



## PRODUCT SPECIFICATION

(Caramel Colour Specification)

### AMMONIA CARAMEL E150c

#### 1. PRODUCT DESCRIPTION

**AMMONIA CARAMEL** – a product obtained by controlled heating of carbohydrates (commercially available foodstuffs with sweetening properties and nutritional value, consisting of glucose and fructose monomers or their polymers, e.g. glucose syrup, sucrose, glucose-fructose syrup) in the presence of a catalyst. As a result of caramelization, a liquid, dark brown product is formed, consisting of a mixture of various colouring and aromatic compounds, characterized by a specific aroma and a sweet-bitter taste with a slightly acidic aftertaste.

#### 2. APPLICATION

Caramel is a universal colouring agent used in food and feed products. It provides colouring ranging from yellow through reddish-brown to dark brown, while simultaneously “rounding” the flavour of the final product. Caramel is used, among others, in soft drinks and alcoholic beverages, gingerbread, biscuits, sauces, preserves, fruit and vegetable products, confectionery, ice cream, soups, and spices.

#### 3. QUALITY CHARACTERISTICS

The product complies with the requirements specified in Commission Regulation (EU) No. 231/2012 of 9 March 2012, laying down specifications for food additives listed in Annexes II and III to Regulation (EC) No. 1333/2008 of the European Parliament and of the Council, as well as selected parameters specified in the Polish Standard PN-A-74772 “Caramel”.

##### 3.1. Organoleptic properties:

- |           |                                      |
|-----------|--------------------------------------|
| a) form   | thick, syrupy liquid                 |
| b) colour | dark brown,                          |
| c) odour  | characteristic of caramel,           |
| d) taste  | Bitter with a sweet-sour aftertaste. |

##### 3.2. Physicochemical properties:

- |                                                       |                                  |
|-------------------------------------------------------|----------------------------------|
| a) Colouring strength (absorbance at 420 nm)*         | 0,30 <sup>±0,03</sup>            |
| b) Colour intensity (absorbance at 610 nm)**          | not less than 60 (lub 0,08÷0,36) |
| c) Density areometr 20°C [kg/m <sup>3</sup> ] / [°Bx] | 1340÷1360 / 70,5 <sup>±1,5</sup> |
| d) Reducing sugars content [%]                        | not less than 35                 |
| e) pH value                                           | 4,2 <sup>±0,7</sup>              |
| f) Ash content [%]                                    | not more than 1,0                |
| g) Total nitrogen content [%]                         | not more than 1,5 (lub 0,7÷3,3)  |
| h) 4-methylimidazole content [mg/kg]                  | not more than 150 (lub 200)      |
| i) Ammoniacal nitrogen content [%]                    | not more than 0,3                |
| j) Acid test (HCl)                                    | negative                         |

##### 3.3 Content of harmful metals

The content of harmful metals shall not exceed:

- a) arsenic: 1 mg/kg
- b) lead: 2 mg/kg
- c) cadmium: 1 mg/kg
- d) mercury: 1 mg/kg

#### **4. TESTING**

The manufacturer performs full testing once per year or in case of technological process changes. Partial testing is performed for each production batch.

##### **4.1. Full testing**

Includes parameters specified in sections 3.1; 3.2; 3.3.

##### **4.2. Partial testing**

Includes parameters specified in sections 3.1; 3.2 a), b), c), d), e).

#### **5. NUTRITIONAL INFORMATION**

|                         |                                                                                                                                 |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| Energy value per 100 g: | 730 kJ/174 kcal                                                                                                                 |
| Carbohydrates [%]:      | 42                                                                                                                              |
| Of which sugars:        | 35                                                                                                                              |
| GMO                     | - does not contain GMO.                                                                                                         |
| Allergens               | - product does not contain allergenic ingredients .                                                                             |
| Radiation               | - product has not been subjected to irradiation/ionizing radiation.                                                             |
| Nanomaterials           | - product does not contain and has not been produced using nanomaterials.                                                       |
| Pesticides              | - In accordance with Regulation (EC) No. 396/2005 of the European Parliament and of the Council of 23 February 2005, as amended |

#### **6. LEGAL BASIS**

- Regulation (EC) No. 1333/2008 of the European Parliament and of the Council on food additives (16.12.2008).
- Regulation (EC) No. 1331/2008 of the European Parliament and of the Council, establishing a common authorization procedure for food additives, food enzymes and food flavourings. (16.12.2008)
- Regulation of the Minister of Health of 23 December 2010 on specifications and purity criteria for food additives.
- Compendium of Food Additive Specification FAO/WHO Expert Committee on Food Additives, 74<sup>th</sup> Meeting 2011.
- Commission Regulation (EU) No. 231/2012 of 9 March 2012

#### **7. PACKAGING**

Caramel is packed in:



- ✓ Polupropylene or polyethylene buckets with a net weight of 12 kg or from 12 to 40 kg,
- ✓ HDPE IBC containers with a net weight from 800 to 1400 kg or other containers – upon agreement with the customer.

## **8. LABELLING**

Each package is labelled with: manufacturer's name and address, product name, standard number, net weight (kg), batch number, best before date preceded by „best before end...”, statement: „Coloring agent intended for food production. Product of Poland”.

## **9. SHELF LIFE AND STORAGE CONDITIONS**

- Shelf life: 24 months from the production date in unopened packaging.
- Storage conditions: store in closed warehouse facilities. Warehouses should be dry, clean, free from foreign odours, and protected against pests. Protect from light and air, do not freeze. Store at 10-20°C in tightly closed containers.

Data opracowania: 16.09.2013 r.

Data aktualizacji: 01.02.2026 r.

\*/ siłę barwienia definiuje się jako absorbancję 0,05% (m/v) wodnego roztworu karmelu (barwnika w postaci płynnej) w kuwecie o grubości 1 cm przy 420 nm.

\*\*/ intensywność barwy definiuje się jako absorbancję 0,1% (m/v) wodnego roztworu karmelu (barwnika w postaci stałej) w kuwecie o grubości 1cm przy 610 nm