

# DATA SHEET

Rev.ver: 01

## 1. Identification

|                     |                                                                                                                                            |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product name</b> | <b>Krebs-Ringer Bicarbonate Buffer 1x w/ Calcium chloride, HEPES buffer, 0.2% Bovine Serum Albumin and Sodium bicarbonate w/o Glucose.</b> |
| <b>Catalog.no</b>   | <b>CCBL023</b>                                                                                                                             |

## 2. Description

Krebs-Ringer Bicarbonate Buffer (1x) is an isotonic physiological solution designed to closely mimic the composition of extracellular fluid in animal tissues. It contains essential ions such as sodium ( $\text{Na}^+$ ), potassium ( $\text{K}^+$ ), calcium ( $\text{Ca}^{2+}$ ), magnesium ( $\text{Mg}^{2+}$ ), chloride ( $\text{Cl}^-$ ), phosphate ( $\text{HPO}_4^{2-}$ ), and bicarbonate ( $\text{HCO}_3^-$ ), which together maintain osmotic balance and provide the necessary environment for normal cellular function. The bicarbonate ions act as a buffering system to stabilize the pH around 7.4, which is optimal for most mammalian cells. This buffer is widely used in physiological, biochemical, and pharmacological experiments for maintaining tissue or organ preparations, perfusion studies, and metabolic assays, ensuring that cells remain viable and functional during experimental manipulation..

## 3. Product Specifications

|                        |                                                 |
|------------------------|-------------------------------------------------|
| Appearance             | Clear, colorless Solution                       |
| Storage and shelf life | Store at room temperature protected from light. |
| Shipping conditions    | Ambient                                         |

## 4. Formulation

| Components                     | Concentration mg/L |
|--------------------------------|--------------------|
| <b>Inorganic Salts</b>         |                    |
| Magnesium chloride hexahydrate | 223.000            |
| Potassium Chloride [KCl]       | 372.000            |
| Sodium Chloride [NaCl]         | 7012.000           |
| Sodium bicarbonate             | 1260.00            |
| Calcium chloride dihydrate     | 367.000            |
| <b>Others</b>                  |                    |
| Bovine serum albumin           | 2000.000           |
| HEPES buffer                   | 2383.000           |

## 5. Precautions and Disclaimer

This product is for research use only. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.