

Krebs-Ringer Bicarbonate Buffer

Cat: G0430

Size: 500mL

Storage: 2-8°C, valid for 1 year.

Reagent components

Ingredients	g/L
D-Glucose	1.8
Magnesium Chloride [Anhydrous]	0.0468
Potassium Chloride	0.34
Sodium Chloride	7.0
Sodium Phosphate Dibasic [Anhydrous]	0.1
Sodium Phosphate Monobasic [Anhydrous]	0.18
Sodium Bicarbonate	1.26
Specification	
pH (after buffer)	7.3±0.2
Osmolality (mOsm)	270±15

Reagent type: Aseptic filtered ready-to-use liquid medium

Introduction

As early as the 19th century, researchers explored how to culture animal tissues in vitro. Balanced salt solution is the solution used earlier in tissue culture. In 1985, Sydney Ringer prepared a salt solution consisting entirely of inorganic salts, which successfully maintained the contractility of mammalian myocardium in vitro. Subsequently, Tyrode prepared a low-specific salt solution that could be widely used in mammalian cell work. This medium was widely accepted as a base solution to dilute other components such as proteins at that time. Since then, a variety of balanced salt solutions have been developed for tissue and cell culture. According to their functions, the commonly used balanced salt solutions can be divided into the following categories:

1. Provide water and inorganic salts for cell growth and proliferation to meet normal cell metabolism;
2. Provide suitable acid-base environment for cell growth, the general pH range is 7.2-7.6;
3. Provide amino acids and other nutrients to meet the needs of cell growth and proliferation and metabolism;
4. Add carbohydrates and metabolic intermediates to meet the energy needs of cells;
5. Provide suitable osmotic pressure environment for cells.

Reference

[1]. Krebs HA and Henseleit K. Studies on urea formation in the animal organism. Hoppe-Seylers Z.Physiol. Chem. 210:33-66, 1932.