

Amino Acids and Their Derivatives

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Boc-L-Amino Acids

Optical purity of Boc-L-amino acid is determined by RP-HPLC using chiral derivatization method. Homogeneity of Boc-group is determined by gas-chromatographic method, and the purity grade of products is guaranteed according to our Purity Criteria on page III (XV).

Code	Compound	Grade	Price:Yen	
2051 2~10°C	Boc-Ala t-Butyloxycarbonyl-L-alanine (M.W. 189.21) C ₈ H ₁₅ NO ₄ [15761-38-3]	AA	5 g 25 g 100 g	1,500 3,000 9,000
2131 2~10°C	Boc-β-Ala t-Butyloxycarbonyl-β-alanine (M.W. 189.21) C ₈ H ₁₅ NO ₄ [3303-84-2]	AA	5 g 25 g 100 g	2,000 5,000 17,000
2058 -20°C	Boc-Arg(NO₂)* N ^α -t-Butyloxycarbonyl-N ^β -nitro-L-arginine (M.W. 319.31) C ₁₁ H ₂₁ N ₅ O ₆ [2188-18-3]	AA-A	5 g 25 g 100 g	2,800 9,000 27,000
2125 2~10°C	Boc-Arg(Tos)* N ^α -t-Butyloxycarbonyl-N ^β -tosyl-L-arginine (M.W. 428.50) C ₁₈ H ₂₈ N ₄ O ₆ S [13836-37-8]	AA	5 g 25 g 100 g	4,000 13,500 47,000
2060 2~10°C	Boc-Asn t-Butyloxycarbonyl-L-asparagine (M.W. 232.23) C ₉ H ₁₆ N ₂ O ₅ [7536-55-2]	AA-A	5 g 25 g 100 g	1,500 3,300 10,000
2077 -20°C	Boc-Asn-ONp t-Butyloxycarbonyl-L-asparagine p-nitrophenyl ester (M.W. 353.33) C ₁₅ H ₁₉ N ₃ O ₇ [4587-33-1]	B	5 g 25 g 100 g	9,000 36,000 126,000
2059 2~10°C	Boc-Asp(OBzl) t-Butyloxycarbonyl-L-aspartic acid β-benzyl ester (M.W. 323.34) C ₁₆ H ₂₁ NO ₆ [7536-58-5]	AA	5 g 25 g 100 g	2,500 6,000 20,000
2132 2~10°C	Boc-Asp(OcHex) t-Butyloxycarbonyl-L-aspartic acid β-cyclohexyl ester (M.W. 315.36) C ₁₅ H ₂₅ NO ₆ [73821-95-1] 1) J.P. Tam, T.-W. Wong, M.W. Riemen, F.-S. Tjoeng, and R.B. Merrifield, <i>Tetrahedron Lett.</i> , 42 , 4033 (1979).	AA	5 g 25 g 100 g	2,500 6,000 20,000
2121 2~10°C	Boc-Cys(Acm) t-Butyloxycarbonyl-S-acetamidomethyl-L-cysteine (M.W. 292.35) C ₁₁ H ₂₀ N ₂ O ₅ S [19746-37-3] 1) D.F. Veber, J.D. Milkowski, S.L. Varga, R.G. Denkwalter, and R. Hirschmann, <i>J. Am. Chem. Soc.</i> , 94 , 5456 (1972). 2) B. Kamber, A. Hartmann, K. Eisler, B. Riniker, H. Rink, P. Sieber, and W. Rittel, <i>Helv. Chim. Acta</i> , 63 , 899 (1980).	AA	5 g 25 g 100 g	3,000 11,000 33,000

* These compounds typically co-crystallize with between 1/4 - 1 molecule of water and/or ethyl acetate per molecule of amino acid derivatives. The exact analytical data are provided to customers with each shipment.

Boc-L-Amino Acids (continued)

Code	Compound	Grade	Price:Yen	
2061 2~10°C	Boc-Cys(Bzl) t-Butyloxycarbonyl-S-benzyl-L-cysteine (M.W. 311.40) C ₁₅ H ₂₁ NO ₄ S [5068-28-0]	AA	5 g 25 g 100 g	3,000 11,000 33,000
2130 2~10°C	Boc-Cys(Bu^t) t-Butyloxycarbonyl-S-t-butyl-L-cysteine (M.W. 277.38) C ₁₂ H ₂₃ NO ₄ S [56976-06-8]	AA	5 g 25 g 100 g	4,000 13,500 47,000
2129 2~10°C	Boc-Cys(4-CH₃Bzl) t-Butyloxycarbonyl-S-4-methylbenzyl-L-cysteine (M.W. 325.42) C ₁₆ H ₂₃ NO ₄ S [61925-77-7] 1) W.F. Heath, J.P. Tam, and R.B. Merrifield, <i>Int. J. Pept. Protein Res.</i> , 28 , 498 (1986).	AA	5 g 25 g 100 g	3,200 12,000 36,000
2078 2~10°C	Boc-Cys(MBzl) t-Butyloxycarbonyl-S-p-methoxybenzyl-L-cysteine (M.W. 341.42) C ₁₆ H ₂₃ NO ₅ S [18942-46-6] 1) M. Platen and E. Steckhan, <i>Liebigs Ann. Chem.</i> , 9 , 1563 (1984).	AA	5 g 25 g 100 g	3,200 12,000 36,000
2062 2~10°C	Boc-Gln t-Butyloxycarbonyl-L-glutamine (M.W. 246.26) C ₁₀ H ₁₈ N ₂ O ₅ [13726-85-7]	AA-A	5 g 25 g 100 g	1,800 4,500 15,000
2079 -20°C	Boc-Gln-ONp t-Butyloxycarbonyl-L-glutamine p-nitrophenyl ester (M.W. 367.35) C ₁₆ H ₂₁ N ₃ O ₇ [15387-45-8]	A-B	5 g 25 g 100 g	9,000 36,000 126,000
2103 2~10°C	Boc-Glu(OBzl) t-Butyloxycarbonyl-L-glutamic acid γ-benzyl ester (M.W. 337.37) C ₁₇ H ₂₃ NO ₆ [13574-13-5]	AA	5 g 25 g 100 g	2,500 6,000 20,000
2134 2~10°C	Boc-Glu(OcHex) t-Butyloxycarbonyl-L-glutamic acid γ-cyclohexyl ester (M.W. 329.39) C ₁₆ H ₂₇ NO ₆ [73821-97-3] 1) J.P. Tam, T.-W. Wong, M.W. Riemen, F.-S. Tjoeng, and R.B. Merrifield, <i>Tetrahedron Lett.</i> , 42 , 4033 (1979).	AA	5 g 25 g 100 g	2,500 6,000 20,000
2054 2~10°C	Boc-Gly t-Butyloxycarbonylglycine (M.W. 175.18) C ₇ H ₁₃ NO ₄ [4530-20-5]	AA	5 g 25 g 100 g	1,500 3,000 9,000
2138 2~10°C	Boc-His(Bom) N ^α -t-Butyloxycarbonyl-N ^ε -benzyloxymethyl-L-histidine (M.W. 375.42) C ₁₉ H ₂₅ N ₃ O ₅ [79950-65-5] 1) T. Brown, J.H. Jones, and J.D. Richards, <i>J. Chem. Soc. Perkin Trans I</i> , 1982 , 1553.	AA	5 g 25 g 100 g	10,000 40,000 140,000
2109 -20°C	Boc-His(Tos) N ^α -t-Butyloxycarbonyl-N ^ε -tosyl-L-histidine (M.W. 409.46) C ₁₈ H ₂₃ N ₃ O ₆ S [35899-43-5]	A	5 g 25 g 100 g	5,000 18,000 60,000

Boc-L-Amino Acids (continued)

Code	Compound	Grade	Price:Yen	
2116 2~10°C	Boc-Hyp(Bzl) t-Butyloxycarbonyl-O-benzyl-L-hydroxyproline (M.W. 321.37) C ₁₇ H ₂₃ NO ₅ [54631-81-1]	AA	5 g 25 g 100 g	8,000 30,000 105,000
2065 2~10°C	Boc-Ile • ½H₂O t-Butyloxycarbonyl-L-isoleucine hemihydrate (M.W. 231.29 • 9.01) C ₁₁ H ₂₁ NO ₄ • ½H ₂ O [13139-16-7]	AA	5 g 25 g 100 g	1,500 3,000 9,000
2055 2~10°C	Boc-Leu • H₂O t-Butyloxycarbonyl-L-leucine monohydrate (M.W. 231.29 • 18.02) C ₁₁ H ₂₁ NO ₄ • H ₂ O [13139-15-6]	AA	5 g 25 g 100 g	1,500 3,000 9,000
2135 2~10°C	Boc-Lys(Cl-Z) N ^α -t-Butyloxycarbonyl-N ^ε -2-chlorobenzoyloxycarbonyl-L-lysine (M.W. 414.88) C ₁₉ H ₂₇ N ₂ O ₆ Cl [54613-99-9]	AA	5 g 25 g 100 g	4,500 16,000 56,000
2108 2~10°C	Boc-Lys(Z) N ^α -t-Butyloxycarbonyl-N ^ε -benzyloxycarbonyl-L-lysine (M.W. 380.44) C ₁₉ H ₂₈ N ₂ O ₆ [2389-45-9]	AA	5 g 25 g 100 g	3,000 11,000 33,000
2104 2~10°C	Boc-Met t-Butyloxycarbonyl-L-methionine (M.W. 249.33) C ₁₀ H ₁₉ NO ₄ S [2488-15-5]	AA	5 g 25 g 100 g	1,500 3,300 10,000
2068 2~10°C	Boc-Phe t-Butyloxycarbonyl-L-phenylalanine (M.W. 265.30) C ₁₄ H ₁₉ NO ₄ [13734-34-4]	AA	5 g 25 g 100 g	1,500 3,000 9,000
2056 2~10°C	Boc-Pro t-Butyloxycarbonyl-L-proline (M.W. 215.25) C ₁₀ H ₁₇ NO ₄ [15761-39-4]	AA	5 g 25 g 100 g	1,500 3,000 9,000
2120 2~10°C	Boc-Sar t-Butyloxycarbonylsarcosine (M.W. 189.21) C ₈ H ₁₅ NO ₄ [13734-36-6]	AA	5 g 25 g 100 g	2,700 8,000 24,000
2102 2~10°C	Boc-Ser(Bzl) t-Butyloxycarbonyl-O-benzyl-L-serine (M.W. 295.33) C ₁₅ H ₂₁ NO ₅ [23680-31-1]	AA	5 g 25 g 100 g	3,200 12,000 42,000
2070 2~10°C	Boc-Thr(Bzl) t-Butyloxycarbonyl-O-benzyl-L-threonine (M.W. 309.36) C ₁₆ H ₂₃ NO ₅ [15260-10-3]	AA	5 g 25 g 100 g	3,200 12,000 42,000
2057 2~10°C	Boc-Trp N ^α -t-Butyloxycarbonyl-L-tryptophan (M.W. 304.34) C ₁₆ H ₂₀ N ₂ O ₄ [13139-14-5]	A	5 g 25 g 100 g	1,700 4,000 12,000

Boc-L-Amino Acids (continued)

Code	Compound	Grade	Price:Yen	
2115	Boc-Trp(CHO) <i>N</i> ^α - <i>t</i> -Butyloxycarbonyl- <i>N</i> ⁱⁿ -formyl-L-tryptophan (M.W. 332.35) C ₁₇ H ₂₀ N ₂ O ₅ [47355-10-2]	AA	5 g 25 g 100 g	5,000 18,000 60,000
	1) M. Ohno, S. Tsukamoto, S. Sato, and N. Izumiya, <i>Bull. Chem. Soc. Jpn.</i> , 46 , 3280 (1973).			
2139	Boc-Trp(Hoc) <i>N</i> ^α - <i>t</i> -Butyloxycarbonyl- <i>N</i> ⁱⁿ -cyclohexyloxycarbonyl-L-tryptophan (M.W. 430.49) C ₂₃ H ₃₀ N ₂ O ₆ [177897-92-6]	A	5 g 25 g	50,000 200,000
	1) Y. Nishiuchi, H. Nishio, T. Inui, T. Kimura, and S. Sakakibara, <i>Tetrahedron Lett.</i> , 37 , 7529 (1996).			
2114	Boc-Tyr(Br-Z) <i>t</i> -Butyloxycarbonyl- <i>O</i> -2-bromobenzyloxycarbonyl-L-tyrosine (M.W. 494.33) C ₂₂ H ₂₄ NO ₇ Br [47689-67-8]	A	5 g 25 g 100 g	5,300 19,000 68,000
2071	Boc-Tyr(Bzl) <i>t</i> -Butyloxycarbonyl- <i>O</i> -benzyl-L-tyrosine (M.W. 371.43) C ₂₁ H ₂₅ NO ₅ [2130-96-3]	AA	5 g 25 g 100 g	5,000 18,000 60,000
2119	Boc-Tyr(Cl₂-Bzl) <i>t</i> -Butyloxycarbonyl- <i>O</i> -2,6-dichlorobenzyl-L-tyrosine (M.W. 440.32) C ₂₁ H ₂₃ NO ₅ Cl ₂ [40298-71-3]	AA	5 g 25 g 100 g	4,500 16,000 56,000
	1) D. Yamashiro and C.H. Li, <i>J. Am. Chem. Soc.</i> , 95 , 1310 (1980). 2) Y. Kiso, M. Satomi, K. Ukawa, and T. Akita, <i>J. Chem. Soc. Chem. Commun.</i> , 22 , 1063 (1980).			
2105	Boc-Val <i>t</i> -Butyloxycarbonyl-L-valine (M.W. 217.26) C ₁₀ H ₁₉ NO ₄ [13734-41-3]	AA	5 g 25 g 100 g	1,500 3,000 9,000

Boc-D-Amino Acids

The amount of L-amino acid in each compound is determined in our laboratory and the data are provided to customers with each shipment. All products are purified to avoid contamination with the *sec*-Boc-amino acid derivatives and the purity grade of products is guaranteed according to our Purity Criteria on page III (XV).

Code	Compound	Grade	Price:Yen	
2606 2~10°C	Boc-D-Ala <i>t</i> -Butyloxycarbonyl-D-alanine (M.W. 189.21) C ₈ H ₁₅ NO ₄ [7764-95-6]	AA	1 g 5 g 25 g	2,000 3,000 10,000
2609 2~10°C	Boc-D-Arg(Tos)* N ^α - <i>t</i> -Butyloxycarbonyl-N ^β -tosyl-D-arginine (M.W. 428.50) C ₁₈ H ₂₈ N ₄ O ₆ S [61315-61-5]	AA	1 g 5 g 25 g	3,000 12,000 42,000
2626 2~10°C	Boc-D-Asn <i>t</i> -Butyloxycarbonyl-D-asparagine (M.W. 232.23) C ₉ H ₁₆ N ₂ O ₅ [75647-01-7]	AA-A	1 g 5 g 25 g	4,500 16,000 64,000
2620 -20°C	Boc-D-Asn-ONp <i>t</i> -Butyloxycarbonyl-D-asparagine <i>p</i> -nitrophenyl ester (M.W. 353.33) C ₁₅ H ₁₉ N ₃ O ₇ [104199-82-8]	B	1 g 5 g 25 g	5,500 20,000 80,000
2616 2~10°C	Boc-D-Asp(OBzl) <i>t</i> -Butyloxycarbonyl-D-aspartic acid β-benzyl ester (M.W. 323.34) C ₁₆ H ₂₁ NO ₆ [51186-58-4]	AA	1 g 5 g 25 g	3,500 12,000 42,000
2617 2~10°C	Boc-D-Asp(OcHex) <i>t</i> -Butyloxycarbonyl-D-aspartic acid β-cyclohexyl ester (M.W. 315.36) C ₁₅ H ₂₅ NO ₆ [112898-18-7]	AA	1 g 5 g 25 g	3,500 12,000 42,000
2611 2~10°C	Boc-D-Cys(4-CH₃Bzl) <i>t</i> -Butyloxycarbonyl-S-4-methylbenzyl-D-cysteine (M.W. 325.42) C ₁₆ H ₂₃ NO ₄ S [61925-78-8]	AA	1 g 5 g 25 g	8,000 32,000 128,000
2623 2~10°C	Boc-D-Gln <i>t</i> -Butyloxycarbonyl-D-glutamine (M.W. 246.26) C ₁₀ H ₁₈ N ₂ O ₅ [61348-28-5]	AA-A	1 g 5 g 25 g	3,000 12,000 48,000
2621 -20°C	Boc-D-Gln-ONp <i>t</i> -Butyloxycarbonyl-D-glutamine <i>p</i> -nitrophenyl ester (M.W. 367.35) C ₁₆ H ₂₁ N ₃ O ₇ [74086-23-0]	A-B	1 g 5 g 25 g	5,500 20,000 80,000

* This compound typically co-crystallizes with between 1/4 - 1 molecule of water and / or ethyl acetate per molecule of amino acid derivative. The exact analytical data are provided to customers with each shipment.

Boc-D-Amino Acids (continued)

Code	Compound	Grade	Price:Yen	
2625 2~10°C	Boc-D-Glu(OBzl) <i>t</i> -Butyloxycarbonyl-D-glutamic acid γ -benzyl ester (M.W. 337.37) C ₁₇ H ₂₃ NO ₆ [35793-73-8]	AA	1 g 5 g 25 g	3,500 12,000 42,000
2605 2~10°C	Boc-D-His(Tos) • DCHA <i>N</i> ^{α} - <i>t</i> -Butyloxycarbonyl- <i>N</i> ^T -tosyl-D-histidine monodicyclohexylammonium salt (M.W. 409.46 • 181.32) C ₁₈ H ₂₃ N ₃ O ₆ S • C ₁₂ H ₂₃ N [210694-29-4]	B	1 g 5 g 25 g	inquiry inquiry inquiry
2629 2~10°C	Boc-D-Ile • ½H₂O <i>t</i> -Butyloxycarbonyl-D-isoleucine hemihydrate (M.W. 231.29 • 9.01) C ₁₁ H ₂₁ NO ₄ • ½H ₂ O [55721-65-8]	AA	1 g 5 g	30,000 120,000
2603 2~10°C	Boc-D-Leu • H₂O <i>t</i> -Butyloxycarbonyl-D-leucine monohydrate (M.W. 231.29 • 18.02) C ₁₁ H ₂₁ NO ₄ • H ₂ O [16937-99-8]	AA	1 g 5 g 25 g	2,000 4,000 16,000
2628 2~10°C	Boc-D-Lys(Cl-Z) <i>N</i> ^{α} - <i>t</i> -Butyloxycarbonyl- <i>N</i> ^{ϵ} -2-chlorobenzoyloxycarbonyl-D-lysine (M.W. 414.88) C ₁₉ H ₂₇ N ₂ O ₆ Cl [57096-11-4]	AA	1 g 5 g 25 g	4,500 16,000 64,000
2608 2~10°C	Boc-D-Met <i>t</i> -Butyloxycarbonyl-D-methionine (M.W. 249.33) C ₁₀ H ₁₉ NO ₄ S [5241-66-7]	A	1 g 5 g 25 g	2,500 7,000 28,000
2604 2~10°C	Boc-D-Phe <i>t</i> -Butyloxycarbonyl-D-phenylalanine (M.W. 265.30) C ₁₄ H ₁₉ NO ₄ [18942-49-9]	AA	1 g 5 g 25 g	2,000 3,000 12,000
2610 2~10°C	Boc-D-Pro <i>t</i> -Butyloxycarbonyl-D-proline (M.W. 215.25) C ₁₀ H ₁₇ NO ₄ [37784-17-1]	AA	1 g 5 g 25 g	4,500 16,000 64,000
2627 2~10°C	Boc-D-Ser(Bzl) <i>t</i> -Butyloxycarbonyl- <i>O</i> -benzyl-D-serine (M.W. 295.33) C ₁₅ H ₂₁ NO ₅ [47173-80-8]	AA	1 g 5 g 25 g	4,000 15,000 62,000
2624 2~10°C	Boc-D-Thr(Bzl) <i>t</i> -Butyloxycarbonyl- <i>O</i> -benzyl-D-threonine (M.W. 309.36) C ₁₆ H ₂₃ NO ₅ [69355-99-3]	AA	1 g 5 g 25 g	4,000 15,000 62,000
2602 2~10°C	Boc-D-Trp <i>N</i> ^{α} - <i>t</i> -Butyloxycarbonyl-D-tryptophan (M.W. 304.34) C ₁₆ H ₂₀ N ₂ O ₄ [5241-64-5]	A	1 g 5 g 25 g	2,000 4,000 16,000
2614 2~10°C	Boc-D-Trp(CHO) <i>N</i> ^{α} - <i>t</i> -Butyloxycarbonyl- <i>N</i> ⁱⁿ -formyl-D-tryptophan (M.W. 332.35) C ₁₇ H ₂₀ N ₂ O ₅ [64905-10-8]	AA	1 g 5 g 25 g	4,000 14,000 56,000

Boc-D-Amino Acids (continued)

Code	Compound	Grade	Price:Yen	
2612	Boc-D-Tyr(Br-Z)	A	1 g	4,500
2~10°C	<i>t</i> -Butyloxycarbonyl- <i>O</i> -2-bromobenzoyloxycarbonyl-D-tyrosine (M.W. 494.33) C ₂₂ H ₂₄ NO ₇ Br [81189-61-9]		5 g	16,000
			25 g	64,000
2622	Boc-D-Tyr(Cl₂-Bzl)	AA	1 g	5,500
2~10°C	<i>t</i> -Butyloxycarbonyl- <i>O</i> -2,6-dichlorobenzyl-D-tyrosine (M.W. 440.32) C ₂₁ H ₂₃ NO ₅ Cl ₂ [69541-62-4]		5 g	20,000
			25 g	80,000
2619	Boc-D-Val	AA	1 g	2,000
2~10°C	<i>t</i> -Butyloxycarbonyl-D-valine (M.W. 217.26) C ₁₀ H ₁₉ NO ₄ [22838-58-0]		5 g	6,000
			25 g	21,000

Z-Amino Acids

The purity grade of the following products is guaranteed as described in our Purity Criteria on page III (XV).

Code	Compound	Grade	Price:Yen	
2117	Z-Pyr	A	5 g	7,500
2~10°C	Benzyloxycarbonyl-L-pyroglutamic acid (N-Benzyloxycarbonyl-L-pyrrolidonecarboxylic acid) (M.W. 263.25) C ₁₃ H ₁₃ NO ₅ [32159-21-0]		25 g	20,000
			100 g	60,000
2613	Z-D-Pyr	AA	1 g	4,300
2~10°C	Benzyloxycarbonyl-D-pyroglutamic acid (N-Benzyloxycarbonyl-D-pyrrolidonecarboxylic acid) (M.W. 263.25) C ₁₃ H ₁₃ NO ₅ [78339-57-8]		5 g	15,000
			25 g	60,000

Fmoc-L-Amino Acids and Fmoc-Peptides

[1] L.A. Carpino and G.Y. Han, *J. Org. Chem.*, **37**, 3404 (1972).

[2] L.A. Carpino, *Acc. Chem. Res.*, **20**, 401 (1987).

[3] G. Barany, N. Kneib-Cordonier, and D.G. Mullen, *Int. J. Pept. Protein Res.*, **30**, 705 (1987).

The purity grade of the following products is guaranteed as described in our Purity Criteria on page III (XV).

Code	Compound	Price:Yen	
2301	Fmoc-Ala • H₂O 9-Fluorenylmethoxycarbonyl-L-alanine monohydrate (M.W. 311.33•18.02) C ₁₈ H ₁₇ NO ₄ • H ₂ O [35661-39-3]	5 g 25 g	2,000 8,000
2350	Fmoc-Ala-Cys(Trt) 9-Fluorenylmethoxycarbonyl-L-alanyl-S-trityl-L-cysteine (M.W. 656.79) C ₄₀ H ₃₆ N ₂ O ₅ S <i>Component of Cysteinyl Prolyl Ester (CPE) Autoactivation Unit</i> 1) T. Kawakami and S. Aimoto, <i>Chem. Lett.</i> , 36 , 76 (2007). 2) T. Kawakami and S. Aimoto, <i>Tetrahedron Lett.</i> , 48 , 1903 (2007). 3) T. Kawakami and S. Aimoto, <i>Tetrahedron</i> , 65 , 3871 (2009). • This compound is produced by Peptide Institute, Inc. under the license of Osaka University and Osaka Foundation for Trade and Industry (previous: Osaka Industrial Promotion Organization).	1 g	20,000
2324	Fmoc-Arg(Pbf) N ^ε -9-Fluorenylmethoxycarbonyl-N ^ε -2,2,4,6,7-pentamethyl-dihydrobenzofuran-5-sulfonyl-L-arginine (M.W. 648.77) C ₃₄ H ₄₀ N ₄ O ₇ S [154445-77-9]	1 g 5 g 25 g	3,100 9,700 43,000
2304	Fmoc-Asn 9-Fluorenylmethoxycarbonyl-L-asparagine (M.W. 354.36) C ₁₉ H ₁₈ N ₂ O ₅ [71989-16-7]	5 g 25 g	2,000 8,000
2325	Fmoc-Asn(Trt) N ^α -9-Fluorenylmethoxycarbonyl-N ^ω -trityl-L-asparagine (M.W. 596.67) C ₃₈ H ₃₂ N ₂ O ₅ [132388-59-1]	1 g 5 g 25 g	3,000 9,300 41,000
2305	Fmoc-Asp(OBu^t) 9-Fluorenylmethoxycarbonyl-L-aspartic acid β- <i>t</i> -butyl ester (M.W. 411.45) C ₂₃ H ₂₅ NO ₆ [71989-14-5]	1 g 5 g 25 g	2,000 6,500 26,000
2322	Fmoc-Cys(Acm) 9-Fluorenylmethoxycarbonyl-S-acetamidomethyl-L-cysteine (M.W. 414.47) C ₂₁ H ₂₂ N ₂ O ₅ S [86060-81-3]	1 g 5 g 25 g	3,000 10,000 40,000
2323	Fmoc-Cys(Trt) 9-Fluorenylmethoxycarbonyl-S-trityl-L-cysteine (M.W. 585.71) C ₃₇ H ₃₁ NO ₄ S [103213-32-7]	1 g 5 g 25 g	2,000 7,000 30,000
2307	Fmoc-Gln 9-Fluorenylmethoxycarbonyl-L-glutamine (M.W. 368.38) C ₂₀ H ₂₀ N ₂ O ₅ [71989-20-3]	5 g 25 g	2,000 7,000

Fmoc-L-Amino Acids and Fmoc-Peptides (continued)

Code	Compound	Price:Yen	
2326	Fmoc-Gln(Trt)	1 g	3,000
2~10°C	N ^α -9-Fluorenylmethoxycarbonyl-N ^ω -trityl-L-glutamine (M.W. 610.70) C ₃₉ H ₃₄ N ₂ O ₅ [132327-80-1]	5 g	9,300
		25 g	41,000
2308	Fmoc-Glu(OBu^t) • H₂O	1 g	2,000
2~10°C	9-Fluorenylmethoxycarbonyl-L-glutamic acid γ- <i>t</i> -butyl ester monohydrate (M.W. 425.47 • 18.02) C ₂₄ H ₂₇ NO ₆ • H ₂ O [204251-24-1]	5 g	8,000
		25 g	36,000
2309	Fmoc-Gly	5 g	2,000
2~10°C	9-Fluorenylmethoxycarbonylglycine (M.W. 297.31) C ₁₇ H ₁₅ NO ₄ [29022-11-5]	25 g	8,000
2351	Fmoc-Gly-Cys(Trt)	1 g	20,000
New	9-Fluorenylmethoxycarbonylglycyl-S-trityl-L-cysteine (M.W. 642.76) C ₃₉ H ₃₄ N ₂ O ₅ S		
2~10°C	<i>Component of Cysteinyl Prolyl Ester (CPE) Autoactivation Unit</i> 1) T. Kawakami and S. Aimoto, <i>Chem. Lett.</i> , 36 , 76 (2007). 2) T. Kawakami and S. Aimoto, <i>Tetrahedron Lett.</i> , 48 , 1903 (2007). 3) T. Kawakami and S. Aimoto, <i>Tetrahedron</i> , 65 , 3871 (2009). • This compound is produced by Peptide Institute, Inc. under the license of Osaka University and Osaka Foundation for Trade and Industry (previous: Osaka Industrial Promotion Organization).		
2310	Fmoc-His(Trt)	1 g	2,000
2~10°C	N ^α -9-Fluorenylmethoxycarbonyl-N ^ε -trityl-L-histidine (M.W. 619.71) C ₄₀ H ₃₃ N ₃ O ₄ [109425-51-6]	5 g	7,000
		25 g	33,000
2311	Fmoc-Ile	5 g	2,000
2~10°C	9-Fluorenylmethoxycarbonyl-L-isoleucine (M.W. 353.41) C ₂₁ H ₂₃ NO ₄ [71989-23-6]	25 g	8,000
2312	Fmoc-Leu	5 g	2,000
2~10°C	9-Fluorenylmethoxycarbonyl-L-leucine (M.W. 353.41) C ₂₁ H ₂₃ NO ₄ [35661-60-0]	25 g	8,000
2352	Fmoc-Leu-Cys(Trt)	1 g	20,000
New	9-Fluorenylmethoxycarbonyl-L-leucyl-S-trityl-L-cysteine (M.W. 698.87) C ₄₃ H ₄₂ N ₂ O ₅ S		
2~10°C	<i>Component of Cysteinyl Prolyl Ester (CPE) Autoactivation Unit</i> 1) T. Kawakami and S. Aimoto, <i>Chem. Lett.</i> , 36 , 76 (2007). 2) T. Kawakami and S. Aimoto, <i>Tetrahedron Lett.</i> , 48 , 1903 (2007). 3) T. Kawakami and S. Aimoto, <i>Tetrahedron</i> , 65 , 3871 (2009). • This compound is produced by Peptide Institute, Inc. under the license of Osaka University and Osaka Foundation for Trade and Industry (previous: Osaka Industrial Promotion Organization).		
2313	Fmoc-Lys(Boc)	1 g	2,000
2~10°C	N ^α -9-Fluorenylmethoxycarbonyl-N ^ε - <i>t</i> -butyloxycarbonyl-L-lysine (M.W. 468.54) C ₂₆ H ₃₂ N ₂ O ₆ [71989-26-9]	5 g	8,000
		25 g	36,000

Fmoc-L-Amino Acids and Fmoc-Peptides (continued)

Code	Compound	Price:Yen	
2314	Fmoc-Met 9-Fluorenylmethoxycarbonyl-L-methionine (M.W. 371.45) C ₂₀ H ₂₁ NO ₄ S [71989-28-1]	5 g 25 g	2,000 8,000
2315	Fmoc-Phe 9-Fluorenylmethoxycarbonyl-L-phenylalanine (M.W. 387.43) C ₂₄ H ₂₁ NO ₄ [35661-40-6]	5 g 25 g	2,000 8,000
2316	Fmoc-Pro 9-Fluorenylmethoxycarbonyl-L-proline (M.W. 337.37) C ₂₀ H ₁₉ NO ₄ [71989-31-6]	5 g 25 g	2,000 8,000
2317	Fmoc-Ser(Bu^t) 9-Fluorenylmethoxycarbonyl- <i>O</i> - <i>t</i> -butyl-L-serine (M.W. 383.44) C ₂₂ H ₂₅ NO ₅ [71989-33-8]	1 g 5 g 25 g	2,000 8,000 36,000
2318	Fmoc-Thr(Bu^t) 9-Fluorenylmethoxycarbonyl- <i>O</i> - <i>t</i> -butyl-L-threonine (M.W. 397.46) C ₂₃ H ₂₇ NO ₅ [71989-35-0]	1 g 5 g 25 g	2,000 7,000 33,000
2319	Fmoc-Trp <i>N</i> ^α -9-Fluorenylmethoxycarbonyl-L-tryptophan (M.W. 426.46) C ₂₆ H ₂₂ N ₂ O ₄ [35737-15-6]	5 g 25 g	2,000 8,000
2327	Fmoc-Trp(Boc) <i>N</i> ^α -9-Fluorenylmethoxycarbonyl- <i>N</i> ⁱⁿ - <i>t</i> -butyloxycarbonyl-L-tryptophan (M.W. 526.58) C ₃₁ H ₃₀ N ₂ O ₆ [143824-78-6] Purity: higher than 97%	1 g 5 g 25 g	3,300 11,100 47,100
2320	Fmoc-Tyr(Bu^t) 9-Fluorenylmethoxycarbonyl- <i>O</i> - <i>t</i> -butyl-L-tyrosine (M.W. 459.53) C ₂₈ H ₂₉ NO ₅ [71989-38-3]	1 g 5 g 25 g	2,000 7,000 33,000
2321	Fmoc-Val 9-Fluorenylmethoxycarbonyl-L-valine (M.W. 339.39) C ₂₀ H ₂₁ NO ₄ [68858-20-8]	5 g 25 g	2,000 8,000

Fmoc-D-Amino Acids

[1] L.A. Carpino and G.Y. Han, *J. Org. Chem.*, **37**, 3404 (1972).

[2] L.A. Carpino, *Acc. Chem. Res.*, **20**, 401 (1987).

[3] G. Barany, N. Kneib-Cordonier, and D.G. Mullen, *Int. J. Pept. Protein Res.*, **30**, 705 (1987).

The purity grade of the following products is guaranteed as described in our Purity Criteria on page III (XV).

Code	Compound	Price:Yen	
2401	Fmoc-D-Ala • H₂O	1 g	2,300
2~10°C	9-Fluorenylmethoxycarbonyl-D-alanine monohydrate (M.W. 311.33•18.02) C ₁₈ H ₁₇ NO ₄ • H ₂ O [79990-15-1]	5 g	7,000
		25 g	30,000
2421	Fmoc-D-Arg(Pbf)	1 g	7,500
2~10°C	N ⁹ -Fluorenylmethoxycarbonyl-N ⁸ -2,2,4,6,7-pentamethyl-dihydrobenzofuran-5-sulfonyl-D-arginine (M.W. 648.77) C ₃₄ H ₄₀ N ₄ O ₇ S [187618-60-6]	5 g	30,000
		25 g	120,000
2403	Fmoc-D-Asn	1 g	3,700
2~10°C	9-Fluorenylmethoxycarbonyl-D-asparagine (M.W. 354.36) C ₁₉ H ₁₈ N ₂ O ₅ [108321-39-7]	5 g	13,000
		25 g	52,000
2422	Fmoc-D-Asn(Trt)	1g	7,500
2~10°C	N ^α -9-Fluorenylmethoxycarbonyl-N ^ω -trityl-D-asparagine (M.W. 596.67) C ₃₈ H ₃₂ N ₂ O ₅ [180570-71-2]	5g	30,000
		25g	120,000
2404	Fmoc-D-Asp(OBu^t)	1 g	7,000
2~10°C	9-Fluorenylmethoxycarbonyl-D-aspartic acid β- <i>t</i> -butyl ester (M.W. 411.45) C ₂₃ H ₂₅ NO ₆ [112883-39-3]	5 g	25,000
		25 g	100,000
2405	Fmoc-D-Cys(Trt)	1 g	7,500
2~10°C	9-Fluorenylmethoxycarbonyl-S-trityl-D-cysteine (M.W. 585.71) C ₃₇ H ₃₁ N ₂ O ₄ S [167015-11-4]	5 g	30,000
		25 g	120,000
2406	Fmoc-D-Gln	1 g	6,000
2~10°C	9-Fluorenylmethoxycarbonyl-D-glutamine (M.W. 368.38) C ₂₀ H ₂₀ N ₂ O ₅ [112898-00-7]	5 g	24,000
		25 g	110,000
2423	Fmoc-D-Gln(Trt)	1 g	9,000
2~10°C	N ^α -9-Fluorenylmethoxycarbonyl-N ^ω -trityl-D-glutamine (M.W. 610.70) C ₃₉ H ₃₄ N ₂ O ₅ [200623-62-7]	5 g	36,000
		25 g	144,000
2407	Fmoc-D-Glu(OBu^t) • H₂O	1 g	7,000
2~10°C	9-Fluorenylmethoxycarbonyl-D-glutamic acid γ- <i>t</i> -butyl ester monohydrate (M.W. 425.47 • 18.02) C ₂₄ H ₂₇ NO ₆ • H ₂ O [104091-08-9]	5 g	25,000
		25 g	100,000

Fmoc-D-Amino Acids (continued)

Code	Compound	Price:Yen	
2408	Fmoc-D-His(Trt)	1 g	8,000
2~10°C	<i>N</i> ^α -9-Fluorenylmethoxycarbonyl- <i>N</i> ^ε -trityl-D-histidine (M.W. 619.71) C ₄₀ H ₃₃ N ₃ O ₄ [135610-90-1]	5 g	30,000
		25 g	120,000
2420	Fmoc-D-Ile	1 g	25,000
2~10°C	9-Fluorenylmethoxycarbonyl-D-isoleucine (M.W. 353.41) C ₂₁ H ₂₃ NO ₄ [143688-83-9]	5 g	100,000
2410	Fmoc-D-Leu	1 g	4,000
2~10°C	9-Fluorenylmethoxycarbonyl-D-leucine (M.W. 353.41) C ₂₁ H ₂₃ NO ₄ [114360-54-2]	5 g	16,000
		25 g	64,000
2411	Fmoc-D-Lys(Boc)	1 g	8,000
2~10°C	<i>N</i> ^α -9-Fluorenylmethoxycarbonyl- <i>N</i> ^ε - <i>t</i> -butyloxycarbonyl-D-lysine (M.W. 468.54) C ₂₆ H ₃₂ N ₂ O ₆ [92122-45-7]	5 g	32,000
		25 g	140,000
2412	Fmoc-D-Met	1 g	3,800
2~10°C	9-Fluorenylmethoxycarbonyl-D-methionine (M.W. 371.45) C ₂₀ H ₂₁ NO ₄ S [112883-40-6]	5 g	15,000
		25 g	60,000
2413	Fmoc-D-Phe	1 g	3,500
2~10°C	9-Fluorenylmethoxycarbonyl-D-phenylalanine (M.W. 387.43) C ₂₄ H ₂₁ NO ₄ [86123-10-6]	5 g	14,000
		25 g	56,000
2414	Fmoc-D-Pro	1 g	3,800
2~10°C	9-Fluorenylmethoxycarbonyl-D-proline (M.W. 337.37) C ₂₀ H ₁₉ NO ₄ [101555-62-8]	5 g	15,000
		25 g	60,000
2415	Fmoc-D-Ser(Bu^t)	1 g	7,000
2~10°C	9-Fluorenylmethoxycarbonyl- <i>O</i> - <i>t</i> -butyl-D-serine (M.W. 383.44) C ₂₂ H ₂₅ NO ₅ [128107-47-1]	5 g	25,000
		25 g	100,000
2416	Fmoc-D-Thr(Bu^t)	1 g	7,000
2~10°C	9-Fluorenylmethoxycarbonyl- <i>O</i> - <i>t</i> -butyl-D-threonine (M.W. 397.46) C ₂₃ H ₂₇ NO ₅ [138797-71-4]	5 g	25,000
		25 g	100,000
2417	Fmoc-D-Trp	1 g	3,000
2~10°C	<i>N</i> ^α -Fluorenylmethoxycarbonyl-D-tryptophan (M.W. 426.46) C ₂₆ H ₂₂ N ₂ O ₄ [86123-11-7] Purity: higher than 97%	5 g	10,500
		25 g	45,000
2424	Fmoc-D-Trp(Boc)	1 g	7,500
2~10°C	<i>N</i> ^α -9-Fluorenylmethoxycarbonyl- <i>N</i> ⁱⁿ - <i>t</i> -butyloxycarbonyl-D-tryptophan (M.W. 526.58) C ₃₁ H ₃₀ N ₂ O ₆ [163619-04-3]	5 g	30,000
		25 g	120,000
2418	Fmoc-D-Tyr(Bu^t)	1 g	8,500
2~10°C	9-Fluorenylmethoxycarbonyl- <i>O</i> - <i>t</i> -butyl-D-tyrosine (M.W. 459.53) C ₂₈ H ₂₉ NO ₅ [118488-18-9]	5 g	38,000
		25 g	172,000
2419	Fmoc-D-Val	1 g	3,000
2~10°C	9-Fluorenylmethoxycarbonyl-D-valine (M.W. 339.39) C ₂₀ H ₂₁ NO ₄ [84624-17-9]	5 g	10,500
		25 g	45,000

L-Amino Acids for Peptide Synthesis

Each of these products will give a mono-spot when 50 µg is subjected to TLC.

The content of D-amino acid is guaranteed to be less than 0.1 % except in the case of L-Ser.

Code	Compound		Price:Yen
2701 RT	L-Alanine (M.W. 89.09) C ₃ H ₇ NO ₂ [56-41-7]	25 g	2,200
		100 g	4,000
		500 g	11,000
2702 RT	L-Arginine • HCl (M.W. 174.20 • 36.46) C ₆ H ₁₄ N ₄ O ₂ • HCl [1119-34-2]	100 g	3,000
		500 g	8,000
2703 RT	L-Asparagine • H₂O (M.W. 132.12 • 18.02) C ₄ H ₈ N ₂ O ₃ • H ₂ O [5794-13-8]	25 g	3,000
		100 g	6,000
		500 g	21,000
2704 RT	L-Aspartic Acid (M.W. 133.10) C ₄ H ₇ NO ₄ [56-84-8]	100 g	2,100
		500 g	4,500
2705 RT	L-Cysteine • HCl • H₂O (M.W. 121.16 • 36.46 • 18.02) C ₃ H ₇ NO ₂ S • HCl • H ₂ O [7048-04-6]	100 g	4,500
		500 g	13,000
2706 RT	L-Cystine (M.W. 240.30) C ₆ H ₁₂ N ₂ O ₄ S ₂ [56-89-3]	100 g	4,000
		500 g	12,000
2708 RT	L-Glutamic Acid (M.W. 147.13) C ₅ H ₉ NO ₄ [56-86-0]	100 g	2,100
		500 g	4,500
2707 RT	L-Glutamine (M.W. 146.14) C ₅ H ₁₀ N ₂ O ₃ [56-85-9]	100 g	3,500
		500 g	9,500
2709 RT	Glycine (M.W. 75.07) C ₂ H ₅ NO ₂ [56-40-6]	100 g	2,000
		500 g	3,000
2710 RT	L-Histidine • HCl • H₂O (M.W. 155.15 • 36.46 • 18.02) C ₆ H ₉ N ₃ O ₂ • HCl • H ₂ O [5934-29-2]	100 g	4,500
		500 g	14,000
2711 RT	L-Hydroxyproline (M.W. 131.13) C ₅ H ₉ NO ₃ [51-35-4]	25 g	6,800
		100 g	18,000
		500 g	68,000
2712 RT	L-Isoleucine (M.W. 131.17) C ₆ H ₁₃ NO ₂ [73-32-5]	25 g	3,500
		100 g	8,000
		500 g	27,000

L-Amino Acids for Peptide Synthesis (continued)

Code	Compound	Price:Yen	
2713	L-Leucine	25 g	2,500
RT	(M.W. 131.17) C ₆ H ₁₃ NO ₂ [61-90-5]	100 g	4,500
		500 g	14,000
2714	L-Lysine • HCl	100 g	2,100
RT	(M.W. 146.19 • 36.46) C ₆ H ₁₄ N ₂ O ₂ • HCl [657-27-2]	500 g	4,500
2715	L-Methionine	100 g	6,000
RT	(M.W. 149.21) C ₅ H ₁₁ NO ₂ S [63-68-3]	500 g	20,000
2716	L-Ornithine • HCl	25 g	3,000
RT	(M.W. 132.16 • 36.46) C ₅ H ₁₂ N ₂ O ₂ • HCl [3184-13-2]	100 g	6,000
		500 g	21,000
2717	L-Phenylalanine	25 g	2,400
RT	(M.W. 165.19) C ₉ H ₁₁ NO ₂ [63-91-2]	100 g	4,500
		500 g	13,000
2718	L-Proline	25 g	2,500
RT	(M.W. 115.13) C ₅ H ₉ NO ₂ [147-85-3]	100 g	4,500
		500 g	14,000
2719	L-Serine	25 g	3,100
RT	(M.W. 105.09) C ₃ H ₇ NO ₃ [56-45-1]	100 g	6,300
	<i>D-Ser Contamination: less than 2%</i>	500 g	23,000
2720	L-Threonine	25 g	3,100
RT	(M.W. 119.12) C ₄ H ₉ NO ₃ [72-19-5]	100 g	6,300
		500 g	23,000
2721	L-Tryptophan	25 g	3,100
RT	(M.W. 204.23) C ₁₁ H ₁₂ N ₂ O ₂ [73-22-3]	100 g	6,300
		500 g	23,000
2722	L-Tyrosine	100 g	6,000
RT	(M.W. 181.19) C ₉ H ₁₁ NO ₃ [60-18-4]	500 g	20,000
2723	L-Valine	100 g	4,200
RT	(M.W. 117.15) C ₅ H ₁₁ NO ₂ [72-18-4]	500 g	12,800

D-Amino Acids for Peptide Synthesis

Each of these products will give a mono-spot when 50 µg is subjected to TLC.

The amount of L-amino acid in each compound is determined in our laboratory, and the data are provided to customers with each shipment.

Code	Compound	Price:Yen
2801	D-Alanine (M.W. 89.09) C ₃ H ₇ NO ₂ [338-69-2]	5 g 2,500 25 g 6,000
2802	D-Arginine (M.W. 174.20) C ₆ H ₁₄ N ₄ O ₂ [157-06-2]	5 g 7,000 25 g 21,000
2815	D-Asparagine • H₂O (M.W. 132.12 • 18.02) C ₄ H ₈ N ₂ O ₃ • H ₂ O [5794-24-1]	5 g 5,300 25 g 13,000
2814	D-Aspartic Acid (M.W. 133.10) C ₄ H ₇ NO ₄ [1783-96-6]	5 g 3,000 25 g 6,000
2817	D-Cysteine • HCl • H₂O (M.W. 121.16 • 36.46 • 18.02) C ₃ H ₇ NO ₂ S • HCl • H ₂ O [32443-99-5]	5 g 6,000 25 g 15,000
2804	D-Glutamic Acid (M.W. 147.13) C ₅ H ₉ NO ₄ [6893-26-1]	5 g 2,500 25 g 5,000
2805	D-Histidine (M.W. 155.15) C ₆ H ₉ N ₃ O ₂ [351-50-8]	5 g 6,000 25 g 15,000
2819	D-Isoleucine (M.W. 131.17) C ₆ H ₁₃ NO ₂ [319-78-8]	1 g 21,500 5 g 100,000
2806	D-Leucine (M.W. 131.17) C ₆ H ₁₃ NO ₂ [328-38-1]	5 g 4,000 25 g 9,000
2813	D-Lysine • HCl (M.W. 146.19 • 36.46) C ₆ H ₁₄ N ₂ O ₂ • HCl [7274-88-6]	5 g 4,500 25 g 10,000
2807	D-Methionine (M.W. 149.21) C ₅ H ₁₁ NO ₂ S [348-67-4]	5 g 4,000 25 g 10,000
2808	D-Phenylalanine (M.W. 165.19) C ₉ H ₁₁ NO ₂ [673-06-3]	5 g 3,500 25 g 7,000
2816	D-Proline (M.W. 115.13) C ₅ H ₉ NO ₂ [344-25-2]	5 g 8,000 25 g 20,000
2818	D-Serine (M.W. 105.09) C ₃ H ₇ NO ₃ [312-84-5]	5 g 4,000 25 g 10,000

D-Amino Acids for Peptide Synthesis (continued)

Code	Compound	Price:Yen
2809	D-Threonine	5 g 10,500
RT	(M.W. 119.12) C ₄ H ₉ NO ₃ [632-20-2]	25 g 28,000
2810	D-Tryptophan	5 g 3,500
RT	(M.W. 204.23) C ₁₁ H ₁₂ N ₂ O ₂ [153-94-6]	25 g 7,500
2812	D-Tyrosine	5 g 4,500
RT	(M.W. 181.19) C ₉ H ₁₁ NO ₃ [556-02-5]	25 g 10,000
2811	D-Valine	5 g 3,000
RT	(M.W. 117.15) C ₅ H ₁₁ NO ₂ [640-68-6]	25 g 6,000

Amino Acid Derivatives and Esters

The purity grade of the following products is guaranteed according to our Purity Criteria on page III (XV).

Code	Compound	Grade	Price:Yen	
2005	Arg(NO₂) N ⁸ -Nitro-L-arginine (N ⁶ -Nitro-L-arginine) (M.W. 219.20) C ₆ H ₁₃ N ₅ O ₄ [2149-70-4]	AA	5 g 25 g 100 g	2,000 4,000 12,000
	<i>Nitric Oxide Synthase Inhibitor</i> 1) Y.Kobayashi and K.Hattori, <i>Jpn. J. Pharmacol.</i> , 52 , 167 (1990). 2) A. Gibson, S. Mirzazadeh, A.J. Hobbs, and P.K. Moore, <i>Br. J. Pharmacol.</i> , 99 , 602 (1990).			
2048	Arg(NO₂)-OBzl • Tos N ⁸ -Nitro-L-arginine benzyl ester monotosylate (M.W. 309.32 • 172.20) C ₁₃ H ₁₉ N ₅ O ₄ • C ₇ H ₈ O ₃ S [10342-07-1]	B	5 g 25 g 100 g	3,500 11,000 33,000
2045	Asp(OBzl)-OBzl • Tos L-Aspartic acid α,β-dibenzyl ester monotosylate (M.W. 313.35 • 172.20) C ₁₈ H ₁₉ NO ₄ • C ₇ H ₈ O ₃ S [2886-33-1]	A	5 g 25 g 100 g	2,500 6,000 18,000
2003	Glu(OBzl) L-Glutamic acid γ-benzyl ester (M.W. 237.25) C ₁₂ H ₁₅ NO ₄ [1676-73-9]	A	5 g 25 g 100 g	2,600 6,400 19,800
2046	Glu(OBzl)-OBzl • Tos L-Glutamic acid α,γ-dibenzyl ester monotosylate (M.W. 327.37 • 172.20) C ₁₉ H ₂₁ NO ₄ • C ₇ H ₈ O ₃ S [2791-84-6]	A	5 g 25 g 100 g	2,500 6,000 18,000
2047	Gly-OBzl • Tos Glycine benzyl ester monotosylate (M.W. 165.19 • 172.20) C ₉ H ₁₁ NO ₂ • C ₇ H ₈ O ₃ S [1738-76-7]	A	5 g 25 g 100 g	2,500 6,000 18,000
2111	Ile-OBzl • Tos L-Isoleucine benzyl ester monotosylate (M.W. 221.30 • 172.20) C ₁₃ H ₁₉ NO ₂ • C ₇ H ₈ O ₃ S [16652-75-8]	A	5 g 25 g 100 g	3,000 7,000 20,000
2112	Leu-OBzl • Tos L-Leucine benzyl ester monotosylate (M.W. 221.30 • 172.20) C ₁₃ H ₁₉ NO ₂ • C ₇ H ₈ O ₃ S [1738-77-8]	A	5 g 25 g 100 g	3,000 7,000 20,000
2110	Phe-OBzl • Tos L-Phenylalanine benzyl ester monotosylate (M.W. 255.31 • 172.20) C ₁₆ H ₁₇ NO ₂ • C ₇ H ₈ O ₃ S [1738-78-9]	A	5 g 25 g 100 g	3,000 7,000 20,000
2049	Pro-OBzl • HCl L-Proline benzyl ester monohydrochloride (M.W. 205.25 • 36.46) C ₁₂ H ₁₅ NO ₂ • HCl [16652-71-4]	B	5 g 25 g 100 g	4,500 13,000 40,000

