

Calory Answer

コンピュータ本体・液晶モニター・マウス・キーボードは付属しません



Non-Contact Analyze of Nutrition Value

by

Near Infrared Spectroscopy Technology

Exported by Higuchi Inc. from Japan

Made by Joy World Pacific Co., Ltd. Japan

Test Results: Calory Answer

		in 100g sample						
Sample	Used Mode	Calorie (kcal)	Protein(g)	Fat(g)	Carbohydrate(g)	Moisture(g)	Sodium(mg)	Salt(g)
		432	7.6	10.0	77.8	2.6	320	0.8
Biscuit	Snacks	434	8.4	12.8	71.3	3.0	394	1
		434	8.4	12.9	71.1	3.0		
		433	8.2	13.1	70.7	3.0		
	Average	433.7	8.3	12.9	71.0	3.0	394.0	1.0

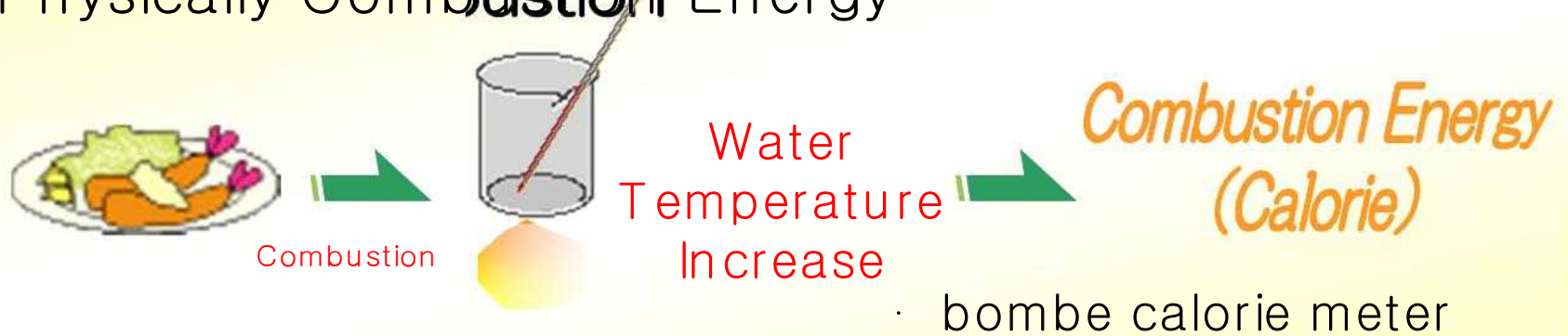
Sample	Used Mode	Calorie (kcal)	Protein(g)	Fat(g)	Carbohydrate(g)	Moisture(g)	Standard Table of Food Composition in Japan 5th Revised and Enlarged Edition (五訂増補日本食品標準成分表、文部科学省)	
		264	9.3	4.4	46.7	38.0		
Bread	Rice, Prepared food, Bread	286	12.0	8.8	39.7	38.0		
		286	11.7	8.9	39.9	39.0		
		286	11.6	8.8	40.0	39.0		
	Average	286.0	11.8	8.8	39.9	38.7		

Sample	Used Mode	Calorie (kcal)	Protein(g)	Fat(g)	Carbohydrate(g)	Moisture(g)		
		745	0.6	81.0	0.2	16.2		
Butter	Seasoning (rich fat)	711	0.0	78.3	1.6	14.0		
		716	0.0	79.0	1.3	15.0		
		711	0.0	78.2	1.8	15.0		
	Average	712.7	0.0	78.5	1.6	14.7		

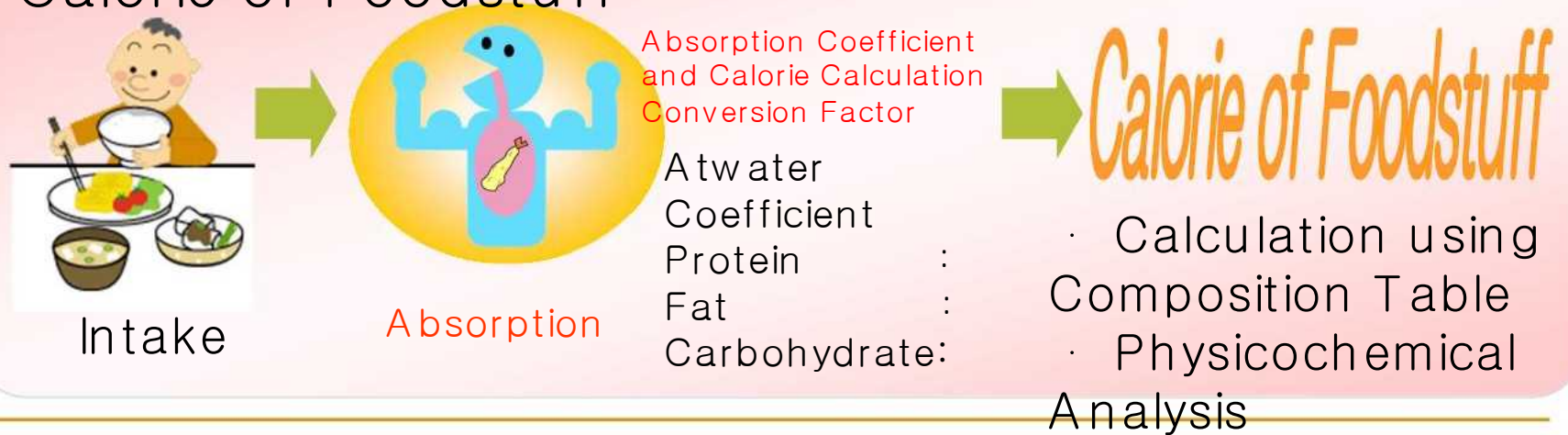
Sample	Used Mode	Calorie (kcal)	Protein(g)	Fat(g)	Carbohydrate(g)	Moisture(g)	Alcohol (g)	Alcohol (%)
		40	0.3	0.0	3.1	92.8	3.7	4.6
Beer	Brewed beverage	37	0.0	0.0	2.8	93.0	3.7	4.6
		37	0.1	0.0	2.8	92.0	3.6	4.5
		43	0.0	0.0	4.2	91.0	3.7	4.7
	Average	39.0	0.0	0.0	3.3	92.0	3.7	4.6

Calorie of Foods . . .

Physically Combustion Energy

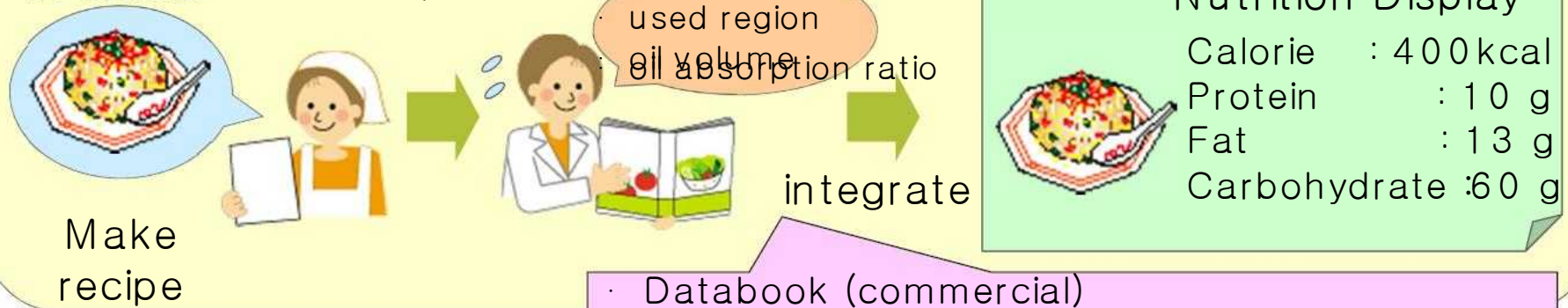


Calorie of Foodstuff



Calculation of Food Calorie

Use Standard Table of Food Composition
(Database) Japan



It is normally calculated the calorie of cooked foods by dietitian from the estimated volume based on formulated raw materials by using Standard Table of Food Composition, in Japan.

- Databook (commercial)
- Calculation Software



Example



Fried Rice(200 g) : Formulated materials

Rice	Egg	Oil
Carrot	Green Peas	Seasoning
Onion	Ginger	Seasoning
Green Onion	Pork	

Calculate the Calorie of Rice
 Calculate the Calorie of Carrot

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+) Calculate the Calorie of Seasoning

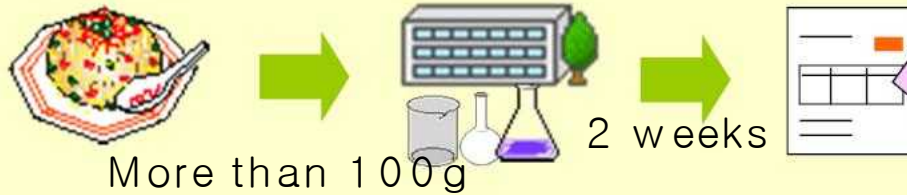
Total Calorie of Fried Rice = **400 kcal**

Estimate the each raw material weight and calculate the Calorie of each materials based on the Database
 ※Pork might be designated its used position.

※ Not possible to calculate the Calorie from leftover foods

Calculation of Food Calorie

Physicochemical Analysis at Food Analytical Institute



Analyze request

Analytical Institution

CoA

Check items

Calorie [kcal]
 Moisture [g]
 Protein [g]
 Fat [g]
 Carbohydrate [g]
 Ash [g]
 Sodium [mg]

Test methods

※ 1
 Evaporation
 Kjeldahl
 Acid hydrolysis
 Deduction
 Direct Inciation
 Flame atomic absorption

Energy conversion coefficient

Standard	Atwater coefficient	Summation of each composition weight x Coefficient
	Protein :	
	Fat :	
	Carbohydrate :	
Deatall	FAO/WHO (Average Value of the World	
	Atwater (Universal Standard)	
	Coefficient of each food component (Japan Original)	

※ 1 :Energy calculation based on
 Standard Nutrition Table Japan





		Calorie (kcal)		Carbohydrate (g)		Protein (g)		Fat (g)	
Marinated Spinach	Calculation	30.4		7.9		3.0		0.4	
	A	34.0	A/B	4.7	A/B	2.9	A/B	0.4	A/B
	B	68.1	100%	11.5	145%	4.4	52%	0.5	25%
Fried Chinese Noodle Salty Taste	Calculation	170.4		14.8		5.1		5.7	
	A	168.0	A/B	14.9	A/B	4.5	A/B	8.9	A/B
	B	173.8	4%	18.0	21%	6.1	36%	4.4	14%
Spaghetti Napolitans	Calculation	245.2		35.8		7.5		7.2	
	A	145.0	A/B	23.2	A/B	6.1	A/B	3.1	A/B
	B	181.7	25%	29.4	27%	6.8	12%	4.1	32%

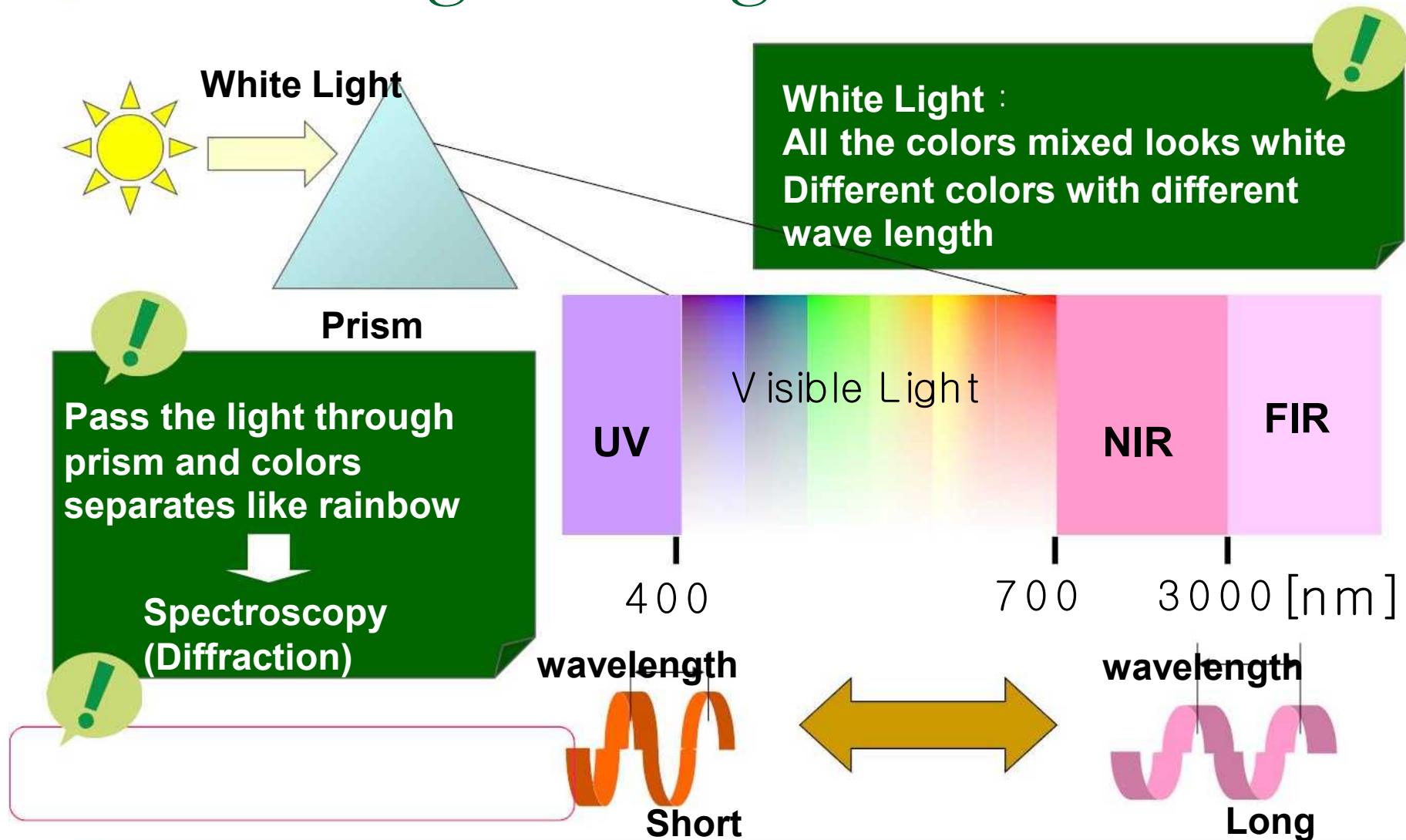
Calory Answer

About Calory Answer



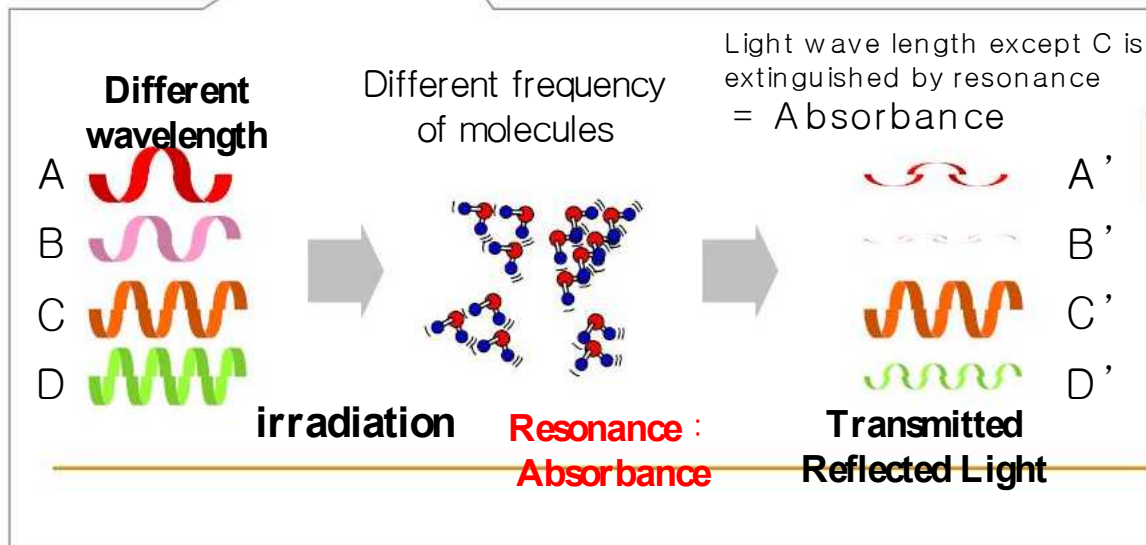
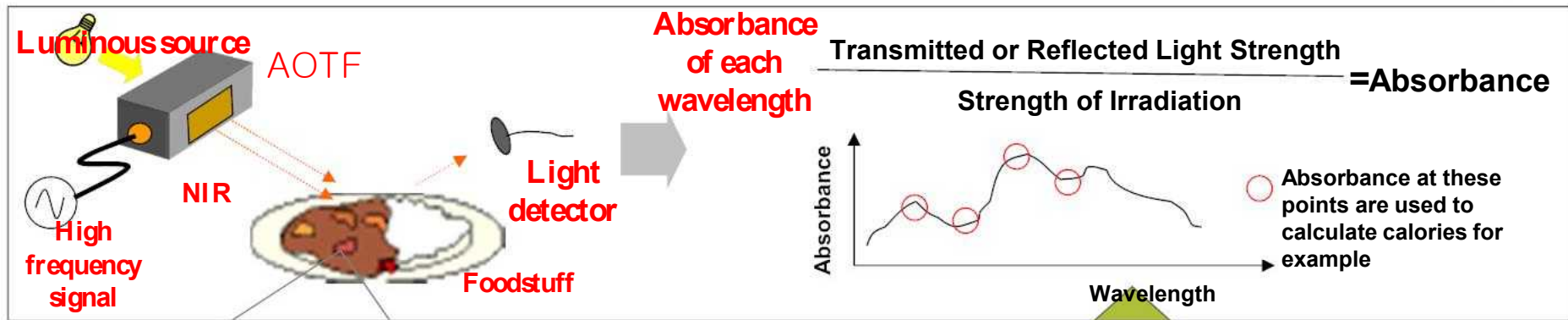
- Use Near Infrared Light
- Easy and Simple measurement operation for Everybody
- Possible to measure cooked foods without knowing those recipes
- Nondestructive and Non-contact Inspection
- Patented Technology

Wave Length of Lights and Colors



Light absorbance

When irradiated same energy light as biding energy of carbohydrate, hydrogen and oxygen, which composed of foodstuff, light energy based on those amounts are extinguished.



Measure the absorbance intensity of reflected or transmitted light at each irradiated wavelength.

Applications

Fully use

Uses for

Displaying
Nutrition Value

New Products
Development

Nutrition intake
counseling



Display of calorie and nutrition value for own products
Speed up tool for new products developments
Control of nutrition by checking of leftover foods
Quality control from recipe after cooked

Solution (Utilization example)

Target

At restaurant · Display of calorie in the menu !

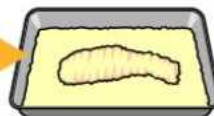
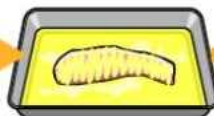
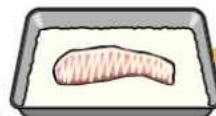
Upgrading of company image
Consumer satisfaction up

Calorie calculation by dieticians

Problems!

Cook does not want to disclose the recipe
Difficult to know the volume of a batter of fried foods
More than 100 thousand of calculation items
No recipe available

Settled



A batter fallen off at the time of drawing up
How much is the oil absorption volume?

How much were flour, egg and bread crumb coated on?

Installation recommendation and its effects

Purpose	Object	Effectiveness
<ul style="list-style-type: none"> · Display of calorie · Insistence of company stance · Increase efficiency of dietitian · Substitution of physicochemical analysis 	<ul style="list-style-type: none"> · Restaurant chain · Daily foods shops 	<ul style="list-style-type: none"> · Increase of consumer sufficient · Increase of marquee · Cost down
<ul style="list-style-type: none"> · New product development · Development of cooking devices · Manufacturing process control · Control of raw materials 	<ul style="list-style-type: none"> · Restaurant Chain · Food industries · Electronic industries · Cooking devices manufactures 	<ul style="list-style-type: none"> · Shorter development time · Additional value for products · Stable quality · Cost down