Medical Diagnostic Device

ACCUNIQ BC510

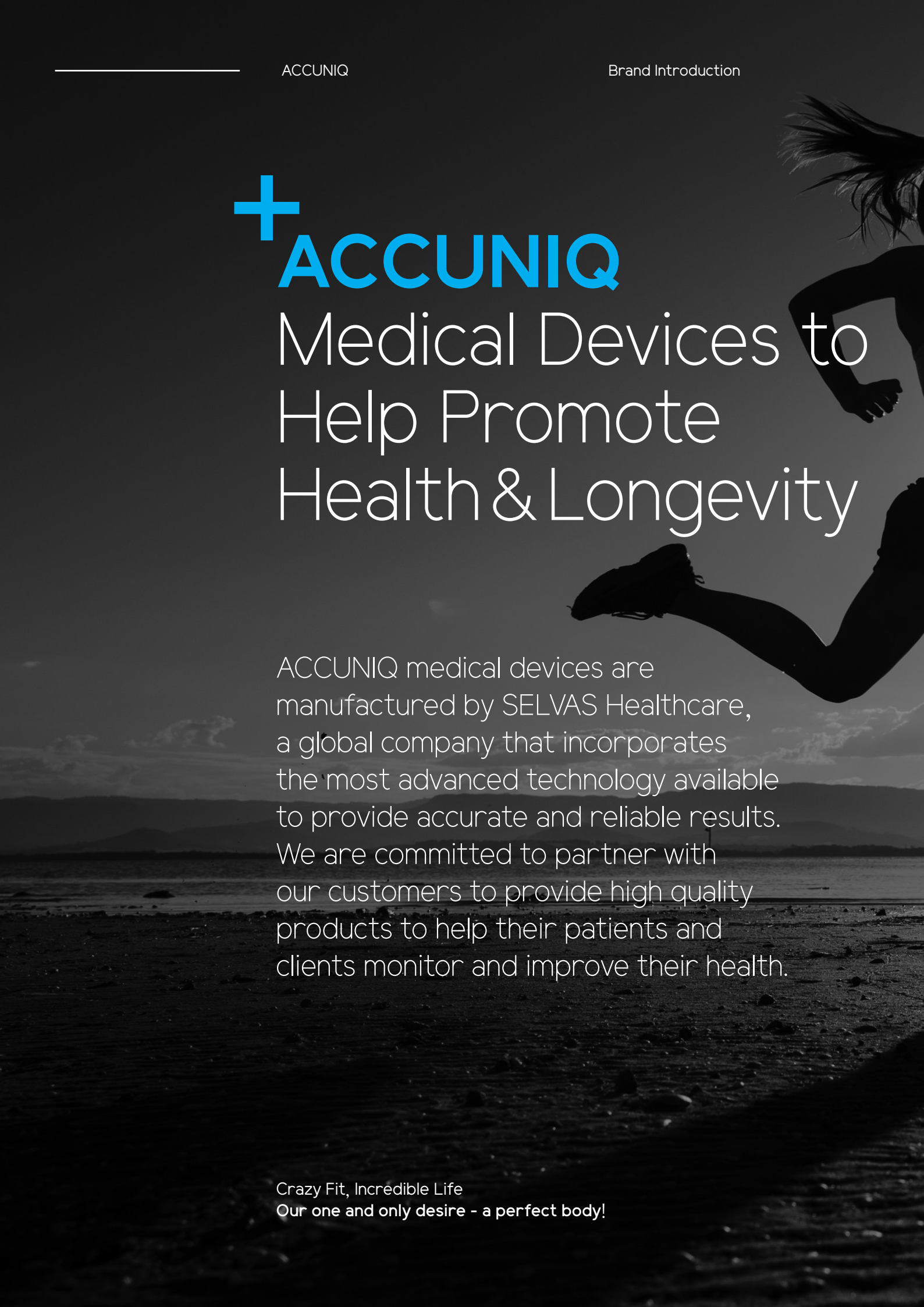
Body Composition Analyzer

The BC510 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

www.accuniq.com



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

GMF Certified

0197
CE Certified

GoodDesign Award

Presidential Award in National Venture Award

Bronze Medal of Industrial Effort in Precision Technology Promotion Contest

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.**

- 7 Inch Wide Color LCD Touch Screen
- 4 Available Frequencies: 5,50,250,550 KHz
- Pediatric Mode Support
- Store up to 100,000 analysis data that can be recalled with ID number
- Client Tracking Software Provided (ACCUNIQ MANAGER)
- Body Composition Analysis (includes 8 previous analysis to track client progress)
- USB and RS232 ports for computer or printer interface
- Optional Bluetooth Wireless Communication

Innovative technology meets stylish design. The BC510 utilizes the most advanced bio-electrical impedance (BIA) analysis technology to provide accurate and dependable results that have been validated by DEXA analysis.

7” Wide Color LCD Touch Screen

Ankle Electrode
The optional ankle electrode analyzes your health without taking off your socks or nylons.

Electrode Handle Hanger
This hanger is used to hang the curved electrode handles.

Ultrasonic Anthropometer
Made more precise, the performance of the anthropometer enhances the confidence level of the analysis.

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

Diverse Range of Options

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

Ankle Electrode

This option helps you proceed with the analysis without taking off your socks or nylons and protects you from germs or fungi. It can also provide a more accurate analysis for users with thick dead skin cells on their feet.

Bluetooth

Connect the thermal printer to your PC or mobile device wirelessly via Bluetooth. Data is transferred and saved as soon as the analysis is complete without QR code or result sheet.

Ultrasonic Anthropometer

This option accurately and quickly measures your height automatically with the distance analysis method based on the AI and ultrasonic sensor.

Fully Automatic Sphygmomanometer

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

Segmental Result and Result Sheet for Infants

The result sheet provides details on the analysis results from 5 different body parts and also data on infants including infant growth curve.

USB Memory

Use the USB memory to save the analysis data and view it on your PC.

Thermal Printer

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

Various Results and Descriptions

ACCUNIQ

BC510

ID / NAME : SELVAS HEALTHCARE123 / Michael

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

selvas Healthcare

1 Body Composition Analysis

	values	Body Water	Soft Lean Mass	Fat-Free Mass	Weight
Body Water (ℓ)	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 (kg)	9.1 (10.2 ~ 11.5)				
Minerals (kg)	3.1 (3.7 ~ 3.8)				
Body Fat (kg)	15.1 (9.0 ~ 13.4)				

2 Muscle/Fat Analysis [kg]

	Under	Normal	Over
Weight			60.1
SMM Skeletal Muscle Mass			25.2
Fat Mass			15.1

3 Obesity Analysis

	Under	Normal	Over
BMI (kg/m²) Body Mass Index			20.6
PBF (%) Percentage of Body Fat			25.2

4 Abdominal Obesity Analysis

	Under	Normal	Over
WHR Waist to Hip Ratio		0.89	

	Subcutaneous	Balanced	Boundary	Visceral Obesity Ⅰ	Visceral Obesity Ⅱ
VFL Visceral Fat Level				11	
VFA (cm²) Visceral Fat Area				107	

5 Segmental Lean Analysis

based on standard weight ■ based on current weight ■ [kg]

	Under	Normal	Over
Right Arm		2.79 (90%)	
Left Arm		2.95 (95%)	
Trunk		22.00 (96%)	
Right Leg		7.03 (84%)	
Left Leg		7.13 (85%)	

6 Body Water Analysis [ℓ]

	Under	Normal	Over
ICW Intracellular Water		20.1	
ECW Extracellular Water		12.7	

	Optimal	Boundary	Over
ECW ratio	0.387		

7 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	kg

8 Body Balance Assessment

Upper Body L/R ☐ balanced ☑ imbalanced Ⅰ ☐ imbalanced Ⅱ

Lower Body L/R ☑ balanced ☐ imbalanced Ⅰ ☐ imbalanced Ⅱ

9 Control Guide

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

10 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 102cm) cm

11 Impedance (570)

Freq	5K	50K	250K	550K
RA.Imp	336	333	308	213
LA.Imp.	335	293	321	215
Trunk	30	24	24	15
RL.Imp.	292	246	215	60
LL.Imp.	278	220	189	56

12 Blood Pressure Analysis

Systolic Lt 125 mmHg / Rt 111 mmHg

Diastolic Lt 65 mmHg / Rt 69 mmHg

Pulse 76 bpm

Blood pressure difference between right arm and left arm

Systolic 14 mmHg, Diastolic 04 mmHg

For history management, please upload this results at the website using QR code scanning.

JUNE 30, 2016 Rev A.0 SELVAS Healthcare, Inc.

❶ 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.

❷ 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.

❸ 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.

❹ 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.

❺ Segmental Lean Analysis
Displays the results of SLM measurements as a graph. There are five body parts that include the left arm, right arm, left leg, right leg and trunk.

❻ Body Water Analysis
This is a measure of the intracellular water, the extracellular water, and the extracellular water ratio.

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

❽ Body Balance Assessment
Assesses the lateral balance of the upper and lower bodies, and the vertical balance between the upper and lower bodies.

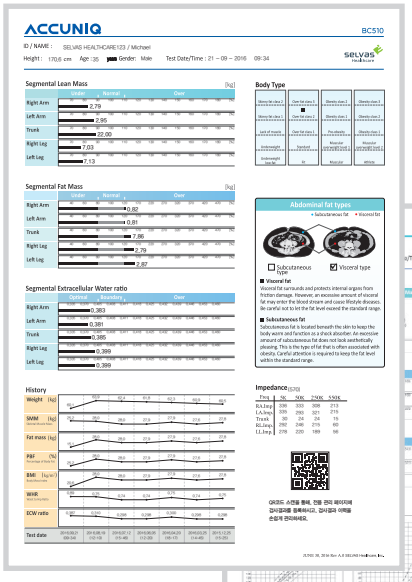
❾ Control Guide
This item presents your recommended target weight, weight, and muscle and fat mass control.

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

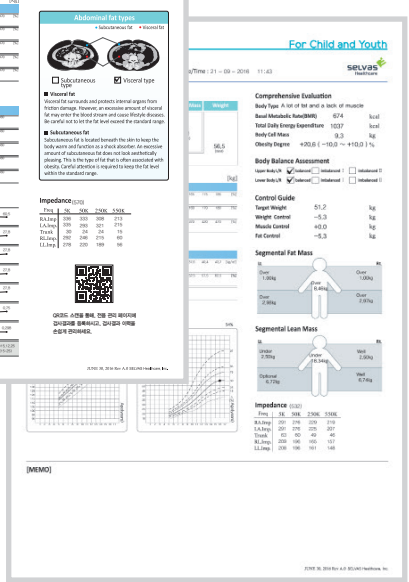
⓫ Impedance
Impedance using frequency applied to a body part. Impedance is a resistance value when electric current is passed through the body. Each subject has a unique impedance.

⓬ Blood Pressure Analysis
This item indicates your blood pressure data when the product is connected to the sphygmomanometer provided by ACCUNIQ. This is especially useful because it assesses your obesity level and blood pressure at the same time.

▼Segmental Results Sheet (Option)

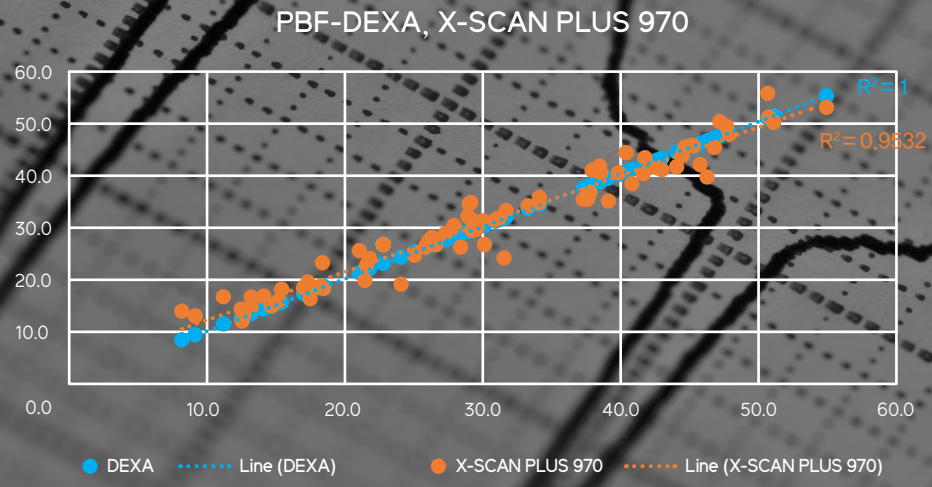


▼Result Sheet for Infants (Option)



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.



※ Determination of coefficient(R2) of DEXA is 1, and the accuracy of ACCUNIQ is higher if R2 value is close to 1.

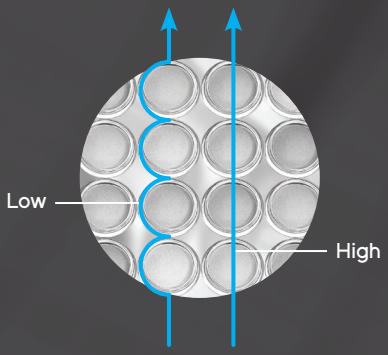
※ The accuracy of X-SCAN PLUS 970 is proved through clinical study with DEXA at IHT center in USA, and the accuracy of other ACCUNIQ brands are guaranteed by high correlation each other.

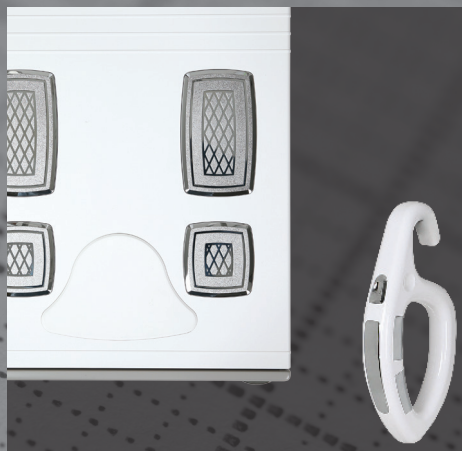
DEXA-ACCUNIQ	Paired T-test Analysis of Body Composition								
	Percent Body Fat(%)			Body Fat Mass(kg)			Lean Body Mass(kg)		
	Mean±SD	p-value	p-value explanation	Mean±SD	p-value	p-value explanation	Mean±SD	p-value	p-value explanation
	-0.4±0.7	0.17	DEXA PBF = ACCUNIQ PBF	-0.4±0.2	0.06	DEXA PBF = ACCUNIQ 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^2		
	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.

Ankle Electrodes

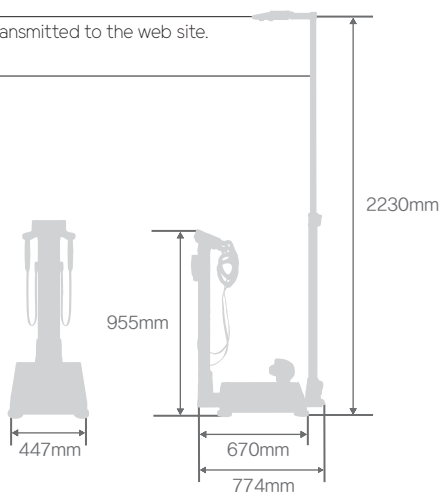
ACCUNIQ provides the ankle electrodes as a convenient option to enable users to proceed with analysis without taking off their socks. This option differentiates ACCUNIQ from all of its competitors.

ACCUNIQ BC510 Specifications

Model	ACCUNIQ BC510
Measuring Method	Tetra-polar electrode method using 8 touch electrodes
Frequency Range	5, 50, 250, 550kHz
Measuring Site	Whole body and segmental measurement (arms, legs and trunk)
Results Sheet Data	**Body Composition Results** Weight, Standard Weight, Lean Body Mass, Mass of Body Fat, Skeletal Muscle Mass, Soft Lean Mass, Protein Mass, Mineral Mass, Total Body Water, Intra Cellular Water, Extra Cellular Water, Body Mass Index, Percent of Body Fat, Ratio of E.C.W./T.B.W., Waist to hip ratio, Visceral Fat Level, Visceral Fat Area, Abdominal Circumference, Dual Graph of Soft Lean Masss, Body Composition Change (8 times accumulated graph for Ratio of E.C.W./T.B.W., Percent of Body Fat, Soft Lean Mass, Weight), Segmental Soft Lean Mass and Percent, Segmental Mass of Body Fat, Body Type, Body Cell Mass, Basal Metabolic Rate, Total Energy Expenditure, Age Matched of Body, Total Score, Study Item (Segmental Impedance Classified by Frequency), Blood Pressure (In case of being connected with blood pressure monitor), QR Code **Segmental Results (Option)** Segmental Ratio of E.C.W./T.B.W., Segmental Soft Lean Mass, Segmental Mass of Body Fat and Percent, Study Item (Segmental Impedance Classified by Frequency) **Results Sheet for Infants (Option)** Weight, Standard Weight, Lean Body Mass, Mass of Body Fat, Subcutaneous Fat Mass, Skeletal Muscle Mass, Soft Lean Mass, Protein Mass, Mineral Mass, Total Body Water, Intra Cellular Water, Extra Cellular Water, Body Mass Index, Percent of Body Fat, Waist to hip ratio, Body Type, Fatness, Child Growth Curve (height, weight), Body Cell Mass, Basal Metabolic Rate, Total Energy Expenditure, Age Matched of Body, Nutritional Assessment, Body Composition Change, Segmental Soft Lean Mass, Segmental Mass of Body Fat, Study Item (Segmental Impedance Classified by Frequency), QR Code
Power Consumption	60VA
Measuring Current	Approx. 180μA
Power Consumption	Input (AC 100~240V, 50~60Hz), Output (DC 12V, 5A adapter)
Display	7 Inch Wide Color LCD Touch Screen
Input Device	Touch Screen, PC Remote Control
Transmission Device	USB Port, RS-232C, Bluetooth (Option)
Printing Device	A4 Printer, Thermal Printer (Option)
Dimension	**Main Unit** 447x670x955mm (WxDxH±10mm) | **Main Unit+Height Meter** 447x774x2230mm (WxDxH±10mm)
Weight	Approx. 21kg (main unit)
Measuring Range	100~950Ω
Measuring Time	Within 40 seconds
Applicable Height	50~220cm
Measuring Weight	10~250kg
Applicable Age	1~99 years old
Operation Ambient	Ambient temperature range +5 to +40℃, Relative humidity range 15 to 93% (non condensing)
Storage Ambient	Ambient temperature range -25 to +70℃, Relative humidity range lower than 93% (non condensing)

Optional Equipment	Ultrasonic Anthropometer, Fully Automatic Sphygmomanometer, Ankle Electrode, Thermal Printer Segmental assessment result sheet·Results sheet for Infants, USB Memory, Bluetooth
Printing Logo	Printing logo or the name of hospital, address, contact information on the pre-printed result sheet
Touch Screen	Touch Screen's sensor location adjustable
Data Storage	Maximum 100,000
Measurement Mode	Scale mode / Body Composition mode
Various Result Sheets	Body composition result sheet, Segmental assessment result sheet (Option), Results sheet for Infants (Option)
Measurement Result	LCD, Web, Data management program, ACCUNIQ MANAGER
USB Storage	Data storage and backup
QR Code	Scan the QR code on LCD&result sheet with your smart phone. all results transmitted to the web site. You can see the result whenever you want.

※ 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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