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Product Information

RPMI 1640 Medium Modified

with 2.05 mM L-glutamine, with 25 mM HEPES

CATALOG NO. 51536C

Description

RPMI 1640 Medium was developed at Roswell Park Memorial Institute in 1966 by Moore and his co-workers. RPMI 1640 has been shown to support several anchorage-dependent cell lines and has also been used in fusion protocols and in the growth of hybrid cells.

RPMI 1640 Modified with HEPES contains 25 mM HEPES to provide additional buffering capacity to the medium. A zwitterionic buffer, HEPES has a pKa of 7.3 at 37 C, which is more compatible with most culture systems than that of sodium bicarbonate, which is usually 6.2 under similar conditions. HEPES will reduce sudden, drastic pH shifts, but as with other buffers, it will not prevent pH shifts entirely.

Precautions

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

Storage

Store medium protected from light at 2 to 8 C. Do not freeze. Do not use after the expiration date.

Indications of Deterioration

Medium should be clear and free of particulates and flocculent material. Do not use if liquid medium is cloudy or contains precipitate. Other evidence of deterioration may include color change, pH shift or degradation of physical or performance characteristics.

Preparation Instructions

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. Sterile serum should not be refiltered before or after being added to sterile medium because growth promoting capacity may be reduced upon refiltration.

Formulation

Component (all components measured in mg/L)	
INORGANIC SALTS	
Calcium nitrate tetrahydrate	100.000
Magnesium sulfate anhydrous	48.840
Potassium chloride	400.000
Sodium bicarbonate	2000.000
Sodium chloride	6000.000
Sodium phosphate dibasic anhydrous	800.000
VITAMINS	
Biotin	0.200
D-calcium pantothenate	0.250
Choline chloride	3.000
Cyanocobalamin	0.005
Folic acid	1.000
i-inositol	35.000
Niacinamide	1.000
PABA	1.000
Pyridoxine HCl	1.000
Riboflavin	0.200
Thiamine HCl	1.000
AMINO ACIDS	
L-arginine free base	200.000
L-asparagine monohydrate	56.800
L-aspartic acid	20.000
L-cystine 2HCl	65.150
L-glutamic acid	20.000
L-glutamine	300.000
Glycine	10.000
L-histidine free base	15.000
Hydroxy L-proline	20.000
L-isoleucine	50.000
L-leucine	50.000
L-lysine HCl	40.000
L-methionine	15.000
L-phenylalanine	15.000
L-proline	20.000
L-serine	30.000
L-threonine	20.000
L-tryptophan	5.000
L-tyrosine 2Na dihydrate	28.830
L-valine	20.000
OTHER	
Dextrose anhydrous	2000.000
L-glutathione reduced	1.000
HEPES free acid	5958.000
Phenol red sodium salt	5.310

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Characteristics

Appearance
Clear orange solution

Endotoxin
≤ 1.0 EU/mL

Osmolality (as supplied)
280 - 320 mOSm/kg H_20

pH (as supplied)
7.0 - 7.4

Sterility
No microbial growth detected

References

1. Moore, G. E. et al., *JNCI* (1966) 36:405.
2. Moore, G. E., *JAMA* (1967) 199:519.
3. Moore, G. E. and Woods L. K., *TCA Manual* (1977) 3:503.

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