



Biochemistry and Reagents for Life Science

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SIGMA

PRODUCT NUMBER	US \$	US \$
C 4916 5-CARBOXYFLUORESCIN DIACETATE (5-CFDA) Approx. 95% (HPLC) Ref.: Bruning, J.W., et al., J. Immunol. Methods., 73 , 33 (1980). [79955-27-4] C ₂₂ H ₁₆ O ₉ FW 460.4 R: 45-46-23/24/25-36/37/38 S: 45-26-36/37/39-22	25 mg 27.40 100 mg 84.65	
C 5041 6-CARBOXYFLUORESCIN DIACETATE (6-CFDA) Approx. 95% (HPLC) Ref.: Goodall, H., et al., Nature, 295 , 524 (1982). [334803-6] C ₂₂ H ₁₆ O ₉ FW 460.4 R: 23/24/25-36/37/38 S: 45-26-36/37/39	25 mg 27.90 100 mg 84.25	
C 8166 5(6)-CARBOXYFLUORESCIN DIACETATE Mixed isomers Minimum 90% (HPLC) C ₂₂ H ₁₆ O ₉ FW 460.4	25 mg 32.45 100 mg 90.05 250 mg 198.10	
C 4272 D-γ-CARBOXYGLUTAMIC ACID [64153-47-5] C ₆ H ₉ NO ₆ FW 191.1	1 mg 33.05 5 mg 127.80 10 mg 229.55	
C 3767 DL-γ-CARBOXYGLUTAMIC ACID [56271-99-9] C ₆ H ₉ NO ₆ FW 191.1	1 mg 15.75 5 mg 52.50 25 mg 207.90	
C 4147 L-γ-CARBOXYGLUTAMIC ACID [53861-57-7] C ₆ H ₉ NO ₆ FW 191.1	500 μg 15.10 1 mg 25.15 5 mg 79.70	
C 3586 4-CARBOXY-3-HYDROXY-L-PHENYLGLYCINE (SI-4C3H-PG) Metabotropic GluR ₂ agonist and GluR ₁ antagonist Ref.: 1. Birse, E.F., et al., Neuroscience, 52 , 481 (1993). 2. Orlando, L.R., et al., Neurosci. Lett., 202 , 109 (1995). [85148-82-9] C ₉ H ₉ NO ₅ FW 211.2 R: 36/37/38 S: 26-36	1 mg 32.60 5 mg 130.45	
C 5511 N-(4-CARBOXY-3-HYDROXY-PHENYL)MALEIMIDE Irreversible inhibitor of LDH isoenzyme M. Ref.: Carvajal, G., et al., National Cancer Institute Monograph No. 27, 111 (1967). [19232-43-0] C ₁₁ H ₉ NO ₅ FW 233.2	250 mg 19.15	
5-CARBOXY-4-HYDROXY-2-THIOPYRIMIDINE See: 5-Carboxy-2-thiouracil Page 223		
2-CARBOXYL-3-CARBOXYMETHYL-4-ISOPROPENYLPIRROLIDINE See: Kainic Acid Page 610		
CARBOXYLESTERASE See: Esterase Page 419		
C 6046 20-CARBOXY-LEUKOTRIENE B ₄ Minimum 90% (HPLC) Approx. 1 mg per ml in ethanol [60434-82-8] C ₂₀ H ₃₀ O ₆ FW 366.5 R: 11-36/37/38 S: 16-26-36	25 μg 142.70 Shipped in dry ice	
C 8783 7-CARBOXYMETHOXY-4-METHYL-COUMARIN [64700-15-8] C ₁₂ H ₁₀ O ₅ FW 234.2 R: 36/37/38 S: 26-36	1 g 41.10	
649 N,N-bis[2-[bis(CARBOXYMETHYL)AMINO]ETHYL]-GLYCINE See: Diethylenetriaminepentaacetic Acid Page 360		

PRODUCT NUMBER	US \$	US \$
2-[(2-bis(CARBOXYMETHYL)AMINO-5-METHYL-PHENOXYMETHYL)-6-METHOXY-8-bis(CARBOXYMETHYL)AMINO]QUINOLINE See: Quin 2 Page 913		
2-[(2-bis(CARBOXYMETHYL)AMINO-5-METHYL-PHENOXYMETHYL)-6-METHOXY-8-bis(CARBOXYMETHYL)AMINO]QUINOLINE-tetrakis-(ACETOXYMETHYL) ESTER See: Quin 2-AM Page 913		
3,3'-bis(N,N-di[(CARBOXYMETHYL)AMINOMETHYL]-THYMOLPHTHALEIN See: Thymolphthalein Complexone Page 1008		
C 4947 CARBOXYMETHYLAMYLOSE Sodium Salt Contains up to 4% ethanol [12768-31-9] R: 36/37/38 S: 26-36	1 g 14.60 5 g 54.65 25 g 213.10	
C 4947 CARBOXYMETHYLCELLULOSE Sodium Salt A completely water-soluble polymer; not an ion exchanger. CM-Cellulose cation exchanger is listed in the Chromatography Section Page 1932 USP Grade See: Page 2209 [9004-32-4]	500 g 32.45 1 kg 43.70 2.5 kg 98.15	
C 5678 Low viscosity Viscosity of 4% aqueous solution at 25°C: 50-200 cps		
C 4888 Medium Viscosity Viscosity of 2% aqueous solution at 25°C: 400-800 cps		
C 5013 High Viscosity Viscosity of 1% aqueous solution at 25°C: 1500-3000 cps		
CARBOXYMETHYL-CELLULOSE HYDRAZIDE See under: Affinity Chromatography Media Page 1964		
C 7757 S-CARBOXYMETHYL-L-CYSTEINE Crystalline [638-23-3] C ₃ H ₇ NO ₄ S FW 179.2	1 g 6.30 5 g 11.15 25 g 23.95 100 g 86.45	
C 6206 N-CARBOXYMETHYL-6-[2,2-DICYANOVINYL]-1,2,3,4-TETRAHYDROQUINOLINE (CDCQ) Minimum 98% (HPLC) Fluorescent molecular rotor Ref.: 1. Iio, T., et al., J. Biochem., 113 , 196 (1993). 2. Iwaki, T., et al., Biochemistry, 32 , 7589 (1993). [47072-52-6] C ₁₅ H ₁₃ N ₃ O ₂ FW 267.3 R: 36/37/38 S: 26-36	25 mg 245.40	
tris(CARBOXYMETHYL)ETHYLENEDIAMINE-AGAROSE See under: Affinity Chromatography Media Page 1992		
C 3205 Nα,Nα-bis(CARBOXYMETHYL)-L-LYSINE (N-[5-Amino-1-carboxypentyl]-imidodiacetic acid) Trifluoroacetate Salt Approx. 95% (TLC) Ref.: Hochuli, E., et al., J. Chrom., 411 , 177 (1987). [160369-83-5] C ₁₀ H ₁₈ N ₂ O ₆ • C ₂ F ₃ O ₂ H FW 376.3	50 mg 39.00 250 mg 130.00	
CARBOXYMETHYL SEPHADEX See: Ion Exchangers and Gel Filtration Media Page 1931		
N-CARBOXYMETHYL-L-PHENYLALANYL-L-LEUCINE See: Bioactive Peptides Page 1099		

PRODUCT NUMBER	US \$	US \$
C 6513 1-(CARBOXYMETHYL)PYRIDINIUM CHLORIDE HYDRAZIDE (Girard's Reagent P) Crystalline [1126-58-5] C ₇ H ₇ ClN ₃ O FW 187.6	25 g 15.35	
C 1757 (CARBOXYMETHYL)TRIMETHYL-AMMONIUM CHLORIDE HYDRAZIDE (Girard's Reagent T) Crystalline [123-46-6] C ₈ H ₁₄ N ₃ OCl FW 167.6	100 g 28.85	
6-CARBOXYMETHYLURACIL See: Uracil-4-acetic Acid Page 1054		
6-CARBOXY-5-NITRO-2,4-DIOXYPYRIMIDINE See: 5-Nitroorotic Acid Page 753		
3-CARBOXY-4-NITROPHENYL DISULFIDE See: 5,5'-Dithiobis(2-nitrobenzoic acid) Page 395		
CARBOXYPEPTIDASE A (Carboxypolypeptidase; Peptidyl-L-amino-acid hydrolase; EC 3.4.17.1) Unit Definition: One unit will hydrolyze 1.0 μmole of hippuryl-L-phenylalanine per min at pH 7.5 at 25°C, unless otherwise indicated. Protein determined by (E) ₄₂₀ . M.W. approx. 35,250 Ref.: Bradshaw, R.A., et al., Proc. Natl. Acad. Sci. USA, 63 , 1389 (1969).		
C 0261 Type I From Bovine Pancreas Aqueous suspension with toluene added. Activity: Approx. 50 units per mg protein. Prepared chromatographically by the method of Cox, D.J., et al., Biochemistry, 3 , 44 (1964). The enzyme obtained by this method is carboxypeptidase A ₁ . It contains an additional N-terminal heptapeptide compared to the enzyme prepared by Allan's procedure (C 0386 below). [11075-17-5] R: 23/24/25-36/37/38 S: 45-26-36/37/39	1,000 units 30.85 5,000 units 127.10	
C 9762 Type I-DPP From Bovine Pancreas C 0261 treated with diisopropyl fluorophosphate to eliminate trypsin and chymotrypsin activity. Dialyzed and recrystallized: aqueous suspension with toluene added. Activity: Approx. 50 units per mg protein. R: 23/24/25-36/37/38 S: 45-26-36/37/39	500 units 30.40 2,500 units 107.95	
C 6393 Type I-PMSF From Bovine Pancreas C 0261 treated with phenylmethylsulfonyl fluoride to eliminate trypsin and chymotrypsin activity. Dialyzed and recrystallized: aqueous suspension with toluene added. Activity: Approx. 50 units per mg protein. R: 23/24/25-36/37/38 S: 45-26-36/37/39	500 units 30.40	
C 0386 Type II: 2x Crystallized From Bovine Pancreas Aqueous suspension with toluene added. Activity: Approx. 50 units per mg protein. Reported to possess approx. 8 times the solubility of the enzyme prepared by Anson's procedure. Deactivation to the apoenzyme occurs with the removal of zinc. Activity is reported to be fully restored by addition of zinc to the metal free Carboxypeptidase A. Ref.: Allan, B.J., et al., Biochemistry, 3 , 40 (1964). [11075-17-5] R: 23/24/25-36/37/38 S: 45-26-36/37/39	1,000 units 17.00 5,000 units 57.65	

(Continued)

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search or pilot-plant scale-up. Custom packaging of larger quantities is division, Sigma-Aldrich Fine Chemicals.

IS #	PRODUCT NUMBER	US \$
00	AZATHIOPRINE, USP	100 mg 14.90
60	A 2593 [6-[1-Methyl-4-nitroimidazol-5-yl]-thiopurine]	1 g 72.40 5 g 281.70
	[446-86-6] S ₆₅₂₁ O ₂ S FW 277.3 R: 45-46-63-22-36/37/38 S: 45-26-36/37/39-22	
50	BACITRACIN, USP	50,000 units 17.50
80	B 8800 Zinc Salt	1,250,000 units 149.15
	[1405-89-6]	
85	BARIUM SULFATE, USP	100 g 19.05
50	B 8675 [7727-43-7] BaSO ₄	500 g 63.45
	[7727-43-7] FW 233.4	
50	BENOXINATE, USP	1 g 26.60
45	B 9050 [4-Amino-3-butoxybenzoic acid diethyl-aminoethyl ester] Hydrochloride	5 g 93.40
	[5987-82-6] C ₁₇ H ₂₈ N ₂ O ₃ • HCl FW 344.9 R: 36/37/38 S: 26-36-22	
40	BENZOIC ACID, USP	100 g 22.85
80	B 9300 [65-85-0] C ₇ H ₆ O ₂	500 g 76.10 1 kg 137.15
	R: 22-41-37/38-42/43 S: 26-36-	
60	BENZYL BENZOATE, USP	250 ml 20.55
75	B 9550 [120-51-4] C ₁₄ H ₁₂ O ₂	500 ml 34.20 1 liter 46.85
65		R: 22 S: 25
50	BETAMETHASONE, USP	25 mg 45.15
00	B 9675 [9α-Fluoro-16β-methyl-prednisolone; 9α-Fluoro-16β-methyl-11β,17α,21-trihydroxy-1,4-pregnadiene-3,20-dione]	100 mg 121.50
	[378-44-9] C ₂₂ H ₂₉ FO ₅ FW 392.5 R: 63 S: 22-36	
40	BIOTIN, USP	500 mg 36.50
90	B 0301 [58-85-5] C ₁₀ H ₁₆ N ₂ O ₃ S	5 g 240.15 25 g 1015.85
	[58-85-5] FW 244.3	
65	BISMUTH SUBNITRATE, USP	100 g 85.35
90	B 0426 [1304-85-4] FW 1462.0	500 g 170.80
	R: 8-36/37/38 S: 17-26-36	
85	CAFFEINE, USP	250 g 38.60
80	C 7731 Anhydrous	1 kg 104.25
	[58-08-2] C ₈ H ₁₀ N ₄ O ₂ FW 194.2 R: 22	
85	CALCIUM ACETATE, USP	100 g 18.60
85	C 7856 [62-54-4] Ca(C ₂ H ₃ O ₂) ₂	500 g 63.20
	[62-54-4] FW 158.2	
85	CALCIUM CARBONATE, USP	100 g 44.10
80	C 7981 [471-34-1] CaCO ₃	500 g 146.95
	R: 41-37/38 S: 26-36	
50	CALCIUM CHLORIDE, USP	500 g 61.55
70	C 8106 Dihydrate	1 kg 105.00 5 kg 416.20
15		[10035-04-8] CaCl ₂ • 2H ₂ O FW 147.0 R: 22-36/37/38 S: 26-36
2	CALCIUM GLUCONATE, USP	100 g 17.75
60	C 8231 Anhydrous	500 g 59.05 1 kg 106.35
	[299-28-5] C ₁₂ H ₂₂ CaO ₁₄ FW 430.4	

PRODUCT NUMBER	US \$
CALCIUM LACTATE, USP	250 g 34.30
C 8356 Pentahydrate	500 g 57.10 1 kg 102.90
	[5743-47-5] C ₆ H ₁₀ CaO ₈ • 5H ₂ O FW 308.3
CALCIUM PANTOTHENATE, USP	25 g 44.15
C 8731 [137-08-6] C ₁₈ H ₃₂ CaN ₂ O ₁₀	100 g 143.30 1 kg 1226.60
	FW 476.5
CALCIUM PHOSPHATE, Dibasic, USP	100 g 10.75
C 8606 [7757-93-9] CaHPO ₄	500 g 35.75 2.5 kg 135.45
	FW 136.1 R: 36/37/38 S: 26-36
CAPTOPRIL, USP	1 g 29.95
C 8856 [(2S)-1-[3-Mercapto-2-methyl-propionyl]-L-proline]	5 g 99.15 25 g 329.55
	[62571-86-2] C ₉ H ₁₅ NO ₃ S FW 217.3 R: 62-43 S: 36-22
CARBAMAZEPINE, USP	5 g 38.05
C 8981 [298-46-4] C ₁₅ H ₁₂ N ₂ O	25 g 119.50
	R: 22-42/43 S: 36/37/39-22
CARBENICILLIN, USP	1 g 97.55
C 9231 Disodium Salt	5 g 334.80 10 g 633.30
	[4800-94-6] C ₁₁ H ₁₄ N ₂ Na ₂ O ₆ S FW 422.4 R: 42/43 S: 36
CARBOXYMETHYLCELLULOSE, USP	500 g 52.25
C 9481 Sodium Salt	1 kg 70.75 2.5 kg 157.00
	Medium Viscosity Viscosity of 2% aqueous solution at 25°C: 400-800 cps [9004-32-4]
CASTOR OIL, USP	500 ml 40.80
C 9606 R: 36/38 S: 26-36	1 liter 73.50
CETYLPYRIDINIUM CHLORIDE, USP	100 g 26.40
C 0732 (1-Hexadecylpyridinium chloride)	1 kg 187.70 5 kg 595.25
	Monohydrate [6004-24-6] C ₂₁ H ₃₈ ClN • H ₂ O FW 358.0 S: 26-36
CHARCOAL, ACTIVATED, USP	125 g 27.75
C 7606 R: 20-36/37/38 S: 22-26-36	500 g 78.80 2.5 kg 178.30
CHLORAMPHENICOL, USP	25 g 51.05
C 0857 (Chloromycetin; D-[-]-threo-2-Dichloroacetamido-1- <i>p</i> -nitrophenyl-1,3-propanediol)	100 g 164.75 500 g 640.05
	[56-73-7] C ₁₁ H ₁₂ Cl ₂ N ₂ O ₃ FW 323.1 R: 45-46-63-42/43 S: 45-36/37/39
CHLORPROMAZINE, USP	5 g 19.30
C 0982 Hydrochloride	25 g 49.25 100 g 131.55
	[69-09-0] C ₁₇ H ₁₉ ClN ₂ S • HCl FW 355.3 R: 26-25-36/37/38 S: 45-26-36/37/39-22
CHOLECALCIFEROL, USP	250 mg 17.65
C 1357 (Activated 7-dehydrocholesterol; Vitamin D ₃)	1 g 29.05 25 g 371.25
	[67-97-0] C ₂₇ H ₄₄ O FW 384.7 R: 60-64-63-25 S: 45-36/37/39
CITRIC ACID, USP	
C 1857 Anhydrous	100 g 13.55 1 kg 96.60 25 kg 1820.00
	[77-92-9] C ₆ H ₈ O ₇ FW 192.1 R: 41-37/38 S: 26-36
C 1732 Monohydrate	100 g 16.30 1 kg 116.30 25 kg 2080.00
	[5949-29-1] C ₆ H ₈ O ₇ • H ₂ O FW 210.1 R: 41-37/38 S: 26-36

PRODUCT NUMBER	US \$
CUPRIC SULFATE, USP	250 g 40.15
C 2857 Pentahydrate	500 g 66.90 2.5 kg 264.75
	[7758-99-8] CuSO ₄ • 5H ₂ O FW 249.7 R: 60-63-22-41-37/38-43 S: 45-26-36/37/39-22
CYANOCOBALAMIN, USP	500 mg 40.25
C 3607 (Vitamin B ₁₂)	5 g 232.75 25 g 1081.85
	[68-19-9] FW 1355.4 S: 36
CYSTEINE, Hydrochloride, USP	
[7048-04-6] C ₃ H ₇ NO ₂ S • HCl • H ₂ O	FW 175.6
R: 36/37/38 S: 26-36	
C 3357 Monohydrate	100 g 51.05 1 kg 287.10 5 kg 1161.25
DAUNORUBICIN, Hydrochloride, USP	1 mg 22.40
D 8809 (Daunomycin)	10 mg 111.30 50 mg 440.00
	Complexes with DNA; inhibits DNA and RNA synthesis. Ref.: Ohnuma, T., et al, Cancer Res. 35 , 1767 (1975). [23541-50-6] C ₂₇ H ₂₉ NO ₁₀ • HCl FW 564.0 R: 45-46-61-22-36/37/38-42/43 S: 53-45-36/37/39-22
DEXAMETHASONE, USP	100 mg 36.95
D 9184 (9α-Fluoro-16α-methyl-prednisolone; 9α-Fluoro-16α-methyl-11β,17α,21-trihydroxy-1,4-pregnadiene-3,20-dione; Prednisolone F)	1 g 161.30 5 g 575.95
	[50-02-2] C ₂₂ H ₂₉ FO ₅ FW 392.5 R: 63-36/37/38-43 S: 26-36-22
DEXTROMETHORPHAN, USP	5 g 34.35
D 9684 Hydrobromide: Monohydrate	10 g 61.15 50 g 240.70
	[6700-34-1] C ₁₈ H ₂₅ NO • HBr • H ₂ O FW 370.3 R: 22 S: 36
DEXTROSE, USP	
(Glucose)	
D 9434 Anhydrous	250 g 24.40 500 g 40.60 2.5 kg 114.40
	[50-99-7] C ₆ H ₁₂ O ₆ FW 180.2
D 9559 Monohydrate	100 g 11.55 1 kg 64.30 25 kg 1040.00
	[5996-10-1] C ₆ H ₁₂ O ₆ • H ₂ O FW 198.2
DIATRIZOIC ACID, USP	10 g 16.30
D 9809 Dihydrate	100 g 114.60
	[50978-11-5] C ₁₁ H ₁₃ N ₂ O ₄ • 2H ₂ O FW 650.0
DIBUCAINE, USP	
D 0185 Free Base	5 g 29.70 25 g 94.05
	[85-79-0] C ₂₀ H ₂₉ N ₃ O ₂ FW 343.5 R: 41-37 S: 26-36
D 0310 Hydrochloride	5 g 51.90 25 g 168.30
	[61-12-1] C ₂₀ H ₂₉ N ₃ O ₂ • HCl FW 379.9 R: 41-37 S: 26-36
DIMETHYL SULFOXIDE, USP	500 ml 38.95
D 1435 [67-68-5] C ₂ H ₆ SO	1 liter 65.00 4 liter 165.50
	R: 36/37/38 S: 26-36-23
DOCUSATE, USP	100 g 26.60
D 1685 (Sulfobutanedioic acid bis[2-ethyl-hexyl ester]; Dioctyl sulfosuccinate)	500 g 104.10
	Sodium Salt [572-11-7] C ₂₀ H ₃₇ NaO ₇ S FW 444.6 R: 22-36/37/38-41 S: 26-36

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