

# JBScreen Buffer Kit

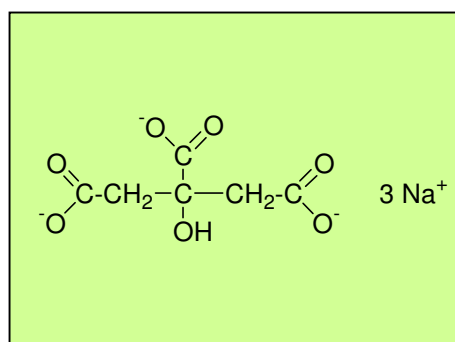
## Sodium Citrate

Cat. No.: CO-102

The **JBScreen Buffer Kit – Sodium Citrate** contains ready-made buffer solutions with preset pH values. Each buffer is provided as a 1.0 M stock solution and supplied in 10 ml volumes. The **JBScreen Buffer Kit – Sodium Citrate** comprises 24 reagents, covering a pH range from 3.7 – 6.0 in 0.1 pH unit increments. Each sodium citrate solution has been carefully titrated using hydrochloric acid.

### Specifications

Buffer Reagent: Sodium Citrate  
Molecular Formula:  $C_6H_5Na_3O_7 \cdot 2H_2O$   
Molecular Weight: 294.10  
EC Number: 2006753  
CAS Number: 6132-04-3  
pKa-Value (20°C): 3.13, 4.76, 6.40  
Useful pH-Range: 3.7 – 6.0  
Titrated with: Hydrochloric Acid



Store at 4°C

### Application

**JBScreen Buffer Kit – Sodium Citrate** is designed for convenient reproduction and optimization of crystallization conditions. The solutions can be used to reformulate conditions of the **JBScreen family**, e.g. JBScreen Classic, JBScreen Basic, JBScreen Cryo, (see below for an example) and other commercially available crystallization screens.

Furthermore, **JBScreen Buffer Kit – Sodium citrate** can be employed for the straightforward preparation of custom screen solutions for the refinement and optimization of initial crystallization conditions. The **JBScreen Buffer Kit** formulations will help to save time preparing accurate and high-quality reagents for the reproducible production of single protein crystals.

#### Example:

JBScreen Classic 3, condition D5 (= E8 in JBScreen Classic HTS I):  
30 % w/v PEG 4000, 100 mM Sodium Citrate pH 5.6, 100 mM Ammonium Sulfate

Required stock solutions:  
50 % w/v PEG 4000, **1.0 M Sodium Citrate pH 5.6 (JBScreen Buffer Kit)**,  
2.0 M Ammonium Sulfate

In order to make up 1 ml of a reservoir solution pipette

1. 250 µl of sterile deionized water
2. 50 µl of 2.0 M Ammonium Sulfate
3. 100 µl of 1.0 M Sodium Citrate pH 5.6
4. 600 µl of 50 % w/v PEG 4000

into the plate reservoir. Mix thoroughly until the solution is homogeneous.

**Note:** The final pH of the reservoir solution may vary from the indicated pH, depending on the nature of the reagents added to the JBScreen Buffer Kit solution.

For optimal results in the crystallization strategy, it is recommended to use the **JBScreen Buffer Kit – Sodium Citrate** together with **JBScreen Single Stocks**.