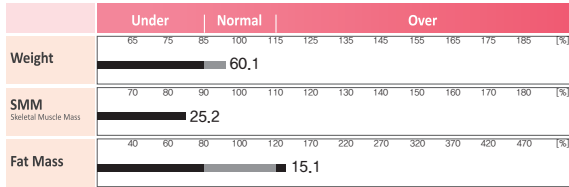
### 1 Body Composition Analysis

	values	Body Water	Soft Lean Mass	Fat-Free Mass	Weight
Body Water	32.8 (37.4 ~ 39.7)	32.8	41.9 (44.1 ~ 53.9)	45.0 (51.2 ~ 54.4)	60.1 (54.4 ~ 73.6)
Proteins	9.1 (10.2 ~ 11.5)				
Minerals	3.1 (3.7 ~ 3.8)				
Body Fat	15.1 (9.0 ~ 13.4)				

### 5 Comprehensive Evaluation

Body Type	over fat class 2
Biological Age	38 years
Basal Metabolic Rate(BMR)	1340 kcal
Total Daily Energy Expenditure	2063 kcal
Body Cell Mass	30.7

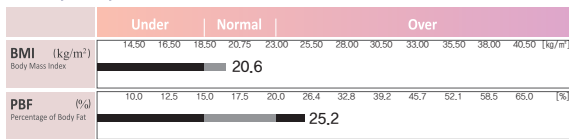
### 2 Muscle/Fat Analysis



### 6 Control Guide

Target Weight	63.2 kg
Weight Control	+3.1 kg
Muscle Control	+7.1 kg
Fat Control	-3.9 kg

### 3 Obesity Analysis



### 7 Goal Setter

Target PBF	20 %
Predicted Weight	56.3 kg
Predicted Fat Mass	11.3 kg
Control	-3.8 kg

### 8 Obesity Assessment

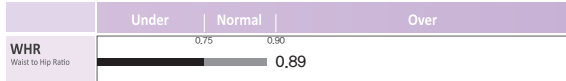
BMI  underweight  normal  overweight  obese

PBF  low-fat  normal  over-fat  obese

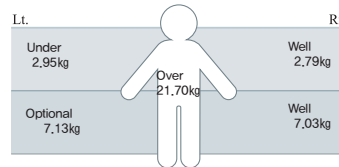
Obesity Degree: -6.1 ( -10.0 ~ +10.0 ) %

Abdominal Circumference: 82.0 ( Less than 90cm ) cm

### 4 Abdominal Obesity Analysis



### 9 Segmental Lean Mass



### 10 Impedance (584)

Freq	5K	50K	250K
RA.Imp	336	333	308
LA.Imp	335	321	293
Trunk	30	24	24
RL.Imp	292	246	215
LL.Imp	278	220	189

[MEMO]





### 1 Body Composition Analysis

This is a measurement of analysis results of body components (e.g., body water, proteins, minerals and body fat) relative to normal ranges.

### 2 Muscle/Fat Analysis

This graph of the Skeletal Muscle Mass (SMM) and fat mass illustrates the proportion of skeletal muscle and body fat that comprise the total body weight.

### 3 Obesity Analysis

This graph of percentage of body fat (PBF) and body mass index (BMI), of which the latter is critical in assessing the prevalence of obesity, illustrates clinical data needed for obesity analysis.

### 4 Abdominal Obesity Analysis

Fat in the body is divided into subcutaneous fat and visceral fat. Visceral fat is closely connected with adult diseases, and measured based on several factors.

### 5 Comprehensive Evaluation

This item shows your body type, biological age, basal metabolic rate (BMR), total daily energy expenditure (TEE), and body cell mass.

### 6 Control Guide

This item presents your recommended target weight, weight, and muscle and fat mass control.

### 7 Goal Setter

It indicates how much fat, weight and Lean Body Mass needs to be controlled. By comparing the current status to the standard weight, the target is to reach the minimum or maximum value of optimal range.

### 8 Obesity Assessment

This item assesses your BMI, PBF and indicates your obesity degree and abdominal circumference.

### 9 Segmental Lean Mass

This item assesses the lean mass of 5 body parts (left arm, right arm, left leg, right leg, and trunk) in graphs.

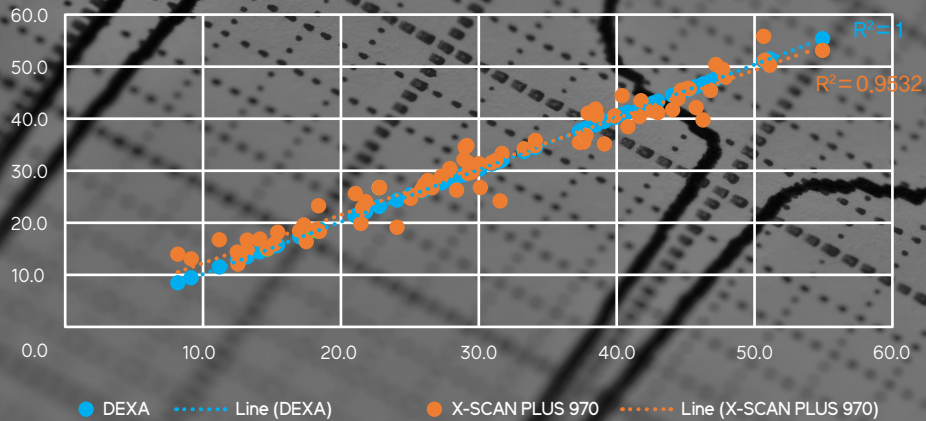
### 10 Impedance

Impedance using frequency applied to a body part. Impedance is a resistance value when electric current is passed through the body. Each subject has a unique impedance.

# + High Consistency with DEXA

The methods of analyzing your body composition include computed tomography(CT), magnetic resonance imaging(MRI), and underwater weighing. Dual-energy X-ray absorptiometry(DEXA) is currently considered the gold standard since it accurately analyzes your fat, muscles, and bones and does not involve any radiation exposure. ACCUNIQ conducted clinical tests with IHT, a professional clinical organization based in Texas, USA, to verify our product’s precision with DEXA. The result shows that our analysis is more accurate than our competitors.

PBF-DEXA, X-SCAN PLUS 970



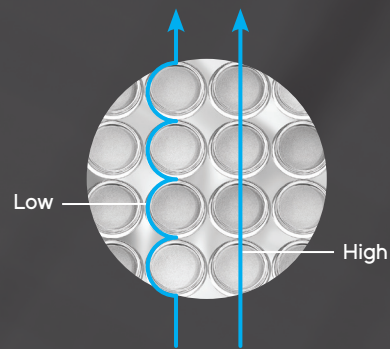
- ※ Determination of coefficient(R2) of DEXA is 1, and the accuracy of ACCUNIQ is higher if R2 value is close to 1.
- ※ The accuracy of X-SCAN PLUS 970 is proved through clinical study with DEXA at IHT center in USA, and the accuracy of other ACCUNIQ brands are guaranteed by high correlation each other.

DEXA-ACCUNIQ	Paired T-test Analysis of Body Composition								
	Percent Body Fat(%)			Body Fat Mass(kg)			Lean Body Mass(kg)		
	Mean±SD	p-value	p-value explanation	Mean±SD	p-value	p-value explanation	Mean±SD	p-value	p-value explanation
	-0.4±0.7	0.17	DEXA PBF = ACCUNIQ PBF	-0.4±0.2	0.06	DEXA PBF = ACCUNIQ PBF	0±0.3	0.99	DEXA PBF = ACCUNIQ PBF

Coefficient of Determination between Our Products (X-SCAN PLUS 970 and ACCUNIQ BCA)	LBM R <sup>2</sup>		
	BC720	BC510	BC360
	0.9967	0.9949	0.9962

## Multi-Frequency Analysis

ACCUNIQ uses 6 frequencies between 1 kHz and 1000kHz to analyze your intracellular water, extracellular water, and total body water accurately. A frequency lower than 100kHz is used to analyze extracellular water since it flows along the cell membrane, whereas a frequency above 100kHz is used to analyze total body water as it flows through the cell membrane.



## Eight-Point Touch Electrodes

ACCUNIQ uses the 8-point touch electrodes method, which is highly accurate despite its complexity. Eight electrodes may be placed on the hands and feet or wrists and ankles to analyze body composition stably.

## ACCUNIQ BC310 Specifications

Model	ACCUNIQ BC310
Measuring Method	Tetra-polar electrode method using 8 touch electrodes
Frequency Range	5, 50, 250kHz
Measuring Site	Whole body, Upper part of the body, Lower part of the body (Selective)
Results Sheet Data	Weight, Standard Weight, Lean Body Mass, Total Body Water, Intra Cellular Water, Extra Cellular Water, B.M.I. (Body Mass Index), Mass of Body Fat, Percent of Body Fat, W.H.R. (Waist to Hip Ratio), Basal Metabolic Rate, Ratio of E.C.W./T.B.W., Segmental Lean Body Mass, Impedance, Body Type, Target to Control, Goal Setter
Power Consumption	60VA
Measuring Current	Approx. within 180 $\mu$ A
Power Consumption	Input (AC 100~240V, 50~60Hz), Output (DC 12V, 5A adapter)
Display	Mono Graphic LCD
Input Device	Key pad, Remote entry to PC
Transmission Device	USB Terminal, RS-232C Port
Printing Device	Thermal Printer with auto-cut and high-speed printing
Dimension	<b>Whole body - Head part</b> 350x216.5x123mm (WxDxH $\pm$ 10mm) <b>Upper part of the body - Head part</b> 350x216.5x123mm (WxDxH $\pm$ 10mm) <b>Lower part of the body - Head part</b> 267x216.5x90mm (WxDxH $\pm$ 10mm), <b>Plate</b> 371x355x106mm (WxDxH $\pm$ 10mm)
Weight	<b>Whole body</b> Approx. 13.5kg (Including the column) <b>Upper part of the body</b> Approx. 11kg, <b>Lower part of the body</b> Approx. 10kg
Measuring Range	100~950g
Measuring Time	Approx. 1 minute
Applicable Height	50~220cm
Measuring Weight	10~200kg
Applicable Age	1~99 years old
Operation Ambient	Ambient temperature range +5 to +40°C, Relative humidity range 15 to 93% (non condensing)
Storage Ambient	Ambient temperature range -25 to +70°C, Relative humidity range lower than 93% (non condensing)

Optional Equipment	Fully Automatic Sphygmomanometer, A4 Result Sheet, Thermal Printer, Column (Support)
Printing Logo	Printing logo or the name of hospital, address, contact information on the pre-printed result sheet.
Scale Offset	Compensating measured value of weight scale
Compensating the Clothes weight	Compensating the weight of clothes which the user wears during the measurement.
Date · Time	Setting current date and time
Brightness	Adjust the brightness of Mono Graphic LCD
Thermal Printer	High speed thermal printer with auto cutting function

※ For purpose of improvement, specifications and design are subject to change without notice.  
This is a medical device. Read precaution and operation method before use.



SELVAS Healthcare is Jawon Medical's new company name.

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