

Raw Ingredient/Product Standards

Wadaman Science Co., Ltd.

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Product name	Sesame Young Leaf Powder (<u>Domestic product</u>)
Product features	Sesame Young Leaf Powder is the fountain of the power of sesame. It contains plenty of folic acid and polyphenol. Acteoside is also contained.
Label name examples	Sesame Young Leaf Powder, Sesame Leaf Powder
Standard daily intake	2~6g. No special laws apply as this product is food.

■The following two types of raw ingredients have been used since 2016:

(1) Kagoshima grown

(2) Shimane grown (organic sesame young leaf powder)

1. Main raw ingredient

Ingredient name	Blend ratio	Standards	Additives
Sesame leaf ground product	100%	Company's standards	None

2. Quality standards *■shows reference values outside the standards.

Items	Standards description	Analysis/Test method
Properties	No abnormal taste or smell; having distinct taste	Comparing with standard products
Moisture content	No more than 10% (provisional value)	Normal pressure heat drying method
Aerobic plate count	No more than 3000 count/g	Standard plate agar medium method
Coliform group	Negative	<u>BGLB medium method or desoxychilate agar medium method</u>
Arsenicum (As ₂ O ₃)	No more than 2ppm	Atomic absorption spectrophotometry
Heavy metal (Pb)	No more than 20ppm	Sulphuretted sodium colorimetric method
Foreign substance	Not allowed	Metal detector, ferrous magnet, visual inspection
Total pheophorbide*	No more than 80mg%	
Existing pheophorbide*	No more than 80mg%	
Acteoside	Confirmation of contamination	High performance liquid chromatograph

* The standard values of pheophorbide are set based on the values of products underwent an accelerated test. Analysis by lot is not conducted. The standards of pheophorbide is applied to Shimane grown only.

* Acteoside is measured in each production year.

3. Specific (allergic) raw material information Use of specific (allergic) raw materials (Y / N)

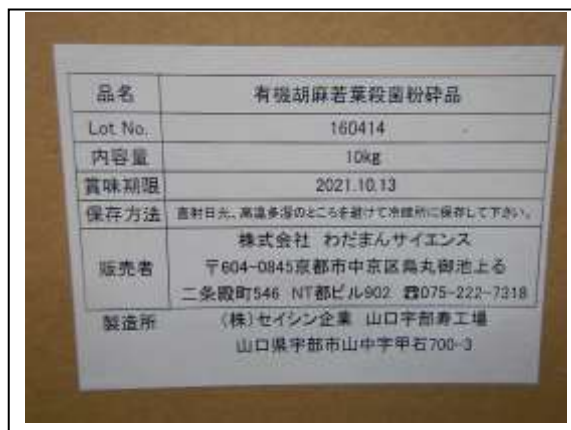
4. Manufacturing process

Raw ingredient washing → Cutting → Blanching → Cooling → Dehydrating → Heat drying → Wind sorting → Metal detector → Smashing → Pasteurization → Fine grinding → Screening → Magnetic sorting → Measurement → Metal detection → Packaging → Shipping *200 mesh

5. Packaging form 10kg (Inside: Double-layer plastic bag; Outside: Cardboard)

<Lot label example of organic sesame young leaf powder after April 2016>

■Outer package



Lot: WDE-0031014
 Product name: Sesame Young Leaf
 Net content: 10 kg
 Seller: XX Co., Ltd.

Product name	Organic Sesame Young Leaf Pasteurized and Ground Product
Lot No.	160414
Net content	10 kg
Best before	2021.10.13
Storage conditions	Please avoid direct sunlight, heat, and humidity and keep in a cool dark place.
Seller	Wadaman Science Co., Ltd. NT Miyako Bldg. 902, 546 Karasuma-Oike agaru, Nijodenchō, Nakagyo-ku, Kyoto, 604-0845 Japan Tel: 075-222-7318
Manufacturer	Yamaguchi Ube Kotobuki Factory, Seishin Enterprise Co., Ltd. 700-3 Aza Kabutoishi, Yamanaka, Ube-shi, Yamaguchi, Japan

<u>Specifications</u>	<u>Inner and outer package</u>
<u>Label name</u>	(1) <u>Sesame Young Leaf Powder (Domestic product)</u> (2) <u>Organic Sesame Young Leaf Pasteurized and Ground Product</u>
<u>Inner plastic bag size and seal</u> <u>Outer plastic bag size and seal</u>	Inner polyethylene bag size: 650(W)×800(H)×0.1(t) (mm), <u>volume_0.09kg</u> Sealing method: Heat seal Outer polyethylene bag size: 900(W)×1000(H)×0.045(t) (mm), volume 0.07kg (Sealing method: Folding inside)
<u>Cardboard case size</u>	480(w)×380(D)×260(H)mm Sealing method: Sealed with <u>kraft tape</u>

8. **Storage conditions** Please avoid direct sunlight, heat, and humidity and keep in a cool dark place.
9. **Best-before period** Kagoshima grown: 2.5 years from the date of manufacture;
Shimane grown (Organic Sesame Young Leaf Pasteurized and Ground Product): 5.5 years

10. Nutrition label (per 100g)

Nutrition	Analyzed value of Shimane grown (e.g.)	Analyzed value of Kyushu grown (e.g.)
Moisture	8.0g	2.5g
Protein	21.5g	13.5g
Lipid	4.2g	3.6g
Ash	15.7g	9.6g
Carbohydrates	50.6g	70.8g
Energy	326kcal/100g	370kcal/100g
Sodium	15.6mg/100g	16.5mg/100g

11. Analysis of components of sesame young leaf (per 100g except superoxide dismutase values)

Analysis test item	Shimane grown Lot 061116	Kyushu grown Lot woc0000118~ woc0018018
Moisture	8.0g	2.5g
Iron	16.6mg	6.72mg
Folic acid	760µg	200µg
Calcium	1,360mg	1,690mg
Potassium	4,900mg	2,580mg
Magnesium	477mg	368mg
Vitamin A (Retinol content)	187µg	473µg
Alpha-Carotene	40µg	Not detected
Beta-Carotene	2,220µg	5,680µg
Riboflavin (Vitamin B2)	1.4mg	0.72mg
Vitamin E(Alpha-Tocopherol)	4.2mg	9.7mg
Lutein	11.3mg	13.6mg
Superoxide Dismutase (SOD)	1,500 units/g	4,100 units/g
Polyphenol	1,300mg	1,800mg

Test laboratory: Japan Food Research Laboratories (Polyphenol Analysis: Japan Food Hygiene Association)

*The value of Iron of Shimane grown product has been changed from the initial value 203 mg to the value stated above after the second analysis (revised January 17, 2008).

* The above data is reference values and not the standard values.

12. Safety test

(1) Acute oral toxicity testing with male mice

1. Death: No death case was found in any mice on the test during the test period.

2. General conditions: No abnormality was found in any mice during the test period.

3. Consideration: Acute oral toxicity examination using male mice as specimen was conducted. The specimen was administered by the dosage of 2,000 mg/kg, neither abnormality nor the death case was admitted during the term of the observation. Therefore, it was considered that the LD50 value by the single time oral administering in the specimen mice was 2,000 mg/kg or more in the male mice.

(2) Mutagenicity test (conducted in May 2013)

The possibility of mutation induction of sesame young leaf powder was checked using Salmonella typhimurium TA100, TA1535, TA98, and TA1537 as well as coliform WP2uvrA. As a result, no increase in the number of revertant colonies which is more than double the number compared to the vehicle control was found for each strain, regardless of the presence or absence of metabolic activation.

13. Other tests

Agricultural Chemicals: There were no agricultural chemicals detected in the specimen.

Total Pheophorbide: 10mg% Existing Pheophorbide: 8mg%

Chlorophyllase: 2mg% Total Chlorophyll: Not lower than 120mg/100g

14. Allergy labeling

Instruction from the Consumer Affairs Agency dated September 20, 2013 encourages labeling of “Sesame” as allergen. Please use “Sesame Young Leaf”, “Sesame Young Leaf Powder”, etc. for labeling.