

## Medium 199 with Earle's Salts

### Description

The M199 was originally developed to assay the nutrient demand of embryonic chicken fibroblasts. But it works very well with cells from many different animal species. For example, it is used for vaccine production in virology. For long term cultures serum should be added.

### Composition

	Components	mg/L
<b>Inorganic Salts</b>	Calcium chloride x 2H <sub>2</sub> O	264.92
	Iron(III) nitrate x 9H <sub>2</sub> O	0.72
	Magnesium sulfate dried	139.52
	Potassium chloride	400.00
	Sodium acetate x 3H <sub>2</sub> O	82.95
	Sodium chloride	6,800.00
	Sodium dihydrogen phosphate	140.00
	<b>Other Components</b>	Adenine sulfate
	AMP	0.20
	ATP	1.00
	Cholesterol	0.20
	2'-Deoxyribose	0.50
	D(+)-Glucose anhydrous	1,000.00
	Glutathione (red.)	0.05
	Guanine x HCl	0.30
	Hepes	5,958.00
	Hypoxanthine	0.30
	Phenol red	10.00
	D-Ribose	0.50
	Thymine	0.30
	Tween 80	4.90
	Uracil	0.30
	Xanthine	0.30
<b>Amino Acids</b>	L-Alanine	25.00
	L-Arginine x HCl	70.00
	L-Aspartic acid	30.00
	L-Cysteine x HCl x H <sub>2</sub> O	0.10
	L-Cystine	20.00
	L-Glutamine	100.00
	L-Glutamic acid	67.00
	Glycine	50.00
	L-Histidine x HCl x H <sub>2</sub> O	21.88
	L-Hydroxyproline	10.00
	L-Isoleucine	20.00
	L-Leucine	60.00
	L-Lysine x HCl	70.00
	L-Methionine	15.00
	L-Phenylalanine	25.00
	L-Proline	40.00
	L-Serine	25.00
L-Threonine	30.00	
L-Tryptophan	10.00	
L-Tyrosine	40.00	
L-Valine	25.00	

(1) usually on stock, (2) minimum order 10 L, (3) available upon request

Vitamins		
	p-Aminobenzoic acid	0.05
	Ascorbic acid	0.05
	D(+)-Biotin	0.01
	Calciferol	0.10
	D-Calcium pantothenate	0.01
	Choline chloride	0.50
	Folic acid	0.01
	myo-Inositol	0.05
	Menadione	0.01
	Nicotinic acid	0.025
	Nicotinamide	0.025
	Pyridoxal x HCl	0.025
	Pyridoxol x HCl	0.025
	Riboflavin	0.01
	DL- $\alpha$ -Tocopherol phosphate-Na <sub>2</sub>	0.01
	Thiamine x HCl	0.01
	Vitamin A acetate	0.14

When 5,958.00 mg/L HEPES is included there is only 6,300.00 mg/L sodium chloride.

### Liquid Media

M199 with EBSS<sup>(1)</sup>  
without L-Glutamine  
with 2.2 g/L NaHCO<sub>3</sub>,      500 ml    P04-07500

### Special Media

M199 with EBSS<sup>(2)</sup>  
with L-Glutamine  
with 2.2 g/L NaHCO<sub>3</sub>,      500 ml    P04-07050

M199 with EBSS<sup>(2)</sup>  
with stab. Glutamine  
with 2.2 g/L NaHCO<sub>3</sub>,      500 ml    P04-07250

M199 with EBSS<sup>(2)</sup>  
with L-Glutamine  
with 25 mM Hepes  
with 2.2 g/L NaHCO<sub>3</sub>,      500 ml    P04-07150

### Powder Media

M199 with EBSS<sup>(1)</sup>  
with L-Glutamine            10 L    P03-1910  
without NaHCO<sub>3</sub>            50 L    P03-1950

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