COSMED
37, Via dei Piani di Monte Savello
I-00040 Rome ITALY (www.cosmed.it)

Last Name:	Female		
First Name:	Subject		
ID:		**Date (dd-mm-yyyy):**	06/11/2006
Test conducted by:		**Gender:**	Female
Height(cm):	165	**Weight(Kg):**	56
Age:	28	**BMI(Kg/m^2):**	20.5

Resting Metabolic Rate

t mm:ss	VO2 ml/min	Ve l/min	Rf 1/min	HR bpm	FeO2 %	RMR kcal/day
00:30	281	6.9	9.6	0	16.06	1953
01:00	262	6.3	10.4	0	15.94	1827
01:30	277	6.8	10.0	0	16.05	1929
02:00	215	5.9	9.7	0	16.56	1499
02:30	175	4.7	10.7	0	16.48	1216
03:00	224	5.1	11.3	0	15.67	1559
03:30	302	7.1	10.7	0	15.84	2100
04:00	284	7.3	11.7	0	16.27	1977
04:30	240	6.8	11.5	0	16.71	1668
05:00	209	5.9	11.8	0	16.69	1454
05:30	215	5.9	11.6	0	16.57	1495
06:00	237	6.5	10.8	0	16.57	1648
06:30	223	6.2	10.8	0	16.63	1550
07:00	230	6.6	10.9	0	16.75	1604
07:30	222	6.4	11.4	0	16.77	1548
08:00	223	6.9	11.5	0	17.06	1553
08:30	229	6.5	12.8	0	16.72	1591
09:00	265	7.8	12.1	0	16.86	1846
09:30	270	8.7	14.4	0	17.21	1882
10:00	278	8.7	13.7	0	17.10	1938
10:30	205	7.0	13.1	0	17.43	1425
11:00	191	5.7	12.5	0	16.92	1329
11:30	257	7.5	11.4	0	16.82	1792
12:00	243	7.1	13.2	0	16.84	1688
12:30	237	7.0	13.1	0	16.87	1652
13:00	261	7.5	13.7	0	16.76	1818
13:30	243	6.9	11.4	0	16.72	1689
Averaged values						
10:30	241	6.9	12.2	0	16.77	1678

Resting Metabolic Rate (Kcal/day)

1678

Slow	Normal	Fast
<1174	1174-1556	>1556

RMR printout with tabular data (VO_2, VE, Rf etc.) and final measurement of Energy Expenditure.

Technical Specification

Main Functions

Oxygen Consumption	*Resting Energy Expenditure, REE, RMR, BMR, EE (Kcal Day), VO2, VE, FeO2, Rf, HR (optional)*
Measurement Time	*15 min (default), user defined*
Additional Testing	*Body composition, Weight Management Program, Standard measurements (blood pressure, waist and hip circumferences, resting heart rate, BMI...)*
Software Features	*Data management, Daily caloric intake, Cardiovascular Risks analysis, Trends*
Sampling Type	*Dynamic Mixing Chamber (international patent)*
Sampling Rate	*30 sec*

Oxygen Analyzer

Type	*GFC (Galvanic Fuel Cell)*
O_2 Measurement range	*0-22%*
Calibration	*Automatic on room air*
Warm-up time	*None*
Accuracy	*±0.02%*
Lifespan	*12-18 months*

Flowmeter: Bidirectional digital turbine Ø 18mm

Ventilation range	*0-50l/m*
Flow resistance	*<0.7cm H2O/l/s@3l/s*
Accuracy Flow/Volume	*±2%*

Hardware

Dimensions & Weight	*24 x 20 x 8 cm / 1.5kg*
Display	*Color LCD 320 x 240 pixel*
Printer	*High speed thermal printer 12 cm (4,7 in)*

Standard Packaging Includes

Fitmate unit, RMR - Flowmeter, RMR masks (10 pcs), AC/DC Adapter, USB cable, Fitmate PC Software (CD-Rom), Skin-fold caliper, Body meter, Fitmate pedometer, Oxygen sensor,

Available languages

Italian, English, German, Spanish, Greek, simplified Chinese, French, Dutch.

Safety & Quality Standards

Equipment complies with MDD (93/42 EEC);
EN 60601-1 (safety) / EN 60601-1-2 (EMC)
FDA 510(k) cleared.

CE 0476

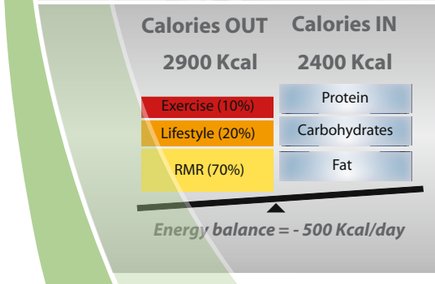
COSMED
Pulmonary Function Equipment

fitmate® Wellness Technology

Nutritional Assessment

The first and unique desktop system for Accurate, Quick & Simple Nutritional Assessment

- Accurate measurement of Resting Energy Expenditure (REE, RMR, BMR)
- Affordable, portable, compact and easy to use
- Built-in application for developing individual Weight Management programs
- Includes Body Composition and standard measurements
- Independently Validated vs. Gold Standard Technique



COSMED
Pulmonary Function Equipment

Fitmate is the first product available in the market designed for providing accurate, Resting Energy Expenditure (REE, RMR) in any field dealing with obesity and malnutrition. Before Fitmate Nutritional Assessment was only available in Hospital or big clinics. The measurement of an important component of each individual weight management program has been expensive and inconvenient. Measuring Metabolism with Fitmate is now affordable, simple and quick.

Fitmate can be used in a variety of settings including:

- Clinical Nutrition, Obesity treatment, diabetes, malnutrition, preventive medicine centers.
- Commercial Weight Management, weight loss clinics.
- Health Clubs, Beauty, SPA
- Respiratory care in conjunction with obesity or malnutrition (COPD, sleep disorders).
- Catheterization lab where there is the necessity to measure Cardiac Output (Direct Fick method)
- Sport nutrition and more.

Accurate Indirect Calorimetry

Fitmate is an accurate device for indirect calorimetry. The system measures Oxygen Consumption (VO2) in real time, by means of a dynamic mixing chamber (patented) and provides averaged data on a 30 seconds (or more) basis. Testing REE is simple and fast. At the end of the test results are automatically printed out by the built-in printer.

Data Input. If you rely on other devices for body composition (e.g. BIA, Infrared or DEXA) you may continue using them by entering the measured value in the Fitmate dialog box. It allows the use of existing devices and benefits of a consistent way to manage the assessment reports to clients.

Individual Weight Management Program

REE value is fundamental to define a customized weight management program based on each energy balance (the difference between energy intake and expenditure). In order to calculate an individual energy balance equation Fitmate includes a powerful, user friendly feature for elaborating the ideal program based on the optimal daily caloric intake and level of exercise. Estimation of energy expenditure related to each subject's lifestyle is possible through questionnaires or direct measurement by means of a pedometer or an activity.

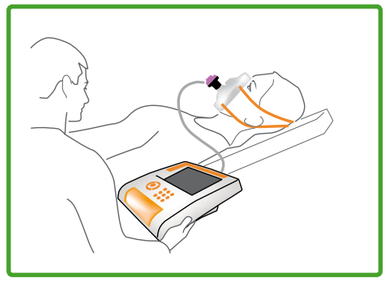
Monitoring Lifestyle & Physical Activity

Fitmate includes specific tools to help professionals monitor daily physical activity. With Fitmate you can estimate daily energy expenditure by using different algorithms. A pedometer is included with every Fitmate. The software will convert steps per day entered into the Energy Expenditure (Kcal/day).

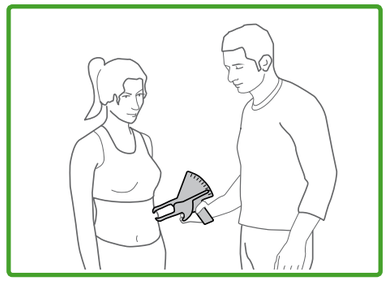
Body Composition

Body composition is one of the most important assessment to check if either diet or lifestyle changes has decreased % body fat and increased lean body mass. Fitmate handles this assessment in different ways:

Skinfold. Fitmate includes a caliper for measuring skin-fold with a 3 measurement algorithm. Simply enter the data measured with a caliper and confirm. PC software allows to measure body composition with either 3 or 7 site skin-fold measurements.

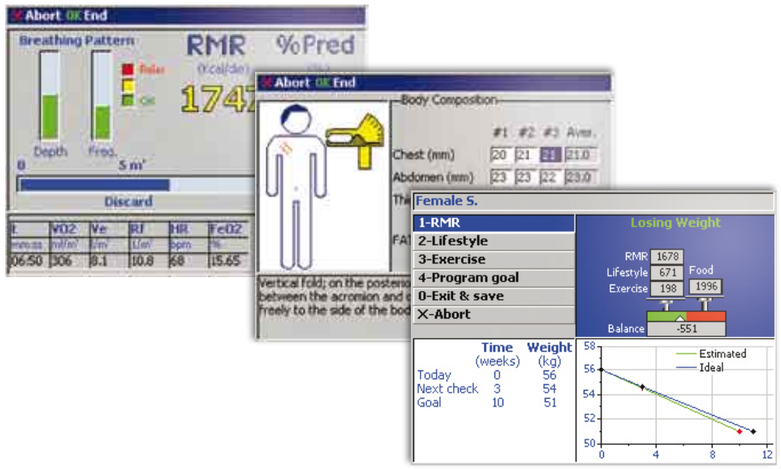


Resting Energy Expenditure (REE, RMR, BMR)



Body composition with skin-fold caliper

Data download on PC Software



Accurate	Fitmate has been validated against the "gold standard" Douglas Bag technique
Portable, Handheld	Battery operating and weighing less than 2 kg (5 lbs), Fitmate can be used within hospital departments or even for outpatients. Built-in printer delivers high quality reports of any assessment in just a few seconds
No warm-up time	Plug it in and Fitmate is ready for use
Quality Control	Fitmate displays real time data (VO_2, EEkcal/day, VE, Rf, FeO_2, HR) for continuous data monitoring. Warnings and quality control messages (mask leaks, inappropriate breathing pattern...) are displayed if anything wrong occurs during the test
Self-Calibrating	Fitmate calibrates in less than 20 seconds, saving time for health care professionals and eliminating the need for complex calibration procedures
Single patient Use Face Mask	Designed to be comfortable and a medical-grade high efficiency antibacterial filter eliminates the risk of cross-contamination or the need of expensive and time-consuming cleaning procedures
No maintenance	Fitmate does not require specialized technical service. Ordinary maintenance requires few operations (O_2 sensor replacement) that can be done by the user in just a few seconds
PC Software	Fitmate includes a powerful PC software running with Windows XP. Data can be downloaded from Fitmate device to a PC for data management, trends and cardiovascular risk analysis.

Fitmate and all the accessories are provided together with a nice and practical carrying case.

Fitmate uses disposable Face Mask (patent) for eliminating risk of cross contamination.

The O_2 sensor has to be replaced every 12-18 months.

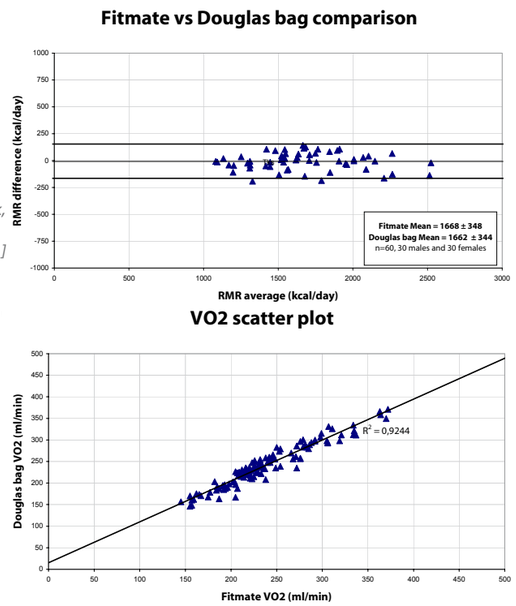
Proven Accuracy

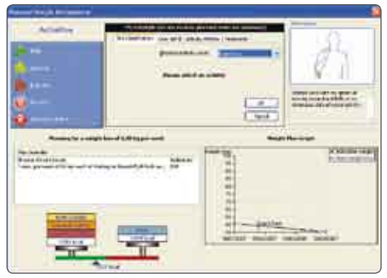
Fitmate Validation

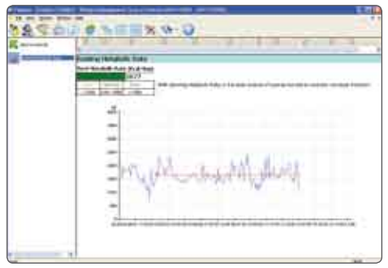
Abstract from: Validation of COSMED's Fitmate™ in measuring oxygen consumption and estimating resting metabolic rate. [David C. Nieman, Melanie D. Austin, Laura Benezra, Steven Pearce, Tim McInnis, Jess Unick, Sarah J. Gross. Research in Sports Medicine, 14: 1–8, 2006.] Bland-Altman plot depicting absolute differences in resting metabolic rate values between the Douglas bag and Fitmate methods versus mean values (n=60, 30 males and 30 females).

Comparison of Oxygen Consumption (VO2), between the Fitmate and Douglas Bag Methods during 2 comparison tests (n=60 all subjects combined).

The validation shows a great correlation (R2= 0.9244)







PC Software screenshots for Weight Management Program (above) and RMR - Resting Energy Expenditure (below).