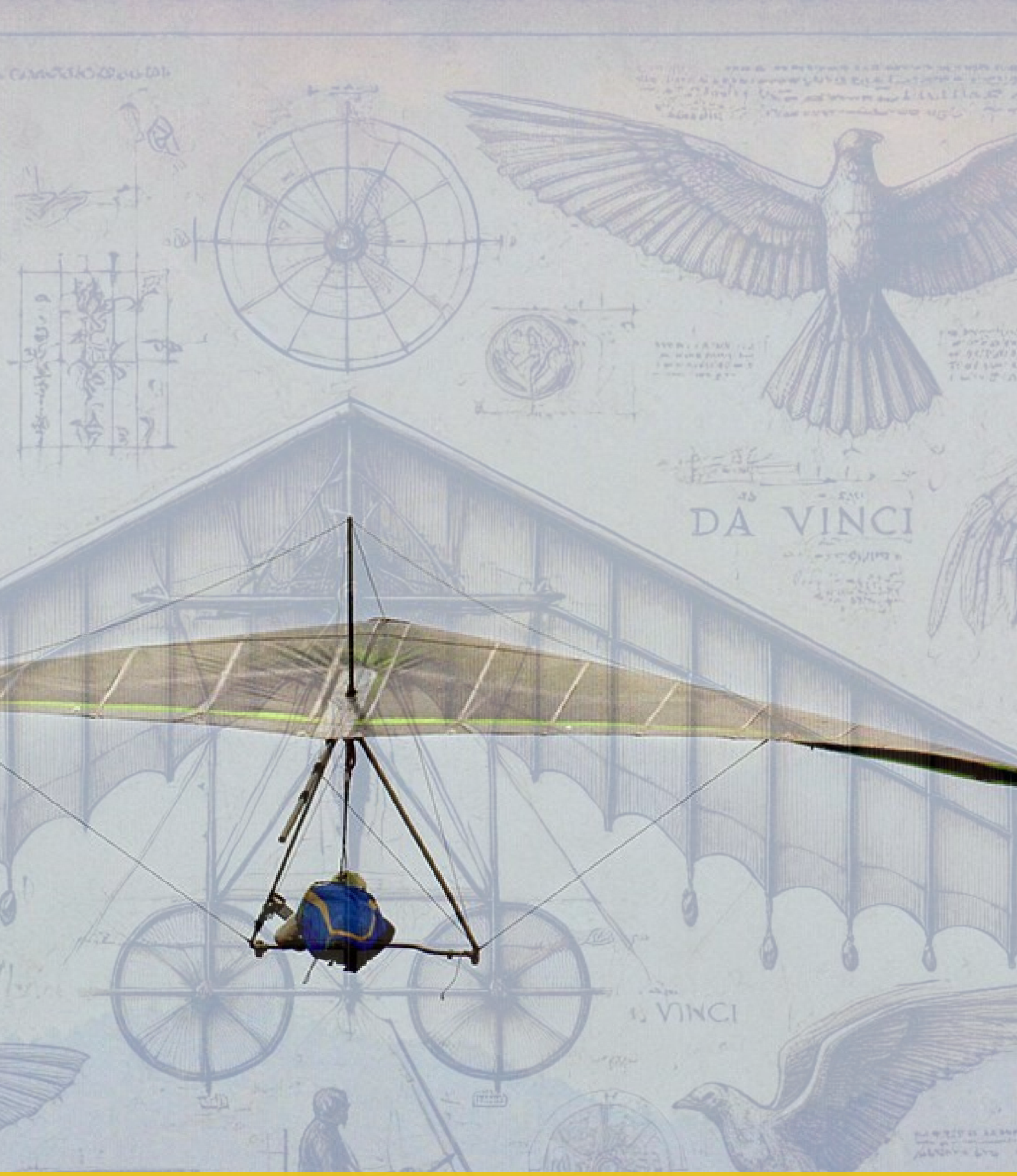


Nucleic Acid Purification

2

NUCLEIC ACID PURIFICATION

We offer kits for nucleic acid purification from various biological samples. For greater flexibility, we provide kits based on the salting-out principle for molecule precipitation, pre-packed columns with homogeneous silica gel (High-Q™ Spin Columns) and magnetic systems are also available. Choosing one of these systems largely depends on the sample type and initial sample size. In all cases, the results are excellent in terms of yield, purity, and quality for all downstream applications.

Purification System Selection Guide

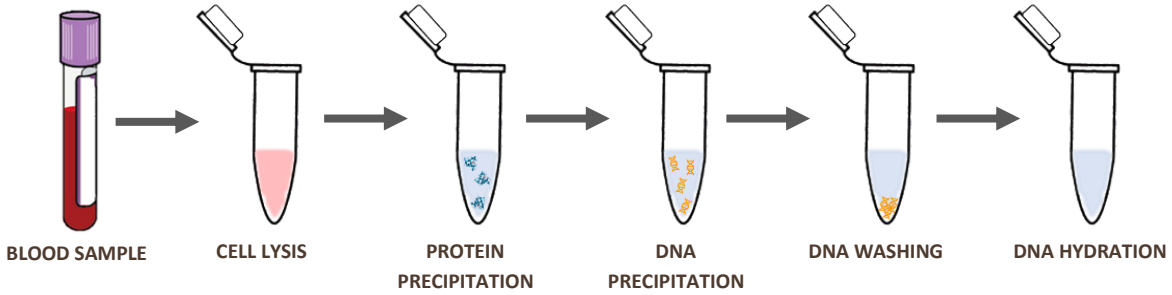
	DNA	RNA	SAMPLE TYPE: BLOOD	CULTURED CELL	BUCCAL SWAB	SALIVA	TISSUE	KERATINOUS TISSUE	PLANTS	MICROBIAL	STOOL	SOIL	ENZIMATIC REACTIONS & AGAROSE GEL
Blood Genomic DNA Purification Mini Kit *(TBK0127-0128)* | **Midi Kit** *(TBK0129-0130)* | **Maxi Kit** *(TBK0131-0132)*	✓		✓										
High-Q™ Spin-Column Blood & Cell Culture Genomic DNA Purification Kit *(TBK0122-0123)*	✓		✓	✓									
High-Q™ Magnetic Blood Genomic DNA Purification Kit *(TBK0386-0387)*	✓		✓										
High-Q™ Automated Magnetic-16 Blood Genomic DNA Purification Kit *(TBK0215-0218)*	✓		✓										
High-Q™ Automated Magnetic-96 Blood Genomic DNA Purification Kit *(TBK0219)*	✓		✓										
Buccal Swab Genomic DNA Purification Kit *(TBK0136-0137)*	✓				✓								
Saliva Genomic DNA Purification Kit *(TBK0146-0147)*	✓					✓							
High-Q™ Spin-Column Buccal Swab Genomic DNA Purification Kit *(TBK0141-0142)*	✓				✓								
High-Q™ Spin-Column Saliva Genomic DNA Purification Kit *(TBK0151-0152)*	✓					✓							
Tissue Genomic DNA Purification Mini Kit ***(TBK0156-0157)*** | **Midi Kit** *(TBK0158-0159)*	✓						✓						
High-Q™ Spin-Column Tissue Genomic DNA Purification Kit *(TBK0163-0164)*	✓						✓						
High-Q™ Spin-Column Keratinous Tissue Genomic DNA Purification Kit *(TBK0172-0173)*	✓							✓					
High-Q™ Spin-Column Vaginal Genomic DNA Purification Kit *(TBK0175-0176)*	✓						✓						
High-Q™ Magnetic Tissue Genomic DNA Purification Kit *(TBK0389-0390)*	✓						✓						
High-Q™ Automated Magnetic-16 Tissue Genomic DNA Purification Kit *(TBK0330-0333)*	✓						✓						
High-Q™ Automated Magnetic-96 Tissue Genomic DNA Purification Kit *(TBK0334)*	✓						✓						
High-Q™ Spin-Column Plant Genomic DNA Purification Kit *(TBK0167-0169)*	✓								✓				
High-Q™ 96-Spin-Column Plant Genomic DNA Purification Kit *(TBK0204-0205)*	✓								✓				
High-Q™ Magnetic Plant Genomic DNA Purification Kit *(TBK0227-0228)*	✓								✓				

	DNA	RNA	BLOOD	CULTURED CELL	BUCCAL SWAB	SALIVA	TISSUE	KERATINOUS TISSUE	PLANTS	MICROBIAL	STOOL	SOIL	ENZIMATIC REACTIONS & AGAROSE GEL
	SAMPLE TYPE												
High-Q™ Automated Magnetic-16 Plant Genomic DNA Purification Kit *(TBK0220-0223)*	✓								●				
High-Q™ Automated Magnetic-96 Plant Genomic DNA Purification Kit *(TBK0224)*	✓								●				
High-Q™ Spin-Column Bacterial Genomic DNA Purification Kit *(TBK0116-0117)*	✓									●			
High-Q™ Spin-Column Yeast Genomic DNA Purification Kit *(TBK0181-0182)*	✓									●			
High-Q™ Spin-Column Fungal Genomic DNA Purification Kit *(TBK0255-0256)*	✓									●			
High-Q™ Spin-Column Stool Genomic DNA Purification Kit *(TBK0289-0290)*	✓										●		
High-Q™ Spin-Column Soil Genomic DNA Purification Kit *(TBK0250-0251)*	✓											●	
High-Q™ Magnetic Soil Genomic DNA Purification Kit *(TBK0392-0393)*	✓											●	
Plasmid DNA Purification Kit *(TBK0183-0184)*	✓									●			
High-Q™ Spin-Column Plasmid DNA Purification Kit *(TBK0186-0187)*	✓									●			
Exo/ SAP Cleanup Kit *(TBK0298-0299)*	✓												●
High-Q™ Spin-Column Cleanup DNA Purification Kit *(TBK0196-0197)*	✓												●
High-Q™ Spin-Column Gel Extraction & Cleanup Purification Kit *(TBK0191-0192)*	✓												●
Tiarizol™ Reagent *(TBR0100-0101)*	✓	✓	●	●	●	●	●	●	●	●	●	●	
High-Q™ Spin-Column Tiarizol™ Plus RNA Purification Kit *(TBK0244-0245)*		✓	●	●	●	●	●	●	●	●	●	●	
High-Q™ Spin-Column Blood RNA Purification Kit *(TBK0266-0267)*		✓	●										
High-Q™ Spin-Column Cultured Cell RNA Purification Kit *(TBK0262-0263)*		✓		●									
High-Q™ Magnetic Cultured Cell RNA Purification Kit *(TBK0410-0411)*		✓		●									
High-Q™ Spin-Column Tissue RNA Purification Kit *(TBK0268-0269)*		✓					●						
High-Q™ Magnetic Tissue RNA Purification Kit *(TBK0404-0405)*		✓					●						
High-Q™ Spin-Column Plant RNA Purification Kit *(TBK0279-0281)*		✓							●				
High-Q™ Magnetic Plant RNA Purification Kit *(TBK0407-0408)*		✓							●				
High-Q™ Spin-Column Bacterial RNA Purification Kit *(TBK0271-0272)*		✓								●			
High-Q™ Spin-Column Viral RNA Purification Kit *(TBK0212-0214)*		✓								●			
High-Q™ 16-Magnetic Viral RNA Purification Kit *(TBK0230-0232)*		✓								●			

Salting-out *High-Q™ Spin Column* *Magnetic Beads* *Enzymatic Reaction* *Phase Separation*

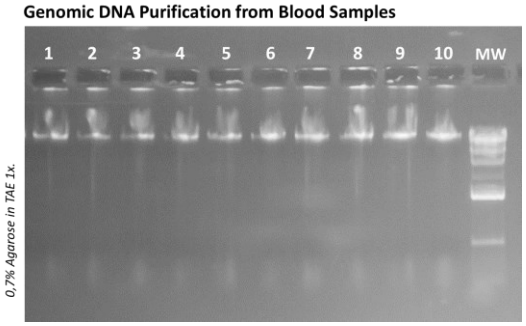
GENOMIC DNA PURIFICATION

Blood Genomic DNA Purification Kit | *Salting out*



Features

- For **fresh or frozen whole blood**.
- Valid for blood in heparin, citrate or EDTA.
- Efficient procedures that **allow sample scale up**.
- Use of **non-toxic products**.
- **High-yield** (~30 µg/ mL) and high-purity purification ($A_{260}/_{280}$ =1.7-2.0).
- **Optimal DNA quality** for downstream applications.



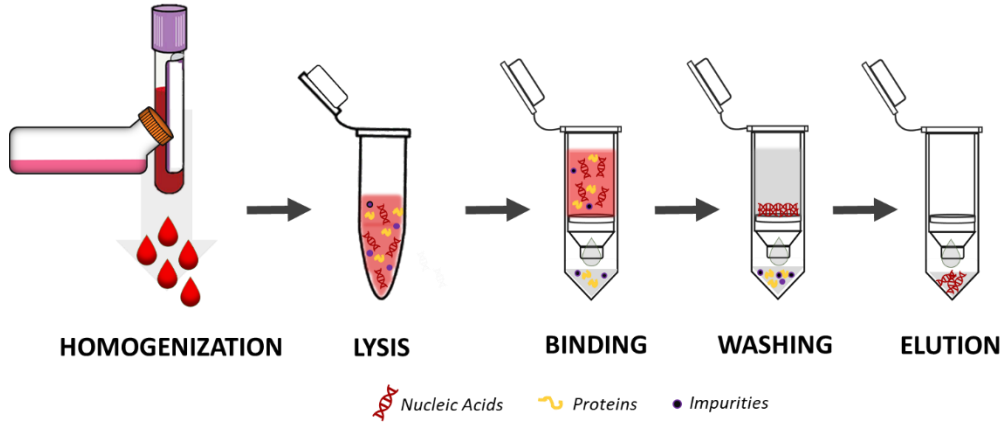
Applications

- PCR and real-time qPCR.
- DNA digestion for Southern.
- SNP Analysis.
- Sequencing.

REFERENCES	DESCRIPTION	SAMPLE SIZE	FORMAT
TBK0127	BLOOD GENOMIC DNA PURIFICATION MINI KIT	200 µL	50 rxn
TBK0128	BLOOD GENOMIC DNA PURIFICATION MINI KIT	200 µL	200 rxn
TBK0129	BLOOD GENOMIC DNA PURIFICATION MIDI KIT	2 mL	20 rxn
TBK0130	BLOOD GENOMIC DNA PURIFICATION MIDI KIT	2 mL	200 rxn
TBK0131	BLOOD GENOMIC DNA PURIFICATION MAXI KIT	5 mL	8 rxn
TBK0132	BLOOD GENOMIC DNA PURIFICATION MAXI KIT	5 mL	80 rxn

Blood Genomic DNA Purification Kit | *High-Q™ Spin Column*

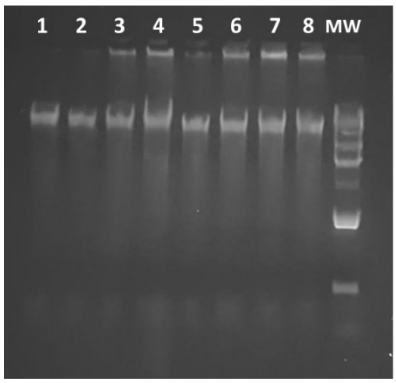
Silica-membrane-based DNA purification kit to obtain genomic DNA with high quality and purity. Suitable for blood, plasma, serum and other body fluids as well as for cell culture samples.



Features

- Valid for blood in heparin, citrate or EDTA.
- **High-yield** (~2-15 µg) and high-purity purification ($A_{260/280}$ =1.7-2.0).
- **Optimal DNA quality** for downstream applications.
- **Versatile**, kit useful to isolate genomic DNA from blood and cultured cells.

Blood gDNA Purification based on High-Q™ Spin Column Kit



0.7% Agarose in TAE1x stained with TiarisStain™

Applications

- Isolation of genomic DNA from fresh or frozen blood from animals or humans.
- Isolation of genomic DNA from cultured cells.
- PCR and real-time qPCR.
- DNA digestion for Southern.
- SNP Analysis.
- Sequencing.

REFERENCES	DESCRIPTION	FORMAT
TBK0122	HIGH-Q™ SPIN-COLUMN BLOOD & CELL CULTURE GENOMIC DNA PURIFICATION KIT	50 rxn
TBK0123	HIGH-Q™ SPIN-COLUMN BLOOD & CELL CULTURE GENOMIC DNA PURIFICATION KIT	200 rxn

Complementary Products

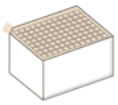
- ✓ **HIGH-Q™ Agarose LE** (TBR0120, TBR0121, TBR0122)
- ✓ **TAE Buffer 10x** (TBB0355, TBB0356)
- ✓ **TiariStain™ Green Safe** (TBR0226)

Blood Genomic DNA Purification Kit | *Magnetic Beads*

Blood genomic DNA purification kits based on magnetic principles are available in a wide variety of formats. They can be used manually with magnets or magnetic racks, or in automated systems designed for instruments that process 32 or 96 samples per run.

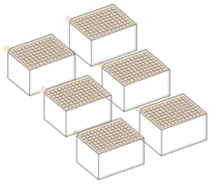
Manual

- ✓ Low throughput.
- ✓ For magnetic racks.



Automated Procedure

- ✓ 16 Samples per plate, up 32 per run.
- ✓ Medium throughput.
- ✓ For Bioer, Biobase or similar instruments.

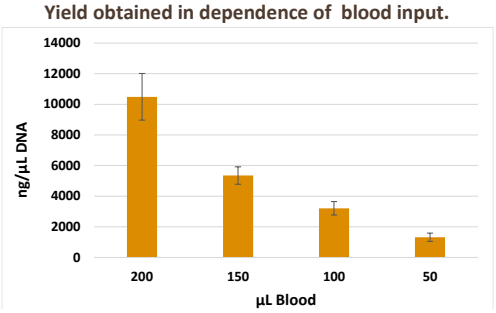


Automated Procedure

- ✓ 96 Samples per plate, 96 per run.
- ✓ High throughput.
- ✓ For KingFisher or similar instruments.

Features

- **Low to high throughput.**
- **Highest DNA quality** for all downstream applications.
- Yield related with blood sample.



REFERENCES	DESCRIPTION	FORMAT	PREFILLED PLATES
TBK0386	HIGH-Q™ MAGNETIC BLOOD GENOMIC DNA PURIFICATION KIT	100 rxn*	
TBK0387	HIGH-Q™ MAGNETIC BLOOD GENOMIC DNA PURIFICATION KIT	400 rxn*	
TBK0215-NP	HIGH-Q™ AUTOMATED MAGNETIC-16 BLOOD GENOMIC DNA PURIFICATION KIT	480 rxn**	-
TBK0215-P	HIGH-Q™ AUTOMATED MAGNETIC-16 BLOOD GENOMIC DNA PURIFICATION KIT	480 rxn**	30
TBK0216-NP	HIGH-Q™ AUTOMATED MAGNETIC-16 BLOOD GENOMIC DNA PURIFICATION KIT	320 rxn**	-
TBK0216-P	HIGH-Q™ AUTOMATED MAGNETIC-16 BLOOD GENOMIC DNA PURIFICATION KIT	320 rxn**	20
TBK0217-NP	HIGH-Q™ AUTOMATED MAGNETIC-16 BLOOD GENOMIC DNA PURIFICATION KIT	160 rxn**	-
TBK0217-P	HIGH-Q™ AUTOMATED MAGNETIC-16 BLOOD GENOMIC DNA PURIFICATION KIT	160 rxn**	10
TBK0218-NP	HIGH-Q™ AUTOMATED MAGNETIC-16 BLOOD GENOMIC DNA PURIFICATION KIT	32 rxn**	-
TBK0218-P	HIGH-Q™ AUTOMATED MAGNETIC-16 BLOOD GENOMIC DNA PURIFICATION KIT	32 rxn**	2
TBK0219-P	HIGH-Q™ AUTOMATED MAGNETIC-96 BLOOD GENOMIC DNA PURIFICATION KIT	96 rxn***	6

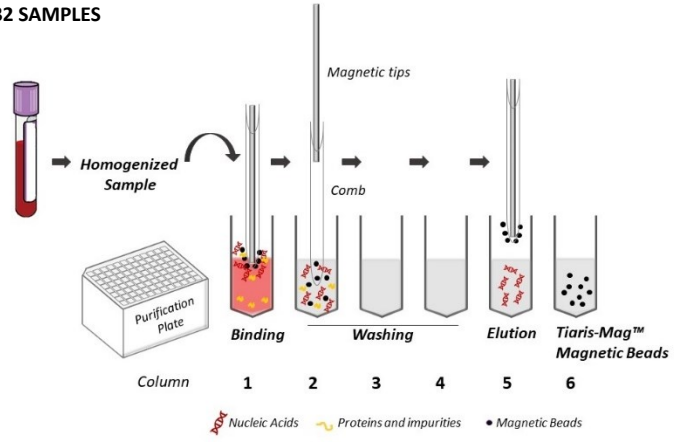
NP, non-prefilled plates | P, prefilled plates

** Manual Procedure*

*** Automatized Procedure, 16 samples per plate, 32 samples at the same time (Bioer, Biobase or similar instruments)*

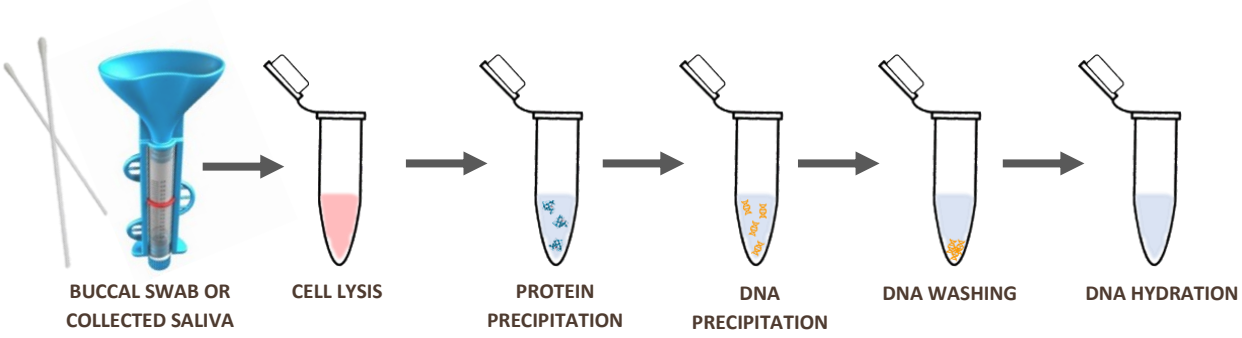
**** Automatized Procedure, 96 samples at the same time (KingFisher or similar instruments)*

AUTOMATED SYSTEM FOR 32 SAMPLES



Buccal Swab and Saliva Genomic DNA Purification Kit | *Salting out*

Both buccal swab or saliva genomic DNA Purification kits are excellent tools based on salting-out principle to produced higher quantity and quality DNA from swab or saliva samples.



Features

- Use of **no invasive samples**.
- **Cost-efficient** method.
- Detailed and **protocol workflow diagrams**.
- **High-yield and purity** purification.
- **Optimal DNA** for downstream applications.

Applications

- Standard and quantitative PCR.
- Genotyping.
- SNP Analysis.
- Sequencing.

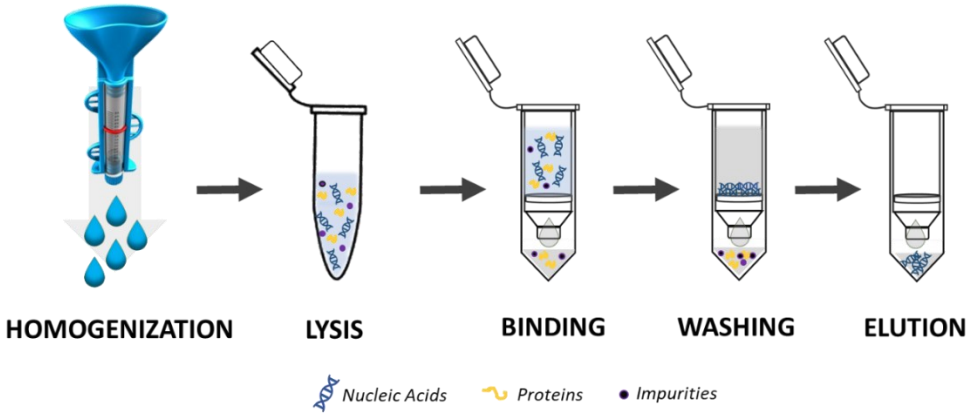
REFERENCES	DESCRIPTION	FORMAT
TBK0136	BUCCAL SWAB GENOMIC DNA PURIFICATION KIT	50 rxn
TBK0137	BUCCAL SWAB GENOMIC DNA PURIFICATION KIT	200 rxn
TBK0146	SALIVA GENOMIC DNA PURIFICATION KIT	50 rxn
TBK0147	SALIVA GENOMIC DNA PURIFICATION KIT	200 rxn

Complementary Products

- ✓ **SimplOFy® Saliva DNA Collection Kit** (SIMPL-301, SIMPL-301B)
- ✓ **Buccal Swab Collection & Stabilization Kit** (TBK0307, TBK0308, TBK0309)

Buccal Swab & Saliva Genomic DNA Purification Kit | *High-Q™ Spin Column*

These kits provide a noninvasive method for obtaining genomic DNA. They are silica-membrane-based DNA purification kits to obtain total DNA from mucosal epithelial cells with high quality and purity. Suitable for DNA extraction from buccal, nasal and vaginal swabs.



Features

- Use of **no invasive samples**.
- Based on High-Q™ silica columns.
- Detailed protocol including **workflow diagram**.
- **High-yield** purification.
- **Optimal DNA** for downstream applications.

Applications

- Standard and quantitative PCR.
- Genotyping.
- SNP Analysis.
- Sequencing.

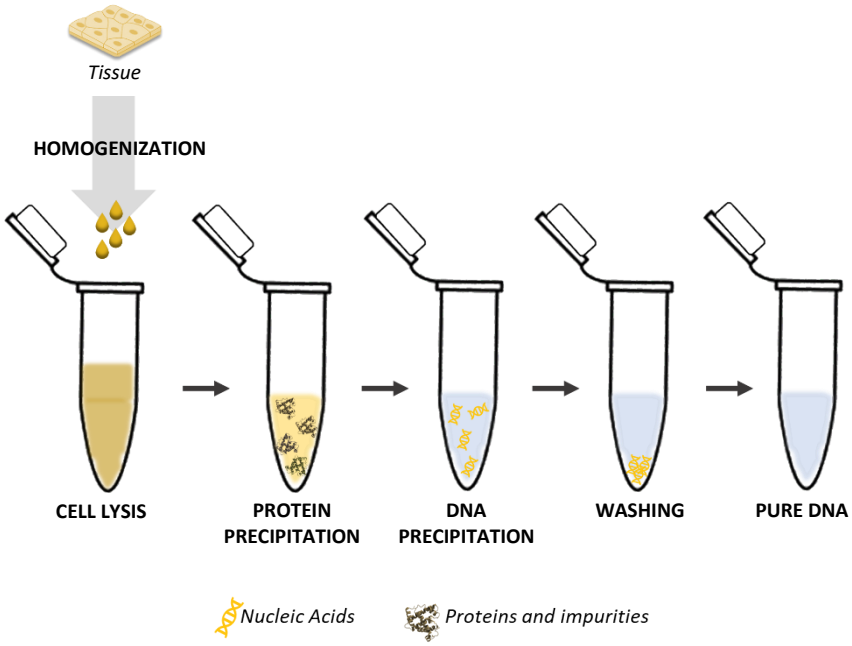
REFERENCES	DESCRIPTION	FORMAT
TBK0141	HIGH-Q™ SPIN COLUMN BUCCAL SWAB GENOMIC DNA PURIFICATION KIT	50 rxn
TBK0142	HIGH-Q™ SPIN COLUMN BUCCAL SWAB GENOMIC DNA PURIFICATION KIT	200 rxn
TBK0151	HIGH-Q™ SPIN COLUMN SALIVA GENOMIC DNA PURIFICATION KIT	50 rxn
TBK0152	HIGH-Q™ SPIN COLUMN SALIVA GENOMIC DNA PURIFICATION KIT	200 rxn

Complementary Products

- ✓ **DNA-SAL™ Saliva Collection Kit** (DNAS-102, DNAS-102B)
- ✓ **Buccal Swab Collection & Stabilization Kit** (TBK0307, TBK0308, TBK0309)

Tissue Genomic DNA Purification Kit | *Salting Out*

Tissue Genomic DNA Purification Kit based on salting-out principle produces higher quantity and quality of DNA. These kits are optimized to obtain high molecular weight genomic DNA from fresh or frozen tissue. The protocol involved tissue homogenization, cell lysis, protein and DNA precipitation and salts elimination by washing of DNA before resuspension of DNA.



Features

- Cost-effective.
- **High yield** and purity,

Tissue Sample	Yield	A_{260}/A_{280}
10 mg	50 µg	1.8
100 mg	150-500 µg	1.8

- **Scalable**, easily to process many samples simultaneously.
- **No phenol extraction**.
- **Fast and easy** protocol.

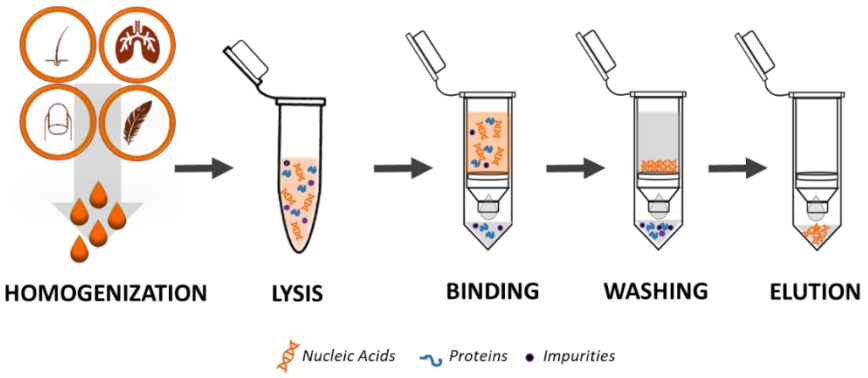
Applications

DNA obtained is suitable for downstream molecular biology applications such as PCR, enzymatic digestion for cloning or Southern, genotyping, etc.

REFERENCES	DESCRIPTION	SAMPLE SIZE	FORMAT
TBK0156	TISSUE GENOMIC DNA PURIFICATION MINI KIT	5- 10 mg	50 rxn
TBK0157	TISSUE GENOMIC DNA PURIFICATION MINI KIT	5-10 mg	200 rxn
TBK0158	TISSUE GENOMIC DNA PURIFICATION MIDI KIT	50-100 mg	20 rxn
TBK0159	TISSUE GENOMIC DNA PURIFICATION MIDI KIT	50-100 mg	50 rxn

Tissue Genomic DNA Purification Kit | *High-Q™ Spin Columns*

Tissue genomic DNA isolation kits are efficient silica-membrane-based systems designed for genomic DNA purification from a wide variety of tissue sources, including kidney, heart, lungs, brain, muscles, liver, spleen, vaginal, keratinous tissue, etc. The use of an optimized lysis buffer guarantees a high yield, while our High-Q™ Spin Columns recover high-quality DNA suitable for downstream applications like PCR, multiplex-PCR, genotyping and a wide range of other enzymatic reactions.



Features

- **Versatile**, efficient DNA purification from a wide variety of animal and human tissues.
- Starting material **up to 100 mg of tissue sample**.
- Typical yields are 0.5- 50 µg of DNA depending on the material tissue used.
- No organic extraction, no ethanol precipitation.
- **Easy and Fast protocol**.

Applications

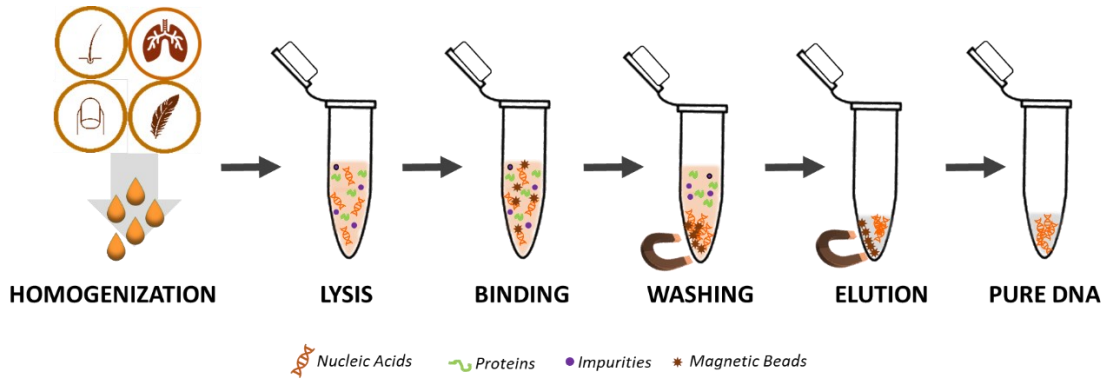
- Purification of DNA tissue using different starting plant materials: frozen, fresh, or stabilized with Tiaris™ Tissue Protect (*TBB0431*).
- DNA obtained is optimal for downstream molecular biology applications such as PCR, enzymatic digestion for cloning or Southern, genotyping, etc.

Tissue	Sample Amount	µg DNA
Brain	25 mg	15-30
Heart	25 mg	5-10
Kidney	25 mg	10-25
Liver	25 mg	15-30
Lung	25 mg	5-10
Mouse Tail	0.5-1.0 cm	5-25
Nail	20 mg	0.5-2.3
Rat Tail	0.6 cm	20-35
Spleen	10 mg	5-25

REFERENCES	DESCRIPTION	FORMAT
TBK0163	HIGH-Q™-SPIN COLUMN TISSUE GENOMIC DNA PURIFICATION KIT	50 rxn
TBK0164	HIGH-Q™-SPIN COLUMN TISSUE GENOMIC DNA PURIFICATION KIT	200 rxn
TBK0172	HIGH-Q™-SPIN COLUMN KERATINOUS TISSUE GENOMIC DNA PURIFICATION KIT	50 rxn
TBK0173	HIGH-Q™-SPIN COLUMN KERATINOUS TISSUE GENOMIC DNA PURIFICATION KIT	200 rxn
TBK0175	HIGH-Q™-SPIN COLUMN VAGINAL GENOMIC DNA PURIFICATION KIT	50 rxn
TBK0176	HIGH-Q™-SPIN COLUMN VAGINAL GENOMIC DNA PURIFICATION KIT	200 rxn

Tissue Genomic DNA Purification Kit | *Magnetic Beads*

Magnetic Tissue DNA Purification Kits are a new generation of nucleic acid purification system intended for manual or automated purification. It is based on Tiaris-Mag™ Magnetic beads, a homogenous silica-coated paramagnetic beads for purification of nucleic acids combined with a powerful step of lysis using an optimized lysis buffers that contain large amounts of detergents and reducing agents and proteinase K. Released nucleic acids are bound to the surface of Tiaris-Mag™ Magnetic beads in the presence of a chaotropic salt. Nucleic acid bound to the beads is then efficiently washed and eluted using a magnetic separation device, removing contaminants.



Features

- **Medium throughput**.
- Quick and convenient **DNA extraction from different samples**.
- Yield between 5-100 µg de genomic DNA.
- **Highest DNA quality** for all downstream applications.
- **Validated** with different tissues: ear cartilage, tail, liver, kidney, etc.

Applications

- Standard and quantitative PCR.
- Genotyping.
- Sequencing.
- Enzyme digestion.

REFERENCES	DESCRIPTION	FORMAT	PREFILLED PLATES
TBK0389	HIGH-Q™ MAGNETIC-TISSUE GENOMIC DNA PURIFICATION KIT	100 rxn*	-
TBK0390	HIGH-Q™ MAGNETIC-TISSUE GENOMIC DNA PURIFICATION KIT	400 rxn*	-
TBK0330-NP	HIGH-Q™ AUTOMATED MAGNETIC-16 TISSUE GENOMIC DNA PURIFICATION KIT	64 rxn**	-
TBK0330-P	HIGH-Q™ AUTOMATED MAGNETIC-16 TISSUE GENOMIC DNA PURIFICATION KIT	64 rxn**	4
TBK0331-NP	HIGH-Q™ AUTOMATED MAGNETIC-16 TISSUE GENOMIC DNA PURIFICATION KIT	160 rxn**	-
TBK0331-P	HIGH-Q™ AUTOMATED MAGNETIC-16 TISSUE GENOMIC DNA PURIFICATION KIT	160 rxn**	10
TBK0332-NP	HIGH-Q™ AUTOMATED MAGNETIC-16 TISSUE GENOMIC DNA PURIFICATION KIT	320 rxn**	-
TBK0332-P	HIGH-Q™ AUTOMATED MAGNETIC-16 TISSUE GENOMIC DNA PURIFICATION KIT	320 rxn**	20
TBK0333-NP	HIGH-Q™ AUTOMATED MAGNETIC-16 TISSUE GENOMIC DNA PURIFICATION KIT	480 rxn**	-
TBK0333-P	HIGH-Q™ AUTOMATED MAGNETIC-16 TISSUE GENOMIC DNA PURIFICATION KIT	480 rxn**	30
TBK0334	HIGH-Q™ AUTOMATED MAGNETIC-96 TISSUE GENOMIC DNA PURIFICATION KIT	96 rxn***	6

NP, non-prefilled plates | P, prefilled plates

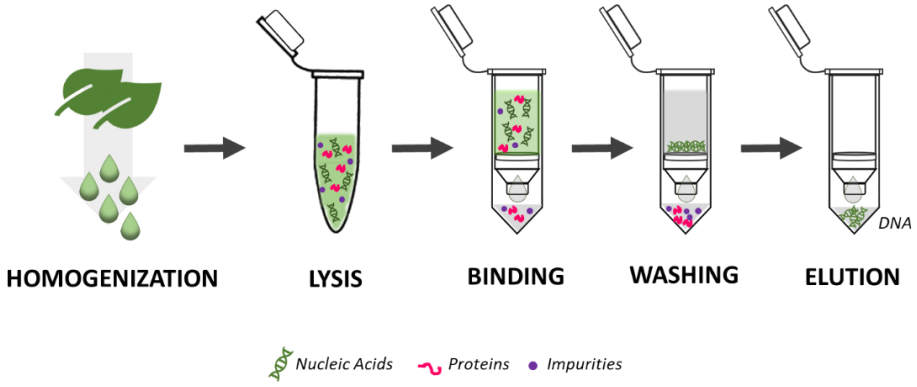
** Manual Procedure*

*** Automatized Procedure, 16 samples per plate, 32 samples at the same time (Bioer, Biobase or similar instruments)*

**** Automatized Procedure, 96 samples at the same time (KingFisher or similar instruments)*

Plant Genomic DNA Purification Kit | *High-Q™ Spin Columns*

Plant genomic isolation based on the use of High-Q™ Spin Columns is suitable for DNA purification from a wide variety of plant species. The kit combines a lysis step with an optimized lysis buffer and the binding and washing of DNA adsorbed in High-Q™ Spin Columns allowing the obtention of good quality DNA.



Features

- **Easy and Fast protocol.**
- Starting material up to 100 mg of **fresh material** and up to 50 mg of **dried plant** material.
- Typical **yields are 2- 50 µg of DNA** depending on the material plant used.
- Detailed protocol including **workflow diagram**
- No organic extraction, no ethanol precipitation.
- **High DNA purity**, the isolated DNA is ready to use for downstream molecular biology applications.

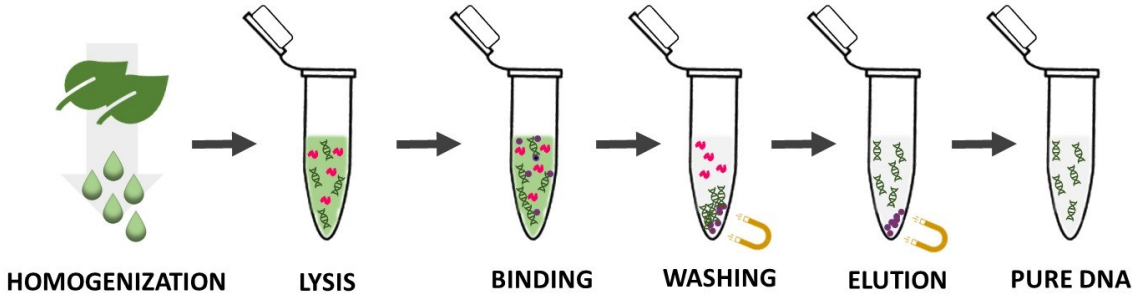
Applications

- Purification of DNA from plant tissue, including plant cells, leaves, seeds, fruits or roots.
- Purification of DNA plant using different starting plant materials: frozen, fresh or dried.
- DNA obtained is suitable for downstream molecular biology applications such as PCR, enzymatic digestion for cloning or Southern, genotyping, etc.

REFERENCES	DESCRIPTION	FORMAT
TBK0167	HIGH-Q™-SPIN COLUMN PLANT GENOMIC DNA PURIFICATION KIT	50 rxn
TBK0168		100 rxn
TBK0169		200 rxn
TBK0204	HIGH-Q™-96 SPIN COLUMN PLANT GENOMIC DNA PURIFICATION KIT	96 rxn
TBK0205		192 rxn

Vacuum system to purify DNA using High-Q™ 96 minispin columns.

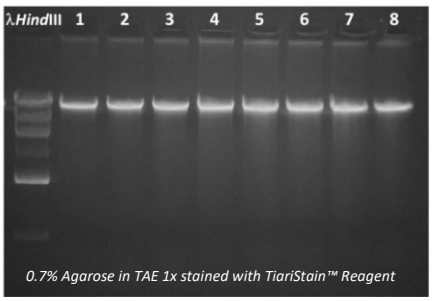
Plant Genomic DNA Purification Kit | *Magnetic Beads*



Features

- **Versatile**, useful for manual (*low throughput*) or automated procedures (*medium or high throughput*).
- **High yield**, 2- 30 µg of DNA depending on the plant material used.

Magnetic DNA Purification from Spinach Samples.



Applications

- Purification of DNA from plant tissue, including plant cells, leaves, seeds, fruits or roots.
- Purification of DNA plant using different starting plant materials: frozen, fresh or dried.
- DNA obtained is suitable for downstream molecular biology applications such as PCR, enzymatic digestion for cloning or Southern, genotyping, etc.

REFERENCES	DESCRIPTION	FORMAT	PREFILLED PLATES
TBK0227	MAGNETIC PLANT GENOMIC DNA PURIFICATION KIT	100 rxn*	-
TBK0228	MAGNETIC PLANT GENOMIC DNA PURIFICATION KIT	400 rxn*	-
TBK0220-NP	HIGH-Q™-16-AUTOMATED MAGNETIC PLANT GENOMIC DNA PURIFICATION KIT	64 rxn**	-
TBK0220-P	HIGH-Q™-16-AUTOMATED MAGNETIC PLANT GENOMIC DNA PURIFICATION KIT	64 rxn**	4
TBK0221-NP	HIGH-Q™-16-AUTOMATED MAGNETIC PLANT GENOMIC DNA PURIFICATION KIT	160 rxn**	-
TBK0221-P	HIGH-Q™-16-AUTOMATED MAGNETIC PLANT GENOMIC DNA PURIFICATION KIT	160 rxn**	10
TBK0222-NP	HIGH-Q™-16-AUTOMATED MAGNETIC PLANT GENOMIC DNA PURIFICATION KIT	320 rxn**	-
TBK0222-P	HIGH-Q™-16-AUTOMATED MAGNETIC PLANT GENOMIC DNA PURIFICATION KIT	320 rxn**	20
TBK0223-NP	HIGH-Q™-16-AUTOMATED MAGNETIC PLANT GENOMIC DNA PURIFICATION KIT	480 rxn**	-
TBK0223-P	HIGH-Q™-16-AUTOMATED MAGNETIC PLANT GENOMIC DNA PURIFICATION KIT	480 rxn**	30
TBK0224	HIGH-Q™-96-AUTOMATED MAGNETIC PLANT GENOMIC DNA PURIFICATION KIT	96 rxn***	6

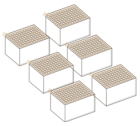
NP, non-prefilled plates | P, prefilled plates

*** Manual**

- ✓ Low throughput.
- ✓ For magnetic racks.

**** Automated Procedure**

- ✓ 16 Samples per plate, 32 per run.
- ✓ Medium throughput.
- ✓ For Bioer, Biobase or similar instruments.

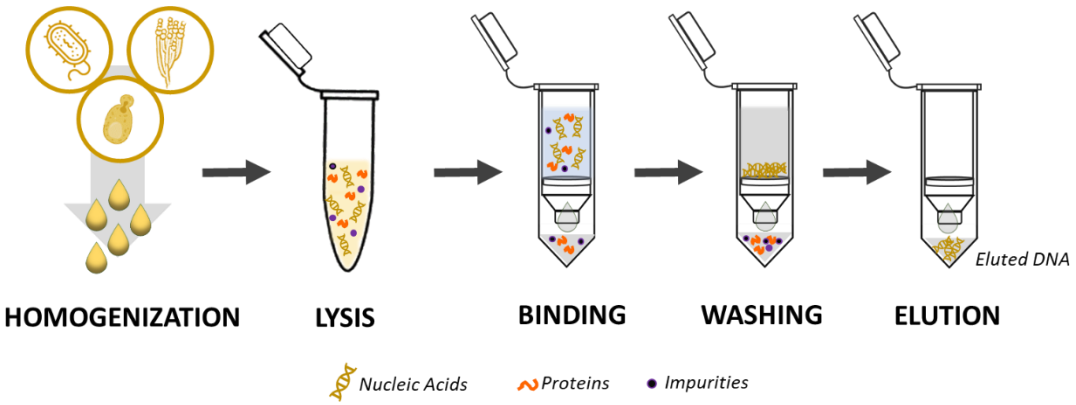


***** Automated Procedure**

- ✓ 96 Samples per plate, 96 per run.
- ✓ High throughput.
- ✓ For KingFisher or similar instruments.

Microbial Genomic DNA Purification Kit | *High-Q™ Spin Columns*

These are optimized kits to purified genomic DNA from bacterial, yeast or fungal culture. Purification is based on High-Q™ silica spin columns in presence of chaotropic salts. Genomic DNA obtained has high quantity and quality.



Features

- **High yield and purity**, 3-20 µg, A_{260}/A_{280} ~1.8.
- **Scalable**, easily to process many samples simultaneously.
- **No phenol extraction**.
- **Fast, easy and cost-effective protocol**.

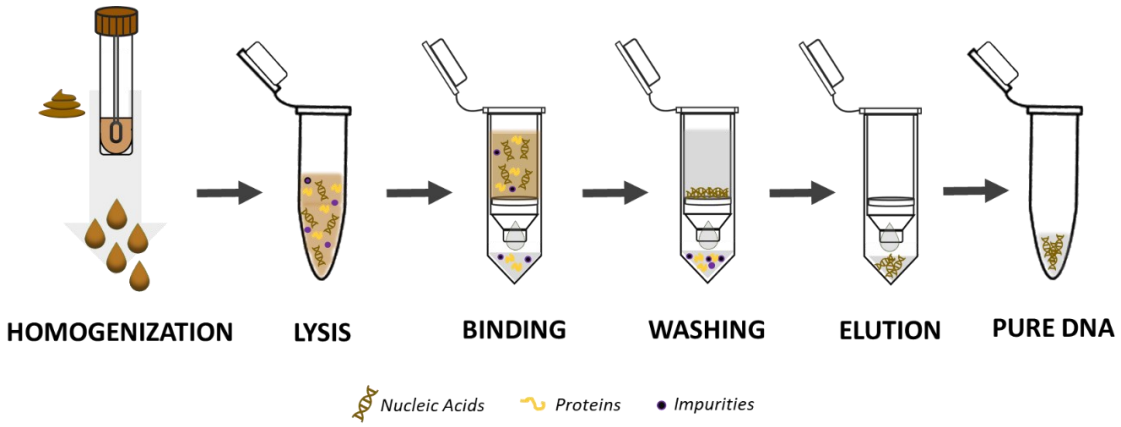
Applications

- Isolation of genomic DNA from bacteria yeast or fungi.
- DNA obtained is suitable for downstream molecular biology applications.

REFERENCES	DESCRIPTION	FORMAT
TBK0116	HIGH-Q™-SPIN COLUMN BACTERIAL GENOMIC DNA PURIFICATION KIT	50 rxn
TBK0117		200 rxn
TBK0181	HIGH-Q™-SPIN COLUMN YEAST GENOMIC DNA PURIFICATION KIT	50 rxn
TBK0182		200 rxn
TBK0255	HIGH-Q™-SPIN COLUMN FUNGAL GENOMIC DNA PURIFICATION KIT	50 rxn
TBK0256		200 rxn

Stool Genomic DNA Purification Kit | *High-Q™ Spin Columns*

High-Q™ Spin-Column Stool DNA Purification Kit provides a convenient method to isolate total DNA from fresh or frozen stool samples. The kit can also be used to isolate DNA from stool samples preserved using our Stool Collection and Preservation Kit. The stool sample is homogenized and disrupted under denaturing conditions using a specially formulated lysis buffer. Humic acid, proteins, polysaccharides, and other contaminants are subsequently precipitated and removed using a proprietary inhibitor removal buffer. Genomic DNA in the sample is then bound by the High-Q™ Spin Column followed two rapid wash steps to remove trace contaminants, and pure DNA is eluted with Elution Buffer. DNA obtained is suitable for downstream molecular biology applications.



Features

- Fast, easy and cost-effective protocol.
- **Eliminates PCR inhibitors** including humic acids.
- **High quality DNA** for sensitive downstream applications such as PCR and other enzymatic reactions.
- **Safe**, no phenol extraction.
- Expected Yield: 3-15 µg, based on the quality and quantity of the starting material utilized.

Applications

- PCR techniques.
- Restriction enzyme digestion.
- Microbiome analysis (NGS).
- Hybridization methods.
- Sequencing reactions.

REFERENCES	DESCRIPTION	FORMAT
TBK0289	HIGH-Q™-SPIN COLUMN STOOL GENOMIC DNA PURIFICATION KIT	50 rxn
TBK0290	HIGH-Q™-SPIN COLUMN STOOL GENOMIC DNA PURIFICATION KIT	200 rxn

Complementary Products

✓ **Stool Sample Collection & Stabilization Kit** (TBK0302, TBK0303, TBK0304)

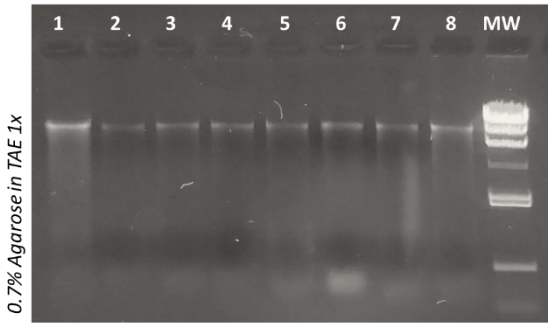
Soil Genomic DNA Purification Kit | *High-Q™ Spin Columns*

High-Q™ Spin-Column Soil DNA Purification Kit is an easy silica-membrane-based system for DNA purification from different soil types. The combination of an optimized lysis buffer, heat and mechanical disruptions using beads, guarantees a good yield. The use of High-Q™ Spin Columns and the PCR inhibitors removing buffer allow a good quality DNA, suitable for downstream applications.

Features

- **Fast, easy and cost-effective protocol**.
- Eliminates PCR inhibitors including humic acids.
- **High quality DNA** for sensitive downstream applications such as PCR and other enzymatic reactions.
- **Safe**, no phenol extraction.
- Expected Yield: 1-10 µg, based on the type of soil and quality of the starting material utilized.

Soil DNA Purification, *10% volume obtained was loaded.*



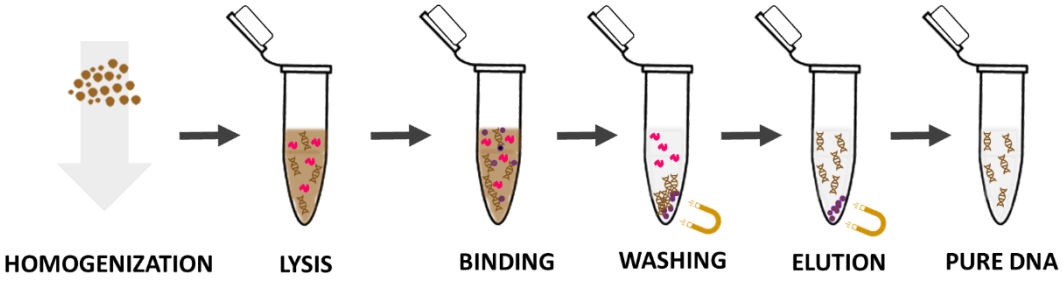
Applications

- PCR techniques.
- Restriction enzyme digestion.
- Microbiome analysis (NGS).
- Hybridization methods.
- Sequencing reactions.

REFERENCES	DESCRIPTION	FORMAT
TBK0250	HIGH-Q™-SPIN COLUMN SOIL GENOMIC DNA PURIFICATION KIT	50 rxn
TBK0251	HIGH-Q™-SPIN COLUMN SOIL GENOMIC DNA PURIFICATION KIT	200 rxn

Soil Genomic DNA Purification Kit | *Magnetic Beads*

Purification of soil DNA based on magnetic principle is an excellent choice to isolate genomic DNA from bacteria, archaea, fungi, and algae in soil samples. The process begins with homogenizing the soil sample using a lysis buffer combined with ceramic beads. Insoluble particles, proteins, and PCR inhibitors like humic acid are then removed using a specialized inhibitor removal buffer. Any remaining PCR inhibitors are eliminated by precipitation. DNA binds to the surface of magnetic beads and is subsequently released using a proprietary buffer system. High-Q™ Magnetic Soil DNA Purification Kit is a manual purification procedure but the kit is compatible with automated magnetic bead separation instruments and workstations, making it highly adaptable for automation.



Features

- **Safe**, no phenol extraction.
- **Eliminates PCR inhibitors** including humic acids.
- Expected Yield: 1-10 µg, based on the quality and quantity of the starting material utilized.

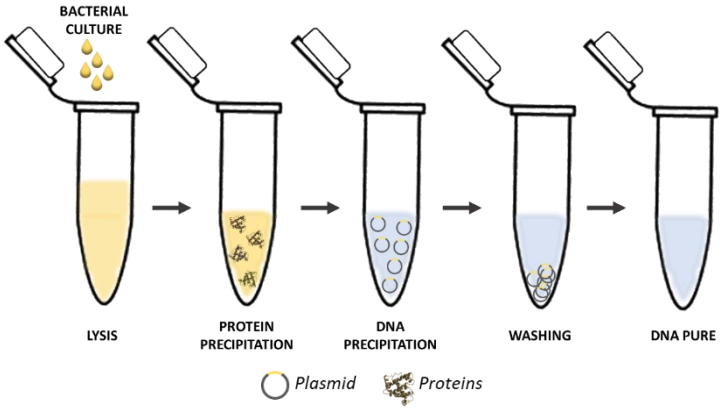
Applications

- PCR techniques.
- Restriction enzyme digestion.
- Microbiome analysis (NGS).
- Hybridization methods.
- Sequencing reactions.

REFERENCES	DESCRIPTION	FORMAT
TBK0392	HIGH-Q™-MAGNETIC SOIL DNA PURIFICATION KIT	100 rxn
TBK0393	HIGH-Q™-MAGNETIC SOIL DNA PURIFICATION KIT	400 rxn

PLASMID DNA PURIFICATION

Plasmid DNA Purification | *Salting out*



Features

- Cost efficient.
- High yield.
- Scalable.

Applications

- Cloning.
- Restriction enzymes digestion.
- PCR and qPCR.
- Bacterial transformation.

Plasmid DNA Purification | *High-Q™ Spin Columns*

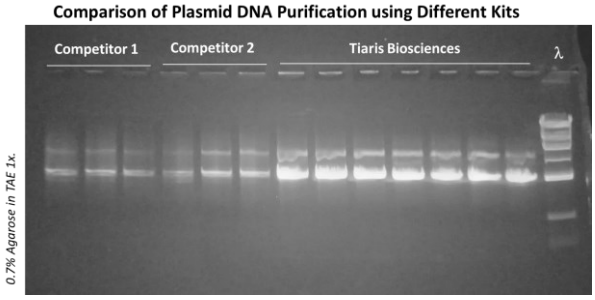
Features

- **Scalable**, easily to process many samples simultaneously.
- **Safe**, no phenol extraction.
- High yield and purity, 2-38 µg, A_{260}/A_{280} ~1.8; A_{260}/A_{230} ~ 2.0.
- **Fast, easy and cost-effective protocol**.

Applications

- Cloning.
- PCR and qPCR.
- Transfection.
- Sequencing.
- Restriction enzyme digestion.
- *In vitro* transcription.
- Library construction.
- Gene editing.
- Mutagenesis studies.
- Bacterial transformation.

Comparison of Plasmid DNA Purification using Different Kits

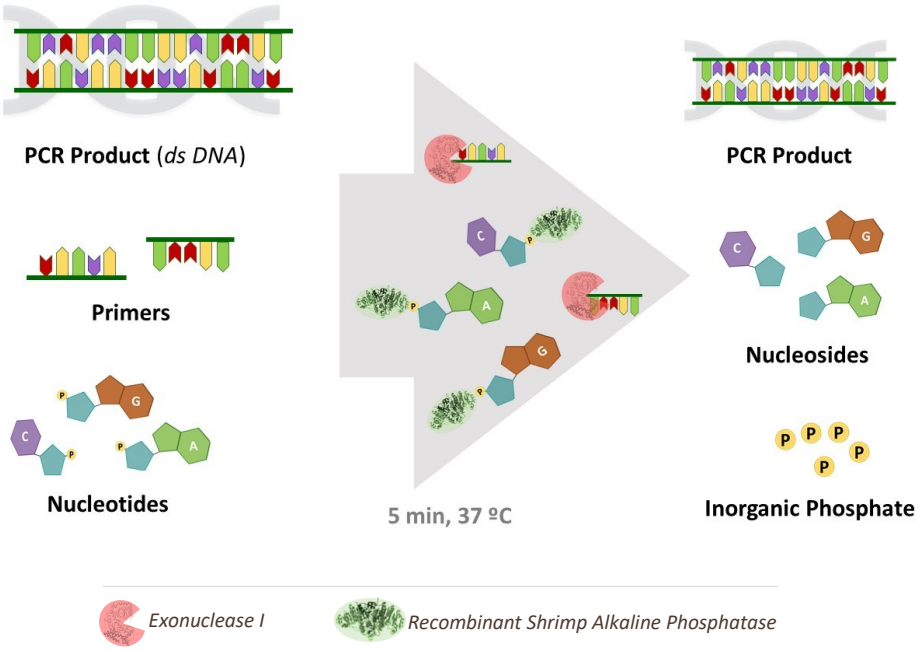


REFERENCES	DESCRIPTION	FORMAT
TBK0183	PLASMID DNA PURIFICATION KIT	100 rxn
TBK0184	PLASMID DNA PURIFICATION KIT	400 rxn
TBK0186	HIGH-Q™-SPIN COLUMN PLASMID DNA PURIFICATION KIT	50 rxn
TBK0187	HIGH-Q™-SPIN COLUMN PLASMID DNA PURIFICATION KIT	200 rxn

DNA CLEANUP

Exo SAP

High-Q™ Exo/SAP kit is an enzymatic PCR Clean-Up kit, comprising exonuclease I (Exo I) and recombinant Shrimp Alkaline Phosphatase (rSAP) in an optimal molar ratio. It is designed to degrade dNTPs and unused primers in a single reaction tube in only 5 minutes. No further treatment is required and recovery is 100%, even for very short PCR products.



Features

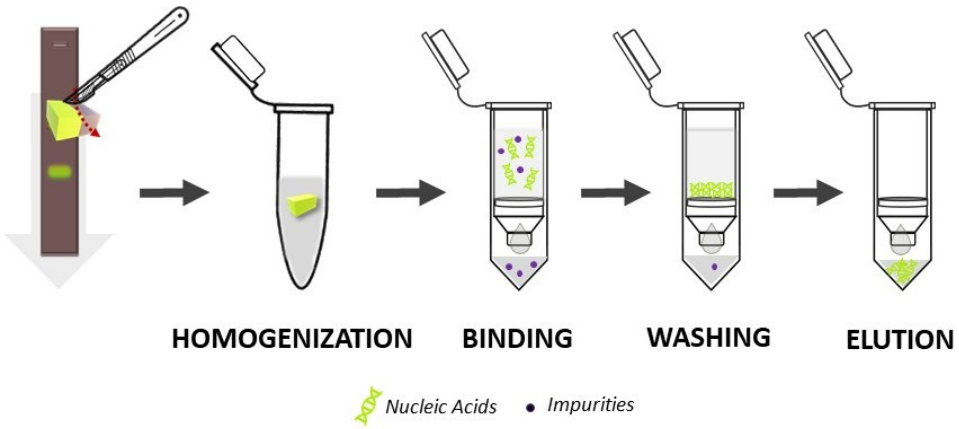
- No need spin columns or magnetic beads.
- **Fast,** just 15 minutes protocol.
- Add directly to PCR product.
- **100 % Sample Recovery**.
- **Scalable f**or different reaction sizes.
- **No interference** with downstream applications.

Applications

- PCR Clean-up prior to sequencing or genotyping.
- Removes excess primers and dNTPs.

REFERENCES	DESCRIPTION	FORMAT
TBK0298	EXO/SAP CLEANUP KIT	100 rxn
TBK0299	EXO/SAP CLEANUP KIT	500 rxn

Gel Extraction & Cleanup Purification Reactions | *High-Q™ Spin Columns*



Features

- **Easy and fast** protocol.
- Complete removal of DNA contaminants.
- **Excellent DNA recovery:** 70-85%.
- **No phenol extraction.**

Applications

- DNA isolation from DNA embedded in agarose gels or enzymatic reaction mixtures such as PCR, restriction digestion, labelling reactions, dephosphorylation, etc.
- DNA obtained is suitable for downstream molecular biology applications such as cloning, PCR, sequencing, digestion, genotyping, etc.

Cleanup Purification Reactions | *High-Q™ Spin Columns*

Features

- Complete removal of DNA contaminants.
- **Purification of small fragments** ≥ 75 bp.
- **High DNA recovery** >80%.
- **No phenol** extraction.
- Easy and Fast protocol.

Applications

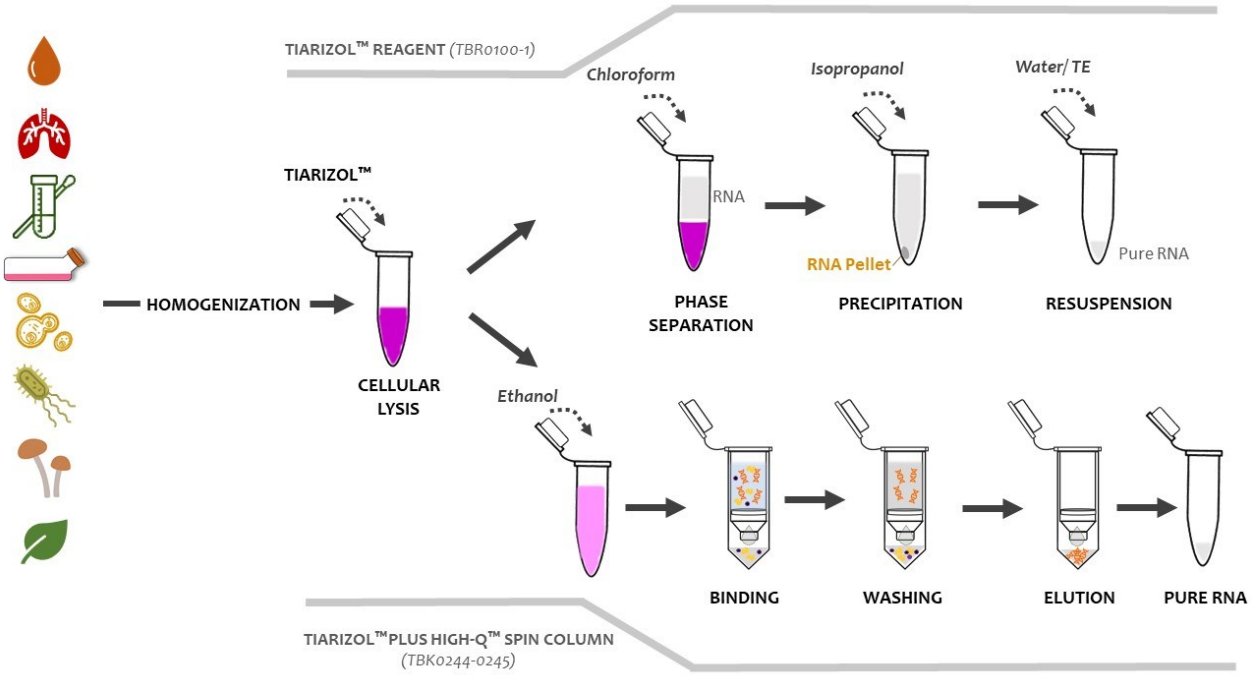
- DNA isolation from enzymatic reaction mixtures (PCR, restriction digestion, labelling reactions, dephosphorylation, etc).
- DNA obtained is suitable for downstream applications.

REFERENCES	DESCRIPTION	FORMAT
TBK0191	HIGH-Q™-SPIN COLUMN GEL EXTRACTION & CLEANUP PURIFICATION KIT	50 rxn
TBK0192		200 rxn
TBK0196	HIGH-Q™-SPIN COLUMN CLEANUP DNA PURIFICATION KIT	50 rxn
TBK0197		200 rxn

RNA PURIFICATION

Broad Range Sample | *Tiarizol™*

TIARIZOL™ Reagent is a ready-to-use solution that makes it easy to isolate high-quality total RNA or even DNA, and proteins all at once from various biological samples. This single-phase mix of phenol and guanidine isothiocyanate is specifically designed to separate RNA, DNA, and proteins from cell and tissue samples of human, animal, plant, bacterial, or yeast origin, and it gets the job done in under an hour.



Features

- **High yield and purity** ($A_{260}/_{280}$~ 2.0).
- Extraction based on **two phases separation.**
- **Strong lysis capability**, even for complex samples.
- **Optimized formulation** to obtain nucleic acids and proteins from tissues, cells, serum, viruses, and bacteria.
- **No sample splitting is needed** for isolation of different molecules.

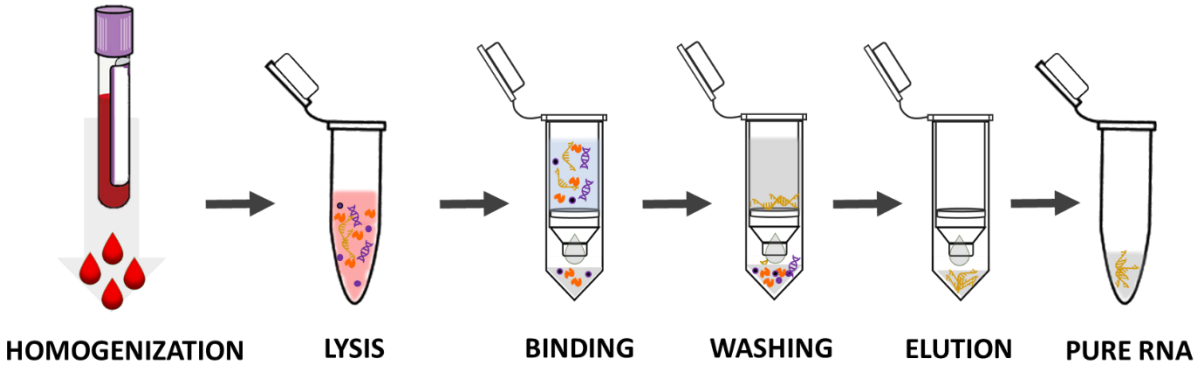
Applications

- RT-PCR and RT-qPCR.
- Northern.
- *In vitro* translation.
- Nuclease Protection Assay.
- cDNA libraries obtention.

REFERENCES	DESCRIPTION	FORMAT
TBR0100	TIARIZOL™-REAGENT	50 mL
TBR0101		2 x 50 mL
TBK0244	HIGH-Q™-SPIN COLUMN TIARIZOL PLUS RNA PURIFICATION KIT	50 rxn
TBK0245		200 rxn

Blood RNA Purification | *High-Q™ Spin Columns*

High-Q™-Spin-Column Blood RNA Purification Kit is an easy silica-membrane-based system for RNA purification from blood. An optimized lysis buffer guarantees a good yield while the use of High-Q™ RNA Spin Columns allow a good quality RNA, suitable for downstream applications.



Features

- **Safety**, no phenol extraction, no ethanol precipitation.
- **High yield** 0.8-3 µg RNA from blood, 24-30 µg from cultured cells.
- Isolated **RNA is ready to use** for downstream molecular biology applications.
- **Suitable** for blood and cell culture samples.

Applications

- Purification of RNA from whole blood and from cultured cells.
- RNA obtained is suitable for downstream molecular biology applications such as RT-PCR, RT-qPCR, Northern, cDNA library, nuclease protection assay, *in vitro* translation, etc.

REFERENCES	DESCRIPTION	FORMAT
TBK0266	HIGH-Q™-SPIN COLUMN BLOOD RNA PURIFICATION KIT	50 rxn
TBK0267	HIGH-Q™-SPIN COLUMN BLOOD RNA PURIFICATION KIT	100 rxn

Complementary Products

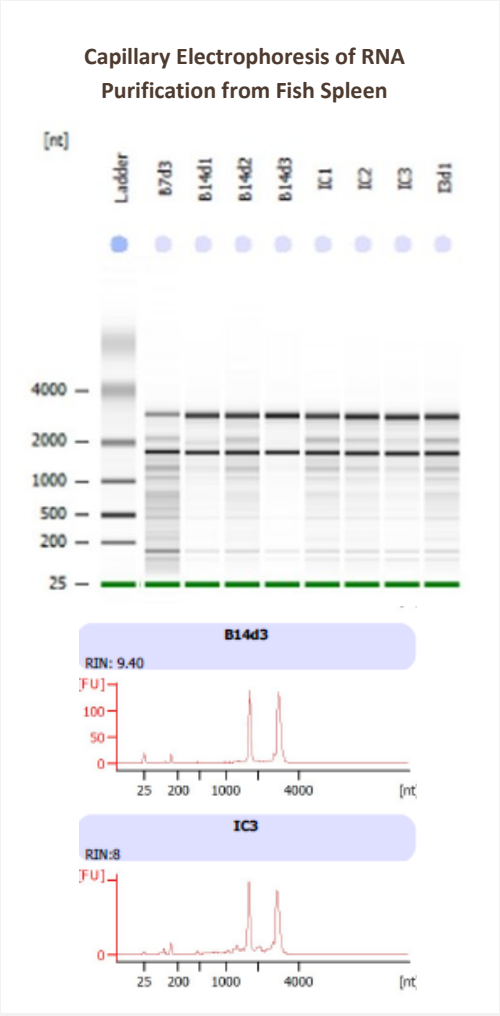
- ✓ **Q-PLUS™ One-Step Probe RT-qPCR Master Mix 2x** (TBK0010, TBK0011)
- ✓ **TIARIS™ RNase Decontamination Solution** (TBR0310)
- ✓ **Water, nuclease free** (TBB0297-0301)

Tissue RNA Purification | *High-Q™ Spin Columns*

Kits designed to RNA purification from human and animal tissue (*e.g. muscle, spleen, intestine, liver, heat, brain, rodent tail*), insects and biopsy material. High-Q™-Spin-Column Tissue RNA Purification Kit is an easy silica-membrane-based system for RNA purification from a wide variety of animal tissues. An optimized lysis buffer guarantees a good yield while the use of High-Q™ RNA Spin Columns allow a good quality RNA, suitable for downstream applications.

Features

- **Safety**, no phenol extraction, no ethanol precipitation.
- **High yield**: up to 100 µg and purity (A_{260}/A_{280} ~2.0; A_{260}/A_{230} ~2.0-2.2; RIN ≥ 8).
- Isolated **RNA is ready to use** for downstream molecular biology applications.
- Easy and fast protocol.
- Purification of RNA from **human and animal tissue** (*e.g. muscle, spleen, intestine, liver, heat, brain, rodent tail*), insects, biopsy material.



Applications

- RT-PCR and RT-qPCR.
- Northern.
- *In vitro* translation.
- Nuclease Protection Assay.

REFERENCES	DESCRIPTION	FORMAT
TBK0268	HIGH-Q™-SPIN COLUMN TISSUE RNA PURIFICATION KIT	50 rxn
TBK0269	HIGH-Q™-SPIN COLUMN TISSUE RNA PURIFICATION KIT	100 rxn

Tissue RNA Purification | *Magnetic Beads*

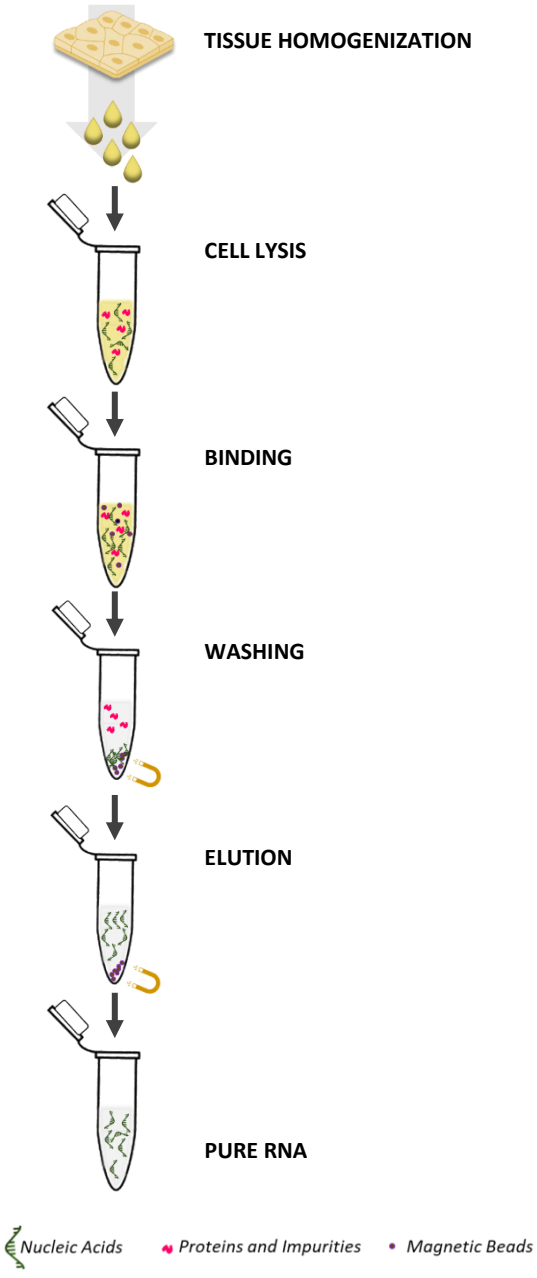
High-Q™-Magnetic Tissue RNA Purification Kit is a highly efficient method for isolating high-quality RNA while minimizing degradation. This technique utilizes magnetic beads to selectively capture RNA in the presence of chaotropic salts. The process begins with tissue homogenization and lysis, followed by RNA binding to the magnetic beads, multiple wash steps to remove proteins, genomic DNA, and other contaminants, and finally, RNA elution in a suitable buffer

Features

- **Easy and fast protocol**.
- **Compatible** with automation procedure.
- **Safety**, no phenol extraction, no ethanol precipitation.
- **High purity** (A_{260}/A_{280} ~2.0; A_{260}/A_{230} ~2.0-2.2; RIN ≥ 8).
- **Higher recovery rates**.

Applications

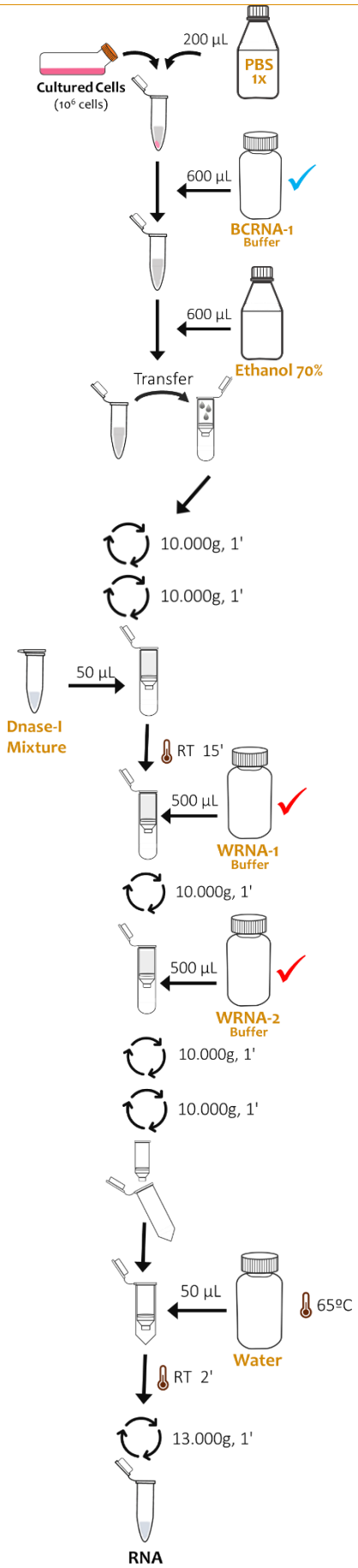
- Purification of RNA from human and animal tissue
- RT-PCR and RT-qPCR.
- NGS sequencing.
- *In vitro* translation.
- Nuclease Protection Assay.
- Northern.



REFERENCES	DESCRIPTION	FORMAT
TBK0404	HIGH-Q™-MAGNETIC TISSUE RNA PURIFICATION KIT	50 rxn
TBK0405	HIGH-Q™-MAGNETIC TISSUE RNA PURIFICATION KIT	200 rxn

Cultured Cell RNA Purification | *High-Q™ Spin Columns*

High-Q™-Spin-Columns Viral RNA Purification Kit is a silica-membrane-based RNA purification kit to obtain viral RNA from cell-free samples with high quality and purity. An optimized lysis buffer ensures high RNA yield, while the use of High-Q™ RNA Spin Columns produces high-quality RNA that is ideal for downstream applications. Suitable for a broad range of viruses and sources.



Features

- **Safety**, no phenol extraction, no ethanol precipitation.
- **High yield** (10-30 µg) and **purity** (A_{260}/A_{280} ~2.0; A_{260}/A_{230} ~2.0-2.2).
- Isolated **RNA is ready to use** for downstream molecular biology applications.
- Detailed protocol including **workflow diagram**
- Easy and fast protocol.

Applications

- Purification of RNA from cultured cells.
- RNA obtained is suitable for downstream molecular biology applications such as RT-PCR, RT-qPCR, Northern, cDNA library, nuclease protection assay, *in vitro* translation, etc.

REFERENCES	DESCRIPTION	FORMAT
TBK0262	HIGH-Q™-SPIN COLUMN CULTURED CELL RNA PURIFICATION KIT	50 rxn
TBK0263	HIGH-Q™-SPIN COLUMN CULTURED CELL RNA PURIFICATION KIT	100 rxn

Complementary Products

- ✓ **PBS 1x, pH 7.4** (TBB0360, TBB0361)
- ✓ **PBS 1x, pH 7.4 Powder** (TBB0600)
- ✓ **Antibiotic-Antimycotic Solution 100x** (TBR0328)
- ✓ **Penicillin-Streptomycin Solution 100x** (TBR0325)

Cultured Cell RNA Purification | *Magnetic Beads*

Isolation of RNA from cultured cells is efficiently achieved using a magnetic system. The High-Q™ Magnetic Cultured Cell RNA Purification Kit is a reliable, magnetic-based system designed for rapid and high-quality RNA purification from cultured cells. Following cell lysis, magnetic beads selectively capture RNA in the presence of chaotropic salts, ensuring effective isolation. The RNA bound to the magnetic beads undergoes multiple washing steps to remove contaminants, resulting in highly pure RNA. Finally, the purified RNA is eluted in a suitable buffer, making it ready for downstream applications such as RT-PCR, qPCR, and sequencing.

Features

- **Medium and high-throughput** friendly.
- **Easy and fast** protocol.
- **Safe**, no phenol extraction or ethanol precipitation steps involved.
- **High yield** (10-30 µg) and **purity** (A_{260}/A_{280} ~2.0; A_{260}/A_{230} ~2.0-2.2; RIN ≥ 8).

Applications

RNA obtained is ready for typical downstream molecular biology applications:

- RT-PCR and RT-qPCR.
- NGS Sequencing.
- cDNA library.
- Nuclease protection assay.
- *In vitro* translation.

REFERENCES	DESCRIPTION	FORMAT
TBK0410	HIGH-Q™-MAGNETIC CULTURED CELL RNA PURIFICATION KIT	50 rxn
TBK0411	HIGH-Q™-MAGNETIC CULTURED CELL RNA PURIFICATION KIT	200 rxn

Complementary Products

- ✓ **Q-PLUS™ One-Step Green RT-qPCR Master Mix 2x** (TBK0014, TBK0015)
- ✓ **Water, nuclease free** (TBB0297-0301)

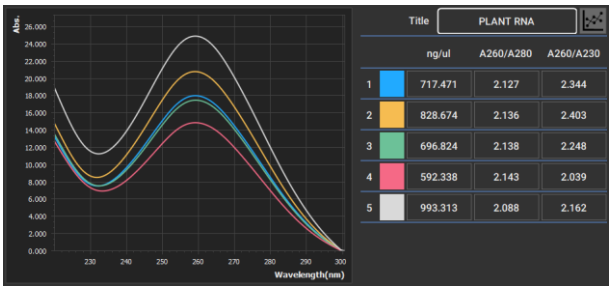
Plant RNA Purification | *High-Q™ Spin Columns*

Excellent kit designed to RNA purification from plant tissue, including plant cells, leaves, seeds, fruits or roots. The kit is suitable to use different starting plant materials: frozen, fresh or dried. High-Q™-Spin-Column Plant RNA Purification Kit is based on the use of silica-membrane prepacked columns for RNA purification from a wide variety of plant species and vegetal material. An optimized lysis buffer guarantees a good yield while the use of High-Q™ RNA Spin Columns allow a good quality RNA, suitable for downstream applications.

Features

- **Safety**, no phenol extraction, no ethanol precipitation.
- High yield (3-30 µg/ 100 mg vegetal material) and purity (A_{260}/A_{280} ~2.0; A_{260}/A**230** ~2.0-2.2).

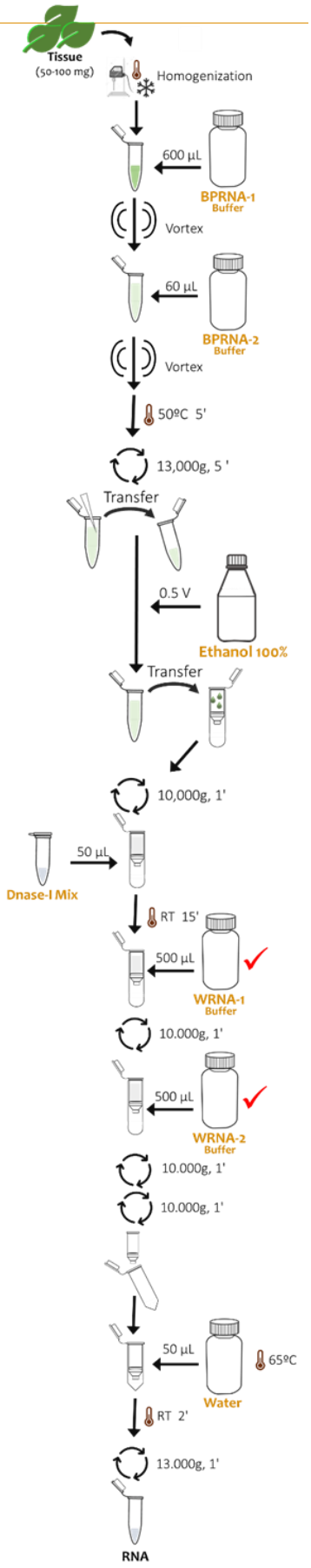
Quantitation of purified plant RNA by nanodrop.



- Isolated **RNA is ready to use** for downstream molecular biology applications.
- Purification of RNA from plant tissue, including **plant cells, leaves, seeds, fruits or roots**.
- Purification of RNA plant using different starting plant materials: frozen, fresh or dried.

Applications

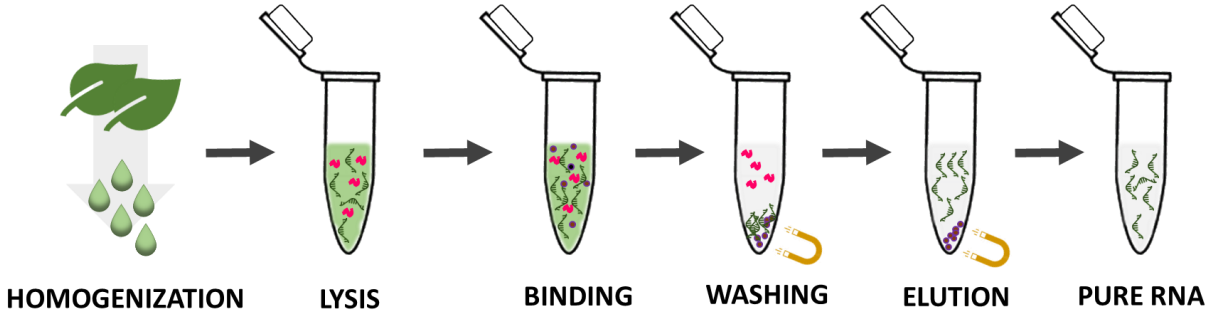
- RT-PCR and RT-qPCR.
- Northern.
- *In vitro* translation.
- Nuclease Protection Assay.
- cDNA libraries obtention.



REFERENCES	DESCRIPTION	FORMAT
TBK0279	HIGH-Q™-SPIN COLUMN PLANT RNA PURIFICATION KIT	20 rxn
TBK0280	HIGH-Q™-SPIN COLUMN PLANT RNA PURIFICATION KIT	50 rxn
TBK0281	HIGH-Q™-SPIN COLUMN PLANT RNA PURIFICATION KIT	100 rxn

Plant RNA Purification | *Magnetic Beads*

High-Q™-Magnetic Plant RNA Purification Kit is a magnetic-based system for RNA purification from vegetal tissue. Magnetic beads selectively capture RNA in the presence of chaotropic salts. The process typically involves cell lysis, RNA binding to the magnetic beads, multiple wash steps to remove contaminants such as proteins, DNA, and cellular debris, and finally, RNA elution in a suitable buffer.



Features

- **Safety**, no phenol extraction procedure.
- **Eliminates PCR inhibitors**.
- **Compatible** with automation procedure.
- **Higher recovery rates**.
- Isolation of **plant RNA from different starting plant materials**: frozen, fresh or dried
- Purification of RNA from plant tissue, including **plant cells, leaves, seeds, fruits or roots**.

Applications

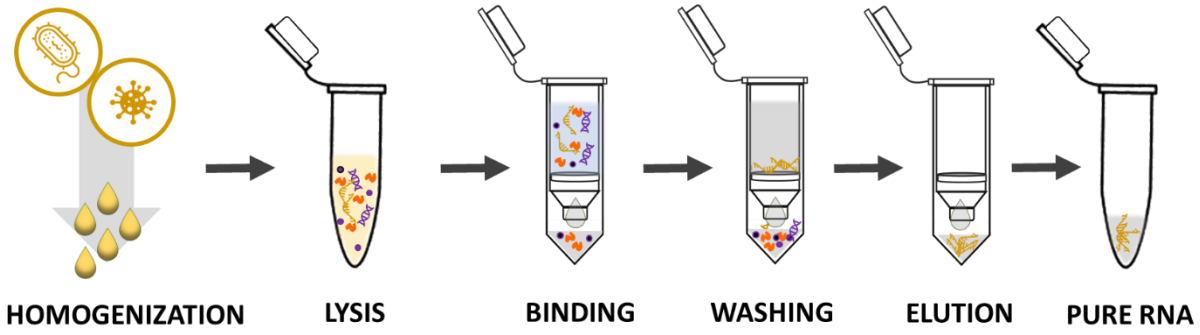
Isolated RNA is ready for typical downstream molecular biology applications:

- RT-PCR and RT-qPCR.
- Transcriptomics.
- *In vitro* translation.
- Nuclease Protection Assay.
- Arrays.

REFERENCES	DESCRIPTION	FORMAT
TBK0407	HIGH-Q™-MAGNETIC PLANT RNA PURIFICATION KIT	50 rxn
TBK0408	HIGH-Q™-MAGNETIC PLANT RNA PURIFICATION KIT	200 rxn

Microbial RNA Purification | *High-Q™ Spin Columns*

In the presence of a chaotropic salt, viral RNA selectively binds to High-Q™ membrane. While the RNA remains attached, a series of quick wash and spin steps efficiently remove contaminating cellular components. Finally, the viral RNA is released from the membrane using a low-salt elution. This process eliminates the need for RNA precipitation, organic solvent extractions, or extensive RNA handling.



Features

- **Suitable** for bacterial, yeast and viral RNA purification.
- **Safe**, method does not require phenol extraction.
- **Easy protocol**.
- **Excellent yield and purity**.

Applications

- RT-PCR and RT-qPCR.
- Northern.
- Viral detection and quantitation.
- Genotyping.

REFERENCES	DESCRIPTION	FORMAT
TBK0271	HIGH-Q™-SPIN COLUMN BACTERIAL RNA PURIFICATION KIT	50 rxn
TBK0272		100 rxn
TBK0212	HIGH-Q™-SPIN COLUMN VIRAL RNA PURIFICATION KIT	50 rxn
TBK0213		100 rxn
TBK0214		200 rxn

Complementary Products

- ✓ **Q-PLUS™ One-Step Green RT-qPCR Master Mix 2x** (TBK0014, TBK0015)
- ✓ **TIARIS™ One-Step RT-PCR Kit** (TBK1040)
- ✓ **TIARIS™ RNase Decontamination Solution** (TBR0310)

Viral RNA Purification | *Magnetic Beads*

Magnetic viral RNA purification kits are optimized nucleic acid purification kits intended for automated purification systems. It is based on magnetic beads technology for purification of biomolecules. High-Q™ Magnetic beads use is combined with heating steps enhancing sample lysis and elution. The samples are firstly lysed and the nucleic acids are bound to the surface of silica-coated paramagnetic beads in the presence of a chaotropic salt. The specialized buffering system allows RNA to bind to the magnetic beads while contaminants and impurities are efficiently washed away, and pure RNA is eluted using a magnetic separation device.

Features

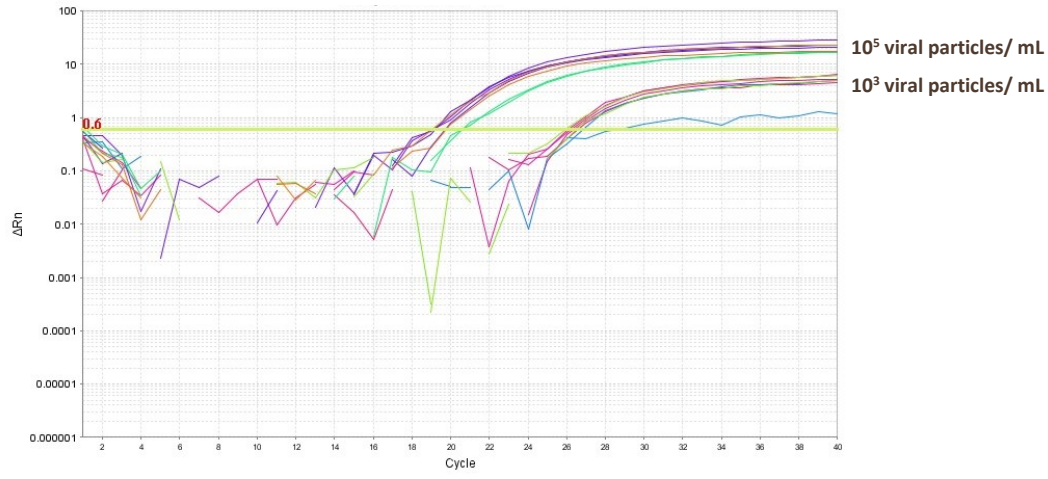
- **Fast and medium** (32 samples)/ **high** (96 samples) **throughput** RNA purification.
- **Versatile**, isolation of nucleic acid of a broad range of RNA viruses.
- **Highest RNA quality** for all downstream applications.
- **High yield** extraction.
- Included in the kit are all plastic accessories, including tip combs.

Applications

Ready-to-use RNA for high performance in downstream applications:

- RT-PCR and RT-qPCR.
- Viral detection and quantitation.
- Genotyping.

Analysis of viral RNA purification from ecotropic viral supernatant.



REFERENCES	DESCRIPTION	FORMAT	PLATES
TBK0230	HIGH-Q™16-MAGNETIC VIRAL RNA PURIFICATION KIT	32 rxn	2
TBK0231		96 rxn	6
TBK0232		192 rxn	12
TBK0235	HIGH-Q™96-MAGNETIC VIRAL RNA PURIFICATION KIT	96 rxn	6

ENZYMES AND OTHER RELATED REAGENTS

Proteinase K

Proteinase K is a serine protease with broad cleavage specificity. The enzyme, isolated from the fungus *Tritirachium album*, is produced as recombinant protein and extensively purified . It is used in DNA and RNA extraction protocols to eliminate proteins.

REFERENCES	DESCRIPTION	FORMAT
TBZ0305	PROTEINASE K, ≥ 30 U/mg (lyophilized powder)	30 mg
TBZ0306		5 x 30 mg
TBZ0307		100 mg
TBZ0308	PROTEINASE K, 20 mg/ mL	1.5 mL
TBZ0309		5 x 1 mL
TBZ0310	PROTEINASE K, 50 mg/ mL	5 x 1 mL

Lysozyme

Lysozyme is a polypeptide of 129 aminoacids isolated from chicken white eggs. The protein hydrolyzes (β 1-4) bonds between N-acetylmuramic acid and N-acetyl-D-glucosamine residues in peptidoglycan and between N-acetyl-D-glucosamine residues in chitodextrin. It is used to lyse bacterial cells in plasmid purification process.

RNase

RNase A is a member of a superfamily of pancreatic ribonucleases. The enzyme binds an RNA substrate and localizes a cytidine or uridine to the enzyme active site. The action of two histidines in the active site removes a proton from the 2′-OH of the pyrimidine, causing the formation of a cyclic 2′,3′-phosphate. Phosphate cyclization releases the portion of the RNA chain that is 3′ to the pyrimidine, resulting in cleavage of the RNA strand. The cyclized phosphate is then hydrolyzed creating a 2′-OH and 3′-phosphate on the 3′-terminal ribose of the cleaved RNA.

Guanidinium Thiocyanate

It is a powerful chaotropic agent widely used in molecular biology for the extraction and purification of nucleic acids. This chemical disrupts cellular structures and denatures proteins, making it an essential component in RNA and DNA extraction protocols.

REFERENCES	DESCRIPTION	FORMAT
TBZ0311	LYSOZYME, ≥ 15000 U/mg (from chicken white egg)	10 g
TBZ0312		30 mg
TBZ0313	LYSOZYME SOLUTION, 50 mg/ mL	1 mL
TBZ0315	RNase SOLUTION DNase FREE, 10 mg/ mL	1 mL
TBZ0317	RNase SOLUTION DNase FREE, 100 mg/ mL	1 mL
TBZ0318	RNase 100 mg (lyophilized powder)	100 mg
TBR0130	GUANIDINIUM THIOCYANATE	100 g
TBR0131		500 g
TBR0131	GUANIDINIUM THIOCYANATE, 6M	500 mL
TBB0400	RED BLOOD CELL LYSIS BUFFER 1X	100 mL
TBB0401	RED BLOOD CELL LYSIS BUFFER 10X	100 mL
TBR0104	TCEP SOLUTION	5 x 1.5 mL

"When the forest and the city are functionally indistinguishable, then we know we reached sustainability."

Janine Benyus

Mick Pearce is a renowned Zimbabwean architect, known for his innovative approach to sustainable design. Born in Harare in 1938, Pearce developed a career marked by his commitment to ecological architecture, always seeking solutions that are efficient and environmentally friendly. His most significant work is the Eastgate Centre in Harare, inspired by termite mounds.

This icon of biomimetic architecture was inaugurated in 1996. The building houses a shopping center and offices that maintain a temperature of 21-25°C without the use of conventional air conditioning systems. Pearce's approach, initially met with skepticism, mimics how termites regulate the internal temperature of their nests despite extreme external temperature fluctuations. The process involves drawing cool night air into large floor cavities and releasing it during the day through grilles. The Eastgate Centre's design reduces energy consumption by approximately 90% compared to similarly sized buildings that rely on traditional heating and cooling systems.

This is achieved by circulating air through chimneys and ducts that enable a constant exchange of fresh air. During the day, the building's heat dissipates through these chimneys, while at night, cooler air is drawn in to maintain a pleasant temperature during warmer hours. This nature-inspired approach is not only energy-efficient but also cost-effective, generating global interest in biomimetic design.

In addition to its innovative ventilation system, the Eastgate Centre is constructed with local materials that further reduce the environmental impact of its construction and operation. The use of bricks and concrete with high thermal mass allows the building to absorb and release heat gradually, contributing to thermal stability. The result is a building that is not only functional but also aesthetically integrated with its surroundings, reflecting a fusion of modernity and sustainability.

Mick Pearce has received global recognition for this project, which remains a benchmark in sustainable architecture. His example has influenced architects and engineers worldwide, demonstrating that nature-inspired solutions can offer viable alternatives to conventional construction methods. The Eastgate Centre is not just an iconic building but a testament to the potential of biomimicry and ecological thinking in contemporary architecture.

#FindingAnswersInNature