The Draft Amendment of Standards for Specification, Scope, Application and Limitation of Food Additives

MOWH Food No.1031300683, 10 April, 2014

Appendix 2: Standards for Specification of Food Additives

06. Leavening Agents

§ 06001

Aluminum Potassium Sulfate

Synonyms	Potassium alum; potash alum; Burnt alum (Anhydrous); INS No. 522
Definition	CAS No. 10043-67-1 (Anhydrous) 7784-24-9 (Dodecahydrate)
Chemical fomula	$AlK(SO_4)_2 \cdot xH_2O$ (x = 0 or 12)
Molecular weight	258.21(Anhydrous) 474.38(Dodecahydrate)
Assay:	Anhydrous form: not less than 96.5% Dodecahydrate form: not less than 99.5%
Description	Transparent crystals or white crystalline powder
Solubility	Soluble in water, insoluble in ethanol
Identification	Passes tests for aluminium, potassium and sulphate
pH	3.0~4.0 (10% solution)
Ammonium salts	Heat 1 g of the sample with 10 ml of sodium hydroxide TS on a steam bath for 1 min. The odour of ammonia is not perceptible.
Fluoride	Not more than 30 mg/kg
Lead	Not more than 5 mg/kg
Selenium	Not more than 30 mg/kg
Category	Food additives category (6)
Functional uses	Leavening Agents

§ 06002

Aluminum Sodium Sulfate

Synonyms	Sodium alum; Soda alum; INS No. 521
Definition	CAS No. 10102-71-3 (Anhydrous) 7789-28-3 (Dodecahydrate)
Chemical fomula	$AlNa(SO_4)_2 \cdot xH_2O$ (x = 0 or 12)
Molecular weight	242.09(Anhydrous) 458.29(Dodecahydrate)
Assay	Anhydrous form: not less than 96.5% Dodecahydrate form: not less than 99.5%
Description	Transparent crystals, white crystals or white powder
Solubility	Soluble in water, insoluble in ethanol
Identification	Passes tests for aluminium, sodium and sulphate
Ammonium salts	Heat 1 g of the sample with 10 ml of sodium hydroxide TS on a steam bath for 1 min. The odour of ammonia is not perceptible.
Fluoride	Not more than 30 mg/kg
Lead	Not more than 5 mg/kg
Selenium	Not more than 30 mg/kg
Arsenic	Not more than 3 mg/kg
Mercury	Not more than 1 mg/kg
Loss on drying	Not more than 47.2% (Dodecahydrate) Not more than 10% (Anhydrous)
Category	Food additives category (6)
Functional uses	Leavening Agents

§ 06004

Aluminum Ammonium Sulfate

Synonyms	Ammonium alum; Soda alum; INS No. 523
Definition	CAS No. 7784-25-0 (Dodecahydrate)
Chemical fomula	$AlNH_4(SO_4)_2 \cdot xH_2O$ (x = 0 or 12)
Molecular weight	237.15(Anhydrous) 453.32(Dodecahydrate)
Assay	Anhydrous form: not less than 96.5% Dodecahydrate form: not less than 99.5%
Description	Transparent crystals, white granules or white powder; odorless
Solubility	Soluble in water, insoluble in ethanol
Identification	Passes tests for aluminium, ammonium and sulphate
Ammonium salts	No odor of ammonia after adding 1 gram sample in 10 mL NaOH solution and steam heating for 1min.
Fluoride	Not more than 30 mg/kg
Alkali metals and alkaline earths	Completely precipitate the aluminium from a boiling Solution of 1 g of the sample in 100 ml of water by the addition of enough ammonia TS to render the solution distinctly alkaline to methyl red TS, and filter. Evaporate the filtrate to dryness, and ignite. The weight of the residue does not exceed 5 mg.
Lead	Not more than 3 mg/kg
Selenium	Not more than 30 mg/kg
Category	Food additives category (6)
Functional uses	Leavening Agents

§ 06013

Sodium Aluminum Phosphate, Acidic

Chemical fomula	$NaAl_3H_{14}PO_4 \cdot 4H_2O$ or $Na_3Al_2H_{15}(PO_4)_8$
Molecular weight	$NaAl_3H_{14}PO_4 \cdot 4H_2O$: 949.88 $Na_3Al_2H_{15}(PO_4)_8$: 897.82
Assay	Not less than 95% of $NaAl_3H_{14}(PO_4)_8 \cdot 4H_2O$ or not less than 95% of $Na_3Al_2H_{15}(PO_4)_8$
Description	White, odorless powder
Solubility	Insoluble in water. Soluble in hydrochloric acid
Identification	Passes tests for aluminium, sodium and phosphate Test a 1 in 10 solution in dilute hydrochloric acid
Fluoride	Not more than 25 mg/kg
Lead	Not more than 2 mg/kg
Arsenic	Not more than 3 mg/kg
Loss on ignition	$NaAl_3H_{14}(PO_4)_8 \cdot 4H_2O$: 19.5 - 21% (750-800℃, 2 h) $Na_3Al_2H_{15}(PO_4)_8$: 15 - 16% (750-800℃, 2 h)
Category	Food additives category (6)
Functional uses	Leavening Agents