

## **Succinic Acid - Applications**

### **Food**

- As a flavouring agent in food and beverages
- For dry gelatin desserts, for preparing cake flavorings
- As bread softening agents
- As Sodium succinate as flavour enhancer
- As catalyst for food seasoning preparation
- In the synthesis of modified starch
- As Micro encapsulation of flavouring oils
- For protein gelatination
- In the preservation of chicken against Salmonella
- In the synthesis of modified starch
- Dog food preservative

### **Pharmaceuticals**

- In the preparation of active calcium succinate, which acts as anti-carcinogenic agent and as deodorant for removal of fish odour.
- Starting material for Active Pharmaceutical Ingredients (APIs) including adipic acid, N-methyl pyrrolidinone, 2-pyrrolidinone, succinate salts, 1,4-butanediol, tetrahydrofuran and gamma-butyrolactone
- As an additive in formulation, as an insulinotropic agent, and in drug control release polymers
- Medicines of sedative, antispasmer, antiplegm, antiphogistic, anrhoter, contraception and cancer curing
- In the preparation of Vitamin A
- In the preparation of Anti-Inflammatory - Erthyrodiol derivates
- Antidote for toxic substance

### **Agriculture**

- Seed treatment to enhance germination, growth and yield
- Plant growth regulator & accelerator
- Root stimulator for grapes
- Soil chelating agent
- Crop dust antistat
- Cut flower preservative
- Component of barley seed antismut treatment

### **Industrial applications**

- For curing epoxy resins, polyester synthesis and other applications
- As an intermediate in the manufacture of Dyes, perfumes, lacquers, photographic chemicals, alkyd resins, plasticizer, Metal treatment chemical, vehicle water cooling systems, alkyd resins and coatings and succinates
- Plasticizer for polymers
- Biodegradable solvents and lubricants
- Engineering plastics
- Adhesive and powder coating
- Corrosion inhibitor
- Perfumery and pharmaceutical

- Surfactants and detergents
- In the electroplating bath for Ni, Ag, Cr, Fe and Au
- Chemical metal plating
- Anodizing aluminum

### **Cosmetics**

- Depilatory component
- Acidic ingredient in toothpaste and denture cleaner

### **Photography**

- Development accelerators
- Anti-foggants
- Photographic stripping layers

### **Textile**

- Shrink proofing wool
- Modification of polyester resin to improve dyeing ability
- Modification of caprolactum to improve viscosity stability and fire resistance
- Modification of aramid fibres when incorporating a UV absorber
- Preparation of antistats and oil repellents