

JBScreen Buffer Kit

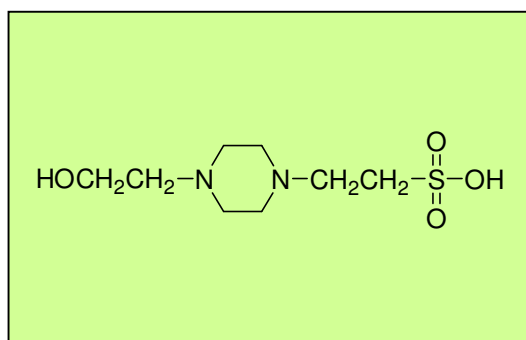
HEPES

Cat. No.: CO-104

The **JBScreen Buffer Kit – HEPES** 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 – HEPES** comprises 15 reagents, covering a pH range from 6.8 – 8.2 in 0.1 pH unit increments. Each HEPES solution has been carefully titrated using sodium hydroxide.

Specifications

Buffer Reagent: HEPES
4-(2-Hydroxyethyl)piperazine-1-ethanesulfonic acid
Molecular Formula: C₈H₁₈N₂O₄S
Molecular Weight: 238.30
EC Number: 2309079
CAS Number: 7365-45-9
pKa-Value (20 °C): 7.55
Useful pH-Range: 6.5 – 8.5
Titrated with: Sodium Hydroxide



Store at 4 °C

Application

JBScreen Buffer Kit – HEPES 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 – HEPES** 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 1, condition A3 (= A2 in JBScreen Classic HTS I):
15 % w/v PEG 400, 100 mM HEPES pH 7.5, 200 mM Magnesium Chloride

Required stock solutions:
100 % w/v PEG 400, **1.0 M HEPES pH 7.5 (JBScreen Buffer Kit)**,
2.0 M Magnesium Chloride

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

1. 650 µl of sterile deionized water
2. 100 µl of 2.0 M Magnesium Chloride
3. 100 µl of 1.0 M HEPES pH 7.5
4. 150 µl of 100 % w/v PEG 400

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 – HEPES** together with **JBScreen Single Stocks**.