L-15 MEDIUM LEIBOVITZ
With L-glutamine
Product Number **L4386**

Product Description
L-15 Medium (Leibovitz) was originally formulated for use in carbon dioxide (CO_2) free systems requiring sodium bicarbonate. L-15 is buffered by its complement of salts, free base amino acids and galactose substituted for glucose to help maintain physiological pH control.

Components	g/L
Calcium Chloride (anhydrous)	0.1396
Magnesium Chloride (anhydrous)	0.09366
Magnesium Sulfate (anhydrous)	0.09767
Potassium Chloride	0.4
Potassium Phosphate Monobasic (anhydrous)	0.06
Sodium Chloride	8.0
Sodium Phosphate Dibasic (anhydrous)	0.19
L-Alanine	0.225
L-Arginine (free base)	0.5
L-Asparagine (anhydrous)	0.25
L-Cysteine (free base)	0.12
L-Glutamine	0.3
L-Glycine	0.2
L-Histidine	0.25
L-Isoleucine	0.125
L-Leucine	0.125
L-Lysine Monohydrochloride	0.0937
L-Methionine	0. 075
L-Phenylalanine	0.125
L-Serine	0.2
L-Threonine	0.3
L-Tryptophan	0.02
L-Tyrosine (free base)	0.3
L-Valine	0.1
Choline Chloride	0.001
Flavin Mononucleotide•Na	0.0001
Folic Acid	0.001
myo-Inositol	0.002
Niacinamide	0.001
DL-Pantothenic Acid (hemicalcium)	0.001
Pyridoxine•HCl	0.001
Thiamine Monophosphate•HCl	0.001
D-Galactose	0.9
Phenol Red•Na	0.011
Pyruvic Acid•Na	0.55

Precautions and Disclaimer
REAGENT
For R&D use only. Not for drug, household or other uses.

Preparation Instructions
Powdered media are hygroscopic and should be protected from moisture. The entire contents of each package should be used after opening. Preparing a concentrated solution of medium is not recommended as precipitates may form.

Supplements can be added prior to filtration or introduced aseptically to sterile medium.

1. Measure out 90% of final required volume of water. Water temperature should be 15-20 °C.
2. While gently stirring the water, add the powdered medium. Stir until dissolved. Do NOT heat.
3. Rinse original package with a small amount of water to remove all traces of powder. Add to solution in step 2.
4. While stirring, adjust the pH of the medium to 0.1-0.3 pH units below the desired pH since it may rise during filtration. The use of 1N HCl or 1N NaOH is recommended.
5. Add additional water to bring the solution to final volume.
6. Sterilize immediately by filtration using a membrane with a porosity of 0.22 microns.
7. Aseptically dispense medium into sterile container.

Storage and Stability
Store the dry powdered medium at 2-8 °C under dry conditions and liquid medium at 2-8 °C in the dark. Deterioration of the powdered medium may be recognized by any or all of the following: [1] color change, [2] granulation/clumping, [3] insolubility. Deterioration of the liquid medium may be recognized by any or all of the following: [1] pH change, [2] precipitate or particulates, [3] cloudy appearance [4] color change. The nature of supplements added may affect storage conditions and shelf life of the medium. Product label bears expiration date.

Procedure
MATERIALS REQUIRED BUT NOT PROVIDED:
Water for tissue culture use [W3500]
1N Hydrochloric Acid [H9892]
1N Sodium Hydroxide [S2770]
Medium additives as required

Reference
1 Leibovitz, A. (1963). The growth and maintainance of tissue/cell cultures in free gas exchange with the atmosphere. Amer. J. Hyg. 78:173-180.

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