

PRODUCT SPECIFICATION

DATE OF ISSUE
20-05-2021




ORGANIC AGAR-AGAR (E406)
NATUURLIJK NATUURLIJK PRODUCT CODE:
X1553, X1554, X1555, X1591

PRODUCTION:
17192512

NATUURLIJK
NATUURLIJK
special food ingredients

1. PRODUCT IDENTIFICATION

1.1 Supplier product information

| | | | |
|---------------------|----------------|---------------|---|
| Product name | Agar-agar | | |
| Production | 17192512 | | |
| Product code | Content | EAN | Packaging |
| X1553 | 30g | 8718309830526 | Plastic jar and screw lock cap with warranty seal. Jar =  Cap =  |
| X1554 | 90g | 8718309830533 | |
| X1555 | 400g | 8718309830540 | |
| X1591 | 5kg | 8718309830854 | Blue bag =  in box |

1.2 Scientific product information

| | |
|--------------------------|--|
| Single ingredient | |
| Main use | Gelling agent |
| Chemical name | Agar, Gelidium extract |
| Production method | Agar is obtained from red seaweeds of the Gelidium species, collected from the Atlantic coast of Spain. Agar is extracted using hot, dilute alkali. The solution is cooled to form a very firm brittle gel, which is frozen to disrupt the gel structure. When the gel is thawed, impurities dissolved in the water can be expelled using high pressure, the gel is dried and ground to produce powdered agar. |

1.3 Legislative product information

| | | | |
|----------------------|------------------|-----------------------------|--------|
| CAS number | 9002-18-0 | | |
| EU food additive | E406 | | |
| Country of Origin | Spain | | |
| Certification | Organic | Certification number | 103446 |
| | Institute | Skal NL-BIO-01 | |

2. PRODUCT INFORMATION

2.1 Physical and Chemical properties

| | Unit | Specification | Method |
|---------------|------|---|--------|
| Appearance | | flakes | |
| Colour | | grayish/beige Opaque and colorless when dissolved | |
| Odour/taste | | neutral | |
| Melting point | °C | 85 - 95 | |

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| | | | |
|----------------------|-------------------|---------------|--|
| Setting point | °C | 30 - 40 | |
| Gel Strength (Bloom) | g/cm ² | 700 | |
| Solubility | | boiling water | |
| pH | | 6,8 -7,0 | |

2.2 Microbiological data

| | | | |
|--------------------|---------|--------|--|
| Total plate count | CFU / g | <5000 | |
| E Coli | CFU / g | Absent | |
| Salmonella | / 25g | Absent | |
| Enterobacteriaceae | / 100g | <10 | |
| Clostridium | UFC / g | <10 | |
| Coliforms | col/g | <100 | |

2.3 Chemical analyses

| | | | |
|--------------|-----|-----|--|
| Arsenic (As) | ppm | <3 | |
| Heavy metals | ppm | <10 | |
| Lead (Pb) | ppm | <10 | |

2.4 Nutritional Information

2.4.1 Nutritional Values

| | | | |
|--------------------|-----------|------|--|
| Energy | kJ/100g | 657 | |
| Energy | kcal/100g | 164 | |
| Protein | g/100g | 0,4 | |
| Carbohydrate: | g/100g | 0,4 | |
| Of which Sugars | g/100g | <0,5 | |
| Polyols | g/100g | | |
| Starches | g/100g | | |
| Others | g/100g | | |
| Fat: | g/100g | 0,2 | |
| Of which Saturated | g/100g | <0,1 | |
| Mono-unsaturated | g/100g | | |
| Poly-unsaturated | g/100g | | |
| Transfatty acids | g/100g | | |
| Cholesterol | mg/100g | | |

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| | | | |
|---------------|--------|------|--|
| Water | g/100g | | |
| Organic acid | g/100g | | |
| Dietary Fiber | g/100g | 79,4 | |

2.4.2 Minerals

| | | | |
|--------|---------|-----|--|
| Sodium | mg/100g | 103 | |
|--------|---------|-----|--|

3. FOOD INTOLERANCE

3.1 Allergens

| Yes = ✓ / No = ✗ | Contains | May contain traces | |
|--|----------|--------------------|--|
| Barley | ✗ | ✗ | |
| Beef | ✗ | ✗ | |
| Cacao | ✗ | ✗ | |
| Carrot | ✗ | ✗ | |
| Celery and celery products | ✗ | ✗ | |
| Cereals containing gluten and products produced with these (wheat, rye, oats, spelt, barley) | ✗ | ✗ | |
| Chicken | ✗ | ✗ | |
| Coriander | ✗ | ✗ | |
| Crustaceans and Shellfish | ✗ | ✓ | |
| Eggs and egg products | ✗ | ✗ | |
| Fish and fish products | ✗ | ✗ | |
| Glutamate | ✗ | ✗ | |
| Lupin and products thereof | ✗ | ✗ | |
| Milk and milk products (including Lactose) | ✗ | ✗ | |
| Molluscs and products thereof | ✗ | ✗ | |
| Mustard and mustard products | ✗ | ✗ | |
| Nuts and nut products (almonds, hazelnuts, walnuts) | ✗ | ✗ | |

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| | | | |
|------------------------------|---|---|--|
| Peanuts and peanut products | X | X | |
| Pork | X | X | |
| Sesame and sesame products | X | X | |
| Soybean and soybean products | X | X | |
| Sulphite (E221 – E228) | X | X | |
| Sulphur dioxide (>10mg/kg) | X | X | |

3.2 Suitability for other diets:

| | | | |
|----------|---|--------------------|---|
| Coeliacs | ✓ | Lactose intolerant | ✓ |
| Halal | ✓ | Vegans | ✓ |
| Kosher | ✓ | Vegetarian | ✓ |

3.3 GMO Declaration:

Agar-agar does not contain genetically modified organisms and is not produced using raw materials of a genetically modified origin. At no stage during production does the product come into contact with genetically modified organisms.

4. STORAGE CONDITIONS

| | |
|--------------------|---|
| Storage conditions | In closed original packaging. Must be kept cool and dry in a well-ventilated place. |
| Shelf life | 5 years after production, under the above mentioned conditions. |

5. FOOD SAFETY

5.1 Hygiene:

This product is produced in a facility with an on HACCP based food safety system.

5.2 Identifications of dangers:

Classification of the substance (Regulation (EC) No 1272/2008) | Not classified. (non-hazardous)

6. EXTENDED PRODUCT INFORMATION

6.1 Usage

Agar-agar powder from Natuurlijk Natuurlijk is made from atlantic seaweed. This vegetable gelatin is used as a thickener, gelling and binding ingredient. It has a gelling strength of 650 Bloom. The Bloom value is an important criterion for the quality of gelatin. It is generally between 30 and 300 for animal gelatin. It indicates the jelly strength or firmness of edible gelatin.

Agar gels are completely reversible and may be melted and reset without any loss of gel strength. The gels have a characteristic firm brittle texture. This gel structure is not affected by salts or proteins. The difference between melting and setting points, is much greater with

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agar than with other gelling agents. Agar gels are used in the baking industry for their durability at high temperatures.

Agar applications are fundamentally based on its enormous gelling power, and total gel reversibility. Agar is unique among polysaccharides in that gelation occurs at a temperature that is far below the gel's melting temperature. Many uses of agar depend upon its high hysteresis. Moreover, as a gelling agent, agar is very useful in preparing strong water-gel systems for molds, or for creating the molds themselves.

The brittle, crumbly-type texture of agar gels can be converted to an elastic and tender one by addition of Locust bean gum. Which makes a gel that can even be stronger than agar alone. The texture of agar-based products such as meringues, pie fillings, and marshmallows can be modified by the addition of gum Arabic. Gum Arabic softens the texture of agar gels and produces a tender consistency.

It is important to note that dissolution of agar in boiling acid solutions (like fruit juice) causes significant degradation. Gel stability is best achieved at pHs slightly over 7,0. The addition of 10mg baking soda to slightly acidic agar improves gel strength.

Agar solutions are hazy. When agar gels are frozen (at around 0°C), they collapse upon thawing and do not recover their gel phase. Nevertheless, the gel can be remelted and regelled, producing a new gel with nearly identical properties to the original one.

Dosage: 5 to 10 grams per liter, presoaking agar (>5 minutes) improves dissolving

- Agar is defined as a strongly gelling hydrocolloid from marine algae.
- Agar is unique for commercial purpose because it forms firm gels at concentrations as low as 1%.
- Once the agar solution starts to boil, it should be boiled (without foaming) for exactly 20 seconds.
- If foaming occurs, disperse it by swirling and stirring for a few minutes.
- A good level of agar for use in icings will range from 0,2 to 0,5%
- At concentrations of 0,1 to 1,0%, agar is a useful antistaling agent in breads and cakes.
- Tannic acid (found, e.g., in squash, apple, and prune) may inhibit agar gelation. This can be avoided by adding small quantities of glycerol.

6.2 Dictionary

| | | |
|----|--------------------|---|
| NL | The Netherlands | Agar agar (Agar) |
| GB | Great Britain (UK) | Agar agar (Gelidium extract, Agar, Kanten) |
| DE | Germany | Agar-Agar (Agar) |
| FR | France | Agar-agar (Agar) |
| ES | Spain | Agar-agar (Agar) |
| PT | Portugal | Agar-ágar |
| IT | Italy | Agar-agar (Agar) |
| DK | Denmark | Agar-agar (Agar) |
| NO | Norway | Agar |
| SE | Sweden | Agar |
| FI | Finland | Agar |

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| | | |
|----|--------------------|---------------------|
| IS | Iceland | Agar |
| CZ | Czech Republic | Agar |
| SK | Slovak Republic | Agar |
| HU | Hungary | Agaragar |
| HR | Croatia (Hrvatska) | Agar |
| GR | Greece | 'Ayap |
| SI | Slovenia | Agar |
| PL | Poland | Agar-agar (Agar) |
| RO | Romania | Agar-agar (Agar) |
| BG | Bulgaria | Arap |
| RU | Russian Federation | Arap-arap (Arap) |
| TR | Turkey | Agar |

7. DISCLAIMER

Although we take great care in setting up this product specification, we cannot accept any liability for the completeness and fully accurateness of the information provided. The content of this Product Specification is completed to the best of our knowledge.

This document does not dismiss the user of his legal obligations with respect to food safety.

This product specification replaces any previously issued specifications.