

## 乙酸钙

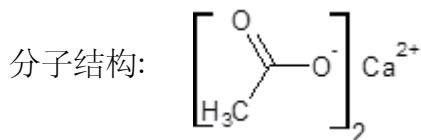
中文名: 乙酸钙;

中文别名: 醋酸钙

英文名: Calcium acetate

分子式:  $C_4H_6CaO_4$

分子量: 158.17



CAS: 62-54-4

### 物理化学性质

白色针状结晶或结晶性粉末,无水乙酸钙的吸湿性非常好,因此常见的乙酸钙都以一水合物( $Ca(CH_3COO)_2 \cdot H_2O$ , CAS [5743-26-0])的形式存在。溶于水,微溶于乙醇。加热到  $160^\circ C$  时分解为丙酮和碳酸钙。

### 产品质量标准

GB 1903.15-2016 《食品添加剂 醋酸钙》

表 1 感官要求

项目	要求	检验方法
色泽	白色	取适量试样置于清洁干燥的白瓷盘中,在自然光下观察色泽和状态,嗅其味
状态	细小疏松粉末	
气味	无臭	

表 2 理化指标

项目	指标	检验方法
乙酸钙( $C_4H_6O_4Ca$ )含量, w/%	98.0~102.0	附录 A 中 A.4
硫酸盐, w/%	≤ 0.1	附录 A 中 A.5
氯化物, w/%	≤ 0.05	附录 A 中 A.6
铅(Pb)/(mg/kg)	≤ 2.0	GB 5009.12 或 GB 5009.75
砷(As)/(mg/kg)	≤ 2.0	GB 5009.76
水分, w/%	≤ 7	GB 5009.3 卡尔·费休法
氟化物, w/%	≤ 0.005	GB/T 5009.18
pH(20 g/L)	6~8	附录 A 中 A.7

## E.263 标准

Assay Not less than 98% after drying

**DESCRIPTION** White, hygroscopic, bulky, crystalline solid; a slight odour of acetic acid may be present; the monohydrate may be needles, granules or powder.

**FUNCTIONAL USES** Antimold and antirope agent, stabilizer, buffer

### CHARACTERISTICS

#### IDENTIFICATION

Solubility (Vol. 4) Freely soluble in water, insoluble in ethanol

Test for acetate (Vol. 4) Passes test

Test for calcium (Vol. 4) Passes test

#### PURITY

Loss on drying (Vol. 4) Not more than 11% (155° to constant weight; monohydrate)

pH (Vol. 4) 6 - 9 (1 in 10 soln)

Water insolubles Not more than 0.3%  
Dissolve 10 g of the sample, weighed to the nearest mg, in 100 ml of hot water. Filter through a Gooch crucible, tared to an accuracy of ±0.2 mg, and wash any residue with water. Dry the crucible for 2 h at 105°. Cool, weigh and calculate as percentage. (The weight of the dried residue should not exceed 30 mg).

Formic acid and oxidizable impurities Not more than traces  
Dissolve 1 g of the sample in 5 ml of water. Add 2.5 ml of 0.1 N potassium dichromate and 6 ml of sulfuric acid and allow to stand for 1 min. Add 20 ml of water, cool to 15° and add 1 ml of potassium iodide TS. A faint yellow or brown colour should be produced immediately.

Aldehydes Not more than traces  
Dissolve 2 g of the sample in 10 ml of water and distil. To the first 5 ml of the distillate, add 10 ml of mercuric chloride TS and make alkaline with N sodium hydroxide. Allow to stand for 5 min, and acidify with dilute sulfuric acid TS. The solution should show no more than a faint turbidity.

Lead (Vol. 4) Not more than 2 mg/kg  
Determine using an atomic absorption technique appropriate to the specified level. The selection of sample size and method of sample preparation may be based on the principles of the method described in Volume 4, "Instrumental Methods."

## FCC 标准:

### DESCRIPTION

Calcium Acetate occurs as a fine, white, bulky powder. It is freely soluble in water and slightly soluble in alcohol.

**Function** Buffer; stabilizer; firming agent.

### REQUIREMENTS

**Identification** A 1:10 aqueous solution gives positive tests for Calcium and for Acetate, Appendix IIIA.

**Assay** Not less than 99.0% and not more than 100.5% of Ca(C<sub>2</sub>H<sub>3</sub>O<sub>2</sub>)<sub>2</sub>, calculated on the anhydrous basis.

**Chloride** Not more than 0.05%.

**Fluoride** Not more than 0.005%.

**Lead** Not more than 2 mg/kg.

**Sulfate** Not more than 0.1%.

**Water** Not more than 7.0%.

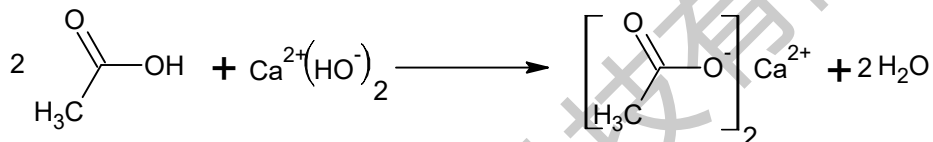
## 产品应用

- 1、用于食品、饲料和防腐、防霉剂，酸度调节剂、钙补充剂、凝固剂；
- 2、农业微量元素补充剂、水泥调节剂。一般添加量为 0.1%-0.3%。

## 包装和存储

- 1、密封干燥保存。
- 2、用纸塑复合袋或者 PA/PE 袋子包装。醋酸钙具有潮解性，贮运中要注意防潮，严禁与腐蚀性气接触，防止曝晒和雨淋，运输要加防雨覆盖物。

## 生产原理



## 生产工艺

将氢氧化钙加到水中，搅拌成悬浮液，分次加入冰醋酸。当 pH 值稳定在 7 时停止反应，过滤，干燥，得到成品。

## 主要原料及参考标准

冰乙酸 参考标准 GB1886.10-2015 《食品添加剂 冰乙酸》

氢氧化钙 参考标准 GB25572-2010 《食品添加剂 氢氧化钙》 碳酸钙

## 安全信息

安全说明: S26: 万一接触眼睛，立即使用大量清水冲洗并送医诊治。

S36: 穿戴合适的防护服装。

危险类别码: R21: 与皮肤接触有害。

R38: 刺激皮肤。