jwρ

			(g)	Energy(kcal)	Protein(g)	Fat(g)	Carbohydrate(g
TING SET			78	115	5.0	2.3	18.5
		FINISH		66	4.1	3.0	5.8
				20	0.3	0.1	4.7
	MEASURING		0.66	53	1.4	3.8	3.4
			CANCEL	286	18.1	16.7	15.8
				127	8.4	5.7	10.6
				52	2.2	1.2	8.2
			136	208	11.4	8.1	22.4

MEXT Ministerial Award for Science and Technology

MEXT Ministerial Award for Invention

Received the Monodzukuri Nippon Grand Award

Food Calorie Measuring Equipment

Calorie Answer®



CA-HM Measurement Guide





Transmission measurement method for liquids

Reflection measurement method for solids

Connect to PC

CA-HM makes it possible to measure the amount of nutritional content in a short time

A PC is not included with the CA-HM main unit



Calorie Answer employs a near-infrared spectroscopic analysis method, which uses the "transmission measurement method" for liquid samples and the "reflection measurement method" for powder and solid samples, and is capable of measuring nutritional components such as protein, fat, carbohydrate, and moisture as reference values in addition to calories in the measured product.

Features of Calorie Answer

- Measurements can be made in a short time. There are conventional methods of knowing the nutritional components of foods, such as database calculations and requests for analysis to specialized institutions, but immediate response is difficult.
- A wide variety of food items are grouped and the optimal measurement mode is prepared. The measurement mode can also be easily searched with a pop-up display.
- Can be operated via USB connection to a PC on which the supplied software is installed.
- Retention of measurement data history enables data comparison for each item using the filtering function.
- It is a measurement value per 100g, but it can be changed to any weight, and the result of each item is automatically converted. The amount of sodium and salt equivalent will be measured separately with a sodium meter.

Salt equivalent is converted by inputting the sodium measurement value into the calorie answer sodium section.

Introduction of various measurement modes

17 measurement modes based on the Standard Tables of Food Composition in Japan

Consists of cereals, potatoes and starches, sugar and sweeteners, beans, nuts and seeds, vegetables, fruits, mushrooms, algae, seafood, meat, eggs, milk, oils and fats, confectionery, seasonings and spices, and prepared processed foods.

12 original measurement modes

Consists of fried food, simmered food, sushi, salad, soft drinks, coffee drinks, curry and stew, miso soup/soup, alcoholic drinks, Chinese food, fish roe, and bread.

6 modes are selected from the above items as standard equipment.

(Installation of all modes are also available)

* We can also separately create an original mode in accordance with your use, so please consult us.

* 1 The specifications of the original mode will be decided upon consultation, however, please understand that we may not be able to meet all of your requests.

Transmission Measurement Method

The adoption of the transmission measurement method makes it possible to measure foods and beverages that are difficult to measure with the reflective measurement method due to their high water content.

① Control cell measurement



With the measurement chamber empty, close the door and press the start button to begin measurement.



After completing the measurement, set the sample and press the start button to begin the measurement.

Measurement Mode Sample Nam		Milks					1	
Transmission			Yogurt drinks		Measuring examples including			
	No name				Yoguit drinks. Thetatetangedicangentation of the subject components on take			
Yogurt drinks	Notianis				Energy(kcal) : 28-64 Protein(g) : <4 Fat(g) : <1			
Select					Carbohydra	ate(g): 5-14 Water(g): 84-9	3 Alcohol(%) : 0	
		D				ing examples inclu		
vieasurement Mode		í l	Lactobacillus drinks		Lactobacilus drinks and Lactobacilus concentrate.			
Coreals	Seasonings and spices				The lage targe of concertation of the nutiest components process Energy (kcal): 28-192 Protein(g): <2 Fat(g): <1 Carbothydrate(o): 7-46 Water(o): 52-93 Alcohol (%): (
Potatoes and starches	Prepared foods							
Sugars and sweeteners	Chinese							
Puises	Fish roe		Condensed milks, Ice creams		Measuring examples including			
Nuts and seeds	Deep-fied foods				loe cream, loe milk, Ladic loe, and Condensed milk. Thetagetarge/concertation/ifterutiantcomponents_protog Energy(kcal): 28-328 Protein(g): <7 Fat(g): <10			
Vegetables	Boiled foods							
Fuls	Sushi	Energy(kc		Protein(a)	Fat(g)	Carbohydrate(q)	Water(g)	
Mushrooms	Breads and Buns		-	(0)			vvaier(g)	
Algae	Salada	52	8	8.3	27.5	61.8		
Fishes and shelfshes	Soft dinks	48	2	5	24.5	60.3	4	
Meats	Coffice drinks	53	7	8.1	53.2	6.6	31	
Eggs	Curries, Staws							
Mila	Miso scupa Soupa	31	5	4.5	8.2	55.8	30	
Fats and oils	Alcoholic dinis	20	4	7.5	10.1	20.7	61	
Confectioneries	Test	17		6.5	4.5	26.4	62	

Reflection Measurement Method

The adoption of the reflection measurement method enables measurement of raw materials and food products that have been crushed and homogenized with powders, solids, and other materials.

1 Control cell measurement



Set the control cell in the measurement chamber, close the door, and press the start button to begin reference measurement.

2 Specimen measurement



After measuring the control cell, replace the cell with the sample cell and press the start button to begin the measurement.

Total measurement completed in about 3 mins.

Measurement Mode	Sample Name	(Cereals	in and the second second		1	
				Measur	ing examples inclu	ding	
Cereals SCREENING	No name		Cereals SCREENING (also powdered rice)		Raw rice powder, Comflakes, and Plain bread (Raw or processed cereals).		
Select			(_	The taget ange of concentration of the nutrient components prevage		
Aeasurement Mode		n.			Energy(kcal) : 200-580 Protein(g) : 3-10 Fat(g) : <39 Carbohydrate(g) : 22-89 Water(g) : <74 Alcohol(%) : 0		
Cereals	Seasonings and spices	1 8					
Potatoes and starches	Prepared foods			Measur	Measuring examples including		
Sugars and avventances	Chinese		Cereals	Boiled rice a	aalis).		
Pulses	Fish roe	1 1	(under 200kcal)	Reference The taget angeof concertation of the ruli entition ponents per st			
Nuts and seeds	Deep-fied foods			Energy(kcal): 35-199 Protein(g): <6 Fat(g): <3			
Vegetables	Boiled foods			Carbohydra	1 Alcohol(%) : 0		
Fuls	Sushi			And the second s	Martin		
Mushrooms	Breads and Buns			Measur	ing examples inclu	ding	
Algae	Salads	Energy(kd	al) Protein(g)	Fat(g)	Carbohydrate(g)	Water(g	
Fishes and shellshes	Satidinks	52	8 8.3	27.5	61.8		
Meats	Coffice chinks				1000		
Eggs	Curries, Staws	48		24.5	60.3		
Mills	Mso scupe/Scups	53	7 8.1	53.2	6.6	3	
Fats and oils	Alcoholic drinks	31	5 4.5	8.2	55.8	3	
Confectioneries	Test	20	4 7.5	10.1	20.7	6	
		17	2 6.5	4.5	26.4	6	

Management and Collaboration

Management of measurement data with the included software, and expanded applications through linkage with sodium analyzers



Included software "JWPCA-HM Client"

Main functions:

Measurement mode selection/specimen name input Device control (start/cancel)

Automatic conversion per gram, measurement history table management

Filtering, text output of measurement history, etc.



Salt equivalent conversion function:

It is possible to add "salt equivalent g" and "sodium mg" to the CA-HM measurement results by inputting the value obtained by sodium measurement into the sodium (mg) section.

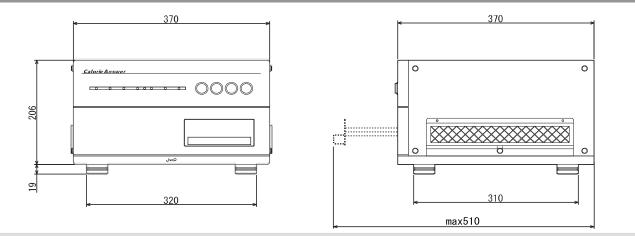
Main Specifications

Specifications are subject to change without notice

Model	CA-HM
Power supply used	AC100V 50/60Hz
Power consumption	100W(max)
Equipment weight	About 14 Kg
Measurement Time	About 3 minutes (Control cell measurement/sample measurement)
Measurement Object	Ingredients, food products in general (solid, semi-solid, liquid)
Measurement Item	Calories per 100g (calories) (Reference values: protein, fat, carbohydrates, water, alcohol) *Alcohol measurement is included depending on the installation
Installation location	Avoid places with high temperature and humidity/No condensation/ Provide a space of 20 cm or more around the device
Accessories	1 control cell / 1 specimen cell eachs (for transmission/reflection)/ lamp / lamp replacement jig / power cable / communication cable / software installation disk
Software Operating Environment	[Supported OS] Microsoft Windows 7 or higher (32/64-bit version) [CPU] 32-bit/64-bit processor of 1 GHz or higher [Memory] 1GB or more [Hard disk] 500MB or more free space [Software] Office Excel

* Please confirm the measured values with the equipment and software before

External dimensions of measuring section



Joy World Pacific Co., Ltd.