

# Citric acid anhydrous

Meets USP-NF, EP, BP, JP and IP testing specifications

Product Code: TC105M

## Product Description :

Molecular Formula:  $C_6H_8O_7$

Molecular Weight: 192.12

CAS: 77-92-9

## Quality Control:

### Appearance (USP)

Colorless, translucent crystals, or white granular to fine crystalline powder.

### Appearance (JP)

Colorless crystals, white granules or crystalline powder.

### Appearance (EP, BP)

White or almost white, crystalline powder, colourless crystals or granules.

### Appearance (IP)

Colourless crystals or a white powder; slightly hygroscopic in moist air

### Solubility (JP)

Very soluble in water, and freely soluble in ethanol (99.5%)

### Solubility (EP, BP)

Very soluble in water, freely soluble in ethanol (96%)

### Solubility (IP)

Very soluble in water, freely soluble in ethanol (95%), sparingly soluble in ether

### Solubility (USP)

Very soluble in water, freely soluble in alcohol, very slightly soluble in ether

### Identification : FTIR (JP)

Matches with the standard pattern (dry the substance at 105°C for 2h)

### Identification A (EP, BP)

The solution is strongly acidic

### Identification A : FTIR (USP, IP)

Matches with the standard pattern (dry the substance at 105°C for 2 h)

### Identification B : FTIR (EP, BP)

Matches with the standard pattern (dry the substance at 105 ±2°C for 2h)

### Identification B : (IP)

Gives reaction A of citrates

### Identification C (EP, BP)

A red colour develops

### Identification C (IP)

10% w/v solution is strongly acidic

### Identification D (EP, BP)

A white precipitate is formed.

### Identification E : Water (EP, BP)

≤ 1.00%

### Appearance of solution (EP, BP)

20% solution in water is clear and colourless or not more intensely coloured than reference solution Y7, BY7 or GY7

### Appearance of solution (IP)

20% solution in water is clear not more intensely coloured than reference solution YS7, BYS7 or GYS7

### Clarity of solution (USP)

The sample solution shows the same clarity as that of water or its opalescence is not more pronounced than standard suspension A

### Colour of solution (USP)

Complies

### Clarity and color of solution (JP)

The solution is clear and colorless or has no more color than the control solutions (1), (2) or (3).

### Melting point (BP, EP, USP)

~153°C with dec.

### Readily carbonisable substances (IP)

Any color produced is not more intense than that of mixture of 1.0 mL of CCS solution and 9 mL of FCS

### Readily carbonisable substances (EP, BP)

The solution is not more intensely coloured than a mixture of 1 mL of red primary solution and 9 mL of yellow primary solution

### Readily carbonisable substances (USP)

The colour of the acid is not darker than that of a similar volume of matching fluid K

### Readily carbonisable substances (JP)

The solution is not more colored than the matching fluid.

**Oxalic acid (EP, BP, USP, JP)**

<= 0.036%

**Sulfates (JP, BP, EP, USP, IP)**

<= 0.015%

**Heavy metals (JP, IP)**

<= 0.0010%

**Arsenic (IP)**

<= 0.0001%

**Barium (IP)**

Any opalescence produced is not more intense than that of a mixture of 5 mL of solution A and 5 mL of distilled water

**Calcium (IP)**

<= 0.02%

**Iron (IP)**

<= 0.0050%

**Chloride (IP)**

<= 0.0050%

**Oxalic acid (IP)**

Any pink colour produced is not more intense than that produced by carrying out the test using 0.2 mg oxalic acid dissolved in 4 mL of water

**Water (EP, BP, USP, JP, IP)**

<= 1.00%

**Sulfated ash (EP, BP, IP)**

<= 0.10%

**Residue on ignition (JP, USP)**

<= 0.10%

**Assay (NaOH Titration, on anhydrous basis) : (IP)**

99.00 -101.00%

**Assay (NaOH Titration, on anhydrous basis) :**

**(USP, EP, BP, JP)**

99.50 -100.50%

**Storage and Shelf Life:**

Store below 30°C away from bright light.

Shelf life is 48 months.

Use before expiry date given on the product label.

**Disclaimer :**

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