

# Product Information

## Dulbecco's Phosphate Buffered Saline

DPBS Modified, without calcium, without magnesium

CATALOG NO. 56064C

### Description

Dulbecco's Phosphate Buffered Saline (DPBS) is intended for use in the maintenance of mammalian cells where a chemically defined balanced salt solution provides an environment that will maintain the structural and physiological integrity of cells *in vitro*. DPBS is commonly used in cell enumerations as a diluent, for rinsing cells and as a buffer in many chromatographic procedures. DPBS also is used to wash and resuspend cells during the dissociation process, where the presence of calcium and magnesium can inhibit trypsin activity. For this application, use DPBS Modified, which is formulated without calcium and magnesium salts.

### Formulation

Component (all components measured in mg/L)	
<b>INORGANIC SALTS</b>	
Potassium chloride	200.000
Potassium phosphate monobasic anhydrous	200.000
Sodium chloride	8000.000
Sodium phosphate dibasic anhydrous	1150.000
<b>OTHER</b>	
Grams of powder per liter	9.550

### Precautions

Use aseptic technique when handling or supplementing this buffer after filtration. This product is for further manufacturing use. THIS PRODUCT IS NOT INTENDED FOR HUMAN OR THERAPEUTIC USE.

### Storage

Store medium at 15 to 30 C. Do not use after the expiration date.

### Indications of Deterioration

Dry powder should be free flowing. Do not use if powder is caked. Rehydrated powder should be clear of particulates and flocculent material. Do not use if liquid buffer is cloudy or contains precipitate. Other evidence of deterioration may include color change or degradation of physical or performance characteristics.

### Preparation Instructions

Powdered salts are vacuum dried, where appropriate, during the particle reduction process and packaged in a humidity-controlled environment. This treatment ensures maximum dehydration and product stability. The end product is extremely hygroscopic and must be protected from atmospheric moisture. We recommend that the entire contents of each package be used immediately after opening.

Preparing concentrated solutions for long-term storage is not recommended because some salts tend to form insoluble complexes in solutions more concentrated than 1X.

1. Measure 80 - 90% of the final volume of cell culture grade water (Catalog No. 59900C) into an appropriate mixing vessel. Water temperature should be 15 to 30 C. Do not heat water.
2. Add the powdered salts to the water. Rinse the original package with a small amount of cell culture grade water to remove all traces of powder and add to the solution. Mix until completely dissolved.
3. For each liter of salt solution being prepared, add 0.1 g of calcium chloride if desired to the solution in Step 2. Mix until completely dissolved.
4. While stirring the solution in Step 3, adjust the pH to 6.9 - 7.1 using NaOH 1N (Catalog No. 59223C) or HCl 1N. For most cells and culture conditions the optimal pH of this salt solution after filtration is 7.0 - 7.4.
5. Add cell culture grade water to the solution in Step 4 to bring it to the final volume. To avoid fluctuations in pH, keep the vessel closed until the solution is filtered.
6. Sterilize the solution using a membrane with a porosity of 0.22 µm or less. A peristaltic pump or an inert gas such as nitrogen can be used to provide positive pressure at 3 - 15 psi. Do not use CO<sub>2</sub> gas.
7. Sterile solutions should be dispensed aseptically into sterile containers. Store liquid salt solutions at 15 to 30 C.

#### United States

SAFC Biosciences, Inc.  
13804 W. 107th Street  
Lenexa, Kansas 66215  
USA  
Phone +1 913-469-5580  
Toll free-USA 1 800-255-6032  
Fax +1 913-469-5584  
E-mail info-na@sial.com

#### Europe

SAFC Biosciences Ltd.  
Smeaton Road, West Portway  
Andover, Hampshire SP10 3LF  
UNITED KINGDOM  
Phone +44 (0)1264-333311  
Fax +44 (0)1264-332412  
E-mail info-eu@sial.com

#### Asia Pacific

SAFC Biosciences Pty. Ltd.  
18-20 Export Drive  
Brooklyn, Victoria 3025  
AUSTRALIA  
Phone +61 (0)3-9362-4500  
Toll free-AUS 1 800-200-404  
Fax +61 (0)3-9315-1656  
E-mail info-ap@sial.com

**NOTE:** Supplements, such as antibiotics, can be added to the sterilized solution using aseptic technique. Storage conditions and shelf life of the supplemented product may be affected by the nature of the supplements.

## Characteristics

### Appearance

Off-white free-flowing powder

### Bioburden

≤ 100 CFU/100 mL

### Endotoxin (LAL)

≤ 1.0 EU/mL

### Moisture content (Karl Fischer)

≤ 2.0%

### Osmolality (as supplied)

265 - 295 mOsm/kg H<sub>2</sub>O

### pH (as supplied)

7.2 - 7.6

### Solubility

Clear solution at 1X

## References

1. Dulbecco R and Vogt M. *J Exp Med* (1954) 99:167.

#### Warranty, Limitation of Remedies

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#### United States

SAFC Biosciences, Inc.  
13804 W. 107th Street  
Lenexa, Kansas 66215  
USA  
Phone +1 913-469-5580  
Toll free-USA 1 800-255-6032  
Fax +1 913-469-5584  
E-mail info-na@sial.com

#### Europe

SAFC Biosciences Ltd.  
Smeaton Road, West Portway  
Andover, Hampshire SP10 3LF  
UNITED KINGDOM  
Phone +44 (0)1264-333311  
Fax +44 (0)1264-332412  
E-mail info-eu@sial.com

#### Asia Pacific

SAFC Biosciences Pty. Ltd.  
18-20 Export Drive  
Brooklyn, Victoria 3025  
AUSTRALIA  
Phone +61 (0)3-9362-4500  
Toll free-AUS 1 800-200-404  
Fax +61 (0)3-9315-1656  
E-mail info-ap@sial.com

[www.safcbiosciences.com](http://www.safcbiosciences.com)