Corning Cell Culture Media, Sera, Reagents, and Flexible Bags Product Selection Guide

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Classical Media

Growth Promotion and Cytotoxicity

Corning® classical media products undergo a variety of tests to determine functionality and toxicity using growth-promotion analysis. Product performance is measured by harvest-to-plant ratios or fold increase according to predetermined specifications.

Physiochemical Properties

Liquid and powder classical media products are tested to determine pH and osmolality. Classical media powders are also tested for residual moisture. The pH and osmolality tests are performed according to specific procedures in which all equipment is calibrated using standards traceable to the National Institute of Standards and Technology.

Biological Tests

Quality release testing of Corning liquid classical media products assures low levels of endotoxin, mycoplasma, and an absence of contamination.

Endotoxin: Classical media products are tested for bacterial endotoxin using the Limulus Amoebocyte Lysate (LAL) chromogenic assay. For release, each lot of standard liquid classical media must have an endotoxin level of <0.25 EU/mL. Classical media powder products must have an endotoxin level of <0.25 EU/mL when reconstituted to formula weight with low endotoxin water.

Sterility: All Corning liquid classical media products are tested for sterility.

Mycoplasma: Liquid classical media products are tested for mycoplasma using a large-volume method.

DMEM (Dulbecco's Modification of Eagle's Medium)

														Powder			
Contains	**10-013**	**10-014**	**10-017**	**10-027**	**10-101**	**10-102**	**15-013**	**15-017**	**15-018**	**17-204**	**17-205**	**17-206**	**17-207**	**50-003**	**50-013**	**90-013**	**90-113**
L-glutamine	■	■	■	■										■	■		
Sodium pyruvate	■	■			■		■		■	■	■	■		■			
Phenol red	■	■	■	■	■	■	■	■	■	■		■	■	■	■		
L-cystine/L-methionine	■	■	■	■	■	■	■	■	■		■	■	■	■	■	■	■
Phosphate	■	■	■	■			■	■	■	■	■		■	■	■	■	■
HEPES				■					■								
High glucose	■		■	■	■	■	■	■	■	■	■	■		■	■	■	
Sodium bicarbonate	■	■	■	■	■	■	■	■	■	■	■	■	■				
Corning® glutagro™					■	■											
Pyridoxine HCl														■	■	■	■

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
10-013-CV	[+] 4.5 g/L Glucose, L-glutamine, sodium pyruvate	2°C to 8°C	18 m	500 mL	6
10-013-CM	[+] 4.5 g/L Glucose, L-glutamine, sodium pyruvate	2°C to 8°C	18 m	1L	6
10-013-LX	[+] 4.5 g/L Glucose, L-glutamine, sodium pyruvate	2°C to 8°C	18 m	10L	1
10-013-LB	[+] 4.5 g/L Glucose, L-glutamine, sodium pyruvate	2°C to 8°C	18 m	20L	1
10-014-CV	[+] 1.0 g/L Glucose, sodium pyruvate, L-glutamine	2°C to 8°C	18 m	500 mL	6
10-014-CM	[+] 1.0 g/L Glucose, sodium pyruvate, L-glutamine	2°C to 8°C	18 m	1L	6
10-017-CV	[+] 4.5 g/L Glucose, L-glutamine; [-] sodium pyruvate	2°C to 8°C	18 m	500 mL	6
10-017-CM	[+] 4.5 g/L Glucose, L-glutamine; [-] sodium pyruvate	2°C to 8°C	18 m	1L	6
10-027-CV	[+] 25 mM HEPES, 4.5 g/L glucose, L-glutamine; [-] sodium pyruvate	2°C to 8°C	18 m	500 mL	6
10-101-CV	[+] Corning glutagro™ supplement, 4.5 g/L glucose, sodium pyruvate, phenol red	2°C to 8°C	12 m	500 mL	6
10-102-CV	[+] Corning glutagro supplement, 4.5 g/L glucose, phenol red; [-] sodium pyruvate	2°C to 8°C	12 m	500 mL	6
15-013-CV	[+] 4.5 g/L Glucose, sodium pyruvate; [-] L-glutamine	2°C to 8°C	18 m	500 mL	6
15-013-CM	[+] 4.5 g/L Glucose, sodium pyruvate; [-] L-glutamine	2°C to 8°C	18 m	1L	6
15-013-LX	[+] 4.5 g/L Glucose, sodium pyruvate; [-] L-glutamine	2°C to 8°C	18 m	10L	1
15-013-LB	[+] 4.5 g/L Glucose, sodium pyruvate; [-] L-glutamine	2°C to 8°C	18 m	20L	1
15-017-CV	[+] 4.5 g/L Glucose; [-] L-glutamine, sodium pyruvate	2°C to 8°C	18 m	500 mL	6
15-017-CM	[+] 4.5 g/L Glucose; [-] L-glutamine, sodium pyruvate	2°C to 8°C	18 m	1L	6
15-018-CV	[+] 4.5 g/L Glucose, sodium pyruvate, 25 mM HEPES; [-] L-glutamine	2°C to 8°C	18 m	500 mL	6
15-018-CM	[+] 4.5 g/L Glucose, sodium pyruvate, 25 mM HEPES; [-] L-glutamine	2°C to 8°C	18 m	1L	6
17-204-CI	[+] 4.5 g/L Glucose, sodium pyruvate; [-] L-glutamine, L-methionine, L-cystine	2°C to 8°C	18 m	100 mL	6
17-205-CV	[+] 4.5 g/L Glucose, sodium pyruvate; [-] L-glutamine, phenol red	2°C to 8°C	18 m	100 mL	6
17-206-CI	[+] 4.5 g/L Glucose, sodium pyruvate; [-] L-glutamine, phosphate	2°C to 8°C	18 m	100 mL	6
17-207-CV	[-] Glucose, L-glutamine, sodium pyruvate	2°C to 8°C	18 m	500 mL	6

Powder

Cat. No.	Description	Storage	Shelf Life	Size*	Qty/Pk
50-003-PB	[+] 4.5 g/L Glucose, L-glutamine, sodium pyruvate; [-] sodium bicarbonate	2°C to 8°C	36 m	10L	1
50-003-PC	[+] 4.5 g/L Glucose, L-glutamine, sodium pyruvate; [-] sodium bicarbonate	2°C to 8°C	36 m	50L	1
50-013-PB	[+] 4.5 g/L Glucose, L-glutamine; [-] sodium pyruvate, sodium bicarbonate	2°C to 8°C	36 m	10L	1
50-013-PC	[+] 4.5 g/L Glucose, L-glutamine; [-] sodium pyruvate, sodium bicarbonate	2°C to 8°C	36 m	50L	1
90-013-PB	[+] 4.5 g/L Glucose; [-] sodium bicarbonate, L-glutamine, sodium pyruvate, phenol red	2°C to 8°C	36 m	10L	1
90-113-PB	[-] Sodium bicarbonate, glucose, L-glutamine, sodium pyruvate, phenol red	2°C to 8°C	36 m	10L	1

*Powder media volume indicated is the reconstituted volume.

DMEM/Ham's F-12 50/50 Mix

						Powder	
Contains	**10-090**	**10-092**	**10-103**	**15-090**	**16-405**	**90-090**	**90-091**
L-glutamine	■	■			■		
Sodium pyruvate	■	■	■	■	■	■	■
Phenol red	■	■	■	■			■
HEPES		■	■				
Sodium bicarbonate	■	■	■	■	■		
Corning® glutagro™			■				

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
10-090-CV	[+] L-glutamine	2°C to 8°C	12 m	500 mL	6
10-090-CM	[+] L-glutamine	2°C to 8°C	12 m	1L	6
10-092-CV	[+] L-glutamine, 15 mM HEPES	2°C to 8°C	12 m	500 mL	6
10-092-CM	[+] L-glutamine, 15 mM HEPES	2°C to 8°C	12 m	1L	6
16-405-CV	[+] L-glutamine; [-] phenol red	2°C to 8°C	12 m	500 mL	6
15-090-CV	[+] L-glutamine	2°C to 8°C	18 m	500 mL	6
15-090-CM	[-] L-glutamine	2°C to 8°C	18 m	1L	6
10-103-CV	[+] Corning glutagro™	2°C to 8°C	36 m	500 mL	6

Powder

Cat. No.	Description	Storage	Shelf Life	Size*	Qty/Pk
90-090-PB	[-] Sodium bicarbonate, L-glutamine, phenol red	2°C to 8°C	36 m	10L	6
90-091-PB	[+] L-glutamine	2°C to 8°C	36 m	10L	6

F-12K Nutrient Mixture (Kaighn's Modification), 1x

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
10-025-CV	[+] L-glutamine	2°C to 8°C	12 m	500 mL	6

Glasgow's MEM

Powder

Cat. No.	Description	Storage	Shelf Life	Size*	Qty/Pk
50-004-PB	[+] L-glutamine; [-] sodium bicarbonate, tryptose phosphate broth	2°C to 8°C	36 m	10L	1

Ham's F-10 Medium

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
10-070-CV	[+] L-glutamine	2°C to 8°C	12 m	500 mL	6

Ham's F-12 Medium

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
10-080-CV	[+] L-glutamine	2°C to 8°C	12 m	500 mL	6
10-080-CM	[+] L-glutamine	2°C to 8°C	12 m	1L	6

Powder

Cat. No.	Description	Storage	Shelf Life	Size*	Qty/Pk
50-040-PB	[+] L-glutamine; [-] sodium bicarbonate	2°C to 8°C	36 m	10L	1

*Powder media volume indicated is the reconstituted volume

Improved MEM (Richter's Modification), 1x

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
10-024-CV	[+] L-glutamine	2°C to 8°C	12 m	500 mL	6
10-026-CV	[+] L-glutamine; [-] phenol red	2°C to 8°C	12 m	500 mL	6

IMDM (Iscove's Modification of DMEM), 1x

Contains	10-016	15-016
L-glutamine	■	
Sodium pyruvate	■	■
Phenol red	■	■
Pyridoxine HCl	■	■
Sodium bicarbonate	■	■

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
10-016-CV	[+] L-glutamine and 25 mM HEPES; [-] α-thioglycerol, β-mercaptoethanol	2°C to 8°C	12 m	500 mL	6
10-016-CM	[+] L-glutamine and 25 mM HEPES; [-] α-thioglycerol, β-mercaptoethanol	2°C to 8°C	12 m	1L	6
15-016-CV	[+] 25 mM HEPES; [-] α-thioglycerol, β-mercaptoethanol, L-glutamine	2°C to 8°C	12 m	500 mL	6

Powder

Cat. No.	Description	Storage	Shelf Life	Size*	Qty/Pk
50-016-PB	[+] 25 mM HEPES; [-] α-thioglycerol, β-mercaptoethanol, sodium bicarbonate	2°C to 8°C	36 m	10L	1

Leibovitz's L-15 (Modification), 1x

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
10-045-CV	[+] L-glutamine	2°C to 8°C	12 m	500 mL	6

Powder

Cat. No.	Description	Storage	Shelf Life	Size*	Qty/Pk
50-045-PB	[+] L-glutamine	2°C to 8°C	12 m	10L	1

MCDB 131, 1x

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
15-100-CV	[-] L-glutamine	2°C to 8°C	12 m	500 mL	6

McCoy's 5A (Iwaketa and Grace Modification), 1x

Contains	10-050	10-051
L-glutamine	■	■
Phenol red	■	■
HEPES		■
Sodium bicarbonate	■	■

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
10-050-CV	[+] L-glutamine	2°C to 8°C	18 m	500 mL	6
10-051-CI	[+] L-glutamine, 25 mM HEPES	2°C to 8°C	18 m	100 mL	6

Medium 199 (Modification)

	Powder		
Contains	**10-060-CV**	**50-050**	**90-050**
L-glutamine	■	■	
Phenol red		■	
Earle's salts	■	■	■
Hank's salts			
Sodium bicarbonate			

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
10-060-CV	[+] Earle's salts, L-glutamine	2°C to 8°C	18 m	500 mL	6

Powder

Cat. No.	Description	Storage	Shelf Life	Size*	Qty/Pk
50-050-PB	[+] Earle's salts, L-glutamine; [-] sodium bicarbonate	2°C to 8°C	36 m	10L	1
90-050-PB	[+] Earle's salts; [-] sodium bicarbonate, L-glutamine, phenol red	2°C to 8°C	36 m	10L	1

MEM (Minimum Essential Medium)

						Powder				
Contains	**10-009**	**10-010**	**15-010**	**15-015**	**17-305**	**50-010**	**50-011**	**50-019**	**51-010**	**90-009**
L-glutamine	■	■				■		■		
Phenol red		■	■	■		■	■		■	
L-Methionine		■	■	■	■					
Calcium and magnesium		■	■		■					
Sodium bicarbonate	■	■	■	■	■					
Non-essential amino acids	■									
Sodium pyruvate	■									
Earle's salts						■	■		■	■
Hank's salts								■		

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
10-009-CV	[+] Sodium bicarbonate, NEAA, L-glutamine, sodium pyruvate	2°C to 8°C	18 m	500 mL	6
10-010-CV	[+] Earle's salts, L-glutamine	2°C to 8°C	18 m	500 mL	6
10-010-CM	[+] Earle's salts, L-glutamine	2°C to 8°C	18 m	1L	6
15-010-CV	[+] Earle's salts; [-] L-glutamine	2°C to 8°C	18 m	500 mL	6
15-010-CM	[+] Earle's salts; [-] L-glutamine	2°C to 8°C	18 m	1L	6
15-015-CV	[-] L-glutamine, calcium, magnesium	2°C to 8°C	18 m	500 mL	6
17-305-CV	[+] Earle's salts; [-] L-glutamine, phenol red	2°C to 8°C	18 m	500 mL	6

Powder

Cat. No.	Description	Storage	Shelf Life	Size*	Qty/Pk
50-010-PB	[+] Earle's salts, L-glutamine; [-] sodium bicarbonate	2°C to 8°C	36 m	10L	1
50-010-PC	[+] Earle's salts, L-glutamine; [-] sodium bicarbonate	2°C to 8°C	36 m	50L	1
50-011-PB	[+] Earle's salts, L-glutamine. NEAA; [-] sodium bicarbonate	2°C to 8°C	36 m	10L	1
50-011-PC	[+] Earle's salts, L-glutamine, NEAA; [-] sodium bicarbonate	2°C to 8°C	36 m	50L	1
51-010-PC	[+] Earle's salts; [-] sodium bicarbonate, L-glutamine	2°C to 8°C	36 m	50L	1
50-019-PB	[+] Hank's salts, L-glutamine; [-] sodium bicarbonate	2°C to 8°C	36 m	50L	1
90-009-PB	[+] Earle's salts; [-] L-glutamine, phenol red, sodium bicarbonate	2°C to 8°C	36 m	10L	1

*Powder media volume indicated is the reconstituted volume

CMRL 1066

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
15-110-CV	[-] L-glutamine	2°C to 8°C	36 m	500 mL	6

*Powder media volume indicated is the reconstituted volume

MEM (Minimum Essential Medium) Alpha Medium

			Powder
Contains	**10-022**	**15-012**	**50-012**
L-glutamine	■		■
Phenol red	■	■	■
Nucleosides	■		
Sodium pyruvate	■	■	■
Sodium bicarbonate	■	■	

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
10-022-CV	[+] Earle's salts, ribonucleosides, deoxyribonucleosides, L-glutamine	2°C to 8°C	12 m	500 mL	6
15-012-CV	[+] Earle's salts; [-] ribonucleosides, deoxyribonucleosides, L-glutamine	2°C to 8°C	18 m	500 mL	6

Powder

Cat. No.	Description	Storage	Shelf Life	Size*	Qty/Pk
50-012-PC	[+] Earle's salts, L-glutamine ; [-] ribonucleosides, deoxyribonucleosides, sodium bicarbonate	2°C to 8°C	36 m	50L	1

RPMI 1640

									Powder	
Contains	**10-040**	**10-041**	**10-043**	**10-104**	**15-040**	**15-041**	**17-104**	**17-105**	**50-020**	**90-022**
L-glutamine	■	■	■						■	
Phenol red	■	■	■	■	■	■	■		■	
HEPES		■				■				
L-cystine/L-methionine	■	■	■	■	■	■		■	■	
Sodium bicarbonate	■	■	■	■	■	■	■	■		
Corning® glutagro™				■						

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
10-040-CV	[+] L-glutamine	2°C to 8°C	18 m	500 mL	6
10-040-CM	[+] L-glutamine	2°C to 8°C	18 m	1L	6
10-040-LX	[+] L-glutamine	2°C to 8°C	18 m	10L	6
10-040-LB	[+] L-glutamine	2°C to 8°C	18 m	20L	6
10-041-CV	[+] L-glutamine and 25 mM HEPES	2°C to 8°C	18 m	500 mL	6
10-041-CM	[+] L-glutamine and 25 mM HEPES	2°C to 8°C	18 m	1L	6
10-043-CV	[+] L-glutamine; [-] glucose	2°C to 8°C	18 m	500 mL	6
10-104-CV	[+] Corning glutagro™, phenol red	2°C to 8°C	18 m	500 mL	6
15-040-CV	[-] L-glutamine	2°C to 8°C	18 m	500 mL	6
15-040-CM	[-] L-glutamine	2°C to 8°C	18 m	1L	6
15-040-LB	[-] L-glutamine	2°C to 8°C	18 m	20L	1
15-041-CV	[+] 25 mM HEPES; [-] L-glutamine	2°C to 8°C	18 m	500 mL	6
17-104-CI	[-] L-glutamine, L-methionine, L-cystine	2°C to 8°C	18 m	100 mL	6
17-105-CV	[-] L-glutamine, phenol red	2°C to 8°C	18 m	500 mL	6

Powder

Cat. No.	Description	Storage	Shelf Life	Size*	Qty/Pk
50-020-PB	[+] L-glutamine; [-] sodium bicarbonate	2°C to 8°C	36 m	10L	1
50-020-PC	[+] L-glutamine; [-] sodium bicarbonate	2°C to 8°C	36 m	50L	1
90-022-PB	[-] L-glutamine, phenol red, sodium bicarbonate	2°C to 8°C	36 m	10L	1

*Powder media volume indicated is the reconstituted volume.

INSECT MEDIA

Grace's Insect Basal Medium (Vaughn Modification)

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
13-200-CV	[+] L-glutamine; [-] insect hemolymph	2 to 8°C	12 m	500 mL	6

Hink's TNM-FH Medium (Modification) (Supplemented Grace's Medium)

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
13-100-CV	[+] L-glutamine, lactalbumin hydrolysate, UF yeast extract; [-] insect hemolymph	2 to 8°C	12 m	500 mL	6

Buffered Salt Solutions

Buffered salt solutions are made to a physiological pH and salt concentration. They are used alone or in combination with other agents for washing tissues and cells. Buffered salt solutions most commonly include sodium, potassium, calcium, magnesium, and chloride. They provide the cells with water and inorganic ions, while maintaining a physiological pH and osmotic pressure.

Although there have been many modifications to the original formulas to produce fully defined media, salt solutions still play an important role in tissue culture. A salt solution's basic functions, to maintain the pH and osmotic balance in the medium and to provide the cells with water and essential inorganic ions, are as valuable today as when it was first developed a century ago.

DPBS (Dulbecco's Phosphate Buffered Saline)

					Powder
Contains	**20-030**	**20-031**	**21-030**	**21-031**	**55-031**
Calcium	■		■		
Magnesium	■		■		
Potassium chloride	■	■	■	■	■

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
20-030-CV	[+] Calcium and magnesium, 10x	2°C to 30°C	18 m	500 mL	6
20-031-CV	[-] Calcium and magnesium, 10x	2°C to 30°C	18 m	500 mL	6
21-030-CV	[+] Calcium and magnesium, 1x	2°C to 30°C	36 m	500 mL	6
21-030-CM	[+] Calcium and magnesium, 1x	2°C to 30°C	36 m	1L	6
21-031-CV	[-] Calcium and magnesium, 1x	2°C to 30°C	36 m	500 mL	6
21-031-CM	[-] Calcium and magnesium, 1x	2°C to 30°C	36 m	1L	6
21-031-LX	[-] Calcium and magnesium, 1x	2°C to 30°C	36 m	10L	1
21-031-LB	[-] Calcium and magnesium, 1x	2°C to 8°C	36 m	20L	1

Powder

Cat. No.	Description	Storage	Shelf Life	Size*	Qty/Pk
55-031-PB	[-] Calcium and magnesium	2°C to 8°C	36 m	10L	1
55-031-PC	[-] Calcium and magnesium	2°C to 8°C	36 m	50L	1

*Powder media volume indicated is the reconstituted volume

PBS (Phosphate Buffered Saline)

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
21-040-CV	[-] Calcium and magnesium, pH 7.4 ± 0.1, 1x	2°C to 30°C	24 m	500 mL	6
21-040-CM	[-] Calcium and magnesium, pH 7.4 ± 0.1, 1x	2°C to 30°C	24 m	1L	6
21-040-CMX12	[-] Calcium and magnesium, pH 7.4 ± 0.1, 1x	2°C to 30°C	24 m	1L	12

HBSS (Hank's Balanced Salt Solution)

Contains	20-021	20-023	21-020	21-021	21-022	21-023	Powder 55-022
Calcium		■	■			■	
Magnesium		■	■			■	
Phenol red	■		■	■			
Sodium bicarbonate			■	■	■	■	

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
20-021-CV	[-] Sodium bicarbonate, calcium, magnesium	2°C to 30°C	36 m	500 mL	6
20-023-CV	[+] Calcium, magnesium; [-] phenol red, sodium bicarbonate	2°C to 30°C	36 m	500 mL	6
21-020-CV	[+] Calcium, magnesium, 1x	2°C to 30°C	36 m	500 mL	6
21-020-CM	[+] Calcium, magnesium, 1x	2°C to 30°C	36 m	1L	6
21-021-CV	[-] Calcium, magnesium, 1x	2°C to 30°C	36 m	500 mL	6
21-021-CM	[-] Calcium, magnesium, 1x	2°C to 30°C	36 m	1L	6
21-022-CV	[-] Calcium, magnesium, phenol red, 1x	2°C to 30°C	36 m	500 mL	6
21-022-CM	[-] Calcium, magnesium, phenol red, 1x	2°C to 30°C	36 m	1L	6
21-023-CV	[+] Calcium, magnesium; [-] phenol red, 1x	2°C to 30°C	36 m	500 mL	6
21-023-CM	[+] Calcium, magnesium; [-] phenol red, 1x	2°C to 30°C	36 m	1L	6

Powder

Cat. No.	Description	Storage	Shelf Life	Size*	Qty/Pk
55-022-PB	[-] Sodium bicarbonate, calcium, magnesium	2°C to 8°C	36 m	10L	1

*Powder media volume indicated is the reconstituted volume

Serum-free/Specialty Media and Solutions

Serum has been extensively used as a supplement to chemically defined media for mammalian cell culture due to its beneficial attributes. As a complex supplement it contains proteins, growth factors, hormones, amino acids, sugars, trypsin inhibitors, and lipids which support vigorous *in vitro* growth of a large number of cell types.

However, there are many negative aspects associated with the use of serum such as cost, time-consuming sampling, lot-to-lot variability, presence of adventitious agents, and availability. These aspects are particularly troublesome with the use of serum in the production of recombinant proteins, viral vaccines, cellular therapies, and monoclonal antibodies. In such cases, extensive downstream purification is required to remove serum-derived protein from the medium and to assure the absence of adventitious pathogens.

To minimize those problems associated with the use of serum, several defined, serum-free media have been developed and commercialized. Serum-free growth media pose numerous advantages over the use of serum, including lot-to-lot consistency, reduced foaming, the reduction of exogenous agents, simpler downstream processing, and high cell yield support.

SF Medium

SF Medium is based on a proprietary classical media formulation. This medium contains a mixture of select trace elements and high molecular weight carbohydrates, extra vitamins, animal-free protein, and a small amount of high quality bovine serum albumin (1.0 g/L). SF Medium supports superior growth and viability over long-term passages in hybridomas, as well as suspension and adherent cell cultures. This formulation contains L-glutamine.

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
40-101-CV	[+] L-glutamine, 1 g/L BSA	2°C to 8°C	12 m	500 mL	6
40-102-CV	[+] L-glutamine, 1 g/L BSA; [-] phenol red	2°C to 8°C	12 m	500 mL	6

PF Medium

Optimized for the cultivation of Chinese Hamster Ovary (CHO) cells, along with many derivatives of this parent line, PF Medium is a proprietary serum-free and protein-free growth medium that does not contain any hormones or growth factors. This medium supports superior growth and viability over long-term passages in both adherent and suspension culture, and is formulated without L-glutamine.

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
40-200-CV	[-] L-glutamine	2°C to 8°C	12 m	500 mL	6

Corning® transfectagro™ Reduced-serum Medium

transfectagro reduced-serum medium is designed to maximize the growth of a variety of cell types under reduced-serum conditions, generally allowing for at least a 50% reduction in serum use with minimal adaptation. A chemically defined, reduced-serum formulation, transfectagro also improves transient transfection efficiency in a variety of cell types.

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
40-300-CV	[+] Lower levels of calcium and phenol red, HEPES	2°C to 8°C	12 m	500 mL	6

LSM (Lymphocyte Separation Medium)

Lymphocyte Separation Medium was originally designed for the *in vitro* isolation of lymphocytes from diluted whole blood. It is a sterile filtered, iso-osmotic polysucrose and diatrizoate solution with low viscosity and a density of 1.077-1.080 g/cm^3 at 20°C.

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
25-072-CI	LSM, Density - 1.077 - 1.080 g/cm^3 at 20°C	15°C to 30°C	18 m	100 mL	1
25-072-CV	LSM, Density - 1.077 - 1.080 g/cm^3 at 20°C	15°C to 30°C	18 m	500 mL	1

TSB (Tryptic Soy Broth)

Tryptic Soy Broth is a sterile-filtered, ready-to-use solution for use in sterility testing and validation in the manufacture of a liquid product. The use of this medium in place of the product intended for production allows for the assessment of the capability of an aseptic manufacturing process. Due to the rich nutrient base, TSB may be used in the cultivation of fastidious micro-organisms. This growth medium has animal-free components, making it ideal for testing the sterility of animal-free biopharmaceutical processes.

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
46-060-CI	Tryptic soy broth, animal-free	15°C to 30°C	12 m	100 mL	1
46-060-CM	Tryptic soy broth, animal-free	15°C to 30°C	12 m	1L	1
46-060-LB	Tryptic soy broth, animal-free	15°C to 30°C	12 m	20L	1

Powder

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
61-411-RO	Tryptic soy broth, animal-free	15°C to 30°C	12 m	500 g	1

Hepatocyte Maintenance Medium

Hepatocyte Maintenance Medium is designed for the *in vitro* cultivation and maintenance of hepatocytes for research applications, drug discovery, and studies related to preclinical drug-induced liver injury. This specialized medium is optimized for primary human hepatocytes. It maintains the physiological relationships between hepatic Phase I and II drug metabolism enzymes as well as influx and efflux transporters. It also meets the long-term high-metabolic needs of hepatocytes. Hepatocyte Maintenance Medium is defined, animal-origin free and serum-free.

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
40-550-CV	Hepatocyte maintenance medium	2°C to 8°C	*	500 mL	1

* Please inquire for lot-specific expiration dates or view the current certificate of analysis at www.corning.com/lifesciences/media

Corning® hybrigro™ SF Medium

Specifically developed for serum-free growth and antibody production with a variety of hybridoma cell lines, hybrigro SF medium is a complete, animal-free component, defined medium.

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
40-215-CV	hybrigro SF medium with Corning glutagro™ supplement	2°C to 8°C	12 m	500 mL	6

Corning stemgro® hMSC Medium

Serum-free stemgro hMSC medium has been designed for the maximum expansion of human mesenchymal stem cells (hMSCs) derived from bone marrow, cord blood, or adipose tissue. The stemgro hMSC medium is defined as its components are either chemically synthesized or recombinantly produced and purified. The stemgro hMSC medium offers the convenience of no vessel coating with biological materials if used with Corning CellBIND® or Primaria™ surface cell culture vessels, saving the cost of coating materials and time.

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
40-410-KIT	stemgro hMSC medium and supplement	-20°C to 8°C	12 m	KIT	1

INSECT MEDIA

Corning insectagro® DS2 Serum-free/Protein-free Medium, 1x

insectagro DS2 serum-free/protein-free medium was developed for the growth and maintenance of Drosophila Schneider 2 (DS2) cells to be used in heterologous protein expression. At the optimal temperature range (22°C to 24°C), DS2 cells grow as a loose monolayer and are readily adaptable to growth in suspension. Under these conditions, the cells require minimal adaptation to serum-free culture.

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
13-402-CV	insectagro DS2 serum-free/protein-free medium, 1x [-] L-glutamine	2°C to 8°C	12 m	500 mL	6

Corning insectagro Sf9 Serum-free/Protein-free Medium

The insectagro Sf9 is formulated to support the propagation of Sf9 insect cells in culture, and can also be used with Sf21 cells. Sf9 cells cultured in non-humidified, non-CO_2 incubators at 27°C (room temperature) display both monolayer and suspension culture qualities. With their fast doubling times of 18 to 22 hours, Sf9 cells are easily scaled up to large cultures using bioreactors.

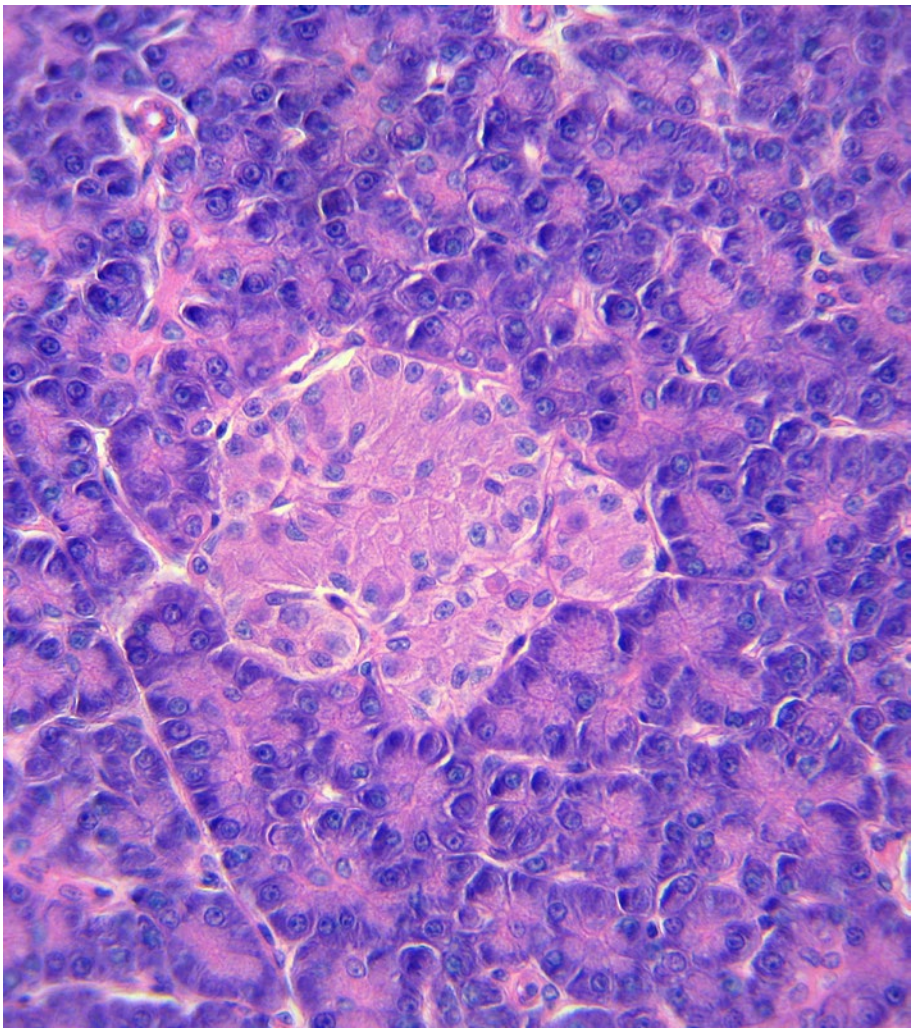
Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
13-410-CV	insectagro Sf9 serum-free/protein-free medium [+] L-glutamine	2°C to 8°C	12 m	500 mL	6

Islet Solutions

Islet cell isolation and processing for diabetes research requires a variety of specialized cell culture media, separation and gradient solutions, porcine-specific solutions, and related isolation, trimming, and storage/preservation solutions. Most islet solutions have been customized to include or leave out components such as insulin, transferrin, HSA, ciprofloxacin, and HEPES.

Corning's portfolio of specialized media has been cited in multiple islet cell isolation protocols for type 1 diabetes research.



Islet Solutions and Reagents

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
98-021-CV	Miami medium #1A with HSA and sodium bicarbonate	2°C to 8°C	18 m	500 mL	1
98-291-CV	CMRL 1066 with HEPES, without sodium bicarbonate and phenol red	2°C to 8°C	18 m	500 mL	1
98-304-CV	CMRL 1066, supplemented, CIT modification	2°C to 8°C	18 m	500 mL	1
99-603-CV	CMRL 1066, supplemented	2°C to 8°C	18 m	500 mL	1
99-663-CV	CMRL 1066 without phenol red, L-glutamine	2°C to 8°C	18 m	500 mL	1
99-595-CM	RPMI 1640 with L-glutamine	2°C to 8°C	18 m	1 L	1
99-597-CM	HBSS (Hank's Balanced Salt Solution), modified for islets	2°C to 8°C	18 m	1 L	1
99-674-CM	Gradient stock solution, density 1.110 to 1.121 g/cm³	2°C to 8°C	24 m	1 L	1
99-676-CM	Trimming solution	2°C to 8°C	24 m	1 L	1
99-677-CM	Cold storage/purification stock solution, density 1.026 to 1.032 g/cm³	2°C to 8°C	18 m	1 L	1
99-678-CM	Phase I solution	2°C to 8°C	24 m	1 L	1
99-723-CM	Penta starch, 10% solution	2°C to 8°C	18 m	1 L	1
99-781-CV	Perfusion solution with HEPES, without phenol red	2°C to 8°C	24 m	500 mL	1
99-782-CM	Priming solution with HEPES, without phenol red, and sodium bicarbonate	15°C to 30°C	24 m	1 L	1
99-783-CM	Dilution solution, RPMI 1640 with HEPES, L-glutamine, without HSA and phenol red	2°C to 8°C	18 m	1 L	1
99-784-CM	Wash solution, medium 199 with 25 mM HEPES, without phenol red, L-glutamine, and sodium bicarbonate	2°C to 8°C	18 m	1 L	1
99-785-CV	Final wash/culture medium, CMRL 1066 without phenol red, with HSA, HEPES, and L-glutamine	2°C to 8°C	18 m	500 mL	1
99-786-CV	Functionality/viability solution, CMRL 1066 without glucose	2°C to 8°C	12 m	500 mL	1

Cell Separation and Gradient Solutions

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
99-662-CVS	Stock Polysucrose solution (Euro-Collins), density 1.132 g/cm³	2°C to 8°C	12 m	350 mL	1
99-690-CIS	Islet gradient, density 1.037 g/cm³	2°C to 8°C	12 m	75 mL	1
99-691-CIS	Islet gradient, density 1.096 g/cm³	2°C to 8°C	12 m	75 mL	1
99-692-CIS	Islet gradient, density 1.108 g/cm³	2°C to 8°C	12 m	75 mL	1
99-815-CIS	Islet gradient, density 1.069 g/cm³	2°C to 8°C	12 m	75 mL	1
25-072-CI	LSM (Lymphocyte Separation Medium), density 1.077 g/cm³	15°C to 30°C	18 m	100 mL	1
25-072-CV	LSM (Lymphocyte Separation Medium), density 1.077 g/cm³	15°C to 30°C	18 m	500 mL	1
61-196-RM	Polysucrose 400	15°C to 30°C	≥12 m	100 g	1
61-196-RO	Polysucrose 400	15°C to 30°C	≥12 m	500 g	1

Porcine Solutions

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
98-343-CV	Neonatal porcine islet culture medium	2°C to 8°C	*	500 mL	1
99-601-CM	Medium 199, porcine modification, with 25 mM HEPES, without phenol red, L-glutamine, and sodium bicarbonate	2°C to 8°C	*	1L	1

*Please inquire for lot-specific expiration dates or view current certificate of analysis at www.corning.com/lifesciences/media.

Preservation Solutions

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
99-408-CM	Glucose solution (Euro-Collins)	15°C to 30°C	24 m	1L	1
99-409-CI	Electrolyte additive solution (Euro-Collins)	15°C to 30°C	24 m	100 mL	1

Human and Animal Sera

Our high-quality serum products perfectly complement our wide range of sterile-filtered, low-endotoxin, classical cell culture media.

Premium Fetal Bovine Serum is U.S.-sourced, with low endotoxin and hemoglobin specifications and is collected from cattle herds located within the United States. It is also available heat-inactivated.

Regular Fetal Bovine Serum is derived from USDA-certified facilities outside the United States. These facilities are located in countries which are recognized by the United States Department of Agriculture (USDA) to be free of bovine spongiform encephalopathy (BSE) and foot and mouth disease (FMD).

Regular Fetal Bovine Serum is also available heat-inactivated.

Specialty serum products are also offered by Corning for a variety of product applications.

Fetal Bovine Serum

Fetal Bovine Serum (FBS) is a light brown-colored liquid separated from the blood of the bovine fetus. All material meets the approval of the USDA and is obtained from sources free of BSE, FMD, and other reportable diseases pertaining to the species.

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
35-010-CV	Fetal Bovine Serum, regular	-25°C to -15°C	*	500 mL	1
35-011-CV	Fetal Bovine Serum, regular (heat inactivated)	-25°C to -15°C	*	500 mL	1
35-015-CV	Fetal Bovine Serum, premium	-25°C to -15°C	*	500 mL	1
35-016-CV	Fetal Bovine Serum, premium (heat inactivated)	-25°C to -15°C	*	500 mL	1
35-070-CV	Fetal Bovine Serum, premium	-25°C to -15°C	*	500 mL	1
35-071-CV	Fetal Bovine Serum, premium (dialyzed)	-25°C to -15°C	*	500 mL	1
35-072-CV	Fetal Bovine Serum, premium (charcoal stripped)	-25°C to -15°C	*	500 mL	1
35-073-CV	Fetal Bovine Serum, premium (low IgG)	-25°C to -15°C	*	500 mL	1
35-074-CV	Fetal Bovine Serum, premium (embryonic stem cell tested)	-25°C to -15°C	*	500 mL	1
35-075-CV	Fetal Bovine Serum, premium (tetracycline negative)	-25°C to -15°C	*	500 mL	1
35-076-CV	Fetal Bovine Serum, Australia origin	-25°C to -15°C	*	500 mL	1

*Please inquire for lot-specific expiration dates or view the current certificate of analysis at www.corning.com/lifesciences/media.

Donor Calf Serum, U.S. Sourced

Donor Calf Serum is a light brown-colored liquid collected from standing herds of bovine calves located entirely in the United States. Animals are regularly inspected by licensed veterinarians and certified to be free of diseases pertaining to the species.

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
35-022-CV	Donor Calf Serum, U.S. sourced	-25°C to -15°C	*	500 mL	1

*Please inquire for lot-specific expiration dates or view the current certificate of analysis at www.corning.com/lifesciences/media.

Donor Horse Serum, U.S. Sourced

Donor Horse Serum is a light brown-colored liquid collected from controlled standing herds of animals located entirely in the United States. Animals are inspected periodically by a licensed veterinarian, certified to be free of diseases pertaining to the species.

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
35-030-CV	Donor Horse Serum, U.S. sourced	-25°C to -15°C	*	500 mL	1

* Please inquire for lot-specific expiration dates or view the current certificate of analysis at www.corning.com/lifesciences/media.

Human AB Serum

Human AB Serum is processed from donor plasma collected at U.S. centers. Each donor unit of plasma is negative for Hepatitis B (HBsAg), Hepatitis C (anti-HCV), Human Immunodeficiency Virus-1 (HIV-1), Human Immunodeficiency Virus-2 (HIV-2), Human Immunodeficiency Virus antibody (HIV-1Ag), and alanine aminotransferase (ALT) using FDA approved methods.

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
35-060-CI	Human AB serum	-25°C to -15°C	*	100 mL	1

* Please inquire for lot-specific expiration dates or view the current certificate of analysis at www.corning.com/lifesciences/media.

Cell Culture Reagents

Growth media is used either for cell culture or microbiological culture. These cultures require nutrients, supplements, buffers, and other reagents specific to the product being grown to maximize results and consistency.

There are two major types of growth media: those used for cell culture, which use specific cell types derived from plants or animals, and microbiological culture, which are used for growing microorganisms, such as bacteria or yeast.

Specialized media are sometimes required for microorganism and cell culture growth. Some organisms, termed fastidious organisms, require specialized environments due to complex nutritional requirements. Viruses, for example, are obligate intracellular parasites and require a growth medium composed of living cells.

AMINO ACIDS AND VITAMINS

Supplementation table for L-glutamine and Corning® glutagro™ supplement.

Media	mg/L	mM	200 mM L-glutamine (25-005) or 200 mM Corning glutagro Supplement (25-015)
AMEM	292	2.00	10.0 mL/L
BME	292.3	2.00	10.0 mL/L
DMEM	584	4.00	20.0 mL/L
DMEM/F12	362.1	2.48	12.4 mL/L
F12K	292	2.00	10.0 mL/L
Ham's F-10	146.2	1.00	5.0 mL/L
Ham's F-12	146.2	1.00	5.0 mL/L
Iscove's DMEM	584	4.00	20.0 mL/L
M199	100	0.68	3.4 mL/L
EMEM	292	2.00	10.0 mL/L
RPMI 1640	300	2.05	10.3 mL/L

Corning glutagro Supplement

The glutagro supplement is a stabilized dipeptide form of L-glutamine which does not degrade in liquid media during storage or incubation, providing superior results in several applications.

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
25-015-CI	glutagro supplement, 200 mM solution, 100x (with 8.5 g/L NaCl)	2°C to 30°C	24 m	100 mL	1

L-glutamine

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
25-005-CI	L-glutamine, 200 mM solution, 100x (with 8.5 g/L NaCl)	-25°C to -15°C	24 m	500 mL	6
25-005-CV	L-glutamine, 200 mM solution, 100x (with 8.5 g/L NaCl)	-25°C to -15°C	24 m	500 mL	6

Powder

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
61-030-RM	L-glutamine	2°C to 8°C	12 m	100 g	1
61-030-RO	L-glutamine	2°C to 8°C	12 m	500 g	1
61-030-RR	L-glutamine	2°C to 8°C	12 m	1 kg	1

MEM Amino Acids

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
25-030-CI	[-] L-glutamine, 50x	2°C to 8°C	36 m	100 mL	6

MEM Non-essential Amino Acids

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
25-025-CI	MEM non-essential amino acids, 100x	2°C to 8°C	18 m	100 mL	6

MEM Vitamins

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
25-020-CI	MEM vitamins, 100x	-25°C to -15°C	18 m	100 mL	6

ANTIBIOTICS AND ANTIMYCOTICS

Amphotericin B

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
30-003-CF	Amphotericin B, liquid	-25°C to -15°C	18 m	50 mL	6

Ampicillin Sodium Salt

Powder

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
61-238-RH	Ampicillin sodium salt	2°C to 8°C	≥12 m	10 g	1
61-238-RM	Ampicillin sodium salt	2°C to 8°C	≥12 m	100 g	1

Antibiotic-Antimycotic Solution

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
30-004-CI	10,000 I.U. Penicillin (per mL), 10,000 µg/mL Streptomycin, 25 µg/mL Amphotericin with 8.5 g/L NaCl	-25°C to -15°C	18 m	100 mL	6

Blasticidin S HCl

Powder

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
30-100-RB	Blasticidin S HCl	-25°C to -15°C	18 m	50 mg	1

Chloramphenicol

Powder

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
61-239-RI	Chloramphenicol	15°C to 25°C	≥12 m	25 g	1

Ciprofloxacin Hydrochloride

Powder

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
61-277-RF	Ciprofloxacin hydrochloride	15°C to 25°C	≥12 m	1 g	1
61-277-RG	Ciprofloxacin hydrochloride	15°C to 25°C	≥12 m	5 g	1

G418 Sulfate

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
30-234-CR	G418 Sulfate, 50 mg/mL solution	2°C to 8°C	≥12 m	20 mL	1
30-234-CI	G418 Sulfate, 50 mg/mL solution	2°C to 8°C	≥12 m	100 mL	1

Powder

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
61-234-RF	G418 Sulfate, potency >700 µg/mg	15°C to 30°C	≥12 m	1 g	1
61-234-RG	G418 Sulfate, potency >700 µg/mg	15°C to 30°C	≥12 m	5 g	1
61-234-RK	G418 Sulfate, potency >700 µg/mg	15°C to 30°C	≥12 m	50 kg	1

Gentamicin Sulfate

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
30-005-CR	Gentamicin sulfate	15°C to 30°C	12 m	10 mL	10

Powder

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
61-098-RA	Gentamicin sulfate	2°C to 8°C	≥12 m	100 mg	1
61-098-RF	Gentamicin sulfate	2°C to 8°C	≥12 m	1 g	1

Hygromycin B Solution

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
30-240-CR	Hygromycin B solution	2°C to 8°C	18 m	10 mL	1

Kanamycin Sulfate

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
30-006-CF	Kanamycin sulfate	-25°C to -15°C	18 m	50 mL	6

Powder

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
61-176-RG	Kanamycin sulfate	15°C to 30°C	18 m	5 g	1

Neomycin Sulfate

Powder

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
61-241-RG	Neomycin sulfate	15°C to 30°C	18 m	5 g	1

Penicillin-Streptomycin Solution

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
30-001-CI	Penicillin-Streptomycin solution, 50x	-25°C to -15°C	12 m	100 mL	6
30-002-CI	Penicillin-Streptomycin solution, 100x	-25°C to -15°C	12 m	100 mL	6
30-009-CI	Penicillin-Streptomycin solution, 100x [+] 29.2 mg/mL L-glutamine	-25°C to -15°C	12 m	100 mL	6

Puromycin Dihydrochloride

Powder

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
61-385-RA	Puromycin dihydrochloride	-25°C to -15°C	12 m	0.1 g	1

Streptomycin Sulfate

Powder

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
61-088-RM	Streptomycin sulfate	15°C to 30°C	12 m	100 g	1

Tetracycline Hydrochloride

Powder

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
61-242-RG	Tetracycline hHydrochloride	15°C to 30°C	12 m	5 g	1

BUFFERS

HEPES

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
25-060-CI	HEPES, 1M solution (238.3 mg/mL)	15°C to 30°C	24 m	100 mL	6

Powder

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
61-034-RM	HEPES	15°C to 30°C	≥12 m	100 g	1
61-034-RO	HEPES	15°C to 30°C	≥12 m	500 g	1
61-034-RR	HEPES	15°C to 30°C	≥12 m	1 kg	1

Sodium Bicarbonate

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
25-035-CI	Sodium bicarbonate, 7.5% solution	15°C to 30°C	36 m	100 mL	6

Powder

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
61-065-RO	Sodium bicarbonate	15°C to 30°C	≥12 m	500 g	1
61-065-RR	Sodium bicarbonate	15°C to 30°C	≥12 m	1 kg	1

ENZYMATIC CELL DISSOCIATION AGENTS

Accutase® Cell Detachment Solution

Accutase is an effective solution for routinely detaching cells from standard tissue culture-treated vessels, as well as advanced surface treatments or coatings. Accutase is useful for cell detachment and for preparing single-cell suspensions from clumped cell populations for sub-culturing cells, analytical studies, and for accurate cell counting. Accutase is free of mammalian or bacterial-derived products, which reduces the risk of contamination.

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
25-058-CI	Accutase cell detachment solution	-25°C to -15°C	18 m	100 mL	1

Trypsin

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
25-050-CI	0.25% Trypsin in HBSS; [-] calcium, magnesium	-25°C to -15°C	12 m	100 mL	6
25-051-CI	0.05% Trypsin/0.53 mM EDTA in HBSS; [+] sodium bicarbonate, [-] calcium, magnesium	-25°C to -15°C	12 m	100 mL	6
25-052-CI	0.05% Trypsin/0.53 mM EDTA in HBSS; [-] sodium bicarbonate, calcium, magnesium	-25°C to -15°C	12 m	100 mL	6
25-052-CV	0.05% Trypsin/0.53 mM EDTA in HBSS; [-] sodium bicarbonate, calcium, magnesium	-25°C to -15°C	12 m	500 mL	6
25-053-CI	0.25% Trypsin/2.21 mM EDTA in HBSS; [-] sodium bicarbonate, calcium, magnesium	-25°C to -15°C	12 m	100 mL	6
25-054-CI	2.5% Trypsin in HBSS; [-] calcium, magnesium, phenol red	-25°C to -15°C	12 m	100 mL	6

NON-ENZYMATIC CELL DISSOCIATION AGENTS

Corning® Cellstripper® Solution

Cellstripper Solution is a non-enzymatic cell dissociation solution formulated with a proprietary mixture of chelators that gently dislodge adherent cells in tissue culture. It is an alternative to trypsin or Accutase® cell detachment solution when used with either serum-free or serum-supplemented media. Because Cellstripper Solution is a gentler reagent than trypsin, cells can be exposed to Cellstripper Solution for longer periods of time. Cellstripper Solution achieves superior results in comparison to enzymatic dissociation products.

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
25-056-CI	Cellstripper Solution	15°C to 30°C	12 m	100 mL	6

GROWTH SUPPLEMENTS

ITS (Insulin, Transferrin, Selenium)

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
25-800-CR	ITS (Insulin, Transferrin, Selenium), 100x	2°C to 8°C	18 m	10 mL	1

rhAlbumin

rhAlbumin is a chemically defined recombinant human serum albumin (rhHSA). Having an essential and non-essential fatty acid profile, this is a powerful media supplement that outperforms plasma-derived human serum albumin (pHSA), bovine serum albumin (BSA), and FBS. Some prominent applications for rhAlbumin are as a supplement for CHO cell culture and for the culture of various other cell lines. This product is plant-derived and completely animal-free.

Powder

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
62-450-RF	rhAlbumin	-20°C to 8°C	12 m	1 g	1

Trace Elements A

Trace Elements A provides copper, zinc, iron and selenium. Selenium aids in the detoxification of free radicals as a cofactor for GSH synthetase, while iron, copper, and zinc may be bound by serum protein. The combination of Trace Elements A and B contains the trace elements of MCDB 104.

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
25-021-CI	Trace Elements A, 1000x solution	15°C to 30°C	*	100 mL	1

*Please inquire for lot-specific expiration dates or view the current certificate of analysis at www.corning.com/lifesciences/media.

Trace Elements B

Trace Elements B has the same composition as Cleveland's Trace Elements I. The combination of Trace Elements A, B, and C contains the trace elements of MCDB 301.

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
25-022-CI	Trace Elements B, 1000x solution	2°C to 8°C	*	100 mL	1

*Please inquire for lot-specific expiration dates or view the current certificate of analysis at www.corning.com/lifesciences/media.

Trace Elements C

Trace Elements C has the same composition of Cleveland's Trace Elements II, and the combination of Trace Elements A, B, and C contains the trace elements of MCDB 301.

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
25-023-CI	Trace Elements C, 1000x solution	2°C to 8°C	*	100 mL	1

*Please inquire for lot-specific expiration dates or view the current certificate of analysis at www.corning.com/lifesciences/media.

HYBRIDOMA REAGENTS

HAT (Hypoxanthine, Aminopterin, Thymidine)

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
25-046-CI	HAT (Hypoxanthine, Aminopterin, Thymidine), 50x	-25°C to -15°C	28 m	100 mL	1

HT (Hypoxanthine, Thymidine)

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
25-047-CI	HT (Hypoxanthine, Thymidine), 50x	2°C to 8°C	20 m	100 mL	1

INSECT REAGENTS

Poloxamer 188

Poloxamer 188 is a synthetic polymer of sucrose and epichlorohydrin used for the density gradient separation of cells, cell membranes, and virus cells. It can also be used to isolate different organelles. This nonionic compound is provided in powder and liquid forms.

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
13-901-CI	Poloxamer 188	2°C to 8°C	12 m	100 mL	6

Powder

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
61-161-RM	Poloxamer 188	15°C to 30°C	≥12 m	100 g	1

Polysucrose 400

Powder

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
61-196-RM	Polysucrose 400	15°C to 30°C	≥12 m	100 g	1
61-196-RO	Polysucrose 400	15°C to 30°C	≥12 m	500 g	1

MISCELLANEOUS REAGENTS

DMSO (Dimethyl Sulfoxide)

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
25-950-CQC	DMSO (Dimethyl sulfoxide)	15°C to 30°C	12 m	250 mL	1

45% Glucose Solution

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
25-037-CI	45% Glucose solution	15°C to 30°C	24 m	100 mL	1

Sodium Pyruvate

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
25-000-CI	100 mM Sodium pyruvate solution with 8.5 g/L NaCl	2°C to 8°C	18 m	100 mL	6

Tris Base Buffer

Powder

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
61-233-RM	Tris base buffer	15°C to 30°C	>12 m*	100 g	1
61-233-RR	Tris base buffer	15°C to 30°C	>12 m*	1 kg	1
61-233-RT	Tris base buffer	15°C to 30°C	>12 m*	5 kg	1

*Please inquire for lot-specific expiration dates or view the current certificate of analysis at www.corning.com/lifesciences/media.

Trypan Blue Solution

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
25-900-CI	Trypan blue solution, 0.4% (w/v) in PBS, pH 7.5 ± 0.5	15°C to 30°C	24 m	100 mL	1

Yeast Extract

Powder

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
61-231-RO	Yeast extract	15°C to 30°C	20 m	500 g	1

Microbiology and Molecular Biology

Our molecular biology product line ranges from microbiological media and components to molecular reagents and buffers. With a wide range of antibiotics to choose from, these products allow you to select your growth as well as ensure their viability and proliferation. Many of the antibiotics offered are members of the aminoglycoside family whose mechanism of action works by binding to the 30S ribosomal subunit.

Miller's LB Broth

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
46-050-CM	Miller's LB broth	15°C to 30°C	*	1L	6

*Please inquire for lot-specific expiration dates or view the current certificate of analysis at www.corning.com/lifesciences/media.

S.O.C. Medium

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
46-003-CR	S.O.C. medium	15°C to 30°C	12 m	10 mL	10

Terrific Broth

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
46-055-CM	Terrific broth	15°C to 30°C	12 m	1L	6

Ampicillin Sodium Salt

Powder

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
61-238-RH	Ampicillin sodium salt	2°C to 8°C	24-30 m	10 g	1
61-238-RM	Ampicillin sodium Salt	2°C to 8°C	24-30 m	100 g	1

Carbenicillin Disodium Salt

Powder

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
46-100-RG	Carbenicillin disodium salt	2°C to 8°C	24-30 m	5 g	1

Kanamycin Sulfate

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
30-006-CF	Kanamycin sulfate	-25°C to -15°C	12 m	50 mL	6

Powder

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
61-176-RG	Kanamycin sulfate	15°C to 30°C	≥12 m	5 g	1

Neomycin Sulfate

Powder

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
61-241-RG	Neomycin sulfate	15°C to 30°C	12 m	5 g	1

Streptomycin Sulfate

Powder

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
61-088-RM	Streptomycin sulfate	2°C to 8°C	12 m	100 g	1

Tetracycline Hydrochloride

Powder

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
61-242-RG	Tetracycline hydrochloride	2°C to 8°C	12 m	5 g	1

X-Gal

Powder

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
46-101-RF	X-Gal	-25°C to -15°C	24 m	1 g	1

IPTG (Isopropylthiogalactoside)

Powder

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
46-102-RF	IPTG (Isopropylthiogalactoside)	-25°C to -15°C	36 m	1 g	1

BUFFERS

MOPS Buffer

Powder

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
46-103-RM	MOPS buffer, pH 6.5-7.9	15°C to 30°C	*	100 g	1

* Please inquire for lot-specific expiration dates or view the current certificate of analysis at www.corning.com/lifesciences/media.

PBS (Phosphate Buffered Saline), 10x

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
46-013-CM	PBS, [-] Calcium, magnesium, pH 7.4 ± 0.1, RNase-/DNase- and protease-free, 10X	15°C to 30°C	24 m	1L	6

SSC Buffer, 20x

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
46-020-CM	SSC buffer, pH 7.0 ± 0.1, RNase-/DNase- and protease-free, 20X	15°C to 30°C	24 m	1L	6

SSPE Buffer, 20x

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
46-021-CM	SSPE buffer, pH 7.4 ± 0.1, RNase-/DNase- and protease-free, 20X	15°C to 30°C	18 m	1L	6

TAE Buffer, 10x

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
46-010-CM	TAE buffer, pH 8.3 ± 0.1, RNase-/DNase- and protease-free, 10X	15°C to 30°C	24 m	1L	6

TBE Buffer, 10x

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
46-011-CM	TBE buffer, pH 8.4 ± 0.1, RNase-/DNase- and protease-free, 10X	15°C to 30°C	24 m	1L	6

TE Buffer, 1x

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
46-009-CM	TE buffer, pH 7.9-8.1, RNase-/DNase- and protease-free, 1X	15°C to 30°C	12 m	1L	6

Tris Buffered Saline, 10x

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
46-012-CM	Tris buffered saline, pH 7.4 ± 0.1, RNase-/DNase- and protease-free, 10X	15°C to 30°C	12 m	1L	6

Tris-HCl Buffers, 1M

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
46-030-CM	Tris-HCl buffers, pH 7.5 ± 0.1, RNase-/DNase- and protease-free, 1M	15°C to 30°C	24 m	1L	6
46-031-CM	Tris-HCl buffers, pH 8.0 ± 1.0, RNase-/DNase- and protease-free, 1M	15°C to 30°C	24 m	1L	6

REAGENTS

EDTA, 0.5M

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
46-034-CI	EDTA, 0.5M, pH 8.0	15°C to 30°C	24 m	100 mL	1

SDS (Sodium Dodecyl Sulfate), 10%

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
46-040-CI	SDS (Sodium Dodecyl Sulfate), 10%	15°C to 30°C	24 m	100 mL	1

Sodium Acetate, 3M

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
46-033-CI	Sodium acetate, 3M, pH 5.2 ± 0.1	15°C to 30°C	24 m	100 mL	1

Sodium Chloride, 5M

Liquid

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
46-032-CV	Sodium chloride, 5M	15°C to 30°C	24 m	500 mL	6

High-quality Water

Corning® high quality water is manufactured in our Mediatech, Inc. facility. Products are manufactured under the current ISO 13485 standard and the FDA Quality System Regulation 21 CFR 820, current good manufacturing practices (cGMP).

Corning offers a range of high quality water products for small and large volume requirements. These products reduce the expense of installing and maintaining your own water system, and ensure you have a secondary source of water that meets your specifications.

Corning high-quality water is available in a variety of sizes, and tested to specifications which may include USP and/or EP monograph requirements.

Cell Culture Grade Water

Cell culture grade water is high-quality water suitable for use as a solvent in the preparation of cell culture media and other reagents for sensitive applications. Our bioprocess container selections are suitable for large-scale applications such as cleaning and upstream and downstream reagent preparation. Cell culture grade water goes through a wide array of testing which includes testing to the chemical and physical properties found in the USP and EP monographs for sterile Water for Injection (WFI).

Tested to USP sterile WFI specifications

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
25-055-CI	Water, cell culture grade	15°C to 30°C	36 m	100 mL	6
25-055-CV	Water, cell culture grade	15°C to 30°C	36 m	500 mL	6
25-055-CVC	Water, cell culture grade, with septum cap	15°C to 30°C	36 m	500 mL	6
25-055-CM	Water, cell culture grade	15°C to 30°C	36 m	1L	6
25-055-LB	Water, cell culture grade	15°C to 30°C	36 m	20L	1
25-055-LG	Water, cell culture grade	15°C to 30°C	36 m	100L	1
25-055-LH	Water, cell culture grade	15°C to 30°C	36 m	200L	1

Tested to USP and EP sterile WFI specifications

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
25-065-LB	Water, cell culture grade	15°C to 30°C	36 m	20L	1
25-065-LG	Water, cell culture grade	15°C to 30°C	36 m	100L	1
25-065-LH	Water, cell culture grade	15°C to 30°C	36 m	200L	1

Molecular Biology Grade Water

Molecular biology grade water is ideal for applications where highly pure, RNase-, DNase-, and protease-free water is required (e.g., PCR and other molecular biology reactions setup, DNA/RNA/protein extraction, purification, and storage reagents). Molecular biology grade water is tested to the chemical and physical properties found in the USP monograph for sterile purified water.

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
46-000-CI	Water, molecular biology grade	15°C to 30°C	24 m	100 mL	6
46-000-CV	Water, molecular biology grade	15°C to 30°C	24 m	500 mL	6
46-000-CM	Water, molecular biology grade	15°C to 30°C	24 m	1L	6

Reagent Grade Water

Reagent grade water is suitable for the preparation of reagents, rinsing glassware and plasticware, cleaning electrodes and other common laboratory tasks requiring highly pure, RNase-, DNase-, and protease-free water. To ensure product quality, reagent grade water is tested to the chemical and physical properties found in the USP monograph for purified water.

Cat. No.	Description	Storage	Shelf Life	Size	Qty/Pk
46-002-LF	Water, reagent grade	15°C to 30°C	*	4L	2

* Please inquire for lot-specific expiration dates or view the current certificate of analysis at www.corning.com/lifesciences/media

Flexible Packaging Systems

Corning® flexible packaging systems are available in multiple formats. They include custom configurations to meet your exact requirements. Our single-use bags are designed to be practical and cost-effective alternatives to rigid-walled containers. They are fabricated to match your specific application with a variety of bag sizes and tubing/connector configurations available. These containment and delivery systems preserve the physical, chemical, and functional characteristics of sterile and process fluids.

Features and Benefits

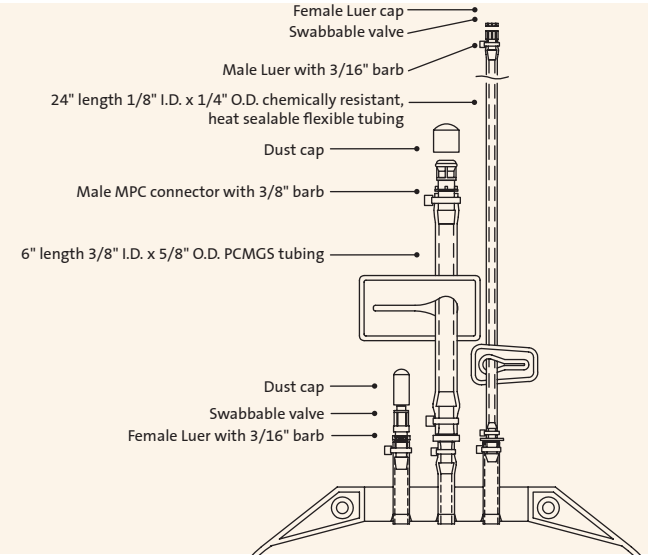
- High-quality barrier films
- Sterile
- Gas and moisture barriers to minimize transmission of oxygen, carbon dioxide and water vapor
- Universal connection systems
- Reduces costs associated with washing, sterilization, and SIP/CIP validations
- Reduces the risks associated with cross-contamination
- Minimal setup time
- Wide variety of standard configurations
- Easily integrated in automated systems

Industry Recognized Manufacturing Standards

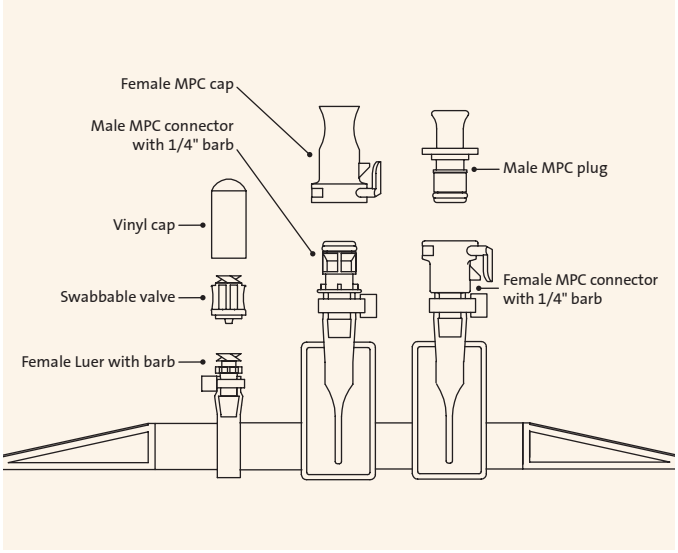
- cGMP and ISO 13485 manufacturing process
- Complete documentation and traceability
- Animal-free manufacturing process

COLLECTION CONTAINERS

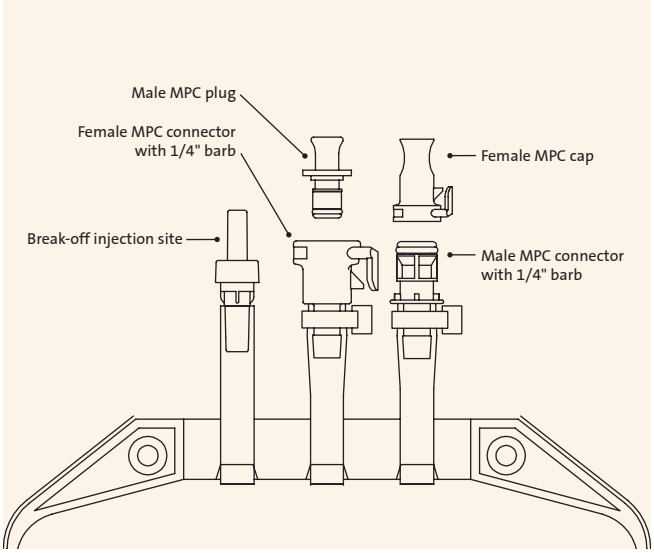
Corning® collection containers are available in 2D hanging configurations and multiple bag volumes with multiple connector configurations.



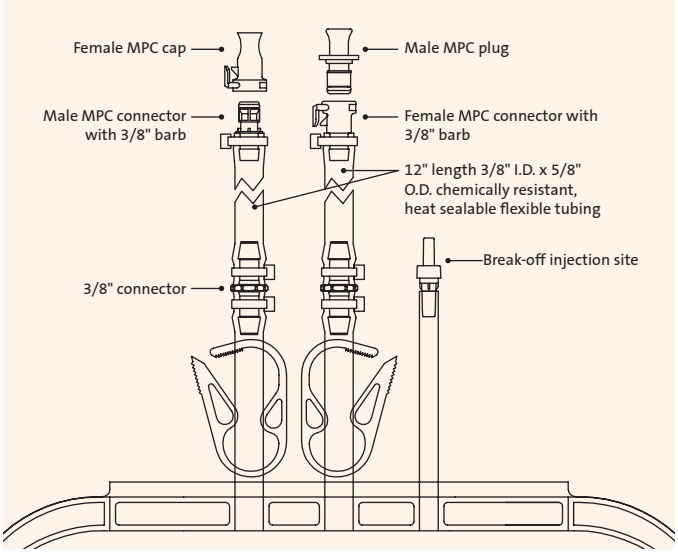
Cat. No.	Film Type	Size	Qty/Pk
91-200-01	EVA	1L	1
91-200-02	EVA	2L	1
91-200-05	EVA	5L	1
91-200-10	EVA	10L	1
91-200-20	EVA	20L	1



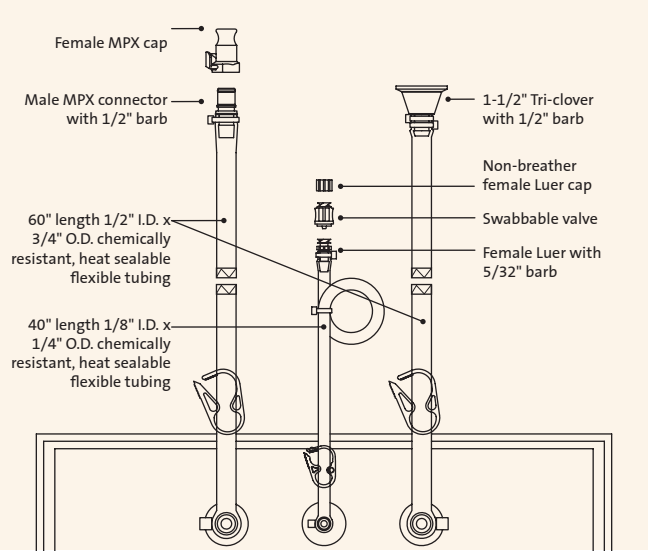
Cat. No.	Film Type	Size	Qty/Pk
91-200-36	EVA	10L	1
91-200-39	EVA	20L	1



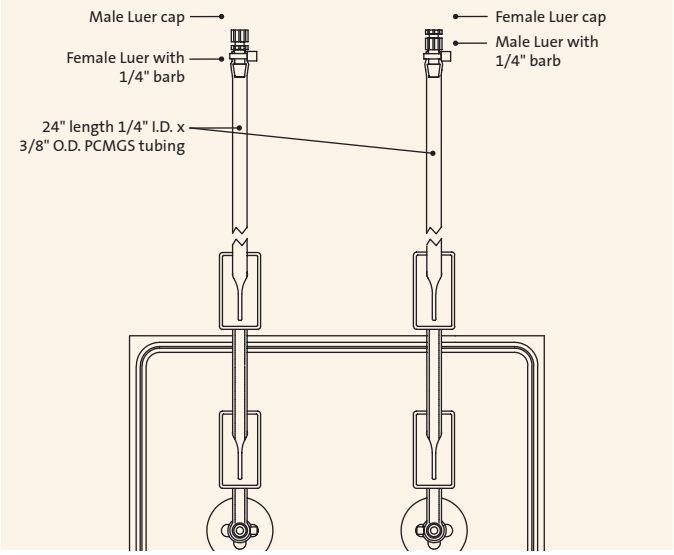
Cat. No.	Film Type	Size	Qty/Pk
91-200-41	EVA	500 mL	1
91-200-42	EVA	1L	1



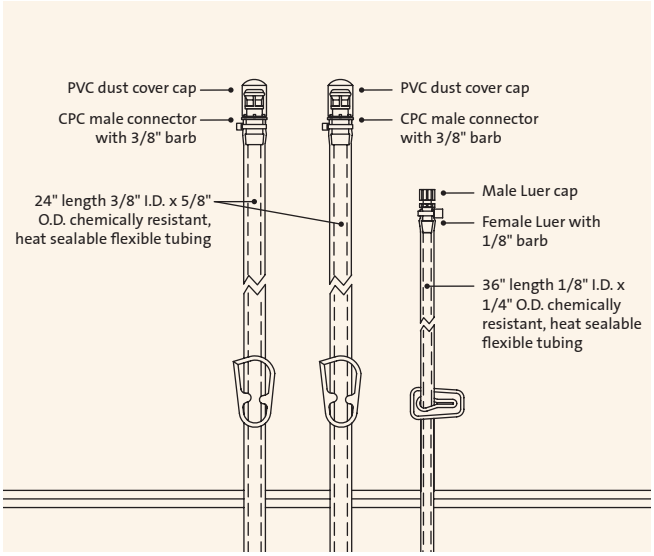
Cat. No.	Film Type	Size	Qty/Pk
91-200-43	EVA	5L	1
91-200-45	EVA	10L	1
91-200-47	EVA	20L	1
91-200-48	EVA	50L	1



Cat. No.	Film Type	Size	Qty/Pk
91-200-82	ULDPE	100L	1
91-200-83	ULDPE	200L	1



Cat. No.	Film Type	Size	Qty/Pk
91-002-MX	Metallocene	10L	1
91-001-MB	Metallocene	25L	1



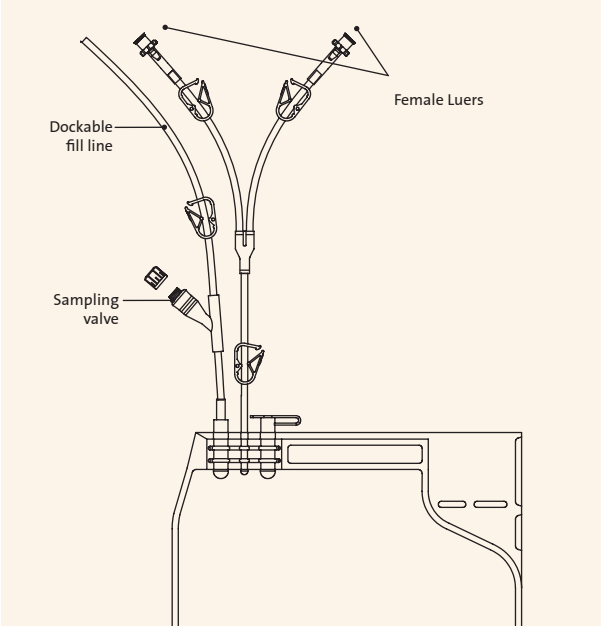
Cat. No.	Film Type	Size	Qty/Pk
91-100-30	Metallocene	50L	1
91-100-35	Metallocene	100L	1

CELL EXPANSION BAGS

Cell expansion bags are intended for the expansion and culture of non-adherent cells. The containers are made from single-web polyolefin, gas permeable film. The integrated tubing allows for functionally closed system filling, feeding, and sampling.

Features and Benefits

- Cell expansion observed with multiple cell models
- Gas permeable film
- Reusable sampling valve for in process testing
- Tubing for sterile weld connections
- Scalable, user friendly design



Biocompatibility Tests	Result	Test Protocol
USP Class VI	Pass	USP <88>
Toxicity	Pass	USP <87>
Heavy metals	<2 ppm	ISO 3826-1
Buffering capacity	1.22 mL	USP <661>
Non-volatile residue	8.6 mg	USP <661>
Residue on ignition (polyolefins)	<1 mg	ISO 3826-1
Acidity and alkalinity	Pass	ISO 3826-1
Oxidizable constituents	<1.5 mL	ISO 3826-1
Absorbance	<0.2 abs unit	ISO 3826-1
Reducing substances	0.34 mL	EP 3.1.14
Local effects after implantation	Pass	ISO 10993-6
Irritation and delayed-type sensitivity	Pass	ISO 10993-10
Systemic toxicity	Pass	ISO 10993-11

Physical Properties	Result	Test Protocol
O_2 transmission (cm^3/100 in^2/24 hrs) at (25°C; 0% RH)	153	ASTM D-3985
CO_2 transmission (cm^3/100 in^2/24 hrs) at (25°C; 0% RH)	1183	MOCON Test Method
Moisture vapor transmission (g/100 in^2/24 hrs)	0.94	ASTM D-1249
Transmittance (%)	83	ASTM D-1003
Tensile strength (psi)	3400/3700	ASTM D-638
Elastic modulus (E)	540/480	ASTM D-638

Cat. No.	Size	Fill Volume	Qty/Pk
91-200-84	500 mL	190 mL	1
91-200-85	1L	381 mL	1
91-200-86	3 L	633 mL	1
91-200-87	5L	1252 mL	1

CRYOPRESERVATION BAGS

Cryogenic storage containers are designed for storage, preservation, and transfer of cells.

Design Offers

- Unique bag film material remains flexible at ultra-low temperatures (-196°C).
- Proprietary membrane port design offers thinner walls for increased flexibility and attached cap minimizes membrane exposure during freezing
- Industry standard label pocket design offers ease-of-use and traceability in labeling

Features and Benefits

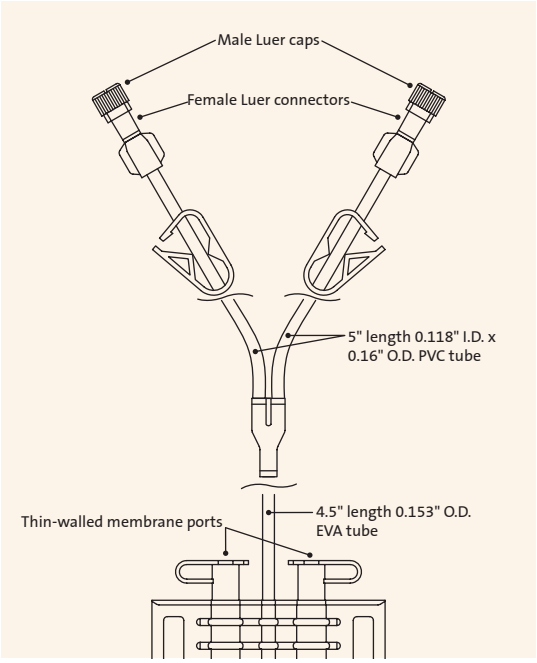
- Polyolefin film – Proprietary EVA blend specifically selected for its low temperature properties while maintaining flexibility and clarity when filled with liquid
- Membrane port – The attached cap snaps into place to protect the contents and minimizes membrane exposure during use
- Label pocket – Supports use of computer-generated labels; product information can be viewed quickly by simply opening the freezing cassette
- Integral fill tube – The unique manufacturing method used to secure the fill tube to the container body eliminates the need for PVC interfaces with the liquid nitrogen storage section of the container
- Interface/Connectors – Compatible with sterile connection technology and smart seal technology (Sebra® Model 1100 tube welder); fits in a variety of freezing cassette systems

Physical Integrity

The physical integrity of the containers were evaluated for their ability to withstand temperature variations experienced during routine storage of hematopoietic progenitor cell products. All containers passed the physical integrity tests performed, which included the initial pressure test and leak tests and the microbial challenge and dye immersion tests.

Cell Quality

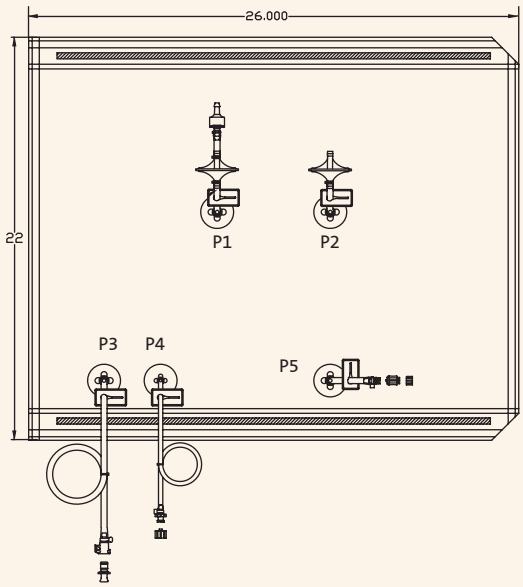
Cell quality was assessed on our cryogenic storage containers using diluted HPC with 10% DMSO. All containers met the acceptance requirement for MNC and CD34+ cell recovery of ≥70% relative to cell counts of the sample prior to cryopreservation. The average MNC and CD34+ cell recoveries were 81% and 84%, respectively. All containers met ≥ 1 CFU acceptance criteria with an average of 78% recovery.



Cat. No.	Size	Fill Volume	Qty/Pk
91-200-88	50 mL	10 - 20 mL	1
91-200-89	250 mL	30 - 70 mL	1
91-200-90	500 mL	55 - 100 mL	1
91-200-91	750 mL	80 - 190 mL	1

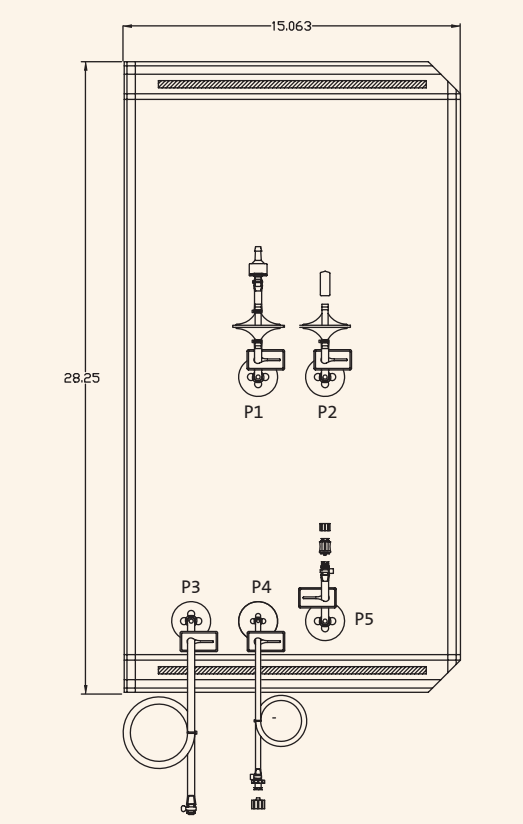
ROCKER CELL CULTURE BAGS

Rocker cell culture bags are designed for use with commercial rocking-motion bioreactor chambers. They feature ethylene vinyl acetate/ultra-low density polyethylene (ULDPE) 9101 film and stability bars on each side. This sterile single-use cell culture bag is ideal for basic research to large-scale biopharmaceutical manufacturing applications.



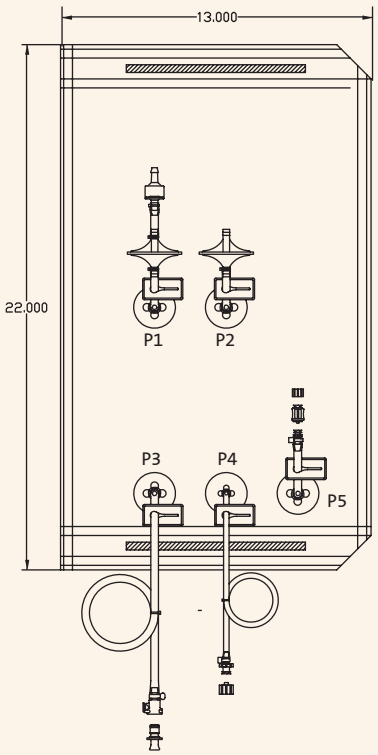
Cat. No.	Size	Qty/Pk
91-200-78	20L	1

P1	Check valve with 1/4" barb PVDF 8004022 filter 2" length 3/16" I.D. x 3/8" O.D. PCMGS tube
P2	PVDF 8004022 filter 2" length 3/16" I.D. x 3/8" O.D. PCMGS tube
P3	Female MPC connector with 1/4" barb Male MPC plug 40" length 1/4" I.D. x 7/16" O.D. chemically resistant, heat sealable flexible tube
P4	Female Luer with 1/4" barb Male Luer plug 40" length 1/8" I.D. x 1/4" O.D. chemically resistant, heat sealable flexible tube
P5	Female Luer with 1/4" barb Swabbable valve Male Luer plug without stem



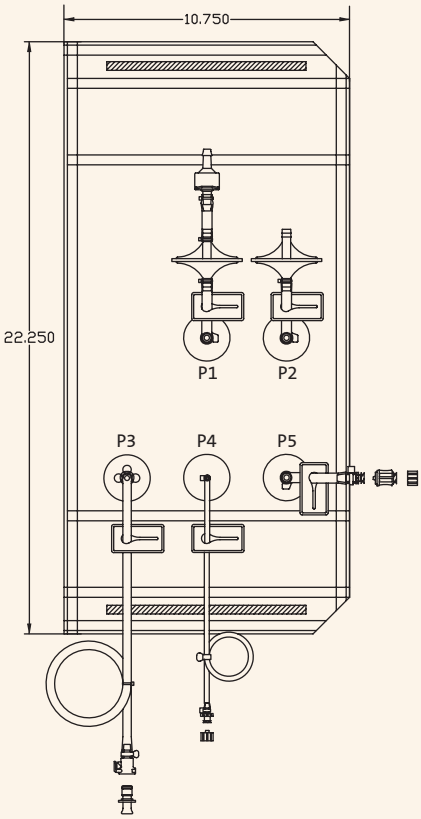
Cat. No.	Size	Qty/Pk
91-200-92	22L	1

P1	Check valve with 1/4" barb PVDF 8004022 filter 2" length 3/16" I.D. x 3/8" O.D. PCMGS tube
P2	PVDF 8004022 filter 2" length 3/16" I.D. x 3/8" O.D. PCMGS tube
P3	Plug with 1/4" barb 48" length 1/4" I.D. x 7/16" O.D. chemically resistant, heat sealable flexible tube
P4	Female Luer with 1/4" barb Male Luer plug 48" length 1/8" I.D. x 1/4" O.D. chemically resistant, heat sealable flexible tube
P5	Female Luer with 1/4" barb Swabbable valve Male Luer plug without stem



Cat. No.	Size	Qty/Pk
91-200-79	10L	1

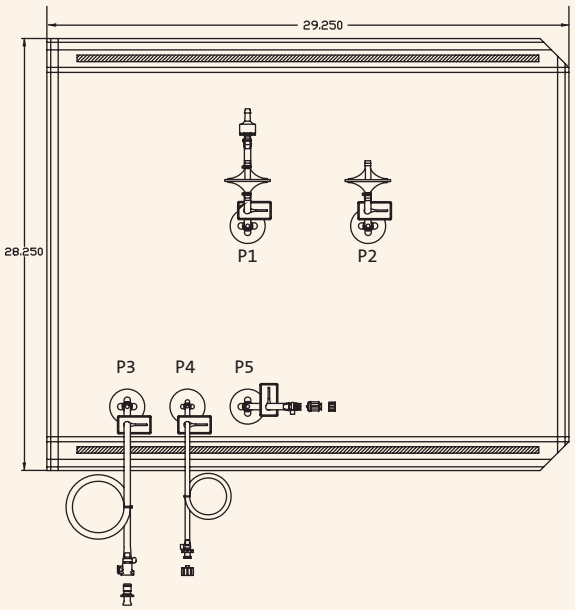
P1	Check valve with 1/4" barb PVDF 8004022 filter 2" length 3/16" I.D. x 3/8" O.D. PCMGS tube
P2	PVDF 8004022 filter 2" length 3/16" I.D. x 3/8" O.D. PCMGS tube
P3	Female MPC connector with 1/4" barb and plug 40" length 1/4" I.D. x 7/16" O.D. chemically resistant, heat sealable flexible tube
P4	Female Luer with 1/4" barb and plug 40" length 1/8" I.D. x 1/4" O.D. chemically resistant, heat sealable flexible tube
P5	Female Luer with 1/4" barb Swabbable valve Male Luer plug without stem



Cat. No.	Size	Qty/Pk
91-200-80	2L	1

P1	Check valve with 1/4" barb PVDF 8004022 filter 2" length 3/16" I.D. x 3/8" O.D. PCMGS tube
P2	PVDF 8004022 filter 2" length 3/16" I.D. x 3/8" O.D. PCMGS tube
P3	Female MPC connector with 1/4" barb Male MPC plug 40" length 1/4" I.D. x 7/16" O.D. chemically resistant, heat sealable flexible tube
P4	Female Luer with 1/4" barb Male Luer plug 40" length 1/8" I.D. x 1/4" O.D. chemically resistant, heat sealable flexible tube
P5	Female Luer with 1/4" barb Swabbable valve Male Luer plug without stem

ROCKER CELL CULTURE BAGS (CONTINUED)

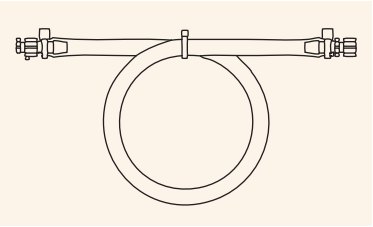


Cat. No.	Size	Qty/Pk
91-200-81	50L	1

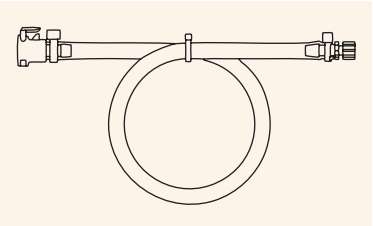
P1	Check valve with 1/4" barb PVDF 8004022 filter 2" length 3/16" I.D. x 3/8" O.D. PCMGS tube
P2	PVDF 8004022 filter 2" length 3/16" I.D. x 3/8" O.D. PCMGS tube
P3	Female MPC connector with 1/4" barb Male MPC plug 40" length 1/4" I.D. x 7/16" O.D. chemically resistant, heat sealable flexible tubing
P4	Female Luer with 1/4" barb Male Luer plug 40" length 1/8" I.D. x 1/4" O.D. chemically resistant, heat sealable flexible tubing
P5	Female Luer with 1/4" barb Swabbable valve Male Luer plug without stem

TUBING SETS

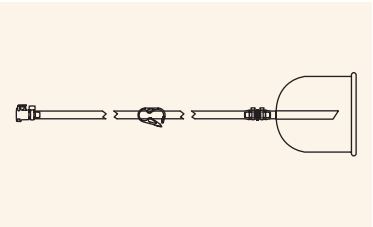
Optional tubing sets are available in combination with all single-use bag options.



Cat. No.	Description	Qty/Pk
91-700-00	36" length 1/4" I.D. clear, chemically resistant, heat sealable, flexible tubing Male Luer and female Luer cap Female Luer and male Luer cap	1



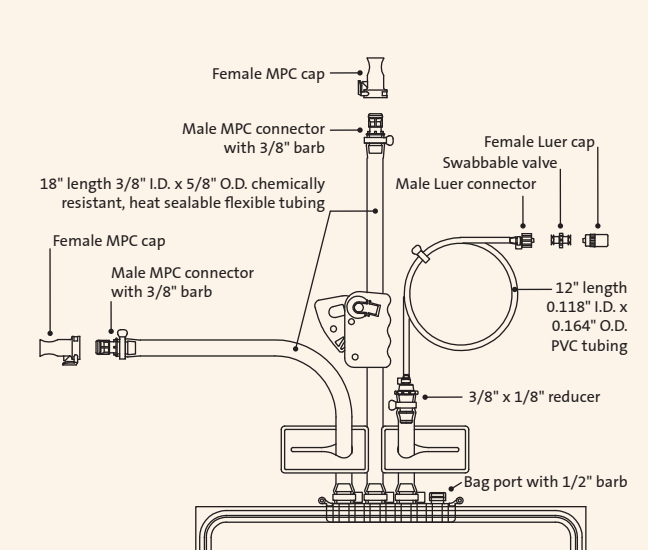
Cat. No.	Description	Qty/Pk
91-700-04	36" length 1/4" I.D. clear, chemically resistant, heat sealable, flexible tubing Female MPC connector Female Luer and male Luer cap	1



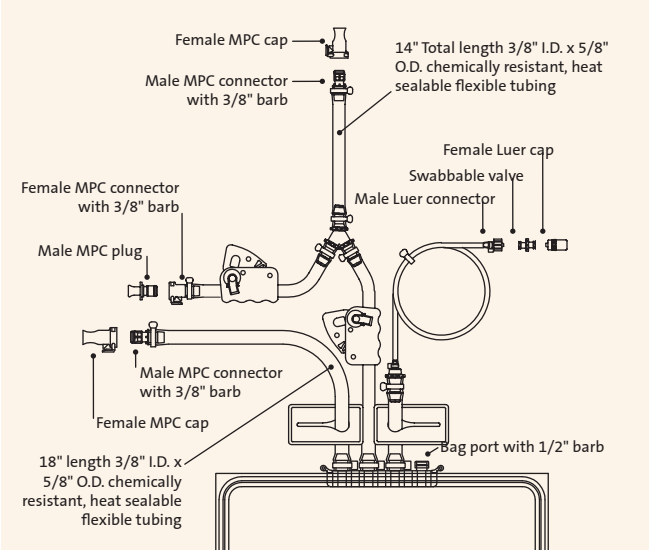
Cat. No.	Description	Qty/Pk
91-700-12	24" length 1/4" I.D. clear, chemically resistant, heat sealable, flexible tubing Female MPC connector with 1/4" barb Pinch clamp Filling bell	1

SINGLE-USE BAGS FOR CORNING® HYPER*STACK*® VESSELS

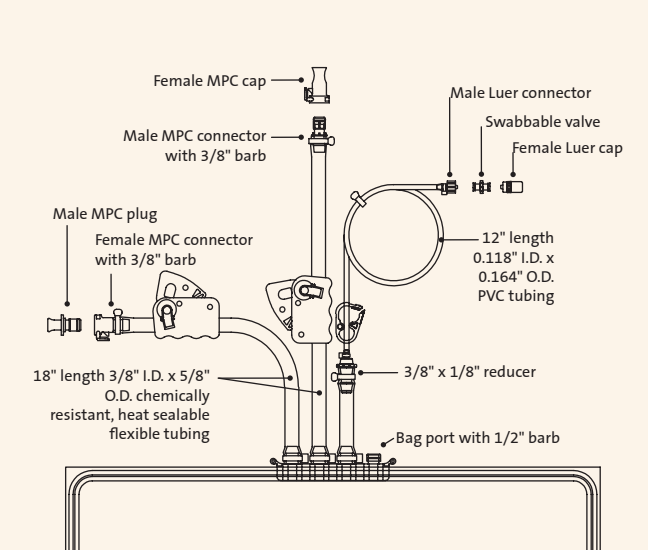
These single-use bags can be connected to tubing by tube welding or by using the pre-assembled multipurpose connectors. They can be used to add media, trypsin, or quenching substrates to culture cells in an entirely closed environment.



Cat. No.	Description	Film Type	Size	Qty/Pk
91-200-75	Trypsin bag	ULDPE	5L	1



Cat. No.	Description	Film Type	Size	Qty/Pk
91-200-76	Quench bag	ULDPE	5L	1



Cat. No.	Description	Film Type	Size	Qty/Pk
91-200-77	Media bag	ULDPE	20L	1

TANK LINERS

Corning's portfolio of sterile tank liners are designed to fit cylindrical tanks. Tank liners are manufactured with ultra-low density polyethylene (ULDPE) and are available in a range of sizes.

Features and Benefits

- Sterile, individually packaged
- Animal-free components
- Reduce costs associated with the cleaning and validation of tanks
- Reduce labor costs and increase turnaround time
- Reduce the risks associated with cross contamination
- Help extend the life of reusable tanks, resulting in lower capital expenditures
- Wide variety of sizes available

Gusseted Tank Liners (3D)

Cat. No.	Max. Volume	Diameter	Approx. Depth	Qty
91-300-15	50L	13"	27"	1
91-300-25	100L	18"	30"	1
91-300-35	200L	22"	36"	1

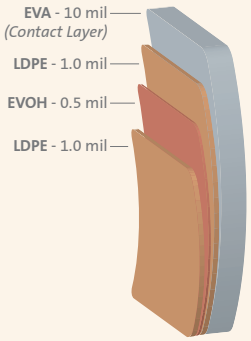
Non-gusseted Tank Liners (2D)

Cat. No.	Max. Volume	Diameter	Approx. Depth	Qty
91-300-20	130L	18"	30"	1
91-300-30	200L	22.5"	36"	1
91-300-80	1090L	42"	49"	1

FILM TYPES

Ethyl Vinyl Acetate (EVA) Film

Composition



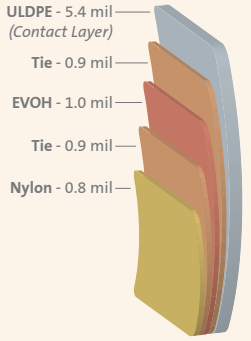
12.5 mil co-extrusion film—Collection bags.

Biocompatibility Tests	Result	Test Protocol
USP intracutaneous reactivity test	Pass	USP <88>
USP acute systemic injection test	Pass	USP <88>
USP intramuscular implantation test	Pass	USP <88>
Toxicity	Nontoxic	USP <87>
Hemolysis	Non-hemolytic	ISO 10993-4
Bacterial endotoxin	<0.015 EU/mL	USP <85>

Physical Properties	Result	Test Protocol
H_2O transmission (g/100 in²/24 hrs)	0.011	ASTM F-1249
CO_2 transmission (cm³/100 in²/24 hrs)	0.58	MOCON Test Method
O_2 transmission (cm³/100 in²/24 hrs)	0.28	ASTM F-3985
Ultimate tensile	3100 psi	ASTM D-638
Ultimate elongation	>650%	ASTM D-638
100% modulus	1000 psi	ASTM D-638
Tear strength	550 lbs/in	ASTM D-1004
Low pressure brittleness	>-75°F	ASTM D-1290
Puncture resistance	22.4 lbs	FTMS 101 B

Metallocene Film

Composition



9.0 mil co-extruded blend of cross-linked polyethylene, EVOH, and Nylon—Collection bags.

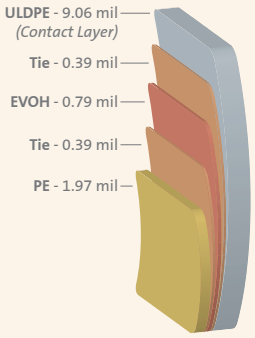
Biocompatibility Tests	Result	Test Protocol
Toxicity	Nontoxic	USP <87>
Bacterial endotoxin	<0.005 EU/mL	USP <85>
Hemolysis	Non-hemolytic	ISO 10993-4
Heavy metals	<1 ppm	ISO 3826-1; USP <661>
Buffering capacity	<1 mL	USP <661>
Non-volatile residue	<1 mg	USP <661>
Residue on ignition	<1 mg	ISO 3826-1; USP <661>
Appearance	Pass	--
Acidity and alkalinity	Pass	--
Absorbance	0.04 units	--
Oxidizable substance	<0.1 mL	--
Transparency	Pass	--

Physical Properties	Result	Test Protocol
H_2O transmission (g/m²/24 hrs 23°C, 100% RH)	0.455	ASTM F-1249
CO_2 transmission (cm³/m²/24 hrs 23°C, 50% RH outside)	<1.0	ASTM F-2476
O_2 transmission rate (cm³/m²/24 hrs 23°C, 100% RH inside and 50% RH outside)	0.148	ASTM F-1927
Ultimate tensile strength	3094 psi	ASTM D-638
Elongation	416 (%)	ASTM D-638
Yield strength	1972 psi	--
Seam strength	18 pounds	--
Temperature range	-80°C to 60°C	--
Sterilization	SAL 10^{-6}	--

Ultra-Low Density Polyethylene (ULDPE)/Ethylene Vinyl Acetate (EVA) Film

Single-ply multilayer structure with inert PE fluid contact layer.
Film is animal-free—Rocker cell culture bags.

Composition

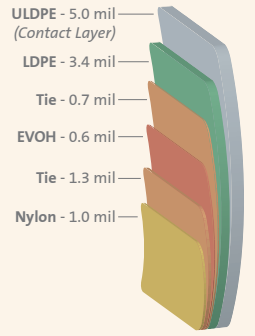


Physical Properties	Result	Test Protocol
Haze (%)	5	ASTM D-1003
Clarity (%)	98	ASTM D-1003
Transmittance (%)	93	ASTM D-1003
Tensile strength at break (Mpa)	14	ASTM D-882
Elongation at break (%)	280	ASTM D-882
Elastic modulus (Mpa)	370	ASTM D-882
Break at cold temperature (°C)	below -45°C	ISO 8570
Density (g/cm^3)	0.9	ASTM D-792
H_2O transmission rate $g/m^2/24$ hrs	0.4 (23°C)	ASTM F-1249
O_2 permeability $cm^3/m^2/24$ hrs	0.1 (23°C, 0% RH)	ASTM D-3985
CO_2 permeability $cm^3/m^2/24$ hrs	<0.2 (23°C, 0% RH)	MOCON Permatran C-IV

Ultra-Low Density Polyethylene (ULDPE) Film

Fluid contact layer is 5.0 mil, ultra-low density polyethylene. Outer film is 5-layer, 7 mil co-extrusion film—Bags for Corning® HYPER*Stack*® vessels, collection bags.

Composition



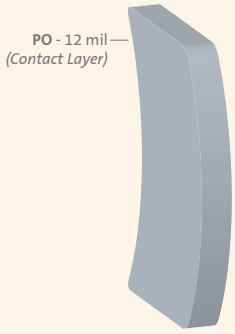
Biocompatibility Tests	Result	Test Protocol
USP intracutaneous reactivity test	Pass	USP <88>
USP acute systemic injection test	Pass	USP <88>
USP intramuscular implantation test	Pass	USP <88>
USP MEM elution method	Nontoxic	USP <87>
Physiochemical test for plastics	Pass	USP <661>

Physical Properties	Result	Test Protocol
H_2O transmission ($g/100\ in^2/24$ hrs)	0.017	ASTM F-1249
CO_2 transmission ($cm^3/100\ in^2/24$ hrs)	0.129	ASTM F-2476
O_2 transmission ($cm^3/100\ in^2/24$ hrs)	0.043	ASTM F-1927

	Average Force	Average MOE	Average Elongation	Test Protocol
Tensile strength	32.73 lbs	25110 psi	1080%	ASTM D 882-02
	Min Force	**Average Force**	**Max Force**	
Tear resistance	6.77 lbs	7.21 lbs	7.74 lbs	ASTM D1004-07
Puncture resistance	16.42 lbs	18.61 lbs	19.51 lbs	FTMS 101C

Polyolefin (PO) Film

Composition



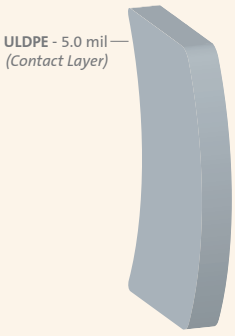
Single-web, 12 mil polyolefin monolayer designed for extremely low temperatures—Cell expansion bags.

Biocompatibility Tests	Result	Test Protocol
USP Class VI	Pass	USP <88>
Toxicity	Nontoxic	USP <87>
Hemolysis	Non-hemolytic	ISO 10993-4
Heavy metals	Pass	ISO 3826-1; USP <661>
Buffering capacity	Pass	USP <661>
Non-volatile residue	Pass	USP <661>
Residue on ignition	Pass	ISO 3826-1; USP <661>
Local effects after implantation	Pass	ISO 10993-6
Irritation and delayed-type sensitivity	Pass	ISO 10993-10
Systemic toxicity	Pass	ISO 10993-11
Bacterial endotoxin	<20 EU/device	USP <85>

Physical Properties	Result	Test Protocol
H_2O transmission g/100 in^2/24 hrs at 25˚C	1.1	ASTM F1249
CO_2 transmission cm^3/100 in^2/24 hrs at 25˚C, 0% RH	1477	ASTM F2476
O_2 transmission cm^3/100 in^2/24 hrs at 25˚C, 0% RH	180	ASTM D3985
Tensile strength (Mpa)	17	ASTM D882
Elongation at break, MD/TD (%)	560/700	ASTM D882
Elastic modulus (Mpa)	17	ASTM D882
Break at cold temperature (˚C)	Below -80˚C	ISO 8570
Glass transition temperature (Tg)	-48˚C	DSC
Density (g/cm^3)	0.92	ASTM D792
Low temperature, (remains flexible)	-196˚C	--

Tank Liner Film

Composition



Biocompatibility Tests	Result	Test Protocol
USP intracutaneous reactivity	Pass	USP <88>
USP acute systemic injection	Pass	USP <88>
USP intramuscular implantation	Pass	USP <88>
Toxicity	Nontoxic	USP <87>
Physiochemical test for plastics	Pass	USP <661>

Physical Properties	Result	Test Protocol
H_2O transmission (g/100 in^2/24 hrs)	0.017	ASTM F-1249
CO_2 transmission (cm^3/100 in^2/24 hrs)	0.129	ASTM F-2476
O_2 transmission (cm^3/100 in^2/24 hrs)	0.043	ASTM F-1927

	Average MOE	Average Elongation	Test Protocol
Tensile strength	5756 psi	710%	ASTM D 882
	Average Force		
Impact strength	2.52 lbs	7.74 lbs	ASTM D 1709

Formulations

AMEM (Alpha Modification of Eagle's Medium) H52
Antibiotic-Antimycotic Solution H52
Buffered Saline Solutions H53
CMRL 1066 H53
DMEM (Dulbecco's Modification of Eagle's Medium) H54-H55
DMEM/Ham's F-12 50/50 Mix H56
DMEM with Corning® glutagro™ Supplement H56
F-12K Nutrient Mixture (Kaighn's Modification) H57
Corning glutagro Supplement and L-glutamine H57
Grace's Insect Basal Medium/Hink's TNM-FH Medium H58
Ham's F-10 Medium H59
Ham's F-12 Medium H60
HAT/HT H60
HEPES H60
HBSS (Hank's Balanced Salt Solutions) H61
Improved MEM H61
IMDM (Iscove's Modification of DMEM) H62
ITS (Insulin, Transferrin, and Selenium Solution) H62
LSM (Lymphocyte Separation Medium) H62
Leibovitz's L-15 H63
McCoy's 5A Medium (Iwakata and Grace Modification) H63
MCDB 131 H64
M199 (Medium 199) H65
MEM (Minimum Essential Medium) Amino Acids Solution H66
MEM Vitamin Solution H66
NEAA (MEM Non-essential Amino Acids Solution) H66
Microbiological Media H67
Molecular Biology Buffers H67
MEM H68
Penicillin Streptomycin Solutions H69
Trace Elements H69
Trypsin and Trypsin/EDTA Solutions H70
TSB (Tryptic Soy Broth) H70
Trypan Blue H70
RPMI 1640 H71-H72

AMEM (Alpha Modification of Eagle's Medium)

Cat. No.	10-022	15-012	50-012
Description	Liquid, 1x	Liquid, 1x	Powder
Units	mg/L	mg/L	mg/L
Components			
Inorganic Salts			
$CaCl_2$ (anhydrous)	200.00	200.00	200.00
KCl	400.00	400.00	400.00
$MgSO_4$ (anhydrous)	97.70	97.70	97.70
NaCl	6,800.00	6,800.00	6,800.00
$NaH_2PO_4 \cdot H_2O$	140.00	140.00	140.00
$NaHCO_3$	2,200.00	2,200.00	--
Amino Acids			
L-Alanine	25.00	25.00	25.00
L-Arginine • HCl	126.40	126.40	126.40
L-Asparagine • H_2O	50.00	50.00	50.00
L-Aspartic acid	30.00	30.00	30.00
L-Cysteine • HCl • H_2O	100.00	100.00	100.00
L-Cystine • 2HCl	31.20	31.20	31.20
L-Glutamic acid	75.00	75.00	75.00
L-glutamine	292.00	--	292.00
Glycine	50.00	50.00	50.00
L-Histidine • HCl • H_2O	41.90	41.90	41.90
L-Isoleucine	52.50	52.50	52.50
L-Leucine	52.50	52.50	52.50
L-Lysine • HCl	72.50	72.50	72.50
L-Methionine	15.00	15.00	15.00
L-Phenylalanine	32.50	32.50	32.50
L-Proline	40.00	40.00	40.00
L-Serine	25.00	25.00	25.00
L-Threonine	47.60	47.60	47.60
L-Tryptophan	10.00	10.00	10.00
L-Tyrosine • 2Na • $2H_2O$	51.90	51.90	51.90
L-Valine	46.80	46.80	46.80
Vitamins			
Ascorbic acid	50.00	50.00	50.00
Biotin	0.10	0.10	0.10
D-Calcium pantothenate	1.00	1.00	1.00
Choline chloride	1.00	1.00	1.00
Folic acid	1.00	1.00	1.00
i-Inositol	2.00	2.00	2.00
Nicotinamide	1.00	1.00	1.00
Pyridoxine • HCl	1.00	1.00	1.00
Riboflavin	0.10	0.10	0.10
Thiamine • HCl	1.00	1.00	1.00
Vitamin B12	1.36	1.36	1.36

Cat. No.	10-022	15-012	50-012
Description	Liquid, 1x	Liquid, 1x	Powder
Units	mg/L	mg/L	mg/L
Other			
D-Glucose	1,000.00	1,000.00	1,000.00
Lipoic acid	0.20	0.20	0.20
Phenol red • Na	10.00	10.00	10.00
Sodium pyruvate	110.00	110.00	110.00
Nucleosides			
Thymidine	10.00	--	--
Adenosine	10.00	--	--
Cytidine	10.00	--	--
Guanosine	10.00	--	--
Uridine (anhydrous)	10.00	--	--
2'-Deoxyadenosine • H_2O	10.00	--	--
2'-Deoxycytidine • HCl	11.00	--	--
2'-Deoxyguanosine • H_2O	10.00	--	--
Add			
$NaHCO_3$			
Powder (g/L)	--	--	2.20
7.5% Solution (mL/L)	--	--	29.33
L-glutamine			
Powder (mg/L)	--	292.00	292.00
200 mM Solution (mL/L)	--	10.00	10.00

Antibiotic-Antimycotic Solution

Cat. No.	30-003	30-004	30-005
Description	Liquid	Liquid, 100x	Liquid
Units	g/L	U/L and mg/L	g/L
Components			
K Penicillin G	--	10,000,000 U/L	--
Dihydro-streptomycin • SO_4	--	0.01 mg/L (adjusted for potency)	--
Amphotericin B (solubilized w/sodium deoxycholate and sodium phosphate)	0.25	0.000025 mg/L (adjusted for potency)	--
NaCl	--	0.0085 mg/L	--
Gentamycin Sulfate	--	--	50

"--" indicates not present

Buffered Saline Solutions

Cat. No.	20-030	20-031	21-030	21-031	21-040	46-012	46-013	55-031
Description	**Liquid, 10x**	**Liquid, 10x**	**Liquid, 1x**	**Liquid, 1x**	**Liquid, 1x**	**Liquid, 10x**	**Liquid, 10x**	**Powder**
Units	**g/L**	**g/L**	**g/L**	**g/L**	**g/L**	**g/L**	**g/L**	**g/L**
Components								
Inorganic Salts								
$CaCl_2$ (anhydrous)	1.00	--	0.10	--	--	--	--	--
KCl	2.00	2.00	0.20	0.20	--	--	2.0	0.20
KH_2PO_4	2.00	2.00	0.20	0.20	0.144	--	2.40	0.20
$MgCl_2 \cdot 6H_2O$	1.00	--	0.10	--	--	--	--	--
NaCl	80.00	80.00	8.00	8.00	9.00	80.00	80.00	8.00
Na_2HPO_4 (anhydrous)	11.50	11.50	--	1.15	0.795	--	14.40	1.15
$Na_2HPO_4 \cdot 7H_2O$	--	--	2.1716	--	--	--	--	--
Organic Buffers								
Tris Ultrapure	--	--	--	--	--	24.2	--	--

CMRL 1066

Cat. No.	15-110
Description	**Liquid, 1x**
Units	**mg/L**
Components	
Inorganic Salts	
CaCl2 (anhydrous)	200
KCl	400
MgSO4 (anhydrous)	97.70
NaCl	6,800
$NaH2PO4 \cdot H_2O$	140
$NaHCO_3$	2,200
Amino Acids	
L-Alanine	25
L-Arginine • HCL	70
L-Aspartic acid	30
L-Cysteine • HCl • H_2O	260
L-Cystine • 2HCl	26
L-Glutamic acid	75
Glycine	50
L-Histidine • HCl • H_2O	20
Hydroxy-L-proline	10
L-Isoleucine	20
L-Leucine	60
L-Lysine • HCl	70
L-Methionine	15
L-Phenylalanine	25
L-Proline	40
L-Serine	25
L-Threonine	30
L-Tryptophan	10
L-Tyrosine • 2Na • $2H_2O$	58
L-Valine	25

Vitamins	
Biotin	0.01
Folic acid	0.01
Riboflavin	0.01
Ascorbic acid	50.00
D-Ca-Pantothenate	0.01
Choline Chloride	0.50
i-Inositol	0.05
Nicotinic acid	0.025
Nicotinamide	0.025
PABA	0.05
Pyridoxine • HCl	0.05
Thiamine • HCl	0.01
Thiamine pyrophosphate, Na	1.00
Other	
Thymidine	10.00
2'-Deoxyadenosine • H_2O	10.00
2'-Deoxycytidine • HCl	10.00
2'-Deoxyguanosine • H_2O	10.00
5-Methyl-2'-deoxycytidine	0.10
Uridine-5'-triphosphate • 3Na • hydrate	1.00
Cholesterol	0.20
Polysorbate 80	5.00
Coenzyme A Li_3 salt • $2H_2O$	2.50
b-NAD • hydrate	7.00
b-NADP • Na • $4H_2O$	1.00
FAD disodium salt	1.00
Dextrose	1000
Glutathione (reduced)	10.00
Sodium acetate	50.00
Sodium glucuronate • H_2O	4.20
Add	
L-glutamine Powder (mg/L) 200 mM Solution (mL/L)	 100.00 3.42

"--" indicates not present

DMEM (Dulbecco's Modification of Eagle's Medium)

Cat. No.	10-013	10-014	10-017	10-101	10-102	15-013	15-017	15-018	17-204
Description	**Liquid, 1x**	**Liquid, 1x**	**Liquid, 1x**	**Liquid, 1x**	**Liquid, 1x**	**Liquid, 1x**	**Liquid, 1x**	**Liquid, 1x**	**Liquid, 1x**
Units	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**
Components									
Inorganic Salts									
$CaCl_2$ (anhydrous)	200	200	200	200	200	200	200	200	200
$Fe(NO_3)_3 \cdot 9H_2O$	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
KCl	400	400	400	400	400	400	400	400	400
$MgSO_4$ (anhydrous)	97.7	97.7	97.7	97.7	97.7	97.7	97.7	97.7	97.7
NaCl	6,400	6,400	6,400	6,400	6,400	6,400	6,400	6,400	6,400
$NaH_2PO_4 \cdot H_2O$	125	125	125	125	125	125	125	125	125
$NaHCO_3$	3,700	3,700	3,700	3,700	3,700	3,700	3,700	3,700	3,700
Amino Acids									
L-Arginine • HCl	84	84	84	84	84	84	84	84.00	84.00
L-Cystine • 2HCl	62.57	62.57	62.57	62.57	62.57	62.57	62.57	62.57	--
L-Aianyi-L-glutamine	--	--	--	869	869	--	--	--	--
L-glutamine	584	584	584	--	--	--	--	--	--
Glycine	30	30	30	30	30	30	30	30.00	30.00
L-Histidine •HCl • H_2O	42	42	42	42	42	42	42	42.00	42.00
L-Isoleucine	104.8	104.8	104.8	104.8	104.8	104.8	104.8	104.80	104.80
L-Leucine	104.8	104.8	104.8	104.8	104.8	104.8	104.8	104.80	104.80
L-Lysine • HCl	146.2	146.2	146.2	146.2	146.2	146.2	146.2	146.20	146.20
L-Methionine	30	30	30	30	30	30	30	30.00	--
L-Phenylalanine	66	66	66	66	66	66	66	66.00	66.00
L-Serine	42	42	42	42	42	42	42	42.00	42.00
L-Threonine	95.2	95.2	95.2	95.2	95.2	95.2	95.2	95.20	95.20
L-Tryptophan	16	16	16	16	16	16	16	16.00	16.00
L-Tyrosine • 2Na • $2H_2O$	103.79	103.79	103.79	103.79	103.79	103.79	103.79	103.79	103.79
L-Valine	94	94	94	94	94	94	94	94.00	94.00
Vitamins									
D-Calcium pantothenate	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Choline chloride	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Folic acid	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
i-Inositol	7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20
Nicotinamide	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Pyridoxine • HCl	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Riboflavin	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Thiamine • HCl	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Other									
D-Glucose	4,500.00	1,000.00	4,500.00	4,500.00	4,500.00	4,500.00	4,500.00	4,500.00	4,500.00
Phenol red • Na	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00
Sodium pyruvate	110.00	110.00	--	110.00	--	110.00	--	110.00	110.00
HEPES	--	--	--	--	--	--	--	5,958.00	--
Add									
L-glutamine									
Powder (mg/L)	--	--	--	--	--	584.00	584.00	584.00	584.00
200 mM Solution (mL/L)	--	--	--	--	--	20.00	20.00	20.00	20.00

"--" indicates not present

DMEM (Dulbecco's Modification of Eagle's Medium)

Cat. No.	17-205	17-206	17-207	50-003	50-013	90-013	90-113
Description	**Liquid, 1x**	**Liquid, 1x**	**Liquid, 1x**	**Powder**	**Powder**	**Powder**	**Powder**
Units	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**
Components							
Inorganic Salts							
$CaCl_2$ (anhydrous)	200.00	200.00	200.00	200.00	200.00	200.00	200.00
$Fe(NO_3)_3 \cdot 9H_2O$	0.10	0.10	0.10	0.10	0.10	0.10	0.10
KCl	400.00	400.00	400.00	400.00	400.00	400.00	400.00
$MgSO_4$ (anhydrous)	97.70	97.70	97.70	97.70	97.70	97.70	97.70
NaCl	6,400.00	6,400.00	6,400.00	6,400.00	6,400.00	6,400.00	6,400.00
$NaH_2PO_4 \cdot H_2O$	125.00	--	125.00	125.00	125.00	125.00	125.00
$NaHCO_3$	3,700.00	3,700.00	3,700.00	--	--	--	--
Amino Acids							
L-Arginine • HCl	84.00	84.00	84.00	84.00	84.00	84.00	84.00
L-Cystine • 2HCl	62.57	62.57	62.57	62.57	62.57	62.57	62.57
L-glutamine	--	--	--	584.00	584.00	--	--
Glycine	30.00	30.00	30.00	30.00	30.00	30.00	30.00
L-Histidine •HCl • H_2O	42.00	42.00	42.00	42.00	42.00	42.00	42.00
L-Isoleucine	104.80	104.80	104.80	104.80	104.80	104.80	104.80
L-Leucine	104.80	104.80	104.80	104.80	104.80	104.80	104.80
L-Lysine • HCl	146.20	146.20	146.20	146.20	146.20	146.20	146.20
L-Methionine	30.00	30.00	30.00	30.00	30.00	30.00	30.00
L-Phenylalanine	66.00	66.00	66.00	66.00	66.00	66.00	66.00
L-Serine	42.00	42.00	42.00	42.00	42.00	42.00	42.00
L-Threonine	95.20	95.20	95.20	95.20	95.20	95.20	95.20
L-Tryptophan	16.00	16.00	16.00	16.00	16.00	16.00	16.00
L-Tyrosine • 2Na • $2H_2O$	103.79	103.79	103.79	103.79	103.79	103.79	103.79
L-Valine	94.00	94.00	94.00	94.00	94.00	94.00	94.00
Vitamins							
D-Calcium pantothenate	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Choline chloride	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Folic acid	4.00	4.00	4.00	4.00	4.00	4.00	4.00
i-Inositol	7.20	7.20	7.20	7.20	7.20	7.20	7.20
Nicotinamide	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Pyridoxine • HCl	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Riboflavin	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Thiamine • HCl	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Other							
D-Glucose	4,500.00	4,500.00	--	4,500.00	4,500.00	4,500.00	--
Phenol red • Na	--	15.00	15.00	15.00	15.00	--	--
Sodium pyruvate	110.00	110.00	--	110.00	--	--	--
HEPES	--	--	--	--	--	--	--
Add							
$NaHCO_3$ Powder (g/L) 7.5% Solution (mL/L)	 -- --	 -- --	 -- --	 3.70 49.40	 3.70 49.40	 -- --	 3.70 49.40
L-glutamine Powder (mg/L) 200 mM Solution (mL/L)	 584.00 20.00	 584.00 20.00	 584.00 20.00	 -- --	 -- --	 -- --	 584.00 20.00

"--" indicates not present

DMEM/Ham's F-12 50/50 Mix

Cat. No.	10-090	10-092	10-103	16-405	90-090	90-091
Description	**Liquid, 1x**	**Liquid, 1x**	**Liquid, 1x**	**Liquid, 1x**	**Powder**	**Powder**
Units	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**
Components						
Inorganic Salts						
$CaCl_2$ (anhydrous)	116.65	116.65	116.65	116.65	116.65	116.65
$FeSO_4 \cdot 7H_2O$	0.417	0.417	0.417	0.417	0.417	0.417
$Fe(NO_3)_3 \cdot 9H_2O$	0.05	0.05	0.05	0.05	0.05	0.05
KCl	311.8	311.8	311.8	311.8	311.8	311.8
$CuSO_4$ (anhydrous)	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008
$MgSO_4$ (anhydrous)	84.95	84.95	84.95	84.95	84.95	84.95
NaCl	7,000	7,000	7,000	7,000	7,000	7,000
$NaH_2PO_4 \cdot H_2O$	62.5	62.5	62.5	62.5	62.5	62.5
Na_2HPO_4 (anhydrous)	71	71	71	71	71	71
$NaHCO_3$	2,438	2,438	2,438	2,438	--	--
$ZnSO_4 \cdot 7H_2O$	0.4315	0.4315	0.4315	0.4315	0.4315	0.4315
Amino Acids						
L-Alanine	4.45	4.45	4.45	4.45	4.45	4.45
L-Arginine • HCl	147.5	147.5	147.5	147.5	147.5	147.5
L-Asparagine • H_2O	7.5	7.5	7.5	7.5	7.5	7.5
L-Aspartic acid	6.65	6.65	6.65	6.65	6.65	6.65
L-Cysteine • HCl • H_2O	17.56	17.56	17.56	17.56	17.56	17.56
L-Cystine • 2HCl	31.285	31.285	31.285	31.285	31.285	31.285
L-Glutamic acid	7.35	7.35	7.35	7.35	7.35	7.35
L-Alanyl-L-glutamine	--	--	543	--	--	--
L-glutamine	365.1	365.1	--	365.1	--	365.1
Glycine	18.75	18.75	18.75	18.75	18.75	18.75
L-Histidine • HCl • H_2O	31.48	31.48	31.48	31.48	31.48	31.48
L-Isoleucine	54.37	54.37	54.37	54.37	54.37	54.37
L-Leucine	58.95	58.95	58.95	58.95	58.95	58.95
L-Lysine • HCl	91.35	91.35	91.35	91.35	91.35	91.35
L-Methionine	17.24	17.24	17.24	17.24	17.24	17.24
L-Phenylalanine	35.48	35.48	35.48	35.48	35.48	35.48
L-Proline	17.25	17.25	17.25	17.25	17.25	17.25
L-Serine	26.25	26.25	26.25	26.25	26.25	26.25
L-Threonine	53.55	53.55	53.55	53.55	53.55	53.55
L-Tryptophan	9.02	9.02	9.02	9.02	9.02	9.02
L-Tyrosine • 2Na • $2H_2O$	55.815	55.815	55.815	55.815	55.815	55.815
L-Valine	52.85	52.85	52.85	52.85	52.85	52.85
Vitamins						
Biotin	0.00365	0.00365	0.00365	0.00365	0.00365	0.00365
D-Ca-Pantothenate	2.24	2.24	2.24	2.24	2.24	2.24
Choline chloride	8.98	8.98	8.98	8.98	8.98	8.98
Folic acid	2.65	2.65	2.65	2.65	2.65	2.65
i-Inositol	12.61	12.61	12.61	12.61	12.61	12.61
Nicotinamide	2.0185	2.0185	2.0185	2.0185	2.0185	2.0185
Pyridoxine • HCl	2.031	2.031	2.031	2.031	2.031	2.031
Riboflavin	0.219	0.219	0.219	0.219	0.219	0.219
Thiamine • HCl	2.17	2.17	2.17	2.17	2.17	2.17
Vitamin B12	0.68	0.68	0.68	0.68	0.68	0.68
Cat. No.	**10-090**	**10-092**	**10-103**	**16-405**	**90-090**	**90-091**
Description	**Liquid, 1x**	**Liquid, 1x**	**Liquid, 1x**	**Liquid, 1x**	**Powder**	**Powder**
Units	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**
Other						
Dextrose	3,151	3,151	3,151	3,151	3,151	3,151
Hypoxanthine, sodium	2.385	2.385	2.385	2.385	2.385	2.385
DL-Thioctic (lipoic) acid	0.105	0.105	0.105	0.105	0.105	0.105
Methyl lineoleate	0.044	0.044	0.044	0.044	0.044	0.044
Phenol red, sodium	8.1	8.1	8.1	--	--	8.1
Putrescine*2HCl	0.08	0.08	0.08	0.08	0.08	0.08
Sodium pyruvate	110	110	110	110	110	110
Thymidine	0.365	0.365	0.365	0.365	0.365	0.365
HEPES	--	3574.8	--	--	--	--
Add						
$NaHCO_3$ Powder (g/L)	--	--	--	--	2.438	2.438
7.5% Solution (mL/L)	--	--	--	--	32.50	32.50
L-glutamine Powder (mg/L)	--	--	--	--	365.10	365.10
200 mM Solution (mL/L)	--	--	--	--	12.50	12.50

"--" indicates not present

F-12K Nutrient Mixture (Kaighn's Modification)

Cat. No.	10-025
Description	Liquid, 1x
Units	mg/L

Components	
Inorganic Salts	
$CaCl_2$ (anhydrous)	102.00
$CuSO_4 \cdot 5H_2O$	0.002
$Fe(NO_3)_3 \cdot 9H_2O$	--
$FeSO_4 \cdot 7H_2O$	0.800
KCl	285.00
KH_2PO_4	59.00
$MgCl_2$ (anhydrous)	49.70
$MgSO_4$ (anhydrous)	192.00
NaCl	7,530.00
NaH_2PO_4 (anhydrous)	--
Na_2HPO_4 (anhydrous)	115.50
$NaHCO_3$	2,500.00
$ZnSO_4 \cdot 7H_2O$	0.144
Amino Acids	
L-Alanine	18.00
L-Arginine • HCl	422.00
L-Asparagine • H_2O	30.00
L-Aspartic acid	26.60
L-Cysteine • HCl • H_2O	70.00
L-Cystine • 2HCl	--
L-Glutamic acid	29.00
L-glutamine	292.00
Glycine	15.00
L-Histidine • HCl • H_2O	45.80
L-Isoleucine	7.88
L-Leucine	26.20
L-Lysine • HCl	73.00
L-Methionine	8.96
L-Phenylalanine	9.92
L-Proline	69.00
L-Serine	21.00
L-Threonine	23.00
L-Tryptophan	4.10
L-Tyrosine • 2Na • $2H_2O$	13.50
L-Valine	23.00

Cat. No.	10-025
Description	Liquid, 1x
Units	mg/L

Vitamins	
Biotin	0.070
D-Calcium pantothenate	0.50
Choline chloride	14.00
Folic acid	1.30
i-Inositol	18.00
Nicotinamide	0.037
Pyridoxine • HCl	0.060
Riboflavin	0.040
Thiamine • HCl	0.30
Vitamin B_{12}	1.40
Other	
D-Glucose	1,260.00
HEPES	--
Hypoxanthine, Na	4.00
Lipoic acid	0.21
Methyl lineoleate	--
Phenol red • Na	3.00
Putrescine • 2HCl	0.32
Sodium pyruvate	220.00
Thymidine	0.70

Corning® glutagro™ Supplement and L-glutamine

Cat. No.	25-015	25-005
Description	Liquid, 100x	Liquid, 100x
Units	g/L	g/L

Components		
L-Alanyl-L-glutamine	43.44	--
L-glutamine	--	29.20
NaCl	8.5	8.5

"--" indicates not present

Grace's Insect Basal Medium (Vaughn Modification) / Hink's TNM-FH Medium (Supplemented Grace's Medium)

Cat. No.	13-100	13-200
Description	Liquid, 1x	Liquid, 1x
Units	mg/L	mg/L
Components		
Inorganic Salts		
$CaCl_2$ (anhydrous)	750.00	750.00
KCl	2,220.00	3,720.00
$MgCl_2$ (anhydrous)	1,068.00	1,068.00
$MgSO_4$ (anhydrous)	1,358.00	1,358.00
$NaH_2PO_4 \cdot H_2O$	1,008.00	1,008.00
$NaHCO_3$	350.00	350.00
Amino Acids		
ß-Alanine	200.00	200.00
L-Alanine	225.00	225.00
L-Arginine • HCl	700.00	700.00
L-Asparagine • H_2O	350.00	350.00
L-Aspartic acid	350.00	350.00
L-Cystine • 2HCl	25.00	25.00
L-Glutamic acid	600.00	600.00
L-glutamine	600.00	600.00
Glycine	650.00	650.00
L-Histidine	2,500.00	2,500.00
L-Isoleucine	50.00	50.00
L-Leucine	75.00	75.00
L-Lysine • HCl	625.00	625.00
L-Methionine	50.00	50.00
L-Phenylalanine	150.00	150.00
L-Proline	350.00	350.00
DL-Serine	1,100.00	1,100.00
L-Threonine	175.00	175.00
L-Tryptophan	100.00	100.00
L-Tyrosine	50.00	50.00
L-Valine	100.00	100.00
Vitamins		
Biotin	0.01	0.01
D-Calcium pantothenate	0.02	0.02
Choline chloride	0.20	0.20
Folic acid	0.02	0.02
i-Inositol	0.02	0.02
Nicotinic acid	0.02	0.02
Para-Aminobenzoic acid	0.02	0.02
Pyridoxine • HCl	0.02	0.02
Riboflavin	0.02	0.02
Thiamine • HCl	0.02	0.02

Cat. No.	13-100	13-200
Description	Liquid, 1x	Liquid, 1x
Units	mg/L	mg/L
Other		
A-Ketoglutaric acid	370.00	370.00
D-Glucose	700.00	700.00
D-Fructose	400.00	400.00
Fumaric acid	55.00	55.00
L-Malic acid	670.00	670.00
Succinic acid	60.00	60.00
Sucrose	26,680.00	26,680.00
Lactalbumin hydrolysate	3,333.00	--
UF yeast extract	3,333.00	--

"--" indicates not present.

Ham's F-10 Medium

Cat. No.	10-070
Description	Liquid, 1x
Units	mg/L

Components	
Inorganic Salts	
$CaCl_2$ (anhydrous)	33.30
$CuSO_4$ (anhydrous)	0.0016
$FeSO_4 \cdot 7H_2O$	0.834
KCl	285.00
KH_2PO_4	83.00
$MgSO_4$ (anhydrous)	74.60
NaCl	7,400.00
Na_2HPO_4 (anhydrous)	153.70
$NaHCO_3$	1,200.00
$ZnSO_4 \cdot 7H_2O$	0.0288
Amino Acids	
L-Alanine	9.00
L-Arginine • HCl	211.00
L-Asparagine • H_2O	15.00
L-Aspartic acid	13.00
L-Cysteine • HCl • H_2O	35.10
L-Glutamic acid	14.70
L-glutamine	146.20
Glycine	7.50
L-Histidine • HCl • H_2O	23.00
L-Isoleucine	2.60
L-Leucine	13.00
L-Lysine • HCl	29.00
L-Methionine	4.48
L-Phenylalanine	5.00
L-Proline	11.50
L-Serine	10.50
L-Threonine	3.57
L-Tryptophan	0.60
L-Tyrosine • 2Na • $2H_2O$	2.61
L-Valine	3.50
Vitamins	
Biotin	0.024
D-Calcium pantothenate	0.715
Choline chloride	0.698
Folic acid	1.32
i-Inositol	0.541
Nicotinamide	0.615
Pyridoxine • HCl	0.206
Riboflavin	0.376
Thiamine • HCl	1.00
Vitamin B_{12}	1.36

Cat. No.	10-070
Description	Liquid, 1x
Units	mg/L

Other	
D-Glucose	1,100.00
Hypoxanthine, Na	4.77
DL-Thioctic (lipoic) acid	0.20
Phenol red • Na	1.20
Sodium pyruvate	110.00
Thymidine	0.73

Ham's F-12 Medium

Cat. No.	10-080	50-040
Description	Liquid, 1x	Powder
Units	mg/L	mg/L
Components		
Inorganic Salts		
$CaCl_2$ (anhydrous)	33.30	33.30
$CuSO_4$ (anhydrous)	0.0016	0.0016
$FeSO_4 \cdot 7H_2O$	0.834	0.834
KCl	223.60	223.60
$MgSO_4$ (anhydrous)	72.20	72.20
NaCl	7,600.00	7,600.00
Na_2HPO_4 (anhydrous)	142.00	142.00
$NaHCO_3$	1,176.00	--
$ZnSO_4 \cdot 7H_2O$	0.863	0.863
Amino Acids		
L-Alanine	8.9	8.9
L-Arginine • HCl	211.00	211.00
L-Asparagine • H_2O	15.00	15.00
L-Aspartic acid	13.30	13.30
L-Cysteine • HCl • H_2O	35.12	35.12
L-Glutamic acid	14.70	14.70
L-glutamine	146.20	146.20
Glycine	7.50	7.50
L-Histidine • HCl • H_2O	20.96	20.96
L-Isoleucine	3.94	3.94
L-Leucine	13.10	13.10
L-Lysine • HCl	36.50	36.50
L-Methionine	4.48	4.48
L-Phenylalanine	4.96	4.96
L-Proline	34.50	34.50
L-Serine	10.50	10.50
L-Threonine	11.90	11.90
L-Tryptophan	2.04	2.04
L-Tyrosine • 2Na • $2H_2O$	7.84	7.84
L-Valine	11.70	11.70
Vitamins		
Nicotinamide	0.037	0.037
Pyridoxine • HCl	0.062	0.062
Riboflavin	0.038	0.038
Thiamine • HCl	0.34	0.34
Vitamin B_{12}	1.36	1.36

Cat. No.	10-080	50-040
Description	Liquid, 1x	Powder
Units	mg/L	mg/L
Other		
D-Glucose	1,802.00	1,802.00
Hypoxanthine, Na	4.77	4.77
DL-Thioctic (lipoic) acid	0.21	0.21
Methyl lineoleate	0.088	0.088
Phenol red • Na	1.20	1.20
Putrescine • 2HCl	0.16	0.16
Sodium pyruvate	110.00	110.00
Thymidine	0.73	0.73
Add		
$NaHCO_3$		
Powder (g/L)	--	1.176
7.5% Solution (mL/L)	--	15.70

HAT (Hypoxanthine, Aminopterin, Thymidine)/HT (Hypoxanthine, Thymidine)

Cat. No.	25-046	25-047
Description	HAT Liquid, 50x	HT Liquid, 50x
Units	mg/L	mg/L
Components		
Aminopterin	8.81	--
Hypoxanthine • Na	910.70	910.70
Thymidine	193.80	193.80

HEPES

Cat. No.	25-060
Description	Liquid, 1M
Units	g/L
Components	
HEPES	238.3

"--" indicates not present

HBSS (Hanks' Balanced Salt Solutions)

Cat. No.	20-021	20-023	21-020	21-021	21-022	21-023	55-022
Description	**Liquid, 10x**	**Liquid, 10x**	**Liquid, 1x**	**Liquid, 1x**	**Liquid, 1x**	**Liquid, 1x**	**Powder**
Units	**g/L**	**g/L**	**g/L**	**g/L**	**g/L**	**g/L**	**g/L**
Components							
Inorganic Salts							
$CaCl_2$ (anhydrous)	--	1.4	0.14	--	--	0.14	--
KCl	4.00	4.00	0.40	0.40	0.40	0.40	0.40
KH_2PO_4	0.60	0.60	0.06	0.06	0.06	0.06	0.06
$MgSO_4$ (anhydrous)	--	0.977	0.0977	--	--	0.0977	--
NaCl	80.00	80.00	8.00	8.00	8.00	8.00	8.00
Na_2HPO_4 (anhydrous)	0.477	0.477	0.0477	0.0477	0.0477	0.0477	0.0477
$NaHCO_3$	--	--	0.35	0.35	0.35	0.35	--
Other							
D-Glucose	10.00	10.00	1.00	1.00	1.00	1.00	1.00
Phenol red • Na	0.10	--	0.01	0.01	--	--	--
Add							
$NaHCO_3$ Powder (g/L)	0.35	--	--	--	--	--	0.35
7.5% Solution (mL/L)	4.67	--	--	--	--	--	4.67

Improved MEM (Richter's Modification)

Cat. No.	10-024	10-026
Description	**Liquid, 1x**	**Liquid, 1x**
Units	**mg/L**	**mg/L**
Components		
Inorganic Salts		
$CaCl_2$ (anhydrous)	200.00	200.00
$FeCl_3 \cdot 6H_2O$	0.54	0.54
KCl	400.00	400.00
$MgCl_2 \cdot 6H_2O$	183.00	183.00
$MgSO_4 \cdot 7H_2O$	25.00	25.00
NaCl	6,800.00	6,800.00
$NaH_2PO_4 \cdot H_2O$	150.00	150.00
$NaHCO_3$	2,200.00	2,200.00
$ZnSO_4 \cdot 7H_2O$	0.14	0.14
Amino Acids		
L-Arginine • HCl	127.00	127.00
L-Asparagine • H_2O	60.00	60.00
L-Cystine • 2HCl	31.28	31.28
L-glutamine	292.00	292.00
L-Histidine • HCl • H_2O	42.00	42.00
L-Isoleucine	52.00	52.00
L-Leucine	131.20	131.20
L-Lysine • HCl	72.60	72.60
L-Methionine	15.00	15.00

Components (continued)	(10-024)	(10-026)
L-Phenylalanine	32.00	32.00
L-Serine	42.00	42.00
L-Threonine	48.00	48.00
L-Tryptophan	10.00	10.00
L-Tyrosine • 2Na • $2H_2O$	51.89	51.89
L-Valine	46.00	46.00
Vitamins		
Biotin	0.10	0.10
D-Calcium pantothenate	1.00	1.00
Choline chloride	56.00	56.00
Folic acid	2.20	2.20
i-Inositol	36.00	36.00
Lineoleic acid	0.08	0.08
DL-Thioctic (lipoic) acid	0.20	0.20
Nicotinamide	1.00	1.00
Pyridoxine • HCl	1.00	1.00
Riboflavin	0.10	0.10
Thiamine • HCl	1.00	1.00
Vitamin B_{12}	1.36	1.36
Other		
D-Glucose	2,000.00	2,000.00
Phenol red • Na	10.00	--
Putrescine • 2HCl	0.16	0.16
Sodium pyruvate	110.00	110.00

"--" indicates not present.

IMDM (Iscove's Modification of DMEM)

Cat. No.	10-016	15-016	50-016
Description	**Liquid, 1x**	**Liquid, 1x**	**Powder**
Units	**mg/L**	**mg/L**	**mg/L**
Components			
Inorganic Salts			
$CaCl_2$ (anhydrous)	165.00	165.00	165.00
KCl	330.00	330.00	330.00
KNO_3	0.076	0.076	0.076
$MgSO_4$ (anhydrous)	97.70	97.70	97.70
Na_2SeO_3	0.0173	0.0173	0.0173
NaCl	4,505.00	4,505.00	4,505.00
$NaH_2PO_4 \cdot H_2O$	125.00	125.00	125.00
$NaHCO_3$	3,024.00	3,024.00	--
Amino Acids			
L-Alanine	25.00	25.00	25.00
L-Arginine • HCl	84.00	84.00	84.00
L-Asparagine • H_2O	28.40	28.40	28.40
L-Aspartic acid	30.00	30.00	30.00
L-Cystine • 2HCl	91.24	91.24	91.24
L-Glutamic acid	75.00	75.00	75.00
L-glutamine	584.00	--	584.00
Glycine	30.00	30.00	30.00
L-Histidine • HCl • H_2O	42.00	42.00	42.00
L-Isoleucine	105.00	105.00	105.00
L-Leucine	105.00	105.00	105.00
L-Lysine • HCl	146.00	146.00	146.00
L-Methionine	30.00	30.00	30.00
L-Phenylalanine	66.00	66.00	66.00
L-Proline	40.00	40.00	40.00
L-Serine	42.00	42.00	42.00
L-Threonine	95.00	95.00	95.00
L-Tryptophan	16.00	16.00	16.00
L-Tyrosine • 2Na • $2H_2O$	103.79	103.79	103.79
L-Valine	94.00	94.00	94.00
Vitamins			
Biotin	0.013	0.013	0.013
D-Calcium pantothenate	4.00	4.00	4.00
Choline chloride	4.00	4.00	4.00
Folic acid	4.00	4.00	4.00
i-Inositol	7.20	7.20	7.20
Nicotinamide	4.00	4.00	4.00
Pyridoxine • HCl	4.00	4.00	4.00
Riboflavin	0.40	0.40	0.40
Thiamine • HCl	4.00	4.00	4.00
Vitamin B_{12}	0.013	0.013	0.013

Cat. No.	10-016	15-016	50-016
Description	**Liquid, 1x**	**Liquid, 1x**	**Powder**
Units	**mg/L**	**mg/L**	**mg/L**
Other			
D-Glucose	4,500.00	4,500.00	4,500.00
HEPES	5,958.00	5,958.00	5,958.00
Phenol red • Na	15.00	15.00	15.00
Sodium pyruvate	110.00	110.00	110.00
Add			
L-glutamine Powder (mg/L) 200 mM Solution (mL/L)	 -- --	 584.00 20.00	 -- --

ITS (Insulin, Transferrin, and Selenium Solution)

Cat. No.	25-800-CR
Description	**Liquid Solution, 100x**
Units	**mg/L**
Components	
Selenious acid	0.67
Insulin, human recombinant	1,000
Transferrin, human recombinant	550

LSM (Lymphocyte Separation Medium)

Cat. No.	25-072
Description	**Liquid**
Units	**g/L**
Components	
Diatrizoic acid	96.219
Polysucrose 400	61.363

"--" indicates not present

Leibovitz's L-15

Cat. No.	10-045	50-045
Description	Liquid, 1x	Powder
Units	mg/L	mg/L
Components		
Inorganic Salts		
$CaCl_2$ (anhydrous)	140.06	140.06
KCl	400.00	400.00
KH_2PO_4	60.00	60.00
$MgCl_2 \cdot 6H_2O$	200.00	200.00
$MgSO_4$ (anhydrous)	97.67	97.67
NaCl	8,000.00	8,000.00
Na_2HPO_4 (anhydrous)	190.00	190.00
Amino Acids		
L-Alanine	225.00	225.00
L-Arginine	500.00	500.00
L-Asparagine • H_2O	250.00	250.00
L-Cysteine	120.00	120.00
L-glutamine	300.00	300.00
Glycine	200.00	200.00
L-Histidine	250.00	250.00
L-Isoleucine	125.00	125.00
L-Leucine	125.00	125.00
L-Lysine • HCl	93.70	93.70
L-Methionine	75.00	75.00
L-Phenylalanine	125.00	125.00
L-Serine	200.00	200.00
L-Threonine	300.00	300.00
L-Tryptophan	20.00	20.00
L-Tyrosine • 2Na • $2H_2O$	430.00	430.00
L-Valine	100.00	100.00
Vitamins		
D-Calcium pantothenate	1.00	1.00
Choline chloride	1.00	1.00
Folic acid	1.00	1.00
i-Inositol	2.00	2.00
Nicotinamide	1.00	1.00
Pyridoxine • HCl	1.00	1.00
Riboflavin-5-PO_4 • Na	0.10	0.10
Thiamine • PO_4 • Cl • $2H_2O$	1.09	1.09
Other		
D-Galactose	900.00	900.00
Phenol red • Na	10.00	10.00
Sodium pyruvate	550.00	550.00

McCoy's 5A Medium (Iwakata and Grace Modification)

Cat. No.	10-050	10-051
Description	Liquid, 1x	Liquid, 1x
Units	mg/L	mg/L
Components		
Inorganic Salts		
$CaCl_2$ (anhydrous)	100.00	100.00
KCl	400.00	400.00
$MgSO_4$ (anhydrous)	97.70	97.70
NaCl	6,460.00	5,960.00
$NaH_2PO_4 \cdot H_2O$	580.00	580.00
$NaHCO_3$	2,200.00	2,200.00
Amino Acids		
L-Alanine	13.36	13.36
L-Arginine • HCl	42.14	42.14
L-Asparagine • H_2O	45.03	45.03
L-Aspartic acid	19.97	19.97
L-Cysteine • HCl • H_2O	35.14	35.14
L-Glutamic acid	22.10	22.10
L-glutamine	219.20	219.20
L-Glycine	7.50	7.50
L-Histidine • HCl • H_2O	20.96	20.96
Hydroxy-L-proline	19.70	19.70
L-Isoleucine	39.36	39.36
L-Leucine	39.36	39.36
L-Lysine • HCl	36.54	36.54
L-Methionine	14.92	14.92
L-Phenylalanine	16.52	16.52
L-Proline	17.30	17.30
L-Serine	26.30	26.30
L-Threonine	17.90	17.90
L-Tryptophan	3.10	3.10
Vitamins		
Ascorbic acid	0.50	0.50
Biotin	0.20	0.20
D-Calcium pantothenate	0.20	0.20
Choline chloride	5.00	5.00
Folic acid	10.00	10.00
i-Inositol	36.00	36.00
Nicotinamide	0.50	0.50
Nicotinic acid	0.50	0.50
Para-aminobenzoic acid	1.00	1.00
Pyridoxine • HCl	1.00	1.00
Riboflavin	0.20	0.20
Thiamine • HCl	0.20	0.20
Vitamin B_{12}	2.00	2.00
Other		
Bacto-peptone	600.00	600.00
D-Glucose	3,000.00	3,000.00
Glutathione (reduced)	0.50	0.50
HEPES	--	5,958.00
Phenol red • Na	10.00	10.00

"--" indicates not present

MCDB 131

Cat. No.	15-100
Description	Liquid, 1x
Units	mg/L

Components	
Inorganic Salts	
$CaCl_2 \cdot 2H_2O$	235.20
$CuSO_4 \cdot 5H_2O$	0.0012
$FeSO_4 \cdot 7H_2O$	0.278
KCl	298.20
$MgSO_4$ (anhydrous)	1,204.00
$MnSO_4 \cdot H_2O$	0.0002
NaCl	6,428.40
Na_2HPO_4 (anhydrous)	71.00
$NaHCO_3$	1,180.00
Na_2SeO_3	0.0052
$Na_2SiO_3 \cdot 9H_2O$	2.842
$(NH_4)_6Mo_7O_{24} \cdot 4H_2O$	0.0037
NH_4VO_3	0.0006
$NiCl_2 \cdot 6H_2O$	0.0001
$ZnSO_4 \cdot 7H_2O$	0.0003
Amino Acids	
L-Alanine	2.67
L-Arginine • HCl	63.21
L-Asparagine • H_2O	15.01
L-Aspartic Acid	13.31
L-Cysteine • HCl • H_2O	35.12
L-Glutamic Acid	4.413
L-Glycine	2.25
L-Histidine • HCl • H_2O	41.92
L-Isoleucine	65.60
L-Leucine	131.20
L-Lysine • HCl	182.60
L-Methionine	14.92
L-Phenylalanine	33.04
L-Proline	11.51
L-Serine	31.53
L-Threonine	11.91
L-Tryptophan	4.08

Cat. No.	15-100
Description	Liquid, 1x
Units	mg/L

Vitamins	
Biotin	0.0073
D-Calcium pantothenate	11.915
Choline chloride	13.96
Calcium folinic acid	0.5115
i-Inositol	7.208
Nicotinamide	6.105
DL-Thioctic (lipoic) acid	0.0021
Pyridoxine • HCl	2.056
Riboflavin	0.0038
Thiamine • HCl	3.373
Vitamin B_{12}	0.0136
Other	
D-Glucose	1,000.00
Putrescine • 2HCl	0.0002
Phenol red • Na	12.421
Sodium pyruvate	110.00
Thymidine	0.0242
Adenine HCl	0.1716

M199 (Medium 199)

Cat. No.	10-060	50-050	90-050
Description	**Liquid, 1x**	**Powder**	**Powder**
Units	**mg/L**	**mg/L**	**mg/L**
Components			
Inorganic Salts			
$CaCl_2$ (anhydrous)	200.00	200.00	200.00
$Fe(NO_3)_3 \cdot 9H_2O$	0.72	0.72	0.72
KCl	400.00	400.00	400.00
KH_2PO_4	--	--	--
$MgSO_4$ (anhydrous)	97.70	97.70	97.70
NaCl	6,800.00	6,800.00	6,800.00
$NaH_2PO_4 \cdot H_2O$	140.00	140.00	140.00
Na_2HPO_4 (anhydrous)	--	--	--
$NaHCO_3$	2,200.00	--	--
Amino Acids			
L-Alanine	25.00	25.00	25.00
L-Arginine • HCl	70.00	70.00	70.00
L-Aspartic acid	30.00	30.00	30.00
L-Cysteine • HCl • H_2O	0.11	0.11	0.11
L-Cystine • 2HCl	26.00	26.00	26.00
L-Glutamic acid	75.00	75.00	75.00
L-glutamine	100.00	100.00	--
Glycine	50.00	50.00	50.00
L-Histidine • HCl • H_2O	21.88	21.88	21.88
Hydroxy-L-proline	10.00	10.00	10.00
L-Isoleucine	20.00	20.00	20.00
L-Leucine	60.00	60.00	60.00
L-Lysine • HCl	70.00	70.00	70.00
L-Methionine	15.00	15.00	15.00
L-Phenylalanine	25.00	25.00	25.00
L-Proline	40.00	40.00	40.00
L-Serine	25.00	25.00	25.00
L-Threonine	30.00	30.00	30.00
L-Tryptophan	10.00	10.00	10.00
L-Tryosine • 2Na • $2H_2O$	57.87	57.87	57.87
L-Valine	25.00	25.00	25.00
Vitamins			
DL-alpha-Tocopherol • PO_4 • Na	0.01	0.01	0.01
Ascorbic acid	0.05	0.05	0.05
Biotin	0.01	0.01	0.01
Calciferol	0.10	0.10	0.10
D-Calcium pantothenate	0.01	0.01	0.01
Choline chloride	0.50	0.50	0.50
Folic acid	0.01	0.01	0.01

Cat. No.	10-060	50-050	90-050
Description	**Liquid, 1x**	**Powder**	**Powder**
Units	**mg/L**	**mg/L**	**mg/L**
Vitamins			
i-Inositol	0.05	0.05	0.05
Menadione • $NaHSO_3 \cdot 3H_2O$	0.019	0.019	0.019
Nicotinic acid	0.025	0.025	0.025
Nicotinamide	0.025	0.025	0.025
Para-Aminobenzoic acid	0.05	0.05	0.05
Pyridoxine • HCl	0.05	0.05	0.05
Riboflavin	0.01	0.01	0.01
Thiamine • HCl	0.01	0.01	0.01
Vitamin A acetate	0.14	0.14	0.14
Other			
Adenine sulfate	10.00	10.00	10.00
5-Adenylic acid • H_2O	0.20	0.20	0.20
ATP • 2Na • $3H_2O$	1.00	1.00	1.00
Cholesterol	0.20	0.20	0.20
2-Deoxy-D-ribose	0.50	0.50	0.50
D-Glucose	1,000.00	1,000.00	1,000.00
Glutathione (reduced)	0.05	0.05	0.05
Guanine • HCl	0.30	0.30	0.30
Hypoxanthine • Na	0.354	0.354	0.354
Phenol red • Na	10.00	10.00	--
D-Ribose	0.50	0.50	0.50
Sodium acetate	50.00	50.00	50.00
Thymine	0.30	0.30	0.30
Polysorbate 80	20.00	20.00	20.00
Uracil	0.30	0.30	0.30
Xanthine • Na	0.34	0.34	0.34
Add			
$NaHCO_3$ Powder (g/L) 7.5% Solution (mL/L)	 -- --	 2.20 29.33	 2.20 29.33
L-glutamine Powder (mg/L) 200 mM Solution (mL/L)	 -- --	 -- --	 100.00 3.40

"--" indicates not present

MEM Amino Acids Solution

Cat. No.	25-030
Description	Liquid, 50x
Units	mg/L

Components	
L-Arginine • HCl	6,320.00
L-Cystine • 2HCl	1,560.00
L-Histidine • HCl •H_2O	2,095.00
L-Isoleucine	2,625.00
L-Leucine	2,625.00
L-Lysine • HCl	3,625.00
L-Methionine	750.00
L-Phenylalanine	1,625.00
L-Threonine	2,380.00
L-Tryptophan	500.00
L-Tyrosine • HCl	2,160.00
L-Valine	2,340.00

NEAA (MEM Nonessential Amino Acids Solution)

Cat. No.	25-025
Description	Liquid, 100x
Units	mg/L

Components	
L-Alanine	890.00
L-Asparagine • H_2O	1,500.00
L-Aspartic acid	1,330.00
L-Glutamic acid	1,470.00
Glycine	750.00
L-Proline	1,150.00
L-Serine	1,050.00

MEM Vitamin Solution

Cat. No.	25-020
Description	100x Liquid
Units	mg/L

Components	
NaCl	8,500.00
D-Calcium pantothenate	100.00
Choline chloride	100.00
Folic acid	100.00
i-Inositol	200.00
Nicotinamide	100.00
Pyridoxine • HCl	100.00
Riboflavin	10.00
Thiamine • HCl	100.00

Microbiological Media

Cat. No.	46-003	46-050	46-055	46-060
Description	**Liquid, S.O.C. Medium**	**Liquid LB Broth**	**Liquid Terrific Broth**	**Liquid Tryptic Soy Broth**
Units	**g/L**	**g/L**	**g/L**	**g/L**
Components				
Casein peptone	20.00	10.00	12.00	--
Glycerol (mL)	--	--	4.00 (mL)	--
KH_2PO_4	--	--	2.31	--
K_2HPO_4	--	--	12.54	2.5
NaCl	0.5845	10.00	--	5.0
UF yeast powder	5.00	5.00	24.00	--
Dextrose	3.6032	--	--	2.5
KCl	0.186375	--	--	--
$MgCl_2$ (anhydrous)	0.9521	--	--	--
$MgSO_4$ (anhydrous)	1.2036	--	--	--
Non-animal origin peptone	--	--	--	20.0

Molecular Biology Buffers

Cat. No.	46-009	46-010	46-011	46-020	46-021	46-030	46-031
Description	**Liquid TE Buffer, 1x**	**Liquid TAE Buffer, 10x**	**Liquid TBE Buffer, 10x**	**Liquid SSC Buffer, 20x**	**Liquid SSPE Buffer, 20x**	**1M Liquid Tris HCl pH 7.5, 1M**	**1M Liquid Tris HCl pH 8.0, 1M**
Units	**g/L**	**g/L**	**g/L**	**g/L**	**g/L**	**g/L**	**g/L**
Components							
Boric acid	--	--	55	--	--	--	--
EDTA free acid (anhydrous)	--	2.922	2.92	--	7.4	--	--
EDTA • 2Na • $2H_2O$	0.37224	--	--	--	--	--	--
Glacial acetic acid	--	11.42	--	--	--	--	--
NaCl	--	--	--	175.35	175.3	--	--
Na citrate • $2H_2O$	--	--	--	88.2	--	--	--
Tris	0.46	48.4	108	--	--	21.78	66.67
Tris HCl	0.976	--	--	--	--	128.74	70.86
NaH_2PO_4 • H_2O	--	--	--	--	27.6	--	--

"--" indicates not present

Minimum Essential Medium (MEM)

Cat. No.	50-004	50-010	50-019	50-011	51-010	90-009	10-009	10-010	15-010	15-015	17-305
Description	**Powder**	**Powder**	**Powder**	**Powder**	**Powder**	**Powder**	**Liquid, 1x**	**Liquid, 1x**	**Liquid, 1x**	**Liquid, 1x**	**Liquid, 1x**
Units	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**
Components											
Inorganic Salts											
$CaCl_2$ (anhydrous)	200.00	200.00	140.00	200.00	200.00	200.00	200.00	200.00	200.00	--	200.00
$Fe(NO_3)_3 \cdot 9H_2O$	0.10	--	--	--	--	--	--	--	--	--	--
KCl	400.00	400.00	400.00	400.00	400.00	400.00	400.00	400.00	400.00	400.00	400.00
KH_2PO_4	--	--	60.00	--	--	--	--	--	--	--	--
$MgSO_4$ (anhydrous)	97.67	97.70	97.67	97.70	97.00	97.70	97.70	97.70	97.70	--	97.70
NaCl	6,400	6,800	8,000	6,800	6,800	6,800	6,800.00	6,800.00	6,800.00	6,800.00	6,800.00
$NaH_2PO_4 \cdot H_2O$	124.00	140.00	47.88	140.00	140.00	140.00	140.00	140.00	140.00	1,217.00	140.00
Na succinate $\cdot 6H_2O$	--	--	--	--	100.00	--	--	--	--	--	--
$NaHCO_3$	--	--	--	--	--	--	1,500.00	2,200.00	2,200.00	2,200.00	2,200.00
Amino Acids											
L-Alanine	--	--		8.90	--	--	8.90	--	--	--	--
L-Arginine • HCl	42.00	126.40	126.00	126.40	126.40	126.40	126.40	126.40	126.40	126.40	126.40
L-Asparagine $\cdot H_2O$	--	--	--	15.00	--	--	15.00	--	--	--	--
L-Aspartic acid	--	--	--	13.30	--	--	13.30	--	--	--	--
L-Cystine • 2HCl	31.28	31.20	31.39	31.20	31.10	31.20	31.20	31.20	31.20	31.20	31.20
L-Glutamic acid	--	--	--	14.70	--	--	14.70	--	--	--	--
L-glutamine	292.00	292.00	292.00	292.00	--	--	292.00	292.00	--	--	--
Glycine	--	--	--	7.50	--	--	7.50	--	--	--	--
L-Histidine • HCl $\cdot H_2O$	21.00	41.90	42.00	41.90	41.90	41.90	41.90	41.90	41.90	41.90	41.90
L-Isoleucine	52.40	52.50	52.00	52.50	52.50	52.50	52.50	52.50	52.50	52.50	52.50
L-Leucine	52.40	52.50	52.00	52.50	52.50	52.50	52.50	52.50	52.50	52.50	52.50
L-Lysine • HCl	73.10	72.50	72.50	72.50	73.06	72.50	72.50	72.50	72.50	72.50	72.50
L-Methionine	15.00	15.00	15.00	15.00	14.90	15.00	15.00	15.00	15.00	15.00	15.00
L-Phenylalanine	33.00	32.50	32.00	32.50	33.02	32.50	32.50	32.50	32.50	32.50	32.50
L-Proline	--	--	--	11.50	--	--	11.50	--	--	--	--
L-Serine	--	--	--	10.50	--	--	10.50	--	--	--	--
L-Threonine	47.60	47.60	48.00	47.60	47.64	47.60	47.60	47.60	47.60	47.60	47.60
L-Tryptophan	8.00	10.00	10.00	10.00	10.20	10.00	10.00	10.00	10.00	10.00	10.00
L-Tyrosine • 2Na $\cdot 2H_2O$	52.19	51.90	51.90	51.90	--	51.90	51.90	51.90	51.90	51.90	51.90
L-Tyrosine, free base	--	--	--	--	36.00	--	--	--	--	--	--
L-Valine	46.80	46.80	46.00	46.80	46.90	46.80	46.80	46.80	46.80	46.80	46.80
Vitamins											
Choline bitartrate	--	--	--	--	1.80	--	--	--	--	--	--
D-Calcium pantothenate	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Choline chloride	2.00	1.00	1.00	1.00	--	1.00	1.00	1.00	1.00	1.00	1.00
Folic acid	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
i-Inositol	3.60	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Nicotinamide	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Pyridoxine • HCl	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Riboflavin	0.20	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Thiamine • HCl	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Other											
D-Glucose	4,500.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00
Phenol red • Na	15.00	10.00	10.00	10.00	6.00	--	10.00	10.00	10.00	10.00	--
Succinic acid	--	--	--	--	75.00	--	--	--	--	--	--
Sodium Pyruvate	--	--	--	--	--	--	110.00	--	--	--	--
Add											
$NaHCO_3$											
Powder (g/L)	2.75	2.20	--	2.20	2.20	2.20	--	--	--	--	--
7.5% Solution (mL/L)	33.40	26.70	--	26.70	26.70	26.70	--	--	--	--	--
L-glutamine											
Powder (mg/L)	--	--	--	--	292.00	292.00	--	--	--	--	--
200 mM Solution (mL/L)	--	--	--	--	10.00	10.00	--	--	--	--	--

"--" indicates not present

Penicillin Streptomycin Solutions

Cat. No.	30-001	30-002	30-009
Description	Liquid, 50x	Liquid, 100x	Liquid, 100x
Units	g/L	g/L	g/L
Components			
Penicillin G • potassium salt	5,000,000 µ/L	10,000,000 µ/L	10,000,000 µ/L
Streptomycin sulfate	5.0	10.0	10.0
L-glutamine	--	--	29.2
Sodium citrate dihydrate	--	--	2.582
NaCl	--	--	1.4

Trace Elements

Cat. No.	25-021	25-022	25-023
Description	(A) 1,000x	(B) 1,000x	(C) 1,000x
Units	mg/L	mg/L	mg/L
Components			
$CuSO_4 \cdot 5H_20$	1.60	--	--
$ZnSO_4 \cdot 7H_20$	863.00	--	--
Selenite • 2Na	17.30	--	--
Ferric citrate	1,155.10	--	--
$MnSO_4 \cdot H_20$	--	0.17	--
$Na_2SiO_3 \cdot 9H_20$	--	140.00	--
Molydbic acid, ammonium salt	--	1.24	--
NH_4VO_3	--	0.65	--
$NiSO_4 \cdot 6H_2O$	--	0.13	--
SnCI2 (anhydrous)	--	0.12	--
$AlCl_3 \cdot 6H_2O$	--	--	1.20
$AgNO_3$	--	--	0.17
$Ba(C_2H_3O_2)_2$	--	--	2.55
KBr	--	--	0.12
$CdCl_2$	--	--	2.28
$CoCl_2 \cdot 6H_2O$	--	--	2.38
$CrCl_3$ (anhydrous)	--	--	0.32
NaF	--	--	4.20
GeO_2	--	--	0.53
KI	--	--	0.17
RbCI	--	--	1.21
$ZrOCl_2 \cdot 8H_2O$	--	--	3.22

"--" indicates not present

Trypsin and Trypsin/EDTA Solutions

Cat. No.	25-050	25-051	25-052	25-053	25-054
Description	Liquid, 1x 0.25% Trypsin in HBSS	Liquid, 1x 0.05% Trypsin 0.53 mM EDTA in HBSS	Liquid, 1x 0.05% Trypsin 0.53 mM EDTA in HBSS	Liquid, 1x 0.25% Trypsin 2.21 mM EDTA in HBSS	Liquid, 10x 2.5% Trypsin in HBSS
Units	mg/L	mg/L	mg/L	mg/L	mg/L
Components					
D-Glucose	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00
EDTA • 4Na • $2H_2O$	--	221.00	221.00	920.00	--
KCl	400.00	400.00	400.00	400.00	400.00
KH_2PO_4	60.00	60.00	60.00	60.00	60.00
NaCl	8,000.00	8,000.00	8,000.00	8,000.00	8,000.00
$NaHCO_3$	350.00	350.00	--	--	350.00
Na_2HPO_4 (anhydrous)	47.70	47.70	47.70	47.70	47.50
Phenol red • Na	10.00	10.00	10.00	10.00	--
Trypsin 1:250	2,500.00	500.00	500.00	2,500.00	25,000.00

TSB (Tryptic Soy Broth)

Cat. No.	46-060	61-411
Description	Liquid, 1x	Powder
Units	g/L	g/L
Components		
Non-animal origin peptone	20.0	20.0
Dextrose	2.5	2.5
NaCl	5.0	5.0
K_2HPO_4	2.5	2.5

Trypan Blue

Cat. No.	25-900
Description	0.4% Solution
Units	g/L
Components	
Trypan blue	4.0
NaCl	8.10
K_2HPO_4	0.60

"--" indicates not present

RPMI 1640

Cat. No.	10-040	10-041	10-043	15-040	15-041	17-104	17-105	50-020	90-022
Description	**Liquid, 1x**	**Liquid, 1x**	**Liquid, 1x**	**Liquid, 1x**	**Liquid, 1x**	**Liquid, 1x**	**Liquid, 1x**	**Powder**	**Powder**
Units	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**
Components									
Inorganic Salts									
$Ca(NO_3)_2 \cdot 4H_2O$	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
KCl	400.00	400.00	400.00	400.00	400.00	400.00	400.00	400.00	400.00
$MgSO_4$ (anhydrous)	48.80	48.80	48.80	48.80	48.80	48.80	48.80	48.80	48.80
NaCl	6,000.00	6,000.00	6,000.00	6,000.00	6,000.00	6,000.00	6,000.00	6,000.00	6,000.00
Na_2HPO_4 (anhydrous)	800.70	800.70	800.70	800.70	800.70	800.70	800.70	800.70	800.70
$NaHCO_3$	2,000.00	2,000.00	2,000.00	2,000.00	2,000.00	2,000.00	2,000.00	--	--
Amino Acids									
L-Arginine	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00
L-Asparagine • H_2O	56.82	56.82	56.82	56.82	56.82	56.82	56.82	56.82	56.82
L-Aspartic acid	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00
L-Cystine • 2HCl	65.20	65.20	65.20	65.20	65.20	--	65.20	65.20	65.20
L-Glutamic acid	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00
L-glutamine	300.00	300.00	300.00	--	--	--	--	300.00	--
Glycine	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
L-Histidine	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00
Hydroxy-L-proline	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00
L-Isoleucine	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
L-Leucine	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
L-Lysine • HCl	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00
L-Methionine	15.00	15.00	15.00	15.00	15.00	--	15.00	15.00	15.00
L-Phenylalanine	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00
L-Proline	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00
L-Serine	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00
L-Threonine	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00
L-Tryptophan	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
L-Tyrosine • 2Na • $2H_2O$	28.83	28.83	28.83	28.83	28.83	28.83	28.83	28.83	28.83
L-Valine	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00
Vitamins									
Biotin	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
D-Calcium pantothenate	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Choline chloride	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Folic acid	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
i-Inositol	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00
Nicotinamide	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Para-Aminobenzoic acid	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Pyridoxine • HCl	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Riboflavin	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Thiamine • HCl	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Vitamin B_{12}	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005

"--" indicates not present

RPMI 1640 (continued)

Cat. No.	10-040	10-041	10-043	15-040	15-041	17-104	17-105	50-020	90-022
Description	**Liquid, 1x**	**Liquid, 1x**	**Liquid, 1x**	**Liquid, 1x**	**Liquid, 1x**	**Liquid, 1x**	**Liquid, 1x**	**Powder**	**Powder**
Units	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**
Components (continued)									
Other									
D-Glucose	2,000.00	2,000.00	--	2,000.00	2,000.00	2,000.00	2,000.00	2,000.00	2,000.00
Glutathione (reduced)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HEPES	--	5,958.00	--	--	5,958.00	--	--	--	--
Phenol red • Na	5.00	5.00	5.00	5.00	5.00	5.00	--	5.00	--
Add									
$NaHCO_3$									
Powder (g/L)	--	--	--	--	--	--	--	2.00	2.00
7.5% Solution (mL/L)	--	--	--	--	--	--	--	26.70	26.70
L-glutamine									
Powder (mg/L)	--	--	--	300.00	300.00	300.00	300.00	--	300.00
200 mM Solution (mL/L)	--	--	--	10.27	10.27	10.27	10.27	--	10.27

"--" indicates not present

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