

# Medical Product Guide

The global leader in health monitoring

#### Vision:

We aim to create a society where people around the world can expand their potential through health habits and feel happy.

#### **Mission:**

We will continue to create health standards in various fields from a new perspective. Until now, Tanita has been working on the development and sale of measuring instruments that "measure health" with the philosophy of contributing to the health promotion of people around the world through "measurement." In addition to this, the women's fitness "Fitzmee" was opened in 2004, and the "Marunouchi Tanita Shokudo" was opened in 2012. In 2014, we started offering the Tanita Health Program, a group health promotion package for companies and local governments, and are expanding our business to include health promotion services.

Today is said to be the "100 years of life". The time has come when extending healthy life expectancy is important for both individuals and society. From now on, Tanita will work to create a society where people around the world can feel happiness through health promotion.

May everyone live their own way and spend precious time with those around them. Tanita will support the continuation of "Healthy Habits" for that purpose.

株式会社 タニタ 谷田 千里

Mr Tanida san

# TANITA; established in 1944 with its global headquarters in Tokyo, has become known as the global market leader in precision scales and body composition monitors, with over 100 million devices sold worldwide.

As an innovator in the field of Bioelectrical Impedance Analysis (BIA), TANITA is recognized as the GOLD standard in the industry, based on extensive validation studies behind its 4C technology and superb product quality, which we proudly back-up with an unparalleled guarantee period.

Recently, TANITA has introduced an appealing new company mission; 'Healthy Habits for Happiness' which demonstrates our ambition to not only Measure and Monitor health, but also to Motivate people towards creating and maintaining a healthy lifestyle step by step.

Recent studies\* have shown that monitoring one's progress against a goal increases the likelihood of attaining the goal by up to 80%. TANITA prides itself in being the only supplier of BIA devices for professional use, that also offers BIA technology in body composition scales for home use, offering everyone the opportunity to monitor their progress on a regular basis.

After the launch of TANITA restaurants in Japan; where you can select your healthy meal up to a maximum of 500kcal, TANITA Europe now introduces its new TANITA branded Clever Coffee concept, which increases metabolism through high levels of the natural ingredient chlorogenic acid. A first new initiative in Europe supporting our mission to help people improve their holistic health and wellbeing!



<sup>\*</sup> Benjamin Harkin, Thomas L. Webb, and Betty P. I. Chang, Andrew Prestwich, Mark Conner, Ian Kellar, Yael Benn, Paschal Sheeran. **Does Monitoring Goal Progress Promote Goal Attainment? A Meta-Analysis of the Experimental Evidence.** Psychological Bulletin, American Psychological Association, 2016, Vol. 142, No. 2, 198–229







## Why Tanita Bioelectrical Impedance Analysis technology is the most accurate

## Highest levels of precision and clinical accuracy.

The original prediction equations used in Tanita software were devised by world-renowned body composition expert Professor Steven Heymsfield and his research team at St Luke's Roosevelt Hospital, Columbia University, New York. Extensive independent research has proven that the accurate prediction of an individual's body composition can only be determined if a range of parameters are included in an algorithm, such as gender, age and height and weight.

## Trusted by experts for clinical excellence.

Tanita BIA technology has been more extensively validated against alternative body composition techniques than any other company and the findings have been published in international medical journals. In addition, Tanita monitors have been used in hundreds of independent research studies worldwide. Tanita is regarded by the scientific community as the gold standard in BIA technology and the Tanita Medical Advisory Board ensures Tanita remains at the forefront of scientific advances. For more information on our extensive scientific publications and validation visit:

https://tanita.eu/tanita-academy/for-professionals/the-science

#### **Ground breaking advances in research.**

Tanita continually invests in numerous research projects that focus on enhancing understanding of key health and fitness issues, including areas such as childhood obesity, optimising physical performance and sarcopenia in the elderly. Our

aim is to work with experts to develop tools and technologies to assist all healthcare and sports professionals in providing the best possible services and to help people enjoy healthier lives.

## Repeatability of measurements through precision weighing.

Precise weight measurements are essential for calculating accurate body composition measurements. Tanita prides itself on manufacturing highly accurate weighing mechanisms in both its home use and professional models. All Tanita medically approved professional monitors have been awarded NAWI Certification as well MDD Class IIa, FDA and CE Approval ensuring the highest standards are met.

## Sound quality through robust construction.

Tanita has grown through continuous product innovation and a commitment to maintaining the highest manufacturing quality standards. The company operates award-winning manufacturing facilities in Japan and China and all Tanita medical products meet strict international quality standards and are independently quality-controlled.



The scales with this symbol are validated to be accurate and legal for use within the medical sector according to EU regulations. It is compulsory to use a product with this compliance for use in all medical settings.



The scales with this symbol have been calibrated according to the precision class III in the Directive 2009 / 23 /EC



# MAKING A DIFFERENCE

TO OUR PATIENTS' LIVES
THANKS TO USING
THE BEST TECHNOLOGY

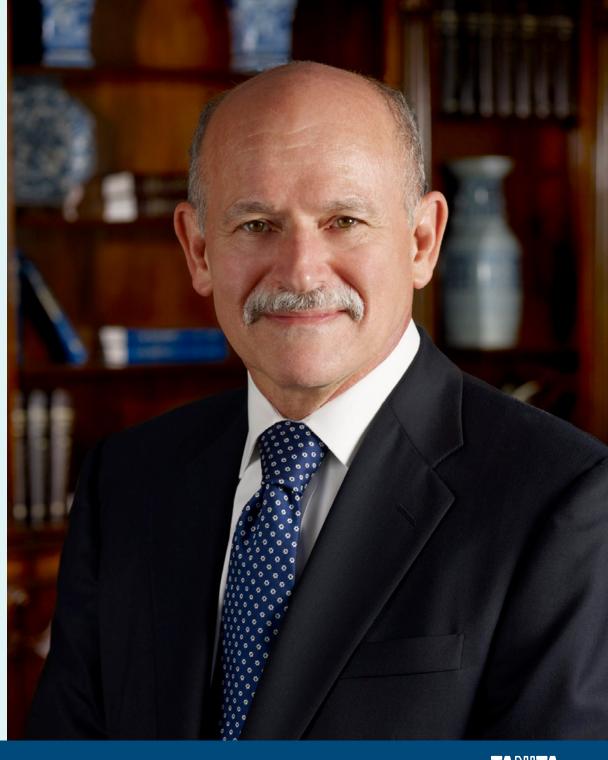
As a Medical Advisory Board member, I have consulted with and learned from Tanita engineers for over 20 years as they developed early prototypes that have now blossomed into advanced bioimpedance technologies that accurately quantify body composition.

These developments are timely as a critical need exists to go beyond simple but inaccurate measures of body shape and composition (e.g., body mass index) when evaluating people with obesity, sarcopenia, and other chronic medical conditions and diseases.

#### **Professor Steven Heymsfield**

Executive Director of Pennington Biomedical Research Center, Baton Rouge USA.

**Member of Tanita Medical Advisory Board** 



# Welcome to the next level in **4c**curacy

## Introducing the 4-Compartment measurement from Tanita

Tanita continues to offer the most accurate calculation of fat, lean mass (or muscle) and bone mineral density available, but with 4C monitoring we go even further, giving an unparalleled, 4-Compartment measurement.

Our new 4C method will enable you to fully assess levels of body fat, protein, bone mineral mass and water within the body.

Fat mass

97%

accuracy as compared with the 4C method®

Nishizawa, M & Ikeda, Y (2018)
'Effectiveness of measuring body
composition and metabolism in
diet'. Metabolic Sensing - Learn the
Metabolism in Health, Dieting, Beauty,
Medicine and Brain. CMC Publishing C
Chapter 6. Page 49

Fat

free mass

98%

accuracy as compared with the 4C method<sup>®</sup>

## What is the 4-Compartment (4C) model?

The 4C model divides body weight into fat, water, mineral, and protein using the gold standard method for measuring each element.

The 4C model involves the measurement of body mass or weight, total body volume (air displacement), total body water (D20), and bone mineral (DXA); however, specialized laboratory equipment is required minimizing the availability of the 4C method to many clinicians and researchers.

Muscle mass

98%

accuracy as compared with the 4C method<sup>®</sup>

Total body water

98%

accuracy as compared with the 4C method (D20)<sup>(1)</sup>



"The 4-Compartment model is a gold standard method to assess body composition in many conditions such as over and under nutrition, hydration, obesity and sarcopenia."

#### Angelo Pietrobelli, M.D.

Professor of Pediatrics
Professor of Nutrition
Pediatric Unit
Department of Surgical Sciences,
Dentistry, Gynecology and Pediatrics,
University of Verona, Verona, Italy

Member of Tanita Medical Advisory Board

## **Validation**

National and international regulatory standards continue to evolve and become more stringent. Medical devices are also becoming smaller and more complex in design, using advanced, engineered materials. This makes the process of validation and verification even more important—not only to comply with regulations, but also design the highest-quality part and production process. The result is better repeatability, fewer mistakes, less rework and redesign, faster time to market, improved competitiveness, and lower costs.

Validation is the process of making sure that you have objective evidence that user needs and intended uses are met. It is usually done by tests, inspections, and in some cases analysis. However, the target of the validation is to make sure the user needs are met in a medical device that consistently provides the intended medical benefit in actual-use conditions. Verification is typically making sure that you have objective evidence that specified requirements are met. It is usually done by tests, inspections, and in some cases analysis as well.

Tanita's professional body composition monitors have been validated.

> Appendicular lean soft tissue (LST, a measure of SM; arm, leg predicted SM by the two BIA systems, MC-780 and MC-980 (Tanita Corp, Tokyo, Japan) in 130 healthy men and women ag

hat separately captures each arm and leg along with trunk nd right and left-body electrical properties.

**Validation** papers are available on request.



## **Validation studies**

# Tanita BIA technology: A scientific overview of methods and accuracy

Tanita BIA technology was first introduced in 1992. Since then we have strived to establish the most accurate technology and will always look for ways and methods to improve accuracy through dedicated research and development.

The Tanita algorithm is the cornerstone of precision body composition measurements in different body types, ages and gender. This has been repeatedly shown in independent scientific publications from researchers and clinicians worldwide.

There are various parameters within the algorithm to ensure the highest accuracy. These include AGE, GENDER and ETHNICITY. By incorporating these parameters, Tanita BIA technology can provide more consistent and reliable body composition measurements for anyone who steps on.

These factors are incorporated into most BIA technology manufacturers within the medical and research fields and has proven to be the foundation of strong validation. This is shown in scientific publications and highlights the importance of including AGE, GENDER and ETHNICITY when calculating body composition of individuals.

In addition, Tanita has developed algorithms for adults with a higher level of physical activity – athlete mode. This feature allows higher accuracy of assessing individuals muscle mass.

# Recent publications showing the importance of incorporating the different parameters in the scientific literature:

#### **AGE and GENDER**

The following papers highlight the importance of incorporating age and gender into BIA technology algorithms and the impact on accuracy when they are not included:

- Völgyi E, Tylavsky FA, Lyytikäinen A, Suominen H, Alén M, Cheng S.
   Assessing body composition with DXA and bioimpedance: effects of obesity, physical activity, and age. Obesity 2008;16(3):700-5.
  - **Conclusion:** Compared to DXA, both BIA devices provided on average 2-6% lower values for FM% in normal BMI men, in women in all BMI categories, and in both genders in both HPA and LPA groups. In obese men, the differences were smaller. The two BIA devices provided similar means for groups. **Differences between the two BIA devices with increasing FM% were a result of the InBody (720) not including age in their algorithm for estimating body composition.**
- Faria SL, Faria OP, Cardeal MD, Ito MK. Validation study of multi-frequency bioelectrical impedance with dual-energy X-ray absorptiometry among obese patients. Obes Surg 2014; 24(9):1476.80.

**Conclusion:** BIA proved to be a safe alternative for assessing BC in clinically severely obese patients and thus provides a more accessible evaluation tool for this population. But, consideration should be given to the formula added to the BIA measurement, adjusting the values to differences observed in order to reduce errors when compared with the DXA measurements

Völgyi E, Tylavsky FA, Lyytikäinen A, Suominen H, Alén M, Cheng, S.
 Assessing body composition with DXA and bioimpedance: effects of obesity, physical activity, and age. Obesity 2008; 16(3):700-5.

**Conclusion:** Compared to DXA, both BIA devices (Tanita MC180 and Inbody 720) provided on average 2-6% lower values for FM% in normal BMI men, in women in all BMI categories, and in both genders in both HPA and LPA groups. In obese men, the differences were smaller. The two BIA devices provided similar means for groups. **Differences** between the two BIA devices with increasing FM% were a result of the InBody (720) not including age in their algorithm for estimating body composition

 Karelis AD, Chamberland G, Aubertin-Leheudre M, Duval C; Ecological mobility in Aging and Parkinson (EMAP) group. Validation of a portable bioelectrical impedance analyzer for the assessment of body composition. Appl Physiol Nutr Metab. 2013 Jan;38(1):27-32.

**Conclusion:** the present study indicated that the portable Inbody 230 may be an acceptable device to measure fat mass, % body fat, and total FFM (except for women) in healthy adults. **In addition, there appears to be a systematic bias for the estimation of trunk and appendicular FFM with the Inbody 230 in men and women.** 

 Sillanpää E, Cheng S, Häkkinen K, Finni T, Walker S, Pesola A, Ahtiainen J, Stenroth L, Selänne H, Sipilä S. Body composition in 18- to 88-year-old adults--comparison of multifrequency bioimpedance and dual-energy X-ray absorptiometry. Obesity 2014; 22(1):101-9

**Authors note:** "we also found that age was a significant predictor in all body composition estimates both in women and in men. Although age and sex are often employed in BIA algorithms because of an increase in measurement accuracy".



#### **ETHNICITY and GENDER**

The following papers conclude Ethnicity increases accuracy of adult and children's body composition measurements using BIA technology:

- Nightingale CM, Rudnicka AR, Owen CG, Donin AS, Newton SL, Furness CA, Howard EL, Gillings RD, Wells JC, Cook DG, Whincup PH. Are ethnic and gender specific equations needed to derive fat free mass from bioelectrical impedance in children of South Asian, Black African-Caribbean and White European origin? Results of the assessment of body composition in children study. Plos One 2013; 18, 8(10):e76426.
- Kumar S, Khosravi M, Massart A, Potluri M, Davenport A. The effects of racial differences on body composition and total body water measured by multifrequency bioelectrical impedance analysis influence delivered Kt/V dialysis dosing. Nephron Clin Pract. 2013;124(1-2):60-6.
- Aglago KE, Menchawy IE, Kari KE, Hamdouchi AE, Barkat A, Bengueddour R, Haloui NE, Mokhtar N, Aguenaou H. Development and validation of bioelectrical impedance analysis equations for predicting total body water and fat-free mass in North-African adults. Eur J Clin Nutr 2013; 67(10):1081-6.
- Nightingale CM, Rudnicka AR, Owen CG, Cook DG, Whincup PH.
   Patterns of body size and adiposity among UK children of South Asian, black African-Caribbean and white European origin: Child Heart And health Study in England (CHASE Study). Int J Epidemiol 2011; 40(1):33-44.
- Haroun D, Taylor SJ, Viner RM, Hayward RS, Darch TS, Eaton J, Cole TJ, WellsJC. Validation of Bioelectrical Impedance Analysis in Adolescents Across Different Ethnic Groups. Obesity 2010; 18(6):1252-59.
- Gibson AL, Holmes JC, Desautels RL, Edmonds LB, Nuudi L Ability
  of new octapolar bioimpedance spectroscopy analyzers to predict
  4-component-model percentage body fat in Hispanic, black, and
  white adults. Am J Clin Nutr 2008; 87(2):332-8.

- Zhu S, Heymsfield SB, Toyoshima H, Wang Z, Pietrobelli A, Heshka S.
   Race ethnicity-specific waist circumference cutoffs for identifying cardiovascular disease risk factors. Am J Clin Nutr 2005; 81(2): 409-415.
- Deurenberg P, Deurenberg-Yap M, Schouten FJ. Validity of total and segmental impedance measurements for prediction of body composition across ethnic population groups. Eur J Clin Nutr 2002; 56:214-220.
- Jakicic JM, Wing RR, Lang W. Bioelectrical impedance analysis to assess body composition in obese adult women: the effect of ethnicity. Int J Obes 1998; 22:243–249.
- McKeigue PM, Shah B, Marmot MG. Relation of central obesity and insulin resistance with high diabetes prevalence and cardiovascular risk in South Asians. Lancet 1991; 337:382-386.

#### To summarize the key findings related to ethnicity and gender:

Previous articles have demonstrated a need for ethnic-and gender-specific prediction equations both in adults and in adolescents. Having in the equation control for ethnicity we reduced the underestimation of fat mass in Asian population.

Ethnic differences in the optimal equations for the prediction of FFM from BIA are likely to reflect the marked ethnic differences in body composition in children of different ethnic groups (Deurenberg P, Deuremberg-Yap, 2002). These include differences in stature, black African-Caribbean children are taller and in particular have greater leg length than white Europeans and South Asians, and lean mass, particularly muscle mass, which tends to be lower among South Asians (Nightngale et al, 2011).

In addition, the amount and distribution of body fat varies appreciably between ethnic groups, with South Asians having a higher proportion of total fat in their abdomen (McKeigue et al 1991), while black African-Caribbeans may have a lower proportion compared to white Europeans (Zhu et al, 2005).



#### PHYSICAL ACTIVITY

In addition, Tanita has created Athlete mode to account for differences in muscle mass hydration of standard and more active individuals.

- Verney J, Schwartz C, Amiche S, Pereira B, Thivel D. Comparisons of a Multi-Frequency Bioelectrical Impedance Analysis to the Dual-Energy X-Ray Absorptiometry Scan in Healthy Young Adults Depending on their Physical Activity Level. J Hum Kinet. 2015;14(47):73-80.
- Gába A, Kapuš O, Cuberek R, Botek M. Comparison of multi- and single-frequency bioelectrical impedance analysis with dual-energy X-ray absorptiometry for assessment of body composition in postmenopausal women: effects of body mass index and accelerometerdetermined physical activity. J Hum Nutr Diet. 2015; 28(4):390-400.

#### **COMMENTS:**

Several articles, see references above and also the references in the two articles mentioned (Verney et al, 2015; Gaba et al, 2015) where they underlined the accuracy of BIA depends on level of physical activity. In other words hydration of fat free mass is influenced by physical activity.

In light of this, it is fundamental to know physical activity level and having an equation that "control" for physical activity.

## **Levels of Accuracy**

#### **How does BIA technology work?**

Bioelectrical Impedance Analysis is a technique used for estimating body composition. All Tanita body composition monitors use advanced Bioelectrical Impedance Analysis technology. When you stand on a Tanita monitor, a very low, safe electrical signal is sent from four metal electrodes through your feet to your legs and abdomen to produce whole body composition measurements. In segmental models, the four hand-held electrodes will provide extra readings for each leg, arm and abdominal area.

The electrical signal passes quickly through water that is present in hydrated muscle tissue but meets resistance when it hits fat tissue. This resistance, known as impedance, is measured and input into scientifically validated Tanita equations to calculate body composition measurements in under 20 seconds.



## Multi frequency BIA technology

Tanita Multi-Frequency Monitors are able to measure bioelectrical impedance analysis at three or six different frequencies.

The additional frequencies provide an exceptional level of accuracy compared to single and dual frequency monitors. The lower frequencies measure the impedance external to the cell membrane.

The higher frequencies are able to penetrate the cell membrane.

By measuring impedance at both the lower and higher frequencies it is possible to estimate extra-cellular water (ECW), intracellular water (ICW) and Total Body Water. This information is essential for providing the health status of a person and indicating health risks such as severe dehydration or oedema.



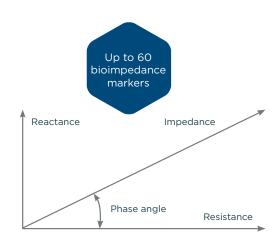
## **Single frequency**BIA technology

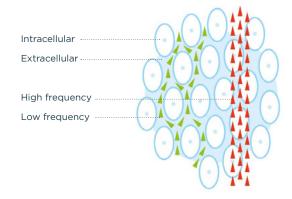
Tanita body composition monitors with Single frequency Bio-electrical Impedance Analysis Technology use a single frequency to capture body composition data.

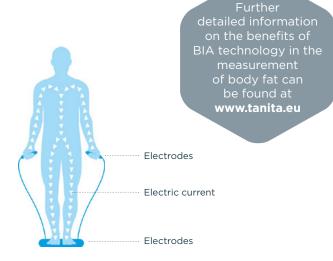


## **Dual frequency**BIA technology

Tanita body composition monitors with Advanced Dual Bioelectrical Impedance Analysis Technology use two different frequencies to capture your body composition data. By using different frequencies, a higher accuracy of measurements can be achieved.







## **Levels of Personalisation**



#### **Segmental** Personalisation

**Segmental Body Composition** Measurements is the highest level of personalised assessment available.

In addition to whole body measurements, the Tanita Segmental Monitor will assess impedance of each arm, leg and trunk area independently. This allows an additional layer of information about a person's health and fitness status including segmental muscle mass and fat free mass.

This information can be used to identify specific anomalies in body composition such as oedema in the legs or localize muscle changes pre or post surgery having higher upper body muscle mass. More importantly, segmental body composition analysis allows even the smallest changes in body composition to be identified and monitored over time giving a precise picture of overall health.



#### **Whole Body** Personalisation

**Using Advanced Dual or Single BIA technology, Tanita Body Composition Monitors can provide** instant whole body measurements.

This includes body fat, fat mass, fat free mass, muscle mass, total body water, bone mass, BMR, metabolic age and visceral fat level, plus body cell data such as phase angle. Further analysis of healthy ranges for these parameters are also avaiable providing an excellent overview of a person's health and fitness status.

BIA In	BIA Information							
	5kHz	50kHz	250kHz	Phase Angle				
H-L	667.0 -24.3	599.3 -57.4	539.9 -60.6	-5.5				
RL	252.9 -10.4	224.6 -22.0	203.2 -17.5	-5.6				
LL	257.4 -10.5	228.7 -22.1	206.9 -18.3	-5.5				
RH	391.1 -13.7	353.4 -35.9	314.7 -43.5	-5.8				
LH	385.2 -12.6	348.8 -33.7	313.1 -42.3	-5.5				
L-L	511.9 -20.8	454.7 -44.0	410.9 -35.7	-5.5				



## **Applications of BIA**

## Benefits in Nutritional Therapy and Dietetics:

- Accurately assess total body composition and create individualised treatment plans.
- Monitor and preserve lean mass to protect metabolic health, patient mobility and musculoskeletal health.
- Supports the diagnosis and monitoring of Sarcopenia, Cachexia and malnutrition.
- Supports the diagnosis, treatment and monitoring of patients for whom BMI is not appropriate (Bariatrics, Eating Disorders, patients with acute or chronic illness)

#### **Benefits in Bariatrics:**

- Accurately assess total body composition to review the requirement for/effectiveness of intervention.
- Create individualised treatment plans based on patient need.
- Monitor and preserve lean mass after surgery to protect metabolic health, patient mobility and musculoskeletal health.
- Monitor intra/extracellular water to support the detection of post-surgical issues.



#### **Benefits in Oncology:**

- Prehabilitation Monitor and maintain muscle mass to improve fitness for surgery or treatment, detect and treat Sarcopenia, Cachexia and malnutrition to improve prognosis.
- Treatment Replace BMI with BIA to reduce toxicity and improve the efficacy of Chemotherapy.
- Rehabilitation Monitor lean mass and Phase Angle to assess recovery after treatment, improve longer-term prognosis and patient quality of life.

#### **Benefits in Physiotherapy:**

- Detects and monitors the effectiveness of the treatment of muscle imbalance after injury or poor load handling.
- Measures muscle quality, physique rating, leg muscle score and Sarcopenic index to assess the risk of frailty and falls.
- Monitors the effectiveness of rehabilitation plans for patients recovering from accidents, acute illness or neuroglial disease.
- Supports patient motivation and adherence to treatment programmes.

#### **Benefits in Respiratory Medicine:**

- Incorporation of BIA into the diagnosis pathway to better assist the staging of respiratory disease.
- · Replace BMI with BIA in the BODE model.
- Detect and treat Sarcopenia and Cachexia to improve patient prognosis.
- Monitor weight gain interventions with a focus on increasing lean mass to protect metabolic and cardiovascular health.



## Benefits in Lifestyle Coaching and Health Improvement:

- Create individual support programmes based on client need.
- Educate clients on holistic health, shifting the focus from weight to reducing fat and maintaining muscle mass.
- Provide reports which help clients understand healthy ranges for measurements to create healthy achievable goals.
- Increase motivation, adherence and goal attainment with a wide range of simple indicators of progress and success.

## **USING TANITA TO MEASURE, MONITOR** & MOTIVATE

#### **Professor David Nocca**

**Professor of Digestive Surgerie** Head of the bariatric and metabolic surgery unit **CHU Montpellier (Montpellier University Hospital)** 

He is recognized worldwide as an expert in laparoscopic and bariatric surgery and was one of the first to integrate LPG techniques into the pre and postoperative management of the obese patient. He has performed over 2500 bariatric surgeries and, in 2013, developed the cutting edge Nissen-sleeve technique: which has significantly decreased the morbidity of sleeve gastrectomy (less gastrooesophageal reflux, less fistula).

From his clinic in Montpellier, France; Professor Nocca is also prolific in the field of bariatric training and education, and is the founding President of the French League Against Obesity. Since 2019, he has been an IFSO Ambassador (International Federation for the Surgery of Obesity).





#### We have been working with Tanita at our Montpellier clinic for around 2 years. The device we have at our clinic is the MC-980 Plus: which is Tanita's most precise and accurate BIA device.

Clinical accuracy and precision is particularly important with our patients as they have elements of body composition well outside of healthy norms, and it can be difficult to track these accurately with lower grade devices.

We use bioimpedance analysis to help accurately diagnose and plan the best course of action for our patients, to monitor the efficacy of treatment, and patient adherence to post-surgical support. The analysis provides both BMI and fat mass, which are important indicators of the success of surgical intervention.

The major benefit of incorporating bioimpedance analysis into my practice has been the improvement in metabolic tracking. Bioimpedance analysis considers the patient's post-surgical lean and muscle mass when calculating BMR; providing a much more accurate estimation of the efficiency of the patient's metabolism: supporting post-surgical nutritional guidance and long-term weight maintenance.

An unwanted side effect of bariatric surgery can be the loss of lean and muscle mass (Maïmoun, L et al, 2017), this can have a detrimental effect upon both the metabolic and musculoskeletal health, and longer-term mobility of the patient. At our Montpellier clinic, we are committed to supporting the long-term holistic health and quality of life of our patients. We have implemented a range of postsurgical interventions to support the maintenance of lean and muscle mass, and we track the efficacy of these using the muscle mass measurement provided by the Tanita analysis.

Another useful measurement, which is unique to the Tanita MC-980, is the Sarcopenia Index which supports the assessment of the patient's longer-term risk of developing Sarcopenia and allows us to implement preventative strategies.

Patients' motivation to continue to work towards improving their health is greatly improved when we can easily share their progress with them, and the Tanita analysis provides useful information and insights which help support the work of my team.



# 

Compatible with the MC-780 and MC-580

Flexible, mobile and easy to use

Cost-effective
packages
for up to 200,
1000 and
unlimited client
lists

Download and use FREE for up to 10 clients

Runs on **iOS** 

## **Information Output**

Healthcare professionals are dedicated to achieving long-lasting improvements in health for their clients, and the Tanita pro app can help you achieve more.

Analysing individual and group data on the Tanita pro app will give greater understanding of an individual's health and fitness status, more in-depth analysis of group and individual data and a greater understanding of what results can be achieved.

By accessing clients' body composition data on the Tanita pro app, you have the facts at your fingertips; clear on-screen analysis helps you to show them progress and the impact of their hard work.

Powerful group data analysis allows you to see the results for clients in a specific age group, with specific needs, or for those following a particular programme or diet. This will help to inform the care and input delivered, and ultimately build on success. What's more, you have the data for all your clients in one place, no matter where you are working.



## **Information Output**



#### **Tanita Pro Software** Information Output

The Tanita PRO software package has been developed in partnership with the leading software developer Medizin & Sevice GmbH.

The software captures data from Tanita Body Composition Analysers, ERKA blood pressure monitor and Activity Monitors, transfers it to a computer, and provides a patient database with professional reports, graphs and trend analysis that can be used for patient education, research and clinical records.

In line with EU regulations, the software is Medically Approved, which complies with MDD (Medical Device Directive) regulations. (Council Directive 93/42/EEC of 14 June 1993 concerning medical devices.)

In addition to body composition data captured from the Tanita Analyser, the user can input target values and waist circumference measurements allowing a full overview of a patient's health and physical progress.

A full colour, printable, client consultation sheet showing segmental body composition analysis and ranges is available for our full Tanita Professional Range.

Please note: suitable for Windows





PRO





## **Body Composition Measurements**



#### Weight



#### **Body Fat Mass**

The actual weight of fat in your body



#### **Body Fat Percentage**

The amount of body fat as a proportion of your body weight



#### **Total Body Water Percentage**

The total amount of fluid in your body as percentage of your total weight



#### **Muscle Mass**

The predicted weight of muscle in your body including skeletal muscles, smooth muscles and the water contained within your muscles



#### **Physique Rating**

Assesses your physique according to the ratio of body fat and muscle mass in the body



#### **Daily Caloric Intake**

Estimate of calories you can eat in 24 hours to maintain current weight



#### **BMR (Basal Metabolic Rate)**

Number of calories your body needs at rest



#### **Metabolic Age**

Age level your body is rated at, according to your BMR



#### **Bone Mass**

The amount of bone (bone mineral level, calcium, other minerals) in your body



#### **Visceral Fat Rating**

Indicates level of fat surrounding your vital organs in the abdominal area



#### **Muscle Score**

Muscle mass is judged by calculating the amount of muscle mass against your height and then the amount is classified.



#### **Body Mass Index**

Indicates the relationship between your height and weight



#### **Phase Angle**

Phase angle is an indicator of cellular health and integrity.



#### **ICW**

Intracellular Water is the fluid found inside cells. Usually 40% of your body weight is intracellular water



#### **ECW**

Extracellular Water is the body fluid found outside of cells.



#### **Protein**

The weight of protein in the body, protein is essential for the maintenance of muscle within the body



## Segmental Analyses of body fat and muscle mass

Body fat and muscle are analysed segmentally in order to assess fat and muscle distribution



#### **Sarcopenic Index**

A risk indicator for the individual developing Sarcopenia



#### %Total Body Water

45% to 60% **Female** Male 50% to 65%

**Athletic Body Types** 

5% higher than adult range



(1 - 12)Healthy level rating (13 - 59)



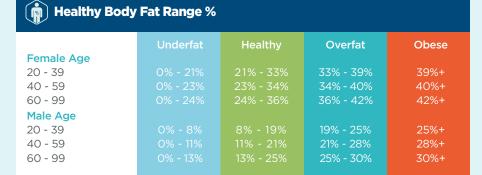
Female W	'eight	Healthy
		BM weight
less than	50kg	1.95kg

between 50kg - 75 kg 2.40kg over 76 kg 2.95kg

#### Male Weight Healthy **BM** weight

Less than 65kg 2.65kg 65kg - 95kg 3.29kg between over 95kg 3.69kg

## **Excess level rating**



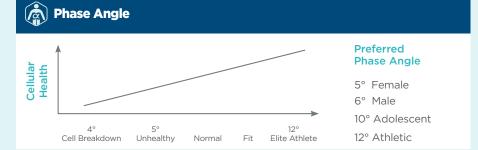
BMI

Healthy range 18.5 - 25

$\sim$			
(بالله)	Muscle	Mass	Score
	1.103010	1.1033	20010

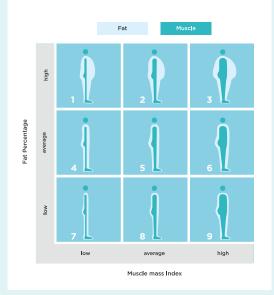
Muscle mass is judged calculating the amount of muscle mass against the person's

-4 -3 -2	2 -1 0	



#### Physique Rating

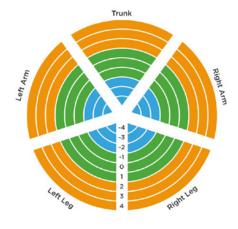
Result	Physique Range	Explanation
1	Hidden Overfat	High body fat % with low muscle mass
2	Medium Frame Overfat	High body fat %, moderate muscle mass
3	Solidly Built	Large frame, high body fat % & muscle mass
4	Low Muscle	Average body fat % & low muscle mass
5	Standard	Average levels of body fat % & muscle mass
6	Muscular	Average body fat % & high muscle mass
7	Low Muscle & Underfat	Low body fat % & low muscle mass
8	Thin & Muscular (Athlete)	Low body fat % & adequate muscle mass
9	Very Muscular (Athlete)	Low body fat % & high muscle mass



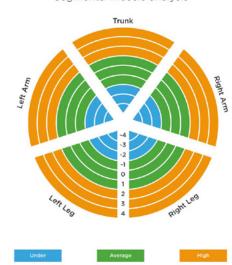
#### **Segmental Measurements**

8-electrode segmental technology to show body composition measurements for each arm. leg and trunk area.

#### Segmental fat analysis



#### Segmental muscle analysis





## MC-980 MA PLUS

Segmental Multi Frequency Body Composition Analyser with touchscreen display and Windows® OS

The MC-980 MA PLUS is the ultimate tool in providing fast in-depth information for truly personalised medical, health and weight management consultations. Incorporating the latest multi-frequency BIA technology with the flexibility of in-built Microsoft® Windows® real time OS software, this monitor provides fast, convenient and accurate information. The MC-980 MA PLUS provides a full medical grade body composition analysis in less than 30 seconds and has an easy-to-follow colour interactive touch screen display.



- · Accuracy grade: NAWI Class III
- · Medical Device Classification: MDD Class II-a

#### **LEVEL OF PERSONALISATION**

- Full segmental body composition analysis provided in 30 seconds using clinically accurate Tanita Multi Frequency BIA Technology.
- The Tanita device can be operated effortlessly using the intuitive touchscreen display which presents precise Tanita BIA data and allows easy transfer of results to PC or printer.

#### **INFORMATION OUTPUT**

- Software and detailed consultation sheets available in 14 languages.
- In-built Microsoft® Windows® real time OS allows client data to be automatically stored, managed and output. Windows 8 upgrade.
- USB ports allow simple data input/output and accessories to be connected including printers, bar code scanners and data capture devices.
- Tanita PRO Software compatible, allowing trend analysis, health risk assessments and full data management.



MC-980 MA PLUS print out



#### **Clinical Application** Weight Occupational Oncology Physiotherapy < Pharmacy Management Diabetes Rena **Bariatrics Paediatrics** Geriatrics / Cistic Fibrosis COPD Active ageing

Technical Specification	
Accuracy Grade	NAWI Class III
Medical Device Classification	MDD Class II-a
Age Range	5 - 99 years
Weight Capacity	300 kg
Graduation	0.1kg
Product Dimensions	450 x 490 x 1240 mm
Product Weight	33 kg
Power Source	230V
Interface	3 x USB



#### **Total Body Measurements**

- Weigh
- BMI
- Body Fat %
- Visceral Fat Indicator
- Fat Mass
- Fat Free Mass
- Muscle Mass
- Protein kg
- Total Body Water Kg
- Total Body Water %
- Extra-Cellular Water Kg
- Intra-Cellular Water Kg
- ECW/TBW Ratio
- Basal Metabolic Rate
- Basal Metabolic Rate Indicator
- Bone Mineral Mass Indicator
- Metabolic Age
- Physique Rating
- Phase angle
- Sarcopenia Index \*new\*

#### **Segmental Measurements**

- Segmental Body Fat %
- Segmental Body Fat kg
- Segmental Fat Distribution Analysis
- Segment Fat Distribution Rating
- Segmental Muscle Mass Kg
- Segmental Muscle Mass Rating
- Segmental Muscle Mass Balance
- Leg Muscle Score
- Segmental Reactance/ Resistance
- Segmental Phase Angle

#### **Information output**













- Accuracy grade: NAWI Class III
- Medical Device Classification: MDD Class II-a

#### **LEVEL OF PERSONALISATION**

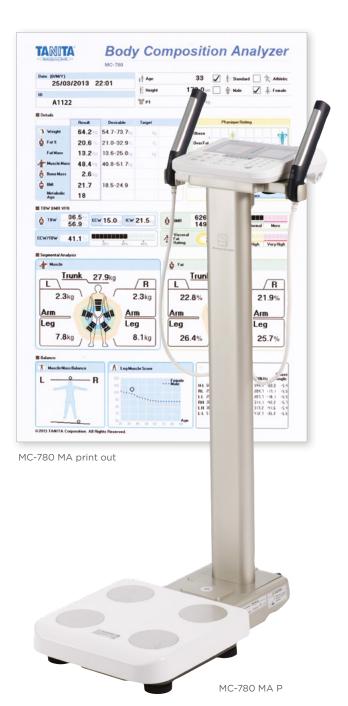
- Full and fast segmental body composition analysis using clinically accurate multi frequency BIA technology.
- · Certified for medical consultations.

#### **INFORMATION OUTPUT**

- In-built SD card facility allows data to be automatically collected and downloaded at convenience
- Client Identity feature allows continuous data to be collected for each client effortlessly. Also allows large anonymous data sets to be collated for research studies
- USB Connection
- Display console can be reversed for confidential readings with children or when large obese clients step on
- Output to any Pictbridge printer for a detailed client consultation sheet allowing a full client assessment.

Clinical Application									
Oncology	<b>✓</b>	Weight Management	<b>✓</b>	Occupational Health	~	Pharmacy	<b>✓</b>	Physiotherapy	<b>~</b>
Diabetes	<b>~</b>	Renal	<b>~</b>	Bariatrics	•	Paediatrics	<b>v</b>		
Cistic Fibrosis	~	COPD	<b>~</b>	General practice	•	Geriatrics / Active ageing	<b>~</b>		

Technical Specification		
Accuracy Grade	NAWI Class III	
Medical Device Classification	MDD Class II-a	
Age Range	5 - 99 years	
Weight Capacity	270kg	
Graduation	0.1kg	
Product Dimensions	(P) 360 x 360 x 1165mm	(S) 360 x 360 x 1165mm
Product Weight	(P) 22kg (S) 15.5kg	
Power Source	AC 100 - 240V	
Interface	RS232, USB, SD CARD	



#### **Total Body Measurements**

- BMI
- Body Fat %
- Visceral Fat Indicator
- Fat Mass
- Fat Free Mass
- Muscle Mass
- Physique Rating
- Total Body Water Kg
- Total Body Water %
- Extra-Cellular Water Kg • Intra-Cellular Water Kg
- ECW/TBW Ratio
- Phase Angle
- Basal Metabolic Rate
- Basal Metabolic Rate Indicator
- Metabolic Age
- Bone Mineral Mass Indicator

#### **Segmental Measurements**

- Segmental Body Fat %
- Segmental Fat Distribution Rating
- Segmental Muscle Mass Kg
- Segmental Muscle Mass Rating
- Segmental Muscle Mass Balance
- Segmental Reactance/ Resistance
- Segmental Leg Muscle Score
- Segmental Phase Angle

#### **Extra measurements only** available via software

Sarcopenic index

#### **Information output**













- Latest dual frequency 4C reactance technology
- Reactance/Resistance technology. Accuracy proven by validation paper from Pennington Biomedical Research Center (Louisiana State University)

#### **LEVEL OF PERSONALISATION**

• Full and fast segmental body composition measurements using the latest multi frequency BIA technology

#### **INFORMATION OUTPUT**

- Segmental data available on the thermal printer
- Segmental fat mass & total fat mass+ segmental muscle mass and total muscle mass directly shown on display
- Extra large LCD dual display shows analysis in an easy-to-read format
- Automatic data transfer through wireless Bluetooth connection to pad and Android tablet.
- Connection to thermal printer via cable

#### **OTHER FEATURES**

- In combination with App or Software, Phase angle is shown which gives an instant assessment of the nutritional state and muscle quality
- Lightweight and portable, suitable for mobile assessments

Technical Specification					
Age Range	5 - 99 years				
Weight Capacity	270 kg				
Graduation	100g				
Product Dimensions	(P) 395 x 390 x 1027mm (S) 395 x 390 x 67mm				
Product Weight	(P) 11.2kg (S) 8.3kg				
Power Source	9 V Adapter or 4 x AA Batteries				
Interface	RS-232C				



#### **Total Body Measurements**

- Body Fat Mass
- Total Body Water %
- Muscle Mass
- Physique Rating
- Bone Mineral Mass
- Basal Metabolic Rate
- Metabolic Age
- Body Mass Index
- Visceral Fat
- Phase Angle (in combination with App or Software)

#### **Segmental Measurements**

- Segmental Body Fat %
- Segmental Fat Distribution Rating
- Segmental Muscle Mass Kg
- Segmental Muscle Mass Rating
- Segmental Muscle Mass Balance
- Segmental Reactance/ Resistance
- Segmental Leg Muscle Score
- Segmental Phase Angle

#### **Extra measurements only** available via software

- Sarcopenic index
- Phase angle
- BMI
- Fat Free Mass
- Body Water Mass

#### **Information output**







**GUARANTEE** 



- · Accuracy grade: NAWI Class III
- Medical Device Classification: MDD Class II-a

#### **LEVEL OF PERSONALISATION**

- Full body composition analysis provided in 20 seconds using clinically accurate Tanita Dual Frequency BIA Technology
- · Certified for medical consultations

#### **INFORMATION OUTPUT**

- Integrated printer prints instant read out of results with topline analysis.
- Results automatically stored on the SD Card, sent to a PC or printed.
- Tanita PRO Software compatible, allowing trend analysis, health risk assessments and full data management.
- Print Out Analysis: Body Fat Analysis, Muscle Mass Indicator, BMR Indicator, Physique Rating, Target: BF and Weight

CLINICAL APPLICATION								
Oncology	~	Weight Management	<b>~</b>	Occupational Health	<b>~</b>	Pharmacy	<b>~</b>	Physiotherapy
Diabetes		Renal		Bariatrics	<b>~</b>	Paediatrics	<b>v</b>	
Cistic Fibrosis		COPD		General practice		Geriatrics / Active ageing	•	

TECHNICAL SPECIFICATION	
Accuracy Grade	NAWI Class III
Medical Device Classification	MDD Class II-a
Age Range	5 - 99 years
Weight Capacity	270kg
Graduation	100g
Product Dimensions	(P) 360 x 360 x 1070 (S) 360 x 360 x 94
Product Weight	(P) 13.5kg (S) 7kg
Power Source	AC 100 - 240V
Interface	RS232, USB, SD CARD



#### **Measurements**

- Body fat %
- · Fat mass kg,

TANITA

BODY COMPOSITION ANALYZER DC-430MA

26/JAN/2015 20:59

- Fat free mass kg
- Muscle mass kg
- Total Body Water %
- Body mass index
- Bone mass kg
- Physique rating
- Visceral fat rating
- Basal Metabolic Rate kcal
- Basal Metabolic Rate indicator
- Metabolic Age
- Print Out Analysis:
  - Body Fat Analysis
  - Muscle Mass
  - BMR Indicator
  - Physique Rating
  - Target: BF and Weight

#### **Extra measurements only** available via software

Phase angle

#### **Accessories**







**Paper Rolls** 

Bluetooth wireless connection Parani

#### **Information output**









## **DC-360**

### Dual Frequency Body Composition Monitor with Integrated Printer

Featuring Dual Frequency BIA technology, the DC-360 delivers full body composition analysis in 20 seconds. Results are instantly shown on the easy-to-read LCD screen and the integrated printer automatically prints the body composition measurements together with a top line analysis.

The robust, low profile platform provides additional client stability. For large data collection and convenience, all data can be stored on the SD Card for future use. Compatible with Tanita PRO Software, the DC-360 allows client trend analysis, health risk assessments and full data management.



#### LEVEL OF PERSONALISATION

• Full body composition analysis provided in 20 seconds using clinically accurate Tanita Dual Frequency BIA Technology

#### **INFORMATION OUTPUT**

- Integrated printer provides instant read out of results with topline analysis.
- Results automatically stored on the SD Card, sent to a PC or printed.
- Tanita PRO Software compatible, allowing trend analysis, health risk assessments and full data management.

CLINICAL APPLICATION							
Oncology	Weight Management	Occupational Health	Pharmacy	Physiotherapy			
Diabetes	Renal	Bariatrics	Paediatrics				
Cistic Fibrosis	COPD	General practice	Geriatrics / Active ageing				

TECHNICAL SPECIFICATION	
Age Range	5 - 99 years
Weight Capacity	270kg
Graduation	100g
Product Dimensions	(P) 360 x 360 x 1070 (S) 360 x 360 x 94
Product Weight	(P) 13.5kg (S) 7kg
Power Source	AC 100 - 240V
Interface	RS232, USB, SD CARD



#### **Measurements**

- Body fat %
- · Fat mass kg,
- Fat free mass kg
- Muscle mass kg
- Total Body Water %
- Body mass index
- Bone mass kg
- Physique rating
- Visceral fat rating
- Basal Metabolic Rate kcal
- · Basal Metabolic Rate indicator
- Metabolic Age
- Print Out Analysis:
- Body Fat Analysis
- Muscle Mass Indicator
- BMR Indicator
- Physique Rating
- Target: BF and Weight

#### **Extra measurements only** available via software

......

Phase angle

#### **Accessories**





TP-301 **Paper Rolls** 

**Bluetooth wireless** connection Parani

#### **Information output**





## **DC-240 MA**

Portable, high capacity medical grade body composition monitor with dual frequency reactance BIA technology

The DC-240 MA offers the latest Dual Frequency Reactance BIA technology in the lightest medically approved body composition monitor, weighing just 4.7kg.

It has been developed with input from healthcare, fitness and weight management professionals and its portability makes it ideal for mobile consultations, community work or field research studies.

It displays weight, body fat %, body water % and BMI readings on the oversized, easy to read display.

When combined with our Tanita Pro software, it provides 8 additional measurements, such as muscle mass, visceral fat and basal metabolic rate.

The Tanita Pro software, allows for automatic set-up for personalised patient studies, capturing measurements and trend results in a variety of reporting formats.



DC-240 MA

- Accuracy grade: NAWI Class III
- Medical Device Classification: MDD Class II-a

#### **LEVEL OF PERSONALISATION**

• The Tanita Pro software, allows for automatic set-up for personalised patient studies, capturing measurements and trend results in a variety of reporting formats.

#### **INFORMATION OUTPUT**

· Core body composition results shown on screen. All additional results can be accessed via Tanita PRO Software allowing trend analysis, health risk assessments and full data management.

#### **OTHER FEATURES**

- Lightweight and highly portable (4.7kg) perfect for field studies, mobile and community assessments
- Low profile platform for additional stability
- Dual-frequency 4 electrode
- · High weight capacity 200kg
- Calibrated up to 300,000 uses with automatic calibration after each measurement

TECHNICAL SPECIFICATION	
Accuracy Grade	NAWI Class III
Medical Device Classification	MDD Class II-a
Age Range	5 - 99 years
Weight Capacity	200kg
Graduation	100g
Product Dimensions	340 x 440 x 65 mm
Product Weight	4.7kg
Power Source	Battery: 9 V Adaptor or 6 x AA Batteries
Interface	USB



#### **Measurements**

- Body fat %
- Body water %
- BMI

#### **Extra measurements only** available via software

- Body Fat %
- BMI
- Fat Mass
- Fat Free Mass
- Body Water %
- Body Water Mass
- Muscle Mass
- Bone Mineral Mass
- Visceral Fat Level
- Basal Metabolic Rate
- Metabolic Age
- Phase angle

#### **Accessories**



C-300 CH Bag

#### **Information output**









- Accuracy grade: NAWI Class III
- Medical Device Classification: MDD Class II-a

#### **INFORMATION OUTPUT**

• Easy to read extra large digital display

#### OTHER FEATURES

- High weight capacity 270kg
- · Tare and weight lock facility
- Calibrated up to 300,000 uses with automatic calibration after each measurement

TECHNICAL SPECIFICATION	
Accuracy Grade	NAWI Class III
Medical Device Classification	MDD Class II-a
Weight Capacity	270 kg
Graduation	100 g
Product Dimensions	(P) 301x 336x 845 mm (S) 301 x 336 x 82 mm
Product Weight	(P) 7.1kg (S) 5.1 kg
Power Source	DC 9V Adaptor Included or 6 x AA Alkaline Batteries
Battery life	100 hours continuous use
Output data	RS232C
Warranty	3 Years



#### **Measurements**

- Weight
- Tare Facility
- Weight Lock

**Information output** 









## **WB-380**

### Digital Weighing Scale

The WB-380 is a 300kg high capacity precision digital scale featuring a BMI function.

The scale is available in three formats: portable, with a column mounted display or with an integrated height rod.



#### **INFORMATION OUTPUT**

- Large easy-to-read LCD display
- · Rotating display allowing confidential readings

#### OTHER FEATURES

- High weight capacity 300kg
- Step on activation
- Low level, stable platform for elderly or obese patients

TECHNICAL SPECIFICAT	TION
Maximum Capacity	300kg
Minimum Graduation	0.1kg
Measurement System	Mechanical Height Rod (WB-380 H only)
Range of Height	64cm - 214cm (WB-380 H only)
Input items - Height	61cm- 250cm 1cm increments
Output Items - Weight	300kg / 0.1kg increments
Output Items - Height	61cm- 250cm / 1cm increments
Output Items - BMI	0.1 increments
Overall size	S: 240 x 139 x 123 mm (Indicater) P: 395 x 595 x 1196 mm H: 395 x 552 x 1425 mm
Platform size:	395 x 390 x 59 mm
Product Weight	S: Total 7.1kg P: Total 10.0kg H: Total 11.2kg
Output Data Interface	RS-232C (D sub 9-pin Female connector) USB (B-type)
Power Source	AC adapter (included) Centre Minus DC 6V 200mA (LR6 - AA Alkaline Battery x 4)
Battery Life	Approximately 100 hours of continuous use
Warranty	3 years



#### **Measurements**

- Weight
- Weight Lock
- BMI
- Height

#### **Accessories**



C-300 Bag

#### **Information output**



**3 YEAR GUARANTEE** 

## **Accessories**



**C-360** 

## Padded Case with Wheels and Telescopic handle

- Compatible with DC-360 S
- Trolley Bag with wheels and pull up handle.
- Dimensions (inc wheels): H:69 x L:43.5 x W:20 cm



C-430

## Padded Case with Wheels and Telescopic handle

- Compatible with Tanita DC-430
- Dimensions (inc wheels):
   H:54 x L:39 x W: 19.5 cm



C-780

## Padded Case with Wheels and Telescopic handle

- Compatible with MC-780 MA S
- Padded Case with Wheels and Telescopic handle
- Padded interior for safe storage and handy internal pockets.
- Dimensions (incl wheels): H:69 x L:43.5 x W:27 cm



#### C-300 CH

## Padded Case with Wheels and Telescopic handle

- Compatible with DC-240 and WB-380.
- Total Handle Length 830 mm.
- Dimensions (inc wheels): 470 x 410 x 245 mm.





## **Bluetooth Adapter**

 Bluetooth adapter to wirelessly connect Tanita Professional devices

## **Payment options**

#### Leasing

Tanita now offers favourable leasing contracts for professional equipment. We offer leasing contracts ranging from 15 months up to 5 years with a possible "buying" option.

All we need to be able to help you to expand your business is:

- Company name and country
- Your name, email and title
- Chamber of Commerce number
- Your (business) phone number



#### Michelle McFarlane

Tanita UK and IRE Medical Representative

michelle.mcfarlane@tanita.eu 07795 280638



For more information contact our sales rep



# 50% IN ADVANCE >>>> THE REST IN 3 STEPS

We now offer you a new step-bystep payment plan\* that allows you to incorporate body composition analysis into your practice in a budget friendly manner.

#### How can you benefit from this:

- > Improve your patients/clients understanding of their body health, instead of just weight and BMI by measuring full body composition.
- Motivate your patient/client with our reports, including ideal values and objectives, which offer a clear overview of the results and changes over time.
- **Celebrate more small successes** with your patients/clients on their journey.

\*The Tanita payment plan has zero interest and no additional charges.

\*\*A direct debit mandate is required when ordering the device.

Payment plan applies to a selected range of products.



#### **HOW IT WORKS:**

1. Select the Tanita
BIA monitor that best
suits your practice
and only pay 50%
in advance

2. Easily set up your chosen BIA monitor with the expert guidance and training of our dedicated team

3. Simply pay the three remaining monthly payments via direct debit\*\*





Would you like a free demonstration, to discuss the clinical application or to get a non obligation offer?

Contact our Tanita team.

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