

Simplified work, quick measurement and medically relevant results – that is the seca mBCA 514.



seca mBCA 514

Technical data

- Capacity: 660 lbs
- Graduation: 0.1 lbs < 330 lbs > 0.2 lbs
- Dimensions (WxHxD):
38.43 x 49.25 x 32.6 inch
- Power Supply: Power adapter
- Display type: 8.4" touch-screen display, can be rotated 360°
- Interfaces: seca 360° wireless technology, USB 2.0, Ethernet
- Measurement method: 8-point Bioelectrical Impedance Analysis
- Measurement current: 100 µA
- Measurement time, normal mode: max. 20 seconds
- Frequencies: 19

seca | mBCA

High precision, scientifically proven –
the seca mBCA.



Contact us!

If you have any questions or would like to purchase the seca mBCA, you can reach us at **+1 800 542 7322**. You can also find more information about this product online at www.seca.com

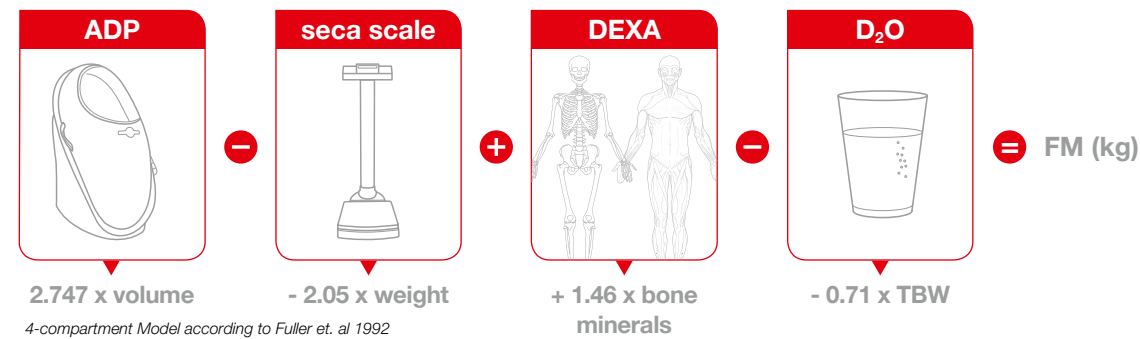
Unmet precision, high accuracy and consistent the seca mBCA defines the

reproducibility – new standard.

Gold standard

For the precise calculation of body composition, seca collaborated with scientists to develop formulas for calculating fat-free mass (FFM), skeletal muscle mass (SMM), total body water (TBW), extracellular water (ECW) and visceral adipose tissue (VAT). In bioelectric impedance analysis (BIA), accuracy describes the extent to which the seca mBCA matches the relevant gold standard. The term "gold standard" describes scientifically accepted reference measurement methods for determining the following parameters with maximum accuracy:

- FFM ▶ 4-compartment Model (4C)
- SMM ▶ Magnetic resonance imaging (MRI)
- TBW ▶ Deuterium dilution method (D₂O)
- ECW ▶ Sodium bromide dilution method (NaBr)
- VAT ▶ Magnetic resonance imaging (MRI)



Validation



The clinical validation of the seca mBCA is published in the BIA supplement of European Journal of Clinical Nutrition (EJCN):

Bosy-Westphal A, Schautz B, Later W, Kehayias JJ, Gallagher D. What makes a BIA equation unique? Validity of eight-electrode multifrequency BIA to estimate body composition in a healthy adult population. Eur J Clin Nutr 2013; 67: 14-21; doi:10.1038/ejcn.2012.160.

The European Journal of Clinical Nutrition is one of the most important nutrition journals in Europe as well as worldwide.

Accuracy

The following table shows the correlation between the seca mBCA measuring results and the respective gold standard method. R² values are close to 1 and a relatively low SEE shows the high accuracy of the seca mBCA.

Parameter	Reference measuring method	R ²	SEE
Fat-free mass (FFM)	4-compartment Model (4C)	0.98	1.8 kg
Skeletal muscle mass (SMM)	Magnetic resonance imaging (MRI)	0.97	1.2 kg
Total body water (TBW)	Deuterium dilution method (D ₂ O)	0.98	1.3 l
Extracellular water (ECW)	Sodium bromide dilution method (NaBr)	0.94	0.8 l
Visceral adipose tissue (VAT)	Magnetic resonance imaging (MRI)	0.81	0.6 l

→ Very good R² values with a simultaneously small SEE
→ Study published in the EJCN

Utilization



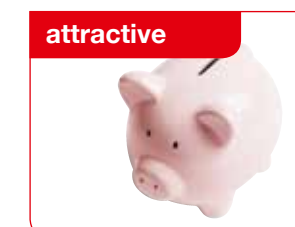
Usage

Conducting measurements with the seca mBCA is easy. The user only has to assure the correct position of hands and feet. In comparison to the gold standard methods, the seca mBCA measurement can be conducted by anyone in your team.



Time

All gold standard methods require a high amount of time, the seca mBCA delivers measurements in less than 20 seconds.



Amortisation

While every gold standard method requires its own device or procedure for the determination of the body composition, the seca mBCA is an all-in-one device.