PURIFICATION KIT COMPARISON

Comparison of Plasmid DNA Extraction Kits - IBI and Brand Q

Conclusions:

1.) **IBI** brand Purification Kits are equivalent or superior to Brand Q in **YIELD**
2.) **IBI** brand Purification Kits are equivalent to Brand Q in **PURITY**

Purity & Stability Test Each Sample Tested 3X

IBI Brand	DH5a/TA			BL21/pET20b		
Final Elution Vol. (ml)	43.00	44.00	44.00	44.50	44.50	43.50
DNA Conc. (ng/ml)	139.40	115.80	123.50	19.70	18.70	18.00
Total DNA (mg)	5.99	5.01	5.43	0.88	0.83	0.78
A260/A280	1.92	1.91	1.91	1.78	2.03	1.82
Brand Q	DH5a/TA			BL21/pET20b		
Final Elution Vol. (ml)	44.50	44.50	45.00	46.00	44.00	45.00
DNA Conc. (ng/ml)	112.20	100.80	105.70	20.60	24.80	19.90
Total DNA (mg)	4.99	4.49	4.76	0.95	1.09	0.90
A260/A280	1.91	1.90	1.89	1.72	1.72	1.84

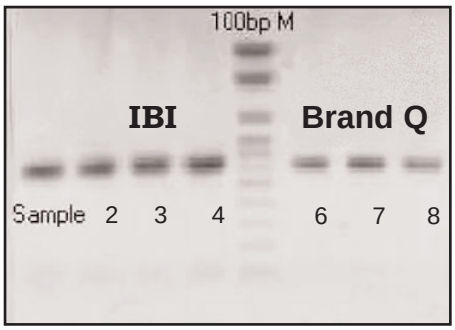


Photo 1: Comparison of % Recovery
Lane 1: Sample
Lane 2-4: **IBI** Brand
Lane 6-8: Brand Q

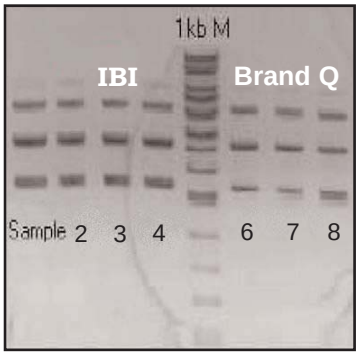


Photo 2: Comparison of % Recovery
Lane 1: Sample
Lane 2-4: **IBI** Brand
Lane 6-8: Brand Q

Comparison of Gel/PCR Extraction Kits - IBI and Brand Q

Conclusions:

1.) **IBI** brand Purification Kits are equivalent or superior to Brand Q in **YIELD**
2.) **IBI** brand Purification Kits are equivalent to Brand Q in **PURITY**

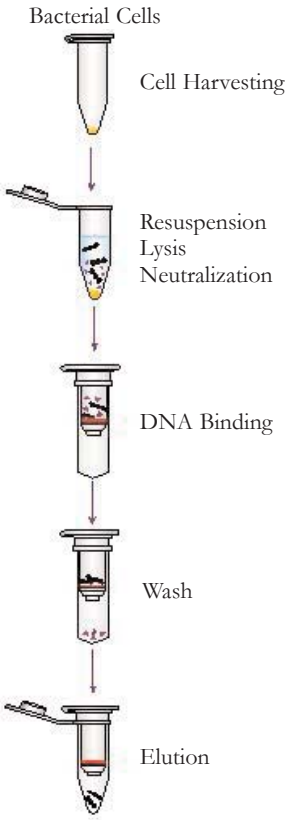
Purity & Stability Test Each Sample Tested 3X

IBI Brand	PCR Clean-Up			Gel Extraction		
Volume (ml)	35.50	36.50	35.00	43.00	44.50	41.00
DNA Conc. (ng/λ)	69.80	66.60	71.30	25.20	24.50	36.20
Total DNA (μg)	2.48	2.43	2.50	1.08	1.10	1.48
A260/A280	1.85	1.97	1.86	1.80	1.70	1.88
Brand Q	PCR Clean-Up			Gel Extraction		
Volume (ml)	37.00	37.00	37.00	46.00	46.00	46.00
DNA Conc. (ng/λ)	48.80	62.20	50.40	13.90	17.60	18.20
Total DNA (μg)	1.81	2.30	1.86	0.64	0.81	0.84
A260/A280	1.63	1.63	1.66	1.74	1.79	1.83

HIGH-SPEED PLASMID KITS

Fast and Economical Plasmid Minipreps

IBI's High-Speed MINI Plasmid Kit is designed for rapid isolation of plasmid or cosmid DNA from 1-4ml of bacterial cultures. The modified alkaline lysis method and RNase treatment are used to create cleared cell lysate with minimal genomic DNA and RNA contaminants. In the presence of a chaotropic salt, the plasmid DNA in the lysate, binds to the glass-fiber matrix in the spin column. The contaminants are washed off with an ethanol based wash buffer, and the purified plasmid DNA is eluted by a low salt elution buffer or water. This procedure does NOT require DNA phenol extraction or alcohol precipitation. Typical yields are 20-30mg for high-copy numbered plasmid or 3-10mg for low-copy numbered plasmid. The purified plasmid DNA is ready to use for restriction enzyme digestion, ligation, PCR, or sequencing reactions. This entire procedure can be completed in under 30 minutes!

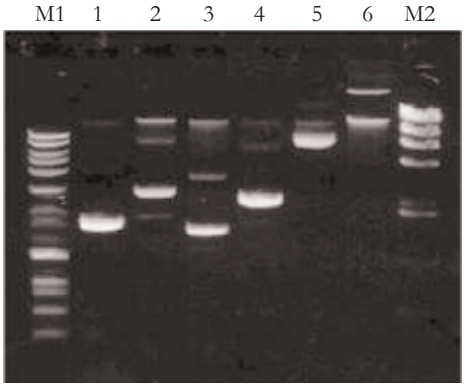


Key Features

Sample Size:	1-4ml bacterial culture
Format:	Spin Columns
Operation:	Centrifuge/Vacuum manifold
Binding capacity:	Up to 30µg
Expectant yield:	20-30µg for high-copy plasmid / 3-10µg for low-copy plasmid
Elution Volume:	50-100µl
Operation time:	30 minutes or less
Applications:	Fluorescent or Radioactive Sequencing, Restriction Digestion, Library Screening Ligation and Transformation

Kit Contents

Component	IB47100	IB47101	IB47102
PD Column	4 MINI	100 MINI	300 MINI
2ml Collection Tube	4	100	300
PD1 Buffer	1ml	25ml	65ml
PD2 Buffer	1ml	25ml	75ml
PD3 Buffer	1.5ml	45ml	100ml
W1 Buffer	2ml	45ml	130ml
Wash Buffer (add Ethanol)	1ml (4ml)	25ml (100ml)	50ml (200ml)
Elution Buffer	1ml	6ml	30ml
RNase A (50mg/ml)	Added	50µl	130µl



Agarose gel analysis of various plasmid DNA purified with an IBI High-Speed MINI Plasmid Kit

Lane 1: pbluescript II **Lane 2:** pUC 18
Lane 3: pBR 322 **Lane 4:** pGem w1kb insert
Lane 5: pET43.1 w/2.7kb insert
Lane 6: cosmid (50kb)
M1: 1kb DNA ladder **M2:** Lanbda-Hind III

Ordering Information

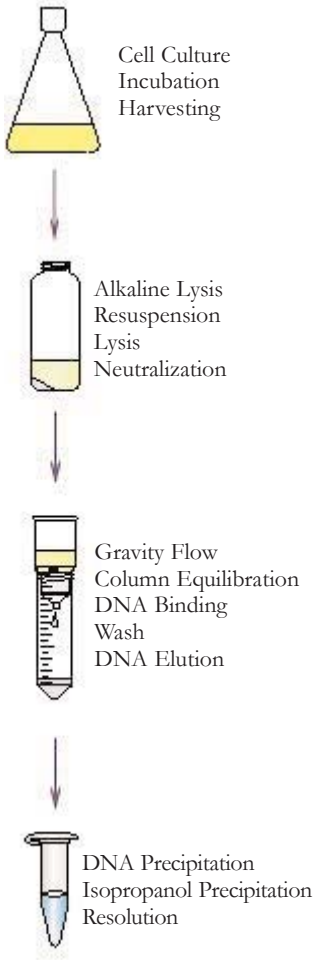
Catalog#	Description
IB47100	MINI High-Speed Plasmid Sample Kit-4 Preps
IB47101	MINI High-Speed Plasmid Kit-100 Preps
IB47102	MINI High-Speed Plasmid Kit-300 Preps

Complete protocols for IBI's High-Speed MINI Plasmid Kits can be found on our website at *www.ibisci.com*

FAST-ION PLASMID KITS

Ultra-Pure and Large-Volume Plasmid Preparation

IBI's MIDI and MAXI Plasmid Kits use pre-packed ion-exchange resin columns to purify plasmid or cosmid DNA from bacterial cultures. In this process, the modified alkaline lysis method and RNase treatment are used for creating cleared cell lysate with minimal genomic DNA and RNA contaminants. Using a gravity-flow procedure, the plasmid DNA in crude lysate has been bound to the column. The contaminants can be washed off with a wash buffer. Finally, the purified plasmid DNA is eluted by a high salt buffer and then precipitated with isopropanol for desalting. The entire procedure can be completed in less than 2 hours; and the obtained high purity plasmid DNA is suitable for transfection, sequencing reactions, PCR, and in-vitro transcription.



KEY FEATURES

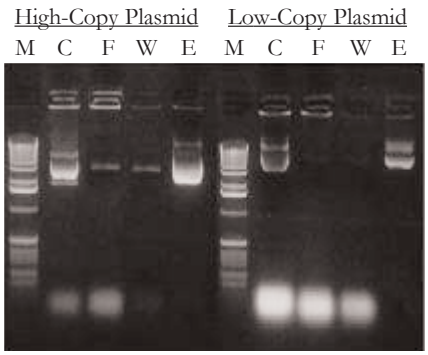
SAMPLE SIZE:	MIDI - 50ml for high copy plasmid / 100ml for low copy plasmid MAXI - 100ml for high copy plasmid / 250ml for low copy plasmid
FORMAT:	Ion-Exchange Resign Column
OPERATION:	Gravity Flow
BINDING CAPACITY:	MIDI - 500µg / MAXI - 1mg
EXPECTANT YIELD:	MIDI - up to 200µg of plasmid DNA/ MAXI - 500µg to 1mg of plasmid DNA
PURITY:	Equal to that obtained by 2XCsCl-Gradient Centrifugation
OPERATION TIME:	120 minutes or less
APPLICATIONS:	Transfection, Sequencing, In-Vitro Transcription, Microinjection, Restriction Digestion

KIT CONTENTS

Component	IB47110	IB47111	IB47120	IB47121	IB47122
PLASMID COLUMNS	2 MIDI	25 MIDI	2 MAXI	10 MAXI	25 MAXI
PM1 BUFFER	10ml	110ml	25ml	110ml	275ml
PM2 BUFFER	10ml	110ml	25ml	110ml	275ml
PM3 BUFFER	10ml	110ml	25ml	110ml	275ml
PEQ BUFFER	12ml	130ml	25ml	130ml	275ml
PW BUFFER	30ml	360ml	65ml	360ml	790ml
PELBUFFER	25ml	220ml	25ml	130ml	350ml
RNASE A (50MG/ML)	Added	200µl	Added	200µl	550µl

ORDERING INFORMATION

CATALOG#	DESCRIPTION
IB47110	MIDI FAST-ION PLASMID SAMPLE KIT-2 PREPS
IB47111	MIDI FAST-ION PLASMID KIT-25 PREPS
IB47120	MAXI FAST-ION PLASMID SAMPLE KIT-2 PREPS
IB47121	MAXI FAST-ION PLASMID KIT-10 PREPS
IB47122	MAXI FAST-ION PLASMID KIT-25 PREPS



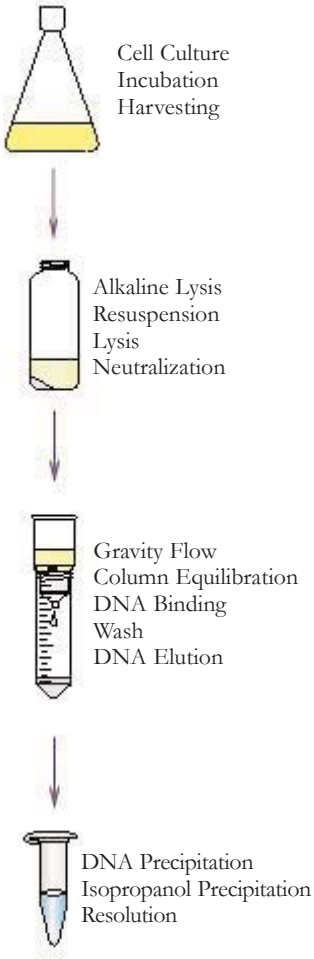
C: Crude lysate
E: Elute
F: Flow-through
M: 1kb DNA ladder
W: Wash

Agarose gel analysis of various plasmid DNA purified with an IBI MAXI Plasmid Kit. Plasmid pBluescript (high-copy) and pBR322 (low-copy) are purified by an IBI MAXI Plasmid Kit. DNA in crude lysate from alkaline lysis and fractions from each gravity-flow step was collected by isopropanol precipitation and loaded into each lane.

FAST-ION PLASMID KITS (ENDOTOXIN FREE)

Ultra-Pure and Large-Volume Plasmid Preparation

IBI's MIDI and MAXI Plasmid Kits (Endotoxin Free) use pre-packed ion-exchange resin columns to purify plasmid or cosmid DNA from bacterial cultures. In this process, the modified alkaline lysis method and RNase treatment are used for creating cleared cell lysate with minimal genomic DNA and RNA contaminants. Using a gravity-flow procedure, the plasmid DNA in crude lysate has been bound to the column. The contaminants can be washed off with a wash buffer. Finally, the purified plasmid DNA is eluted by a high salt buffer and then precipitated with isopropanol for desalting. The entire procedure can be completed in less than 2 hours; and the obtained high purity plasmid DNA is suitable for transfection, sequencing reactions, PCR, and in-vitro transcription.



KEY FEATURES

SAMPLE SIZE:	MIDI - 50ml for high copy plasmid / 100ml for low copy plasmid MAXI - 100ml for high copy plasmid / 250ml for low copy plasmid
FORMAT:	Ion-Exchange Resign Column
OPERATION:	Gravity Flow
BINDING CAPACITY:	MIDI - 500µg / MAXI - 1mg
EXPECTANT YIELD:	MIDI - up to 200µg of plasmid DNA/ MAXI - 500µg to 1mg of plasmid DNA
PURITY:	Equal to that obtained by 2XCsCl-Gradient Centrifugation
OPERATION TIME:	120 minutes or less
APPLICATIONS:	Transfection, Sequencing, In-Vitro Transcription, Microinjection, Restriction Digestion

KIT CONTENTS

Component	IB47112	IB47113	IB47123	IB47124	IB47125
PLASMID COLUMNS	2 MIDI	25 MIDI	2 MAXI	10 MAXI	25 MAXI
PM1 BUFFER	10ml	110ml	25ml	110ml	275ml
PM2 BUFFER	10ml	110ml	25ml	110ml	275ml
PM3 BUFFER	10ml	110ml	25ml	110ml	275ml
PER BUFFER	4ml	40ml	8ml	40ml	100ml
PEQ BUFFER	12ml	130ml	25ml	130ml	275ml
PW BUFFER	30ml	360ml	65ml	360ml	790ml
PEL BUFFER	25ml	220ml	25ml	130ml	350ml
RNASE A (50MG/ML)	Added	200µl	Added	200µl	550µl

ORDERING INFORMATION

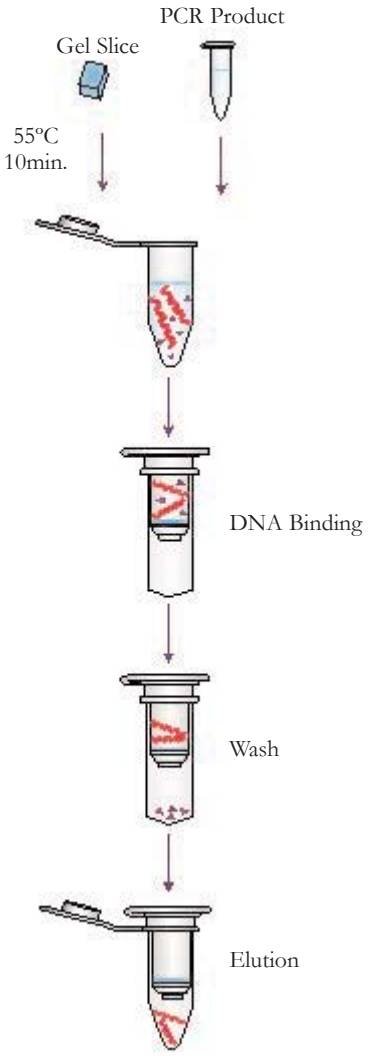
CATALOG#	DESCRIPTION
IB47112	MIDI FAST-ION PLASMID SAMPLE KIT (ENDOTOXIN FREE)-2 PREPS
IB47113	MIDI FAST-ION PLASMID KIT (ENDOTOXIN FREE)-25 PREPS
IB47123	MAXI FAST-ION PLASMID SAMPLE KIT (ENDOTOXIN FREE)-2 PREPS
IB47124	MAXI FAST-ION PLASMID KIT (ENDOTOXIN FREE)-10 PREPS
IB47125	MAXI FAST-ION PLASMID KIT (ENDOTOXIN FREE)-25 PREPS

Endotoxins are cell membrane components of Gram-negative bacteria such as E.Coli. Endotoxins are released during the lysis step of plasmid purification and reduce transfection efficiencies in endotoxin-sensitive cell lines. Endotoxions also represent a non-controllable variable in transfection experiment set-up making results difficult to compare and interpret.

GEL/PCR DNA FRAGMENT EXTRACTION KITS

Efficient Gel Extraction and PCR Clean-Up

The Gel/PCR DNA Fragment Extraction Kits are designed to recover or concentrate DNA fragments (50bp-10kb) from an agarose gel, PCR, or any other enzymatic reaction. This method uses a chaotropic salt to dissolve the agarose gel and denature the enzymes. The DNA fragments in the chaotropic salt are bound to the glass-fiber matrix of the spin column. The contaminants are washed with a wash buffer (containing Ethanol) and the purified DNA fragments are eluted by a low salt based elution buffer or water. Salts, enzymes and unincorporated nucleotides can be effectively removed from the reaction mixture without phenol extraction or alcohol precipitation. Typically, recoveries are 80-90% for Gel Extraction and 90-95% for PCR Clean-Up. The entire procedure can be completed in 20 minutes, and the eluted DNA is ready to use in restriction digestion, ligation, PCR, and sequencing reactions.



Key Features

Sample Size:	up to 300mg of agarose gel / up to 100µl of PCR products
Format:	Spin Column
Operation:	Centrifuge / Vacuum Manifold
Binding capacity:	10µg DNA
Expectant yield:	80-90% for gel extraction / 90-95% for PCR Clean-Up
Operation time:	20 minutes or less
Applications:	PCR, Fluorescent or Radioactive Sequencing, Restrictive Digestion, DNA Labeling, Ligation

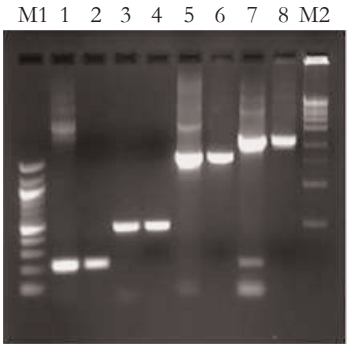
Kit Contents

Component	IB47010	IB47020	IB47030
DF Columns	4	100	300
2ml Collection Tubes	4	100	300
DF Buffer	3ml	80ml	240ml
Wash Buffer (add Ethanol)	1ml (4ml)	25ml (100ml)	50ml (200ml)
Elution Buffer	1ml	6ml	30ml

Ordering Information

Catalog#	Description
IB47010	Gel/PCR Fragment Extraction Sample Kit-4 Preps
IB47020	Gel/PCR Fragment Extraction Kit-100 Preps
IB47030	Gel/PCR Fragment Extraction Kit-300 Preps

DNA fragments before and after extraction with an IBI Gel/PCR DNA fragments Extraction Kit.

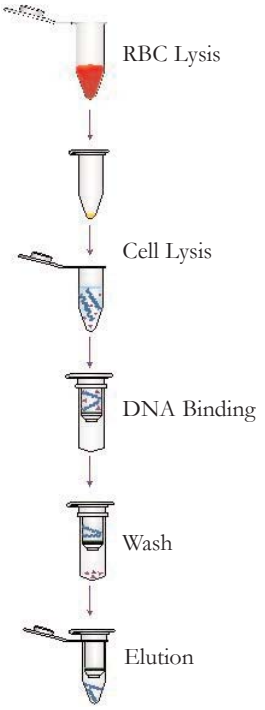


Lane 1, 3, 5, 7: before extraction; 200bp, 500bp, 2kb, 3kb
Lane 2, 4, 6, 8: after extraction; 200bp, 500bp, 2kb, 3kb
M1: 100bp DNA ladder
M2: 1kb DNA ladder

GENOMIC DNA KITS (BLOOD AND CULTURED CELL)

Fast Genomic DNA Preparations from Blood Samples

The Genomic DNA MINI and MAXI (Blood/Cultured Cell) Kits provide a fast and economical method for the purification of total DNA (including genomic, mitochondrial, and viral DNA) from fresh whole blood, plasma, serum, buffy coat, other bodily fluids, lymphocytes, bacteria, and cultured cells. The method uses a chaotropic salt to lyse cells and degrade proteins. The DNA in the chaotropic salt is bound by the glass fiber matrix of the spin column. Once any contaminates have been removed, the purified DNA is eluted by a low salt elution buffer or water. The entire procedure can be completed in 40 minutes (MINI) or 60 minutes (MAXI) without the use of phenol extraction or alcohol precipitation.



KEY FEATURES

SAMPLE SIZE:	MINI - up to 300µl of fresh whole blood, up to 10^7 animal cultured cells MAXI - 10ml frozen blood, up to 10^8 cultured cells
FORMAT:	Spin Column
OPERATION:	Centrifuge / Vacuum Manifold
BINDING CAPACITY:	10µg per well
EXPECTANT YIELD:	MINI - up to 50µg of DNA / MAXI - up to 140µg of DNA
OPERATION TIME:	MINI - 40 minutes or less / MAXI - 60 minutes or less
ELUTION VOLUME:	MINI - 50-200µl / MAXI - 1-2ml

KIT CONTENTS

Component	IB47210	IB47211	IB47200	IB47201	IB47202
GD COLUMNS	10 MAXI	2 MAXI	4 MINI	100 MINI	300 MINI
2ML COLLECTION TUBES	-	-	8	200	600
RBC LYSIS BUFFER	-	-	6ml	135ml	405ml
GT BUFFER	-	-	1.5ml	30ml	75ml
GB BUFFER	120ml	25ml	2ml	40ml	100ml
W1 BUFFER	45ml	10ml	2ml	45ml	130ml
WASH BUFFER (add Ethanol)	25ml (100ml)	5ml (20ml)	1ml (4ml)	25ml (100ml)	50ml (200ml)
ELUTION BUFFER	30ml	6ml	1ml	30ml	75ml
PROTEINASE K (add ddH_2O)	55mg (5.5ml)	11mg (1.1ml)	-	-	-

ORDERING INFORMATION

CATALOG#	DESCRIPTION
IB47200	MINI GENOMIC DNA SAMPLE KIT (BLOOD C.C.)-4 PREPS
IB47201	MINI GENOMIC DNA KIT (BLOOD C.C.)-100 PREPS
IB47202	MINI GENOMIC DNA KIT (BLOOD C.C.)-300 PREPS
IB47210	MAXI GENOMIC DNA KIT (BLOOD C.C.)-10 PREPS
IB47211	MAXI GENOMIC DNA SAMPLE KIT (BLOOD C.C.)-2 PREPS

YIELD RESULTS

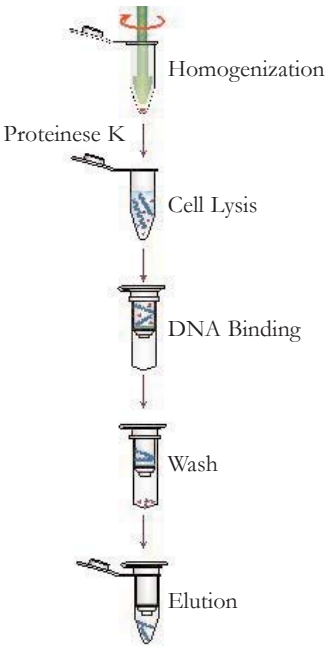
	Sample	Size	DNA Yield (µg)
Mini	Blood	200µl	3-6
	Blood	1ml	10-30
	Buffy Coat	200µl	30-60
	Cultured Cells	$5x10^6$	5-30
	Bacterial Cells	$2x10^9$	20-30
Maxi	Blood	10ml	100-300

Complete protocols for IBI's Genomic DNA Kits can be found on our website at *www.ibisci.com*

GENOMIC DNA KITS (TISSUE)

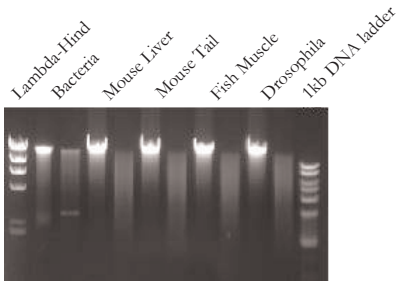
Extract Genomic DNA from Blood, Cultured Cells, and Various Animal Tissues

The Genomic DNA MINI (Tissue) Kits are specially designed for purification of total DNA (including genomic mitochondrial and viral DNA) from a variety of animal tissues and cells. The provided micropestle can efficiently homogenize tissue samples to shorten the time in the Lysis step. This method uses Proteinase K and a chaotropic salt to lyse cells and degrade proteins. The DNA in the chaotropic salt is bound by the glass fiber matrix of the spin column. Once any contaminants have been removed, the purified DNA is eluted by a low salt elution buffer or water. This entire procedure can be completed in under 60 minutes without phenol extraction or alcohol precipitation. The expected yield of genomic DNA is up to 50mg and the purified DNA (with approximately 20-30kb) is suitable for PCR or other enzymatic reactions.



Key Features

Sample Size:	up to 50mg of tissue or 200µl of blood
Format:	Spin Column
Operation:	Centrifuge / Vacuum Manifold
Expectant Yield:	up to 50µg
Binding capacity:	50µg
Operation time:	60 minutes or less
Elution Volume:	50-200µl
Applications:	PCR, AFLP/PADP, RFLP, Southern Blotting, Real-Time PCR



Agarose gel analysis of various genomic DNA extracted with an IBI Genomic DNA Mini Kit, 1mg of purified DNA was analyzed. In the right lane, purified genomic DNA was digested with EcoR1.

Kit Contents

Component	IB47220	IB47221	IB47222
GD Columns	4 MINI	50 MINI	300 MINI
2ml Collection Tubes	8	100	600
Micropestle	4	50	300
GT Buffer	1.5ml	30ml	75ml
GB Buffer	2ml	30ml	100ml
W1 Buffer	2ml	45ml	130ml
Wash Buffer (add Ethanol)	1ml (4ml)	25ml (100ml)	50ml (200ml)
Elution Buffer	1ml	30ml	75ml
Proteinase K (add ddH_2O)	1mg (0.1ml)	11mg- (1.1ml)	65mg (6.5ml)

Ordering Information

Catalog#	Description
IB47220	MINI Genomic DNA Sample Kit (Tissue)-4 Preps
IB47221	MINI Genomic DNA Kit (Tissue)-50 Preps
IB47222	MINI Genomic DNA Kit (Tissue)-300 Preps

Yield Results

Sample	Size	DNA Yield (µg)
Mouse Tail	0.5cm	10-20
Liver	20mg	10-20
Brain	20mg	10-20
Lung	20mg	5-10
Muscle	20mg	5-10
Kidney	20mg	20-50
Blood	200µl	3-6
Buffy Coat	200µl	30-60
Cultured Cells	$5x10^6$	5-30
Bacterial Cells	$2x10^9$	20-30

GENOMIC DNA KITS (PLANT)

Extract Genomic DNA from Plant and Fungal Tissues

The Genomic DNA MINI and MAXI (Plant) Kits provide a fast and economical method to isolate total DNA (genomic DNA, mitochondrial and chloroplast) from plant tissue and cells. Samples are disrupted both by grinding in liquid nitrogen and lysis buffer incubation. The lysate is treated with RNase A to degrade RNA and filtered to remove cell debris and salt precipitates. In the presence of the binding buffer coupled with chaotropic salt, the genomic DNA in the lysate binds to the glass fiber matrix of the spin column. The contaminants are washed with an ethanol based wash buffer. The Genomic DNA is then eluted by a low salt elution buffer or water. The protocol does not require DNA phenol extraction or alcohol precipitation. This entire procedure can be completed in 30 minutes or less and the purified genomic DNA is ready for PCR, Real-Time PCR, Southern Blotting, or RFLP.

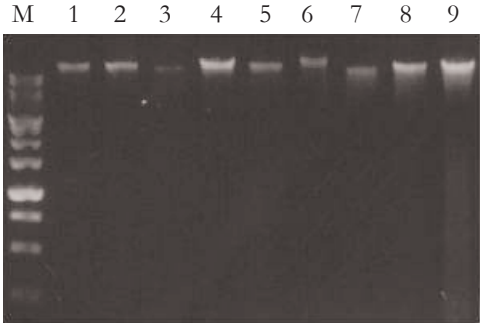
Key Features

Sample Size:	MINI - up to 100mg fresh plant tissue / 25mg of dry plant tissue MAXI - 1gm of fresh plant tissue / 250mg of dry plant tissue
Format:	Spin Column
Operation:	Centrifuge / Vacuum Manifold
Binding capacity:	MINI - 50µg / MAXI - 500µg
Expectant yield:	MINI - up to 50µg of DNA / MAXI - up to 140µg of DNA
Operation time:	MINI - 60 minutes or less / MAXI - 60 minutes

Kit Contents

Component	IB47230	IB47231	IB47240	IB47241	IB47242
GD Columns	4 MINI	100 MINI	10 MAXI	25 MAXI	2 MAXI
2ml Collection Tubes	8	200	-	-	-
Filter Column	4	100	10	25	2
GP1 Buffer	2ml	50ml	50ml	125ml	10ml
GPX1 Buffer	2ml	50ml	50ml	125ml	10ml
GP2 Buffer	1ml	15ml	15ml	30ml	3ml
GP3 Buffer (add Isopropanol)	1.5ml (3ml)	30ml (60ml)	30ml (60ml)	70ml (140ml)	8ml (16ml)
W1 Buffer	2ml	45ml	45ml	130ml	10ml
Wash Buffer (add Ethanol)	1ml (4ml)	25ml (100ml)	25ml (50ml)	50ml (200ml)	5ml (20ml)
Elution Buffer	1ml	30ml	30ml	60ml	6ml
RNase A (10mg/ml)	25µl	550µl	550µl	(2) 650µl	100µl

Agarose gel (1.0%) analysis of DNA isolated from the indicated young leaves with Plant Genomic DNA Mini Kit, 100mg of each sample is used. After DNA purification, 3µl of 200µl elution product is loaded in each well



M: 1 kb DNA ladder
1: Cinnamommun camohora (Camphor tree)
2: Pisum sativum (Pea sprout)
3: Arabidopsis thaliana (Arabidopsis)
4: Oryza sativa (Rice)
5: Ipomoea batatas (Sweet potato vine)
6: Rhizoma dioscoreae (Chianes Yam)
7: Populus tremula (Aspen)
8: Flammulina velutipes (Mushroom)
9: Oxalis comiculats (Four leaf clover)

Ordering Information

Catalog#	Description
IB47230	MINI Genomic DNA Sample Kit (Plant)-4 Preps
IB47231	MINI Genomic DNA Kit (Plant)-100 Preps
IB47240	MAXI Genomic DNA Kit (Plant)-10 Preps
IB47241	MAXI Genomic DNA Kit (Plant)-25 Preps
IB47242	MAXI Genomic DNA Sample Kit (Plant)-2 Preps

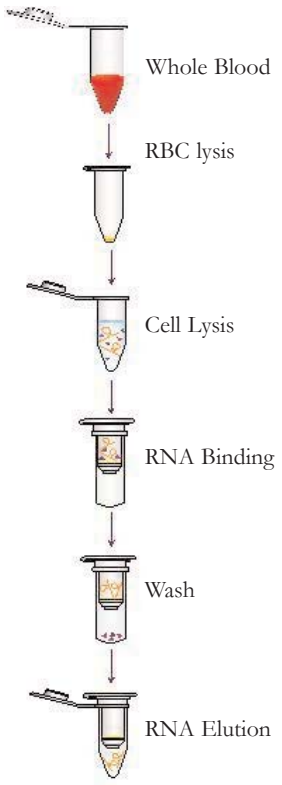
Yield Results

Sample	DNA Yield (µg)	
	Mini (100mg leaf)	Maxi (1g leaf)
Arabidopsis (Arabidopsis thaliana)	3-5	30-50
Rice (Oryza sativa)	10-15	100-150
Tomato (Lycopersicon esculentum)	10-15	100-150
Tobacco (Nicotiana tabacum)	20-25	200-250
Chianes Yam (Rhizoma dioscoreae)	30-60	300-500
Maize (Zea mays)	15-20	150-200
Sweet potato (Ipomoea batata)	20-30	200-300
Orchis (Phalaenopsis aphrodite)	5-10	50-100
Camphor tree (Cinnamommun camohora)	15-20	150-200
Spinach (Spinacia oleracea)	5-10	50-100
Bamboo (Bambusa iodhamii)	10-15	100-150

TOTAL RNA KITS (Blood and Cultured Cell)

Total RNA Minipreps from Cultured Cells and Blood Samples

The Total RNA MINI and MAXI Kits (Blood and Cultured Cell) are specially designed for purification of total RNA from fresh whole human blood and cultured cells. This method uses detergents and a chaotropic salt to lyse cells and inactivate RNase. The RNA in the chaotropic salt is bound by the glass fiber matrix of the spin column. Once any contaminates have been removed following the wash step, the purified RNA is eluted by RNase-Free water. The entire procedure can be completed within 30 minutes (MINI) and 60 minutes (MAXI), and the purified RNA is ready for RT-PCR, Northern Blotting, Primer Extension, and cDNA library construction.



Key Features

Sample Size:	MINI - up to 300µl of whole human blood up to $5x10^6$ of cultured mammalian cells up to $1x10^9$ of cultured bacterial cells MAXI - up to 5ml of whole human blood up to $1x10^8$ of cultured mammalian cells up to $1x10^{10}$ of cultured bacterial cells
Format:	Spin Column
Operation:	Centrifuge / Vacuum Manifold
Binding capacity:	MINI - up to 60µg / MAXI - up to 500µg
Operation time:	MINI - 30 minutes / MAXI - 60 minutes
Applications:	RT-PCR, Real-Time RT-PCR, Northern Blotting, Primer Extension, RNase Protection Assays, mRNA Selection, cDNA Synthesis

Kit Contents

Component	IB47330	IB47331	IB47320	IB47321	IB47322	IB47323
RB Columns	10 MAXI	2 MAXI	4 MINI	50 MINI	100 MINI	300 MINI
2ml Collection Tubes	-	-	8	100	200	600
RBC Lysis Buffer	160ml	40ml	10ml	100ml	200ml	500ml
RB Buffer	60ml	12ml	2ml	30ml	60ml	130ml
RT Buffer	30ml	6ml	1.5ml	15ml	30ml	75ml
W1 Buffer	45ml	10ml	2ml	30ml	50ml	130ml
Wash Buffer (add Ethanol)	25ml (100ml)	12.5ml (50ml)	1ml (4ml)	12.5ml (50ml)	25ml (100ml)	(2) 50ml ((2) 200ml)
RNase-Free Water	6ml	1ml	1ml	6ml	6ml	30ml

Ordering Information

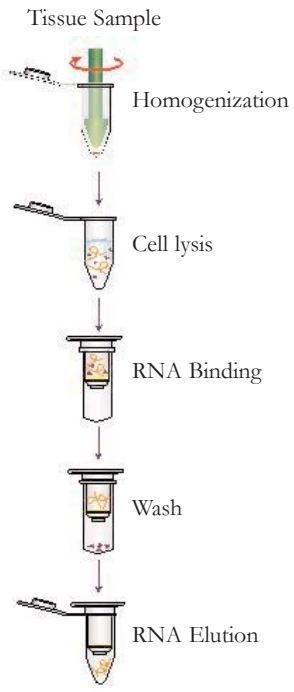
Catalog#	Description
IB47320	MINI Total RNA Sample Kit (Blood/C.C.)-4 Preps
IB47321	MINI Total RNA Kit (Blood/C.C.)-50 Preps
IB47322	MINI Total RNA Kit (Blood/C.C.)-100 Preps
IB47323	MINI Total RNA Kit (Blood/C.C.)-300 Preps
IB47330	MAXI Total RNA Kit (Blood/C.C.)-10 Preps
IB47331	MAXI Total RNA Sample Kit (Blood/C.C.)-2 Preps

Complete protocols for IBI's Total RNA Kits can be found on our website at *www.ibisci.com*

TOTAL RNA KITS (TISSUE)

Total RNA Minipreps from Tissues, Cultured Cells and Blood Samples

The Total RNA MINI and MAXI Kits (Tissue) are specially designed for purification of total RNA from a variety of animal tissues or cells. The provided micropestle can efficiently homogenize tissue samples in the microcentrifuge tube. The method uses a detergent and chaotropic salt to lyse cells and inactivate RNase. The RNA in the chaotropic salt is bound by the glass fiber matrix of the spin column. Once any contaminates have been removed following the wash step, the purified RNA is eluted by RNase-Free water. This protocol does not require phenol extraction or alcohol precipitation. The entire procedure can be completed within 60 minutes, and the purified RNA is ready for RT-PCR, Northern blotting, primer extension, and cDNA library construction.



KEY FEATURES

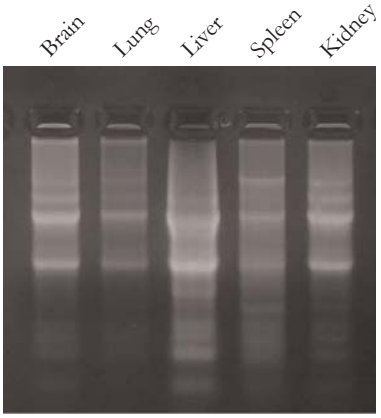
SAMPLE SIZE:	MINI - up to 25mg of tissue / $5x10^6$ of cultured animal cells MAXI - up to 200mg of animal tissue / 10^7x10^8 of cultured animal cells up to 5ml of blood / 10^9-10^{10} of bacteria cells
FORMAT:	Spin Column
OPERATION:	Centrifuge / Vacuum Manifold
BINDING CAPACITY:	MINI - up to 60µg / MAXI - up to 500µg
OPERATION TIME:	MINI - 30 minutes / MAXI - 60 minutes
APPLICATIONS:	RT-PCR, Real-Time RT-PCR, Northern Blotting, Primer Extension, RNase Protection Assays, mRNA Selection, cDNA Synthesis

KIT CONTENTS

Component	IB47310	IB47311	IB47300	IB47301	IB47302
RB COLUMNS	10 MAXI	2 MAXI	4 MINI	50 MINI	100 MINI
FILTER COLUMNS	10	2	4	50	100
2ML COLLECTION TUBES	-	-	8	100	200
MICROPESTLE	-	-	4	50	100
RBC LYSIS BUFFER	200ml	35ml	-	-	-
RB BUFFER	60ml	12ml	2ml	30ml	60ml
RT BUFFER	30ml	5ml	-	-	-
W1 BUFFER	50ml	10ml	2ml	30ml	50ml
WASH BUFFER (add Ethanol)	25ml (100ml)	5ml (20ml)	1ml (4ml)	12.5ml (50ml)	25ml (100ml)
RNASE-FREE WATER	6ml	1ml	1ml	6ml	15ml

ORDERING INFORMATION

CATALOG#	DESCRIPTION
IB47300	MINI TOTAL RNA SAMPLE KIT (TISSUE)-4 PREPS
IB47301	MINI TOTAL RNA KIT (TISSUE)-50 PREPS
IB47302	MINI TOTAL RNA KIT (TISSUE)-100 PREPS
IB47310	MAXI TOTAL RNA KIT (TISSUE)-10 PREPS
IB47311	MAXI TOTAL RNA SAMPLE KIT (TISSUE)-2 PREPS

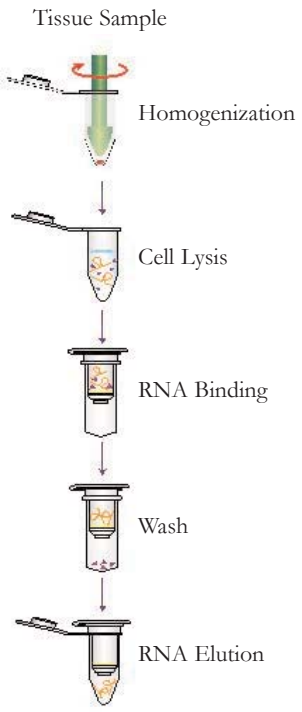


Agarose gel of total RNA purified with IBI's Total RNA Mini Kit. 5µl of elution product from 10mg of different tissues was loaded into each lane. All tissues were from a mouse.

TOTAL RNA KITS (PLANT)

Total RNA Minipreps from Plant and Fungal Tissues

The Total RNA MINI and MAXI Kits (Plant) provide a simple and fast method to isolate total RNA from plant tissue and cells. Samples are ground in liquid nitrogen and filtered to remove debris. In the presence of a binding buffer and chaotropic salt, the total RNA in the lysate binds to the glass fiber matrix of the spin column. The optional DNase treatments can remove DNA residues and the contaminants can be washed with an ethanol based wash buffer. Finally, the purified total RNA is eluted by RNase-Free water. This protocol does not require phenol extraction or alcohol precipitation, and the entire procedure can be completed within 60 minutes. The purified total RNA is ready for RT, RT-PCR, Real-Time PCR, and Northern Blotting.



KEY FEATURES

SAMPLE SIZE:	MINI - up to 100mg of fresh plant tissue / 25mg of dry plant tissue MAXI - up to 500mg of fresh plant tissue
FORMAT:	Spin Column
YIELD:	MINI - 5-30µg for young leaf / MAXI - 50-300µg for young leaf
BINDING CAPACITY:	MINI - up to 60µg
ELUTION VOLUME:	MAXI - up to 500µl
OPERATION TIME:	MINI - 60 minutes or less / MAXI - 60 minutes
APPLICATIONS:	RT-PCR, Real-Time RT-PCR, Northern Blotting, Primer Extension, RNase Protection Assays, mRNA Selection, cDNA Synthesis

KIT CONTENTS

Component	IB47350	IB47351	IB47340	IB47341	IB47342
RB COLUMNS	10 MAXI	2 MAXI	4 MINI	50 MINI	100 MINI
FILTER COLUMNS	10	2	4	50	100
2ML COLLECTION TUBES	-	-	8	100	200
RB BUFFER	60ml	12ml	3ml	30ml	60ml
PRB BUFFER	60ml	12ml	3ml	30ml	60ml
W1 BUFFER	50ml	10ml	2ml	30ml	50ml
WASH BUFFER (add Ethanol)	25ml (100ml)	5ml (20ml)	1ml (4ml)	12.5ml (50ml)	25ml (100ml)
RNASE-FREE WATER	6ml	1ml	1ml	6ml	6ml

ORDERING INFORMATION

CATALOG#	DESCRIPTION
IB47340	MINI TOTAL RNA SAMPLE KIT (PLANT)-4 PREPS
IB47341	MINI TOTAL RNA KIT (PLANT)-50 PREPS
IB47342	MINI TOTAL RNA KIT (PLANT)-100 PREPS
IB47350	MAXI TOTAL RNA KIT (PLANT)-10 PREPS
IB47351	MAXI TOTAL RNA SAMPLE KIT (PLANT)-2 PREPS

miRNA ISOLATION KITS

Isolation of microRNA from Tissue or Cultured Cells

The miRNA Isolation Kits are designed for the purification of microRNA (miRNA) and other small cellular RNAs from tissue samples and cultured cells. Purification of miRNA allows research into significant biological pathways for gene regulation. The standard protocol for isolating total RNA and mRNA are not optimized for small RNA molecules, and therefore result in the loss of substantial amounts of miRNA and other small RNA. In addition, the removal of the predominantly larger RNAs is required for accurate analysis of miRNA expression by qPCR or microarray analysis. These kits are specifically designed for the purification of small RNA with minimal contamination from large RNA molecules or genomic DNA. The method employs a spin column with a silica-base filter matrix that binds RNA in the presence of a chaotropic salt. This method is based on the selective binding of RNA molecules of various sizes to the silica-based fiber matrix when different ethanol concentrations are present in the solvent.

KEY FEATURES

SAMPLE SIZE:	100mg of tissue / $1x10^6$ of cultured cells
FORMAT:	Spin Columns
OPERATION:	Centrifuge/Vacuum manifold
REACTIONS:	100
OPERATION TIME:	30 minutes or less

KIT CONTENTS

Component	IB47370	IB47371
RNA COLUMNS	8	200
2ML COLLECTION TUBES	8	200
LYSIS BUFFER	1ml	25ml
MI BUFFER	1.5ml	3ml
RELEASE BUFFER	1ml	6ml
WASH BUFFER (add Ethanol)	250µl (1ml)	12.5ml (50ml)

ORDERING INFORMATION

CATALOG#	DESCRIPTION
IB47370	MIRNA ISOLATION SAMPLE KIT-4 PREPS
IB47371	MIRNA ISOLATION KIT-100 PREPS

Complete protocols for IBI's miRNA Isolation Kits can be found on our website at *www.ibisci.com*

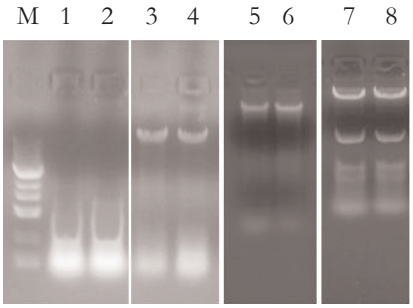
IBI-ISOLATE

Total DNA and RNA Isolation from Tissue and Cells

IBI-Isolate provides a quick and easy method to isolate Total Nucleic Acid from tissue, bacteria, blood, and serum. IBI-Isolate ensures purified total nucleic acid with high yield and excellent quality (when isolating nucleic acid from fresh blood samples, RBC Lysis Buffer is required). RNase A or DNase I can be used only if DNA or RNA isolation is required. Isolate does not require DNA phenol extraction, and the entire procedure can be completed in 60 minutes or less. The purified DNA and RNA is now ready for PCR, RT-PCR, Southern Blotting, Northern Blotting, Mapping, and RFLP. IBI-Isolate is available in two convenient 100ml and 500ml sizes, and 4ml product samples are available by request.

KEY FEATURES

SAMPLE SIZE:	50mg of fresh tissue / 1.5-3ml of cultured bacterial cells
YIELD:	up to 80µg for tissue samples up to 30µg for cultured bacterial cells
OPERATION TIME:	60 minutes or less
APPLICATIONS:	PCR, RT-PCR, Southern Blotting, Northern Blotting, Mapping, and RFLP



Total Nucleic Acid pellet resuspended in 200µl of depc-water. 10µl of the solution was used for the agarose gel analysis.

M: 1kb DNA ladder,
Shrimp 50mg: Lanes 1-2 (Brand I), Lanes 3-4 (IBI-*Isolate*).
Pork 50mg: Lanes 5-6 (IBI-*Isolate*),
DH5 α (including pBluescript) $3x10^9$: Lanes 7-8 (IBI-*Isolate*)

ORDERING INFORMATION

CATALOG#	DESCRIPTION
IB47600	IBI-*ISOLATE* SAMPLE-4ML
IB47601	IBI-*ISOLATE*-100ML
IB47602	IBI-*ISOLATE*-500ML

IBI-PLANT ISOLATE

Total DNA and RNA Isolation from Plant Tissue

IBI-Plant Isolate kits provide a quick and easy method to isolate Total DNA (genomic DNA, mitochondrial, and chloroplast) and RNA from plant tissue and cells. Samples are broken down by both grinding them in liquid nitrogen and GR buffer incubation. RNase A or DNase I can be used if only DNA or RNA isolation is required. The IBI-Plant Isolate protocol does not require DNA phenol extraction, and the entire procedure can be completed in less than 90 minutes. The purified nucleic acid is now ready for PCR, Real-Time PCR, Southern Blotting, Mapping, and RFLP. IBI-Plant Isolate is available in two convenient 100ml and 500ml sizes, and 4ml product samples are available by request.

KEY FEATURES

SAMPLE SIZE:	100mg of fresh plant tissue
YIELD:	up to 80µg
OPERATION TIME:	90 minutes or less
APPLICATIONS:	PCR, Real Time-PCR, Southern Blotting, Mapping, and RFLP

KIT CONTENTS

Component	IB47610	IB47611	IB47612
GR BUFFER	4ml	100ml	500ml
RNASE A (50MG/ML)	Provided by user	50µl	250µl

ORDERING INFORMATION

CATALOG#	DESCRIPTION
IB47610	IBI-*PLANT ISOLATE* SAMPLE-4ML
IB47611	IBI-*PLANT ISOLATE*-100ML
IB47612	IBI-*PLANT ISOLATE*-500ML

VACUUM MANIFOLD

Manifold for 96-Well Plate Operation

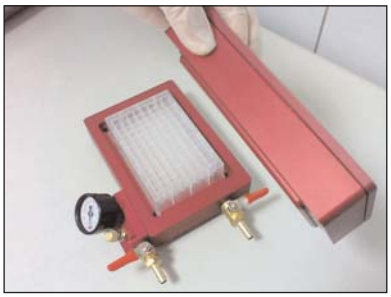
IBI's anodized aluminum 96-Well Vacuum Manifold is optimized for use with all of our 96-Well Kits. The thin upper portion of the manifold is designed to reduce cross contamination, allowing for the most effective extraction and purification of Plasmid DNA, Genomic DNA, Viral DNA & RNA, Total RNA, and PCR products.

KEY FEATURES

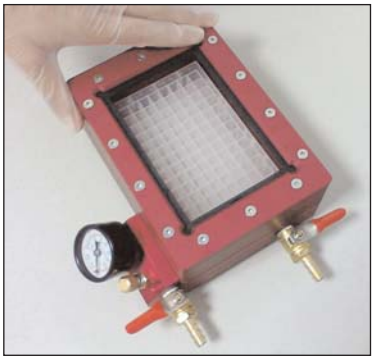
MATERIAL:	Manifold - Anodized Aluminum Gasket - Ethylene Propylene O-Ring - Silicone
DIMENSIONS:	17cm(L) x 12cm(W) x 8cm(H)
OPERATION:	Centrifuge/Vacuum manifold
MAXIMUM VACUUM:	Approx. 71cm Hg (28 in Hg) (-13.7psi)

ORDERING INFORMATION

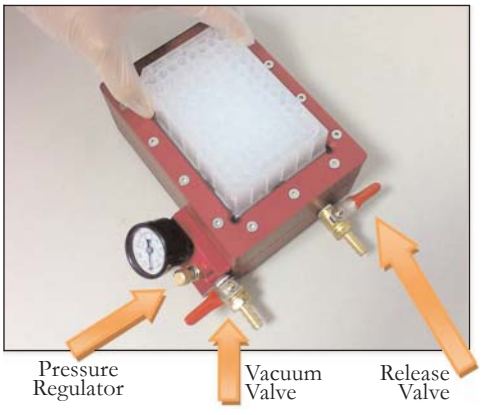
CATALOG#	DESCRIPTION
IB47500	96-WELL VACUUM MANIFOLD-1 KIT

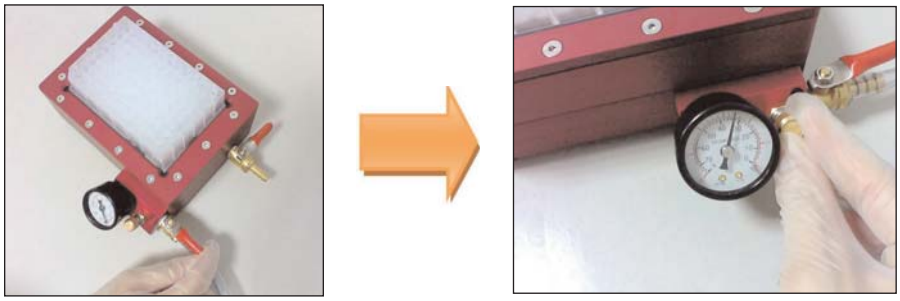


Remove the upper portion of the vacuum manifold. Then place the collection plate on the base. Finally place the upper portion of the vacuum manifold back to its original position.

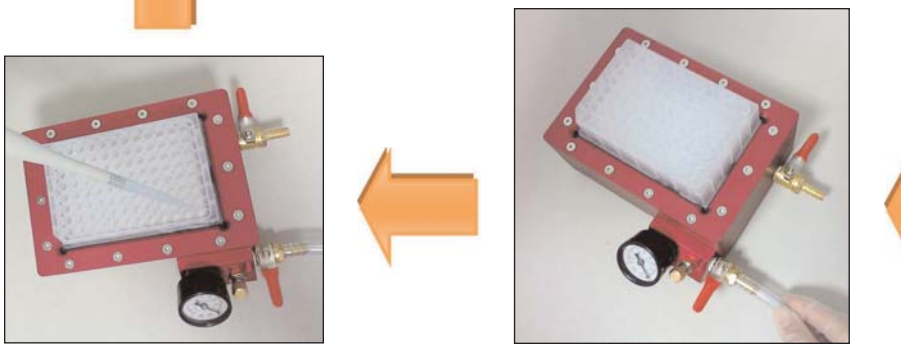


Place the sample plate on top of the vacuum manifold, making sure the pressure regulator is closed (turn clockwise) and both the vacuum valve and release valve are closed.





Once the wells are loaded, turn on the vacuum pump and fully open the vacuum valve. Adjust the vacuum to the desired pressure, approximately 30cm/Hg is recommended for optimum performance. Once the operation is completed, ensure the vacuum valve remains closed and the release valve is turned to the open position. Allow the pressure gauge to return to 0 and remove the sample plate.



Connect the vacuum pump hose to the vacuum valve and add the required buffer to the sample plate. Note: If not using all 96-Wells, cover the empty wells with adhesive film to increase efficiency.

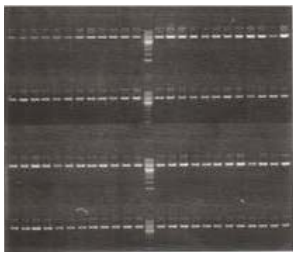
96-WELL PLASMID KITS

High-Throughput Plasmid Minipreps

The 96-Well Plasmid Kits are designed for rapid isolation of plasmid or cosmid DNA from 1-2ml of bacterial cultures. Modified alkaline lysis method and RNase A treatment are used to obtain cleared cell lysate with minimal genomic DNA and RNA contaminants. In the presence of a chaotropic salt, the plasmid DNA in the lysate binds to the glass fiber matrix of each well of the plate. The contaminants are washed with an ethanol based wash buffer. Finally, the purified plasmid DNA is eluted by a low salt elution buffer of water. This protocol does not require DNA phenol extraction or alcohol precipitation. Typical yields are 5-10mg for high-copy numbered plasmid or 0.5-5mg for low-copy numbered plasmid. The entire procedure can be completed in in less than 60 minutes, and the purified plasmid DNA is ready for restriction digestion, ligation, PCR, and sequencing reactions.

Key Features

Sample Size:	1-2ml bacterial culture
Format:	96-Well Plates
Operation:	Centrifuge/Vacuum manifold
Binding capacity:	10µg per well
DNA Size:	50bp - 10kb
Expectant yield:	5-10µg for high-copy plasmid / 0.5-5µg for low-copy plasmid
Elution Volume:	50-100µl
Operation time:	30 minutes
Applications:	Fluorescent or Radioactive Sequencing, Restriction Digestion, Library Screening Ligation and Transformation



Agarose gel analysis of purified plasmid using 96-Well Plasmid Mini Kit. 3µl from a 100µl elution product were loaded per lane.

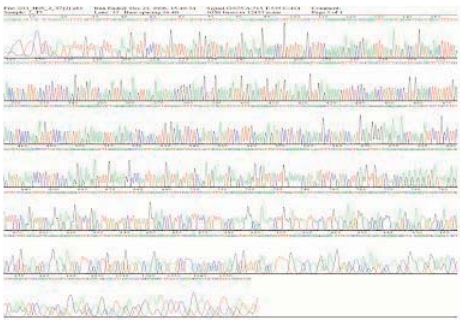
Kit Contents

Component	IB47150	IB47151	IB47152
Plasmid Plates	2x96	4x96	10x96
0.35ml Collection Plates	2	4	10
Adhesive Film	4	8	20
PD1 Buffer	25ml	65ml	(2) 65ml
PD2 Buffer	25ml	75ml	(2) 75ml
PD3 Buffer	45ml	100ml	(2) 100ml
Wash Buffer (add Ethanol)	25ml (100ml)	(2) 25ml ((2) 100ml)	(3) 50ml ((3) 200ml)
Elution Buffer	30ml	60ml	120ml
RNase A (50mg/ml)	50µl	130µl	(3) 130µl

Ordering Information

Catalog#	Description
IB47150	2x96-Well High-Speed Plasmid Kit-2 Plates
IB47151	4x96-Well High-Speed Plasmid Kit-4 Plates
IB47152	10x96-Well High-Speed Plasmid Kit-10 Plates

Complete protocols for IBI's 96-Well Plasmid Kits can be found on our website at *www.ibisci.com*



Sequencing of plasmid purified with IBI High-Speed Plasmid Mini Kits. The sequence was analyzed with BigDye Terminator® chemistry on ABI 3700.

96-WELL GENOMIC DNA KITS

High-Throughput Genomic DNA from Blood, Cultured Cells, & Various Animal Tissues

The 96-Well Genomic DNA Kits are designed for high-throughput purification of total DNA (including genomic, mitochondrial and viral DNA) from whole blood and a variety of animal tissues or cells. This method uses Proteinase K and a chaotropic salt to lyse cells and degrade proteins. DNA in the chaotropic salt is bound by the glass fiber matrix of each well. Once any contaminants have been removed, the purified DNA is eluted by a low salt elution buffer or water. The entire procedure can be completed in 1 hour without phenol extraction or alcohol precipitation. These kits can be used for manual filtration or with robotic handling systems, and purified DNA with approximately 20-30kb is suitable for PCR or other enzymatic reactions.

Key Features

Sample Size:	up to 25mg of animal tissues, mouse tails, or swabs 200µl of blood or other body fluids / 10^6x10^7 animal cultured cells
Format:	96-Well Plates
Operation:	Centrifuge/Vacuum manifold
Binding Capacity:	up to 30µg per well
Operation Time:	60 minutes
Applications:	PCR, AFLP, RFLP, Southern Blotting, Real-Time PCR

Kit Contents

Component	IB47250	IB47251	IB47252
DNA Binding Plates	2x96	4x96	10x96
0.35ml Collection Plates	2	4	10
Adhesive Film	4	8	20
GT Buffer	60ml	120ml	240ml
GB Buffer	60ml	120ml	240ml
W1 Buffer	130ml	130ml	(3) 130ml
Wash Buffer (add Ethanol)	25ml (100ml)	50ml (200ml)	(3) 50ml ((3) 200ml)
Elution Buffer	30ml	60ml	120ml
Proteinase K (add ddH_2O)	45mg (4.5ml)	(2) 45mg- ((2) 4.5ml)	(5) 45mg ((5) 4.5ml)

Quantitative Real-Time PCR result - Different concentrations of DNA will show different colors. All negative controls did not detect any DNA, which means there was no cross contamination during the experiment process. The DNA concentration in the 96-Well format was also uniformly spread over 96-Well format, and no pattern was found.

Ordering Information

Catalog#	Description
IB47250	2x96-Well Genomic DNA Kit-2 Plates
IB47251	4x96-Well Genomic DNA Kit-4 Plates
IB47252	10x96-Well Genomic DNA Kit-10 Plates

Check-Board Cross-Contamination Test

For the DNA extraction process, to check board cross contamination we placed 20ml of blood into each well of a 96-Well microplate. An IBI 96-Well Genomic DNA Kit with extracted DNA, and cooperates with real-time PCR to check cross contamination during the process of automation extraction.

	1	2	3	4	5	6	7	8	9	10	11	12
A	P	N	P	N	P	N	P	N	P	N	P	N
B	N	P	N	P	N	P	N	P	N	P	N	P
C	P	N	P	N	P	N	P	N	P	N	P	N
D	N	P	N	P	N	P	N	P	N	P	N	P
E	P	N	P	N	P	N	P	N	P	N	P	N
F	N	P	N	P	N	P	N	P	N	P	N	P
G	P	N	P	N	P	N	P	N	P	N	P	N
H	N	P	N	P	N	P	N	P	N	P	N	P

The list and result of different samples in a 96-Well microplate.
P: Positive control N: Negative control X: Empty well

> 5.0
4.50 ~ 5.0
4.0 ~ 4.5
3.5 ~ 4.0
< 3.5
Non-detected

	1	2	3	4	5	6	7	8	9	10	11	12
A	5.38	ND	4.19	ND	4.75	ND	4.35	ND	5.1	ND	3.96	ND
B	ND	4.67	ND	4.45	ND	3.25	ND	4.7	ND	4.27	ND	3.28
C	4.37	ND	3.44	ND	4.7	ND	3.44	ND	4.34	ND	4.8	ND
D	ND	4.66	ND	4.14	ND	3.97	ND	3.41	ND	3.22	ND	4.1
E	4.79	ND	3.35	ND	4.15	ND	3.7	ND	4.18	ND	4.34	ND
F	ND	4.29	ND	3.83	ND	3.77	ND	3.21	ND	4.33	ND	3.44
G	5.15	ND	5.19	ND	4.66	ND	4.26	ND	4.15	ND	3.41	ND
H	ND	5.02	ND	4.48	ND	5.31	ND	4.69	ND	4.62	ND	3.69

The result of different samples after quantitative by real-time PCR.
P: Positive control N: Negative control X: Empty well

96-WELL GENOMIC DNA KITS

High-Throughput Genomic DNA from Plant Tissues and Cells

The 96-Well Genomic Plant DNA Kits provide an efficient method for isolating total DNA (genomic, mitochondrial and chloroplast DNA) from plant tissue and cells. Samples are initially disrupted by grinding in liquid nitrogen, followed by lysate treatment with RNase A. The unique GR Buffer is able to lyse most common plant samples, as well as samples high in polysaccharides. DNA phenol extraction is not required, and the entire procedure can be completed in under 90 minutes. The isolated total DNA is ready for use in PCR, Real-Time PCR, Southern Blotting, mapping, and RFLP.

KEY FEATURES

SAMPLE SIZE:	fresh plant tissue or dry plant tissue
FORMAT:	96-Well Plates
OPERATION:	Centrifuge/Vacuum manifold
YIELD:	up to 80µg per well
OPERATION TIME:	90 minutes
APPLICATIONS:	PCR, Real-Time PCR, RFLP, Southern Blotting, Mapping

KIT CONTENTS

Component	IB47260	IB47261	IB47262
2ML COLLECTION PLATES	4	8	20
GR BUFFER	80ml	160ml	400ml
RNASE A (50MG/ML)	50µl	100µl	250µl

ORDERING INFORMATION

CATALOG#	DESCRIPTION
IB47260	2X96-WELL GENOMIC PLANT DNA KIT-2 PLATES
IB47261	4X96-WELL GENOMIC PLANT DNA KIT-4 PLATES
IB47262	10X96-WELL GENOMIC PLANT DNA KIT-10 PLATES

96-WELL PCR CLEAN-UP KITS

High-Throughput PCR Clean-Up

The 96-Well PCR Clean-Up/DNA Extraction Kits provide a high-throughput, rapid and economical method to purify DNA fragments. Chaotropic salt is used to denature enzymes and in this condition, DNA fragments are bound by the glass fiber matrix in each well of the plate. Once the contaminants have been removed, the purified DNA is eluted by a low salt elution buffer or water. Salts, enzymes, and unincorporated nucleotides are effectively removed from reaction mixtures without toxic phenol extraction or alcohol precipitation. This entire protocol can be completed in 30-40 minutes, and the eluted DNA is ready to use in restricted digestion, ligation, PCR and sequencing reactions.

Kit Contents

Component	IB47040	IB47050
DNA Binding Plates	4x96	10x96
0.35ml Collection Plates	4	10
Adhesive Film	8	20
Binding Buffer	120ml	320ml
Wash Buffer (add Ethanol)	50ml (200ml)	(2) 50ml ((2) 200ml)
Elution Buffer	30ml	60ml

Key Features

Sample Size:	up to 50µl of PCR product up to 50mg of agarose slice
Format:	96-Well Plates
Operation:	Centrifuge/Vacuum manifold
Binding capacity:	10µg per well
DNA Size:	50bp - 10kb
Recovery:	80-90% for Gel Extraction 90-95% for PCR Clean-Up
Operation time:	30 minutes for PCR Clean-Up 40 minutes for Gel Extraction

Ordering Information

Catalog#	Description
IB47040	4x96-Well PCR Clean-Up Kit-4 Plates
IB47050	10x96-Well PCR Clean-Up Kit-10 Plates

96-WELL TOTAL RNA KITS

High-Throughput RNA Purification from Cultured Cells

The 96-Well Total RNA Kit is specially designed for high-throughput purification of total RNA from up to 5x106 animal cultured cells. Using either vacuum or centrifuge, RNA preparations of 96/192 samples can be completed in approximately one hour. This method uses chaotropic salt to lyse cells and inactivate RNase. The RNA in the chaotropic salt is bound by the glass fiber matrix of each well. Once the contaminants have been removed, the purified RNA is eluted by RNase-Free water. The purified RNA is now ready to use in various downstream applications.

Key Features

Sample Size:	5x10^6 animal cultured cells
Format:	96-Well Plates
Operation:	Centrifuge/Vacuum manifold
Binding capacity:	up to 30µg per well
Expectant yield:	5-10µg for high-copy plasmid 0.5-5µg for low-copy plasmid
Operation time:	40 minutes
Applications:	RT-PCR, Real-Time PCR, Northern Blotting, mRNA Selection, Microassays, cDNA Synthesis

Kit Contents

Component	IB47360	IB47361
RNA Binding Plates	4x96	10x96
0.35ml Collection Plates	4	10
Adhesive Film	8	20
RB Buffer	100ml	240ml
W1 Buffer	130ml	(3) 130ml
Wash Buffer (add Ethanol)	(2) 50ml ((2) 200ml)	(6) 50ml ((6) 200ml)
RNase-Free Water	60ml	(2) 60ml

Ordering Information

Catalog#	Description
IB47360	4x96-Well Total RNA Kit-4 Plates
IB47361	10x96-Well Total RNA Kit-10 Plates

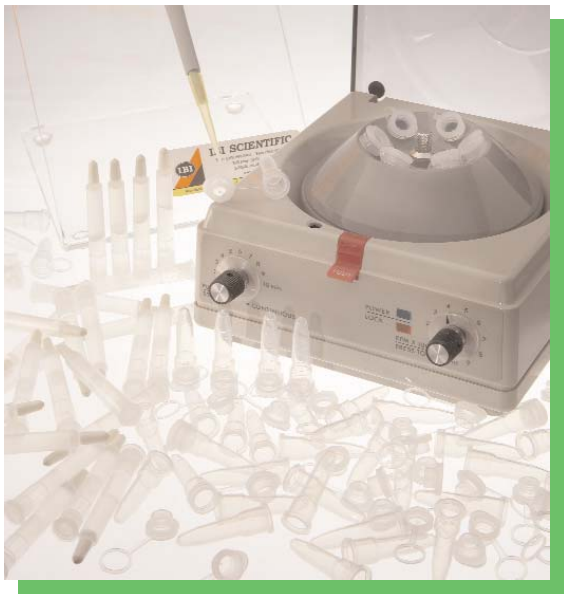
Check out our Vacuum Manifold on page 79!

SPIN COLUMNS

Gel filtration is a commonly used technique for buffer exchange and desalting, removal of small unincorporated labeled nucleotide products from DNA, riboprobe cleanup, and dideoxy terminator removal and protein purification between 6,000 and 40,000 molecular weight. IBI offers pre-made gel filtration columns with either G-25 or G-50 Sephadex® saturated with either STE or TE buffer. All columns are RNase and DNase free.

The Select-D Sephadex® G-25 columns are intended for purification of DNA, including reaction mixtures, desalting, recovering DNA fragment (>12mer) unincorporated radio labeled deoxynucleotide triphosphates (dNTPs) from small volume 5'-end-labeling reactions, primer-dimer, fill-in labeling reactions, and enzymes that may inhibit subsequent applications.

The Select-D G-25 are pre-packed spin columns for rapid purification of oligoribonucleotides and RNA. These columns are also DNase and RNase free and are recommended for 12mer up to 72bp. The Select-D G-50 are pre-packed spin columns for rapid purification of oligoribonucleotides and RNA. The columns are DNase and RNase free and recommended for purification of DNA or RNA greater than 72bp in length.



ORDERING INFORMATION

CATALOG#	DESCRIPTION	MAX. SAMPLE	QTY
IB06000	MINI SELECT-D, G-25, TE	20µL	50
IB06005	MINI SELECT-D, G-50, TE	20µL	50
IB06010	MIDI SELECT-D, G-25, TE	50µL	50
IB06015	MIDI SELECT-D, G-50, TE	50µL	50
IB06020	MIDI SELECT-D, G-50, STE	50µL	50
IB06030	MAXI SELECT-D, G-25, TE	100µL	50
IB06035	MAXI SELECT-D, G-50, TE	100µL	50
IB06040	MAXI SELECT-D, G-25, STE	100µL	50
IB06045	MAXI SELECT-D, G-50, STE	100µL	50
IB06050	NU-CLEAN D50/SEPHADEX, G-50, STE	100µL	10
IB06055	NU-CLEAN D50/SEPHADEX, G-50, STE	100µL	25
IB06060	NU-CLEAN D25/SEPHADEX, G-25, STE	100µL	10
IB06065	NU-CLEAN D25/SEPHADEX, G-25, STE	100µL	25
IB06080	NU-CLEAN R50/SEPHADEX, STE	100µL	10
IB06100	LARGE MICRO COLUMNS W/CAPS	-	50
IB06110	COLLECTION TUBES W/CAPS	1ML	50
IB06200	MINI COLUMNS	-	50
IB06210	COLLECTION TUBES W/CAPS	2ML	50
IB06150	SEPHADEX™ G-50, SUPERFINE	-	100GM

*Sephadex is a trademark of GE-Biosciences

**All MINI and MIDI spin column kits come complete with 2ml collection tubes, while the MAXI Select-D and Nu-Clean spin column kits come complete with 1ml collection tubes.

***IBI Spin Columns are available in three sizes; MINI (20µl), MIDI (50µl), and MAXI(100µl). These columns are pre-hydrated with either TE or STE buffer for ease of use and extended shelf life.

RECOVERIES (G-25)

- **Pd(N)12** . . . . . >60%
- **Pd(N)19-24** . . . . . >80%
- **Large oligonucleotides** . . . . . >85%
- **Retention of unincorporated nucleotides** . . . . >90%

RECOVERIES (G-50)

- **DNA >72 base pairs** . . . . . >90%
- **RNA >72 base pairs** . . . . . >80%
- **Retention of unincorporated nucleotides** . . . . >90%

COLUMN SIZES

Size	Max. Volume	Centrifuge
MINI	20µl	TableTop
MIDI	50µl	TableTop
MAXI	100µl	Clinical w/Swing Bucket
Nu-Clean	100µl	Clinical w/Swing Bucket

SPECIFICATIONS (G-25)

- Bead Size: 20 - 50µm
- Globular Proteins: 1,000 - 5,000
- DNA: 20 to 72bp

SPECIFICATIONS (G-50)

- Bead Size: 20 - 80µm
- Globular Proteins: 1,500 - 30,000
- DNA: >72bp

FLEX TUBES

ORDERING INFORMATION

CATALOG#	DESCRIPTION	VOLUME	QTY
IB48010	MIDI FLEX TUBE KIT, 3.5K	800µL	10 TUBE KIT
IB48013	MIDI FLEX TUBE KIT, 3.5K	800µL	2 TUBE KIT
IB48020	MIDI FLEX TUBE KIT, 6-8K	800µL	10 TUBE KIT
IB48023	MIDI FLEX TUBE KIT, 6-8K	800µL	2 TUBE KIT
IB48030	REPLACEMENT MINI TUBES, 6-8K	250µL	10 TUBES
IB48035	REPLACEMENT MINI TUBES, 6-8K	250µL	30 TUBES
IB48110	REPLACEMENT MIDI TUBES, 3.5K	800µL	10 TUBES
IB48112	REPLACEMENT MIDI TUBES, 3.5K	800µL	30 TUBES
IB48120	REPLACEMENT MIDI TUBES, 6-8K	800µL	10 TUBES
IB48210	REPLACEMENT MAXI TUBES, 3.5K	3ML	50 TUBES
IB48001	MINI FLEX TUBE SUPPORT TRAY	-	4 PLACE
IB48002	MIDI FLEX TUBE SUPPORT TRAY	-	4 PLACE
IB48003	MAXI FLEX TUBE SUPPORT TRAY	-	3 PLACE
IB48004	MINI FLEX TUBE FLOAT	-	9 PLACE
IB48005	MIDI FLEX TUBE FLOAT	-	4 PLACE
IB48006	MAXI FLEX TUBE FLOAT	-	7 PLACE

Sodium dodecyl sulfate-polyacrylamide gel electrophoresis (SDS-PAGE) is a widely used technique for the separation and estimation of the molecular weight of individual proteins. However, the accuracy of this molecular weight determination is often inadequate for protein characterization. More recently, MALDI-TOFMS has found widespread use for the determination of the molecular mass of intact proteins isolated from gels. The isolation of proteins from gels with the newly developed Flex Tube electroelution system has over 80% recovery yields. This combination of SDS-PAGE, Flex Tube electroelution system, and MALDI-TOFMS is attractive since it offers potential of providing a much more accurate determination of protein molecular weight. Moreover, even difficult proteins can be analyzed, such as integral membrane proteins (hydrophobic) or high molecular mass proteins, can be analyzed. This unique method provides a powerful means for characterizing endogenous proteins of wide molecular weight ranges separated by SDS-PAGE methods. The combination of these three methods provides significantly improved protein yield and SDS-Free samples. The end result is a MALDI-MS analysis with greater sensitivity.

There are two applications that can be performed by IBI Flex Tubes, gel extraction and dialysis. IBI Flex Tubes can be used for in-gel extraction of proteins, oligonucleotides, DNA, and RNA from polyacrylamide and agarose gels. The IBI gel extraction kits include Flex Tubes with the appropriate MWCO cutoff, a tube support, and an instruction manual.

YIELD RESULTS

Yield of Molecule Recovery	%
DNA or RNA from an Agarose Gel	90%
DNA or RNA from a Polyacrylamide Gel	75%
Protein from SDS-PAGE Gel	60%