

RNA Purification Quick Reference Guide

Post-Reaction

Sigma System	Page Number	Catalog Number	Product Description	Starting Amount	Time Required	Elution Volume	Expected Yield	Downstream Applications
GenElute PCR Clean-Up Kit	35	NA1020	Purification of single or double stranded PCR (100 bp to 10 kb) amplification products	100 µl or 10 µg of DNA	<10 minutes	50 µl	Up to 95% recovery	Enzymatic Reactions, Automated Sequencing, Cloning, and Microarray Analysis
GenElute Agarose Spin Columns	36	56500	Purification of DNA fragments (50 bp to 10 kb) from agarose gel slices	<200 mg gel slice	10 minutes	50-200 µl depending on size of gel slice	Up to 80% recovery	Ligation, Restriction Enzyme Digestion, Cloning, and PCR
GenElute Minus EtBr Spin Columns	37	56501	Extraction of DNA fragments (50 bp to 10 kb) from ethidium bromide (EtBr) stained agarose gels or EtBr-containing solutions	<200 mg gel slice	10 minutes	50-200 µl depending on size of gel slice	Up to 70% recovery	Ligation, Restriction Enzyme Digestion, Cloning, and PCR

Sequencing Clean-Up

Sigma System	Page Number	Catalog Number	Product Description	Starting Amount	Time Required	Elution Volume	Expected Yield	Downstream Applications
UltraClear™ Sequencing Reaction Clean-Up Kit	38	UC9601, UC9604	Removes unincorporated dye terminators, including BigDye® 3.1, dNTPs, excess salt, and other interfering components from sequencing reactions	<10 µl sequencing reaction	Flexible based on user interface	40 µl	N/A	Fluorescent Sequencing
SigmaSpin™ Post-Reaction Clean-Up Columns	40	S5059	Removes unincorporated dyes, including BigDye 3, excess salts, and other interfering components from sequencing reactions	10-20 µl sequencing reaction	<8 minutes	10-20 µl	N/A	Fluorescent Sequencing and Microarray Analysis
SigmaSpin 96-Well Post-Reaction Clean-Up Plates	40	S4309, S4434, S4559	Removes unincorporated dyes, including BigDye 3, excess salt, and other interfering components from sequencing reactions	10-20 µl sequencing reaction	<8 minutes	10-20 µl	N/A	Fluorescent Sequencing

Total RNA

Sigma System	Page Number	Catalog Number	Product Description	Starting Material	Time Required	Typical Yield	Downstream Application
GenElute Mammalian Total RNA Miniprep Kit	45	RTN10, RTN70, RTN350	Isolation of total RNA from mammalian cells and tissues	Up to 10 ⁷ mammalian cells or 40 mg of tissue per prep	30 minutes	Up to 150 µg of total RNA	RT-PCR, Northern blots, and Microarray Analysis
GenElute Bacterial Total RNA Miniprep Kit	46	BTR1, BTR7	Isolation of total RNA from Gram-positive and Gram-negative Bacteria	Up to 1.5 ml (1 x 10 ⁹ cells/ml)	40 minutes	30-55 µg	RT-PCR, Labeling, Microarray Analysis, and Northern blots
GenElute Yeast Total RNA Miniprep Kit	47	YTR1, YTR7	Isolation of total RNA from yeast cultures	Up to 1.5 ml (1 x 10 ⁷ cells/ml)	40 minutes	130 µg	RT-PCR, Labeling, Microarray Analysis, and Northern blots
Spectrum™ Plant Total RNA Kit	43	STRN10, STRN50, STRN250	Isolation of total RNA from plant tissues	Up to 100 mg of ground plant tissue	30 minutes	20-60 µg	RT-PCR, Labeling, Microarray Analysis, and Northern blots
TRI Reagent RNA Isolation Reagent	48	T9424, T3809, T3934	Isolation of total RNA from a variety of starting materials	Up to 100 mg tissue, 10 ⁷ cells, 10 ² cm plate area or 0.25 ml fluid and blood derivatives	90 minutes	5-15 µg per million cells, 1-10 µg/mg tissue	RT-PCR, Northern blots, and Microarray Analysis

mRNA

Sigma System	Page Number	Catalog Number	Product Description	Starting Material	Time Required	Typical Yield	Downstream Application
SpyLine™ Poly A+ Capture Kit	49	SPY1, SPY4	Isolation of Poly A+ mRNA from cultured mammalian cells	1,000-50,000 cells per well	60 minutes	N/A	RT-PCR, Quantitative real-time RT-PCR
GenElute mRNA Miniprep Kit	51	MRN10, MRN70	Isolation of mRNA from total RNA	5-500 µg total RNA	40 minutes	1-5% of starting total RNA	RT-PCR, Northern blots, and Microarray Analysis
GenElute Direct mRNA Miniprep Kit	51	DMN10, DMN70	Isolation of mRNA from mammalian cells or tissues	Up to 10 ⁷ mammalian cells or 50 mg of tissue per prep	60 minutes	Up to 5 µg	RT-PCR, Northern blots, and Microarray Analysis

RNA Isolation Products

Sigma System	Page Number	Catalog Number	Product Description	Starting Material	Time Required	Typical Yield	Downstream Application
Amplification Grade DNase I	53	AMPD1	Eliminate DNA from RNA preparations	N/A	15 minutes	N/A	cDNA Synthesis and RT-PCR