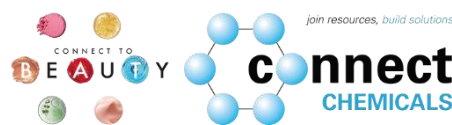


## TECHNICAL DATA SHEET

# Sodium Glucoheptonate (H-Quest A300)



INCI Sodium Gluceptate

CAS 13007-85-7

## SPECIFICATIONS

|            |                            |
|------------|----------------------------|
| Appearance | White or off-white crystal |
| Assay (%)  | 96.0                       |

## GENERAL INFORMATION

Sodium glucoheptonate (H-Quest A300) is a natural chelating agent produced from high purity sugar and is inherently biodegradable.

Sodium glucoheptonate is a replacement for traditional chelate such as EDTA and exhibit excellent natural sequestration power over a broad range of di- and tri-valent metal ions, (Ca<sup>2+</sup>, Mg<sup>2+</sup>, Fe<sup>2+</sup>, Fe<sup>3+</sup>, Zn<sup>2+</sup>, Al<sup>3+</sup>).

## FORMULATION AND RECOMMENDATIONS

Sodium glucoheptonate is highly compatible with strong alkali solutions (pH 8.00-10.00), which can prevent the bacterial and fungal degradation of the solution. Unlike EDTA and NTA based chelating agents, Sodium glucoheptonate is a non-toxic, non-hazardous, non-corrosive product and therefore a much safer compound. Typically, a dosage level of 0.1% to 0.3% is used as a starting point.

### Dosage level

#### Recommended concentration

0.1 – 0.6 %

### Solubility

Moderate solubility in water (4 g/100 ml) and is miscible in alcohols and diethyl ether.

## EFFICACY

Sodium glucoheptonate is a high-performance chelating agent. Its superior performance in the pH range between 12 and 14 is due to its efficiency in forming stable chelates with di- and tri-valent metal ions such as Ca<sup>2+</sup>, Mg<sup>2+</sup>, Fe<sup>2+</sup>, Fe<sup>3+</sup>, Zn<sup>2+</sup>, Mn<sup>2+</sup>, etc.

In the chart below comparative data are reported at different pH levels with the most common chelating agents present on the market.

| NaOH % | pH   | Calcium Chelation as mg CaCO <sub>3</sub> /g |            |          |           |
|--------|------|----------------------------------------------|------------|----------|-----------|
|        |      | H-Quest A-300                                | H-Quest E5 | 48% GLDA | 40% HEDTA |
| 0.25   | 12.6 | 153.2                                        | 51.1       | 142      | 136.2     |
| 0.50   | 12.9 | 190.1                                        | 93.6       | 156      | 139       |
| 0.75   | 13.1 | 332                                          | 207.1      | 150      | 164.6     |
| 1.00   | 13.3 | 652.6                                        | 252.5      | 167      | 141.9     |
| 2.00   | 13.5 | 686.7                                        | 295.1      | 216      | 144.7     |
| 4.00   | 13.8 | 794.5                                        | 317.8      | 281      | 141.9     |

## BENEFITS

- Can be used in ECOCERT/COSMOS formulations
- Easy to handle
- Good efficacy against molds and bacteria
- Safe profile
- Approved for use in leave-on and rinse-off products
- Efficacy at low concentration

## APPLICATIONS

### **Fragrances**

### **Natural extracts**

### **Cosmetics**

- Skin care
- Sun care
- Toiletries
- Makeup
- Hair care
- Baby care

## SHELF LIFE

60 months under proper storage conditions