



Product Specifications

Electrophoresis Reagents, Polymerase Chain Reaction
 Custom Primers and Probes
 Hybridization and Detection Reagents

PCR Buffers & Reagents

Store at -20°C

	Catalog Number	Description	Size
<input type="checkbox"/>	40-3060-16	PCR Buffer Standard (10 X Concentrate)	1.6 ml
<input type="checkbox"/>	40-3061-16	PCR Buffer Mg++ Free (10 X Concentrate)	1.6 ml
<input type="checkbox"/>	40-3070-10	Taq Polymerase Storage & Dilution Buffer Standard	1 ml
<input type="checkbox"/>	40-3022-16	MgCl ₂ ; 25mM	1.6 ml
<input type="checkbox"/>	40-3001-16	Nuclease Free Water	1.6 ml

Product Description & Application

PCR buffer conditions vary and it is imperative to optimize buffer conditions for each amplification reaction. At Gene Link most amplification reactions have been optimized to work with the following standard buffer condition, unless otherwise indicated. On occasion Mg++ and other components need to be optimized depending on the template and primer. Mg++ free buffer is offered so as to add specific amount of Mg++.

MgCl₂ Concentration

The concentration of Mg²⁺ will vary from 1-5 mM, depending upon primers and substrate. Since Mg²⁺ ions form complexes with dNTPs, primers and DNA templates, the optimal concentration of MgCl₂ has to be selected for each experiment. Low Mg²⁺ ion concentration results in a low yield of PCR product, and high concentrations increase the yield of non-specific products and promote misincorporation. Lower Mg²⁺ concentrations are desirable when fidelity of DNA synthesis is critical. The recommended range of MgCl₂ concentration is 1-4 mM, under the standard reaction conditions specified. At Gene Link, using the standard PCR buffer with KCl, a final dNTP concentration of 0.2 mM, a MgCl₂ concentration of 1.5 mM is used in most cases. If the DNA samples contain EDTA or other chelators, the MgCl₂ concentration in the reaction mixture should be raised proportionally. Given below is a MgCl₂ concentration calculation and addition table using a stock solution of 25 mM MgCl₂.

MgCl ₂ Concentration & Addition Table								
Final concentration of MgCl ₂ in 50 µl reaction mix, (mM)	1.0	1.25	1.5	1.75	2.0	2.5	3.0	4.0
Volume of 25 mM MgCl ₂ , (µl)	2	2.5	3	3.5	4	5	6	8

Specifications

<input type="checkbox"/>	40-3060-16	PCR Buffer Standard (10 X Concentrate)
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Standard PCR buffer with MgCl ₂	
10 X PCR buffer	1 X PCR buffer
100 mM Tris-HCl pH 8.3	10 mM
500 mM KCl	50 mM
15 mM MgCl ₂	1.5 mM
0.01% Gelatin; 1 mg/ml	0.1 mg/ml

<input type="checkbox"/>	40-3061-16	PCR Buffer Mg++ Free (10 X Concentrate)
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PCR buffer Mg++ Free	
10 X PCR buffer	1 X PCR buffer
100 mM Tris-HCl pH 8.3	10 mM
500 mM KCl	50 mM
0.01% Gelatin; 1 mg/ml	0.1 mg/ml

<input type="checkbox"/>	40-3070-10	Taq Polymerase Storage & Dilution Buffer Standard
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1 X Taq DNA Polymerase Storage Buffer/ Dilution Buffer
10 mM Tris-HCl pH 8.3
100 mM KCl
0.1 mM EDTA
1 mM DTT
0.5% Tween 20
0.5% NP-40
50% Glycerol

Ordering Information

Product	Catalog No.	Size	Price \$
Taq DNA Polymerase; 400 units; 5 µl/µl; 80 µl	40-5200-40	400 units	\$75.00
Taq PCR Kit; 200 reactions	40-5211-01	200 reactions	\$110.00
Taq PCR Kit with controls; 200 reactions	40-5212-01	200 reactions	\$125.00
PCR Master Mix (2X); 100 reactions (2 x 1.3 ml)	40-5213-01	100 reactions	\$70.00
PCR Master Mix (2X); 200 reactions (4 x 1.3 ml)	40-5213-02	200 reactions	\$120.00

Related Products Ordering Information

PCR Reagents

Product	Catalog No.	Size	Price \$
Taq DNA Polymerase 300 units; 5 µl/µl; 60 µl	40-5200-30	300 units	\$60.00
PCR Buffer Standard (10 X)	40-3060-16	1.6 ml	\$8.00
PCR Buffer Mg Free (10 X)	40-3061-16	1.6 ml	\$8.00
Taq Polymerase Dilution Buffer; 1 ml	40-3070-10	1 ml	\$8.00
dNTP 2mM (10X)	40-3021-11	1.1 ml	\$15.00
MgCl ₂ ; 25 mM	40-3022-16	1.6 ml	\$8.00
Omni-Marker™ Universal Unlabeled	40-3005-01	100 µl	\$15.00
Primer and Template Mix; 1 kb; 40 reactions	40-2026-61PT	100 µl	\$15.00
Nuclease Free Water	40-3001-16	1.6 ml	\$5.00
DMSO	40-3031-10	1 ml	\$8.00
TMAC (Tetramethyl ammonium chloride) 100 mM	40-3053-10	1 ml	\$8.00
KCl 300 mM	40-3059-10	1 ml	\$8.00
Betaine; 5M	40-3032-10	1 ml	\$8.00

Omni-Marker™

Product	Catalog No.	Size*	Price \$
Omni-Marker™ Universal unlabeled	40-3005-01	100 µl	15.00
Omni-Marker™ Universal unlabeled	40-3005-05	500 µl	50.00
Omni-Marker™ Universal unlabeled	40-3005-10	1 ml	90.00
Omni-Marker™ Low unlabeled	40-3006-01	100 µl	15.00
Omni-Marker™ Low unlabeled	40-3006-05	500 µl	50.00
Omni-Marker™ Low unlabeled	40-3006-10	1 ml	90.00
Omni-Marker™ GScan-2 Tamra labeled 50 bp - 600 bp	40-3062-01	100 µl	75.00
Omni-Marker™ GScan-2 Tamra labeled 50 bp - 600 bp	40-3062-05	500 µl	325.00

Buffers & Reagents

Product	Catalog No.	Size	Price \$
Agarose Tablets, 0.5 gm each	40-3011-10	100 tablets	100.00
Agarose LE Molecular Biology Grade; 100 gms	40-3010-10	100 gms	120.00
Agarose LE Molecular Biology Grade; 500 gms	40-3010-50	500 gms	410.00
Hybwash A, Hybridization Wash Solution	40-5020-20	200 ml	65.00
Hybwash B, Hybridization Wash Solution	40-5021-10	100 ml	50.00
TAE Buffer; 50 X Concentrate; 100 ml	40-3007-01	100 ml	32.00
TAE Buffer; 50 X Concentrate; 1000 ml	40-3007-10	1000 ml	128.00
TBE Buffer; 5 X Concentrate	40-3008-10	1000 ml	35.00
10x Washing buffer	40-5025-20	200 ml	125.00
10% Blocking solution	40-5026-10	100 ml	75.00
Seq. Loading buffer	40-5027-00	1 ml	10.00
10x AP Detection buffer	40-5031-10	100 ml	65.00
Lumisol™ I Hybridization Solution; contains formamide	40-5022-20	200 ml	75.00
Lumisol™ II Hybridization Solution; for non-toxic hybridizations	40-5023-20	200 ml	75.00
Lumisol™ III Hybridization Solution; for oligo probes	40-5024-20	200 ml	75.00

Loading Buffers

Product	Catalog No.	Size	Price \$
Loading Buffer 5X BPB/XC non-denaturing	40-3002-01	100 µl	5.00
Loading Buffer 5X BPB/XC non-denaturing	40-3002-10	1 ml	10.00
Loading Buffer 5X Orange G/XC non-denaturing	40-3004-01	100 µl	5.00
Loading Buffer 5X Orange G/XC non-denaturing	40-3004-10	1 ml	10.00
Loading Buffer 2X BPB/XC Denaturing for Sequencing	40-5027-01	100 µl	5.00
Loading Buffer 2X BPB/XC Denaturing for Sequencing	40-5027-10	1 ml	10.00

Prices subject to change without notice

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