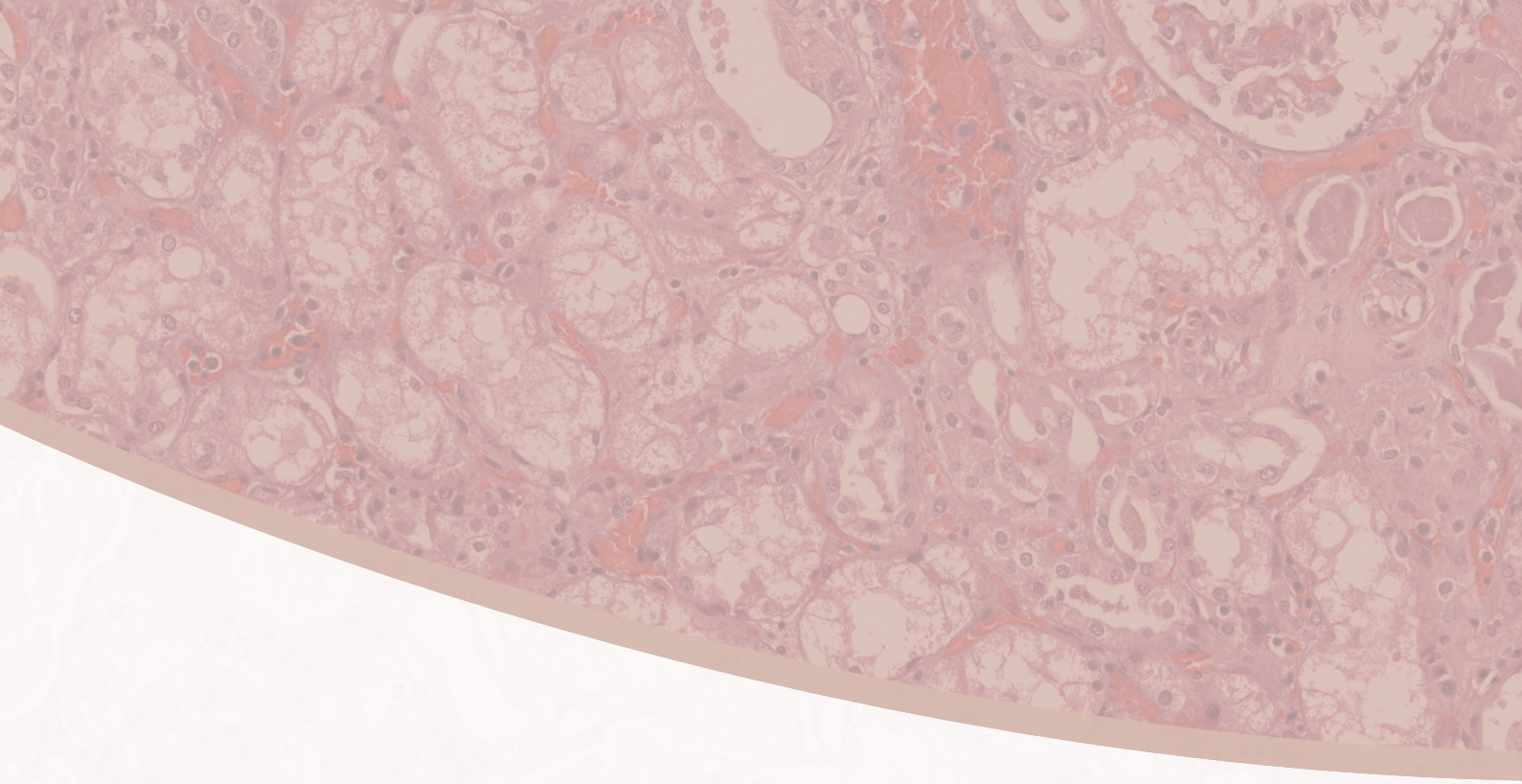


6. Nucleic Acid Purification Kits

DNA Spin Column based Purification

DNA Reagent based Purification

DNA Magnetic Bead based Purification

RNA Spin Column based Purification

Sample collection

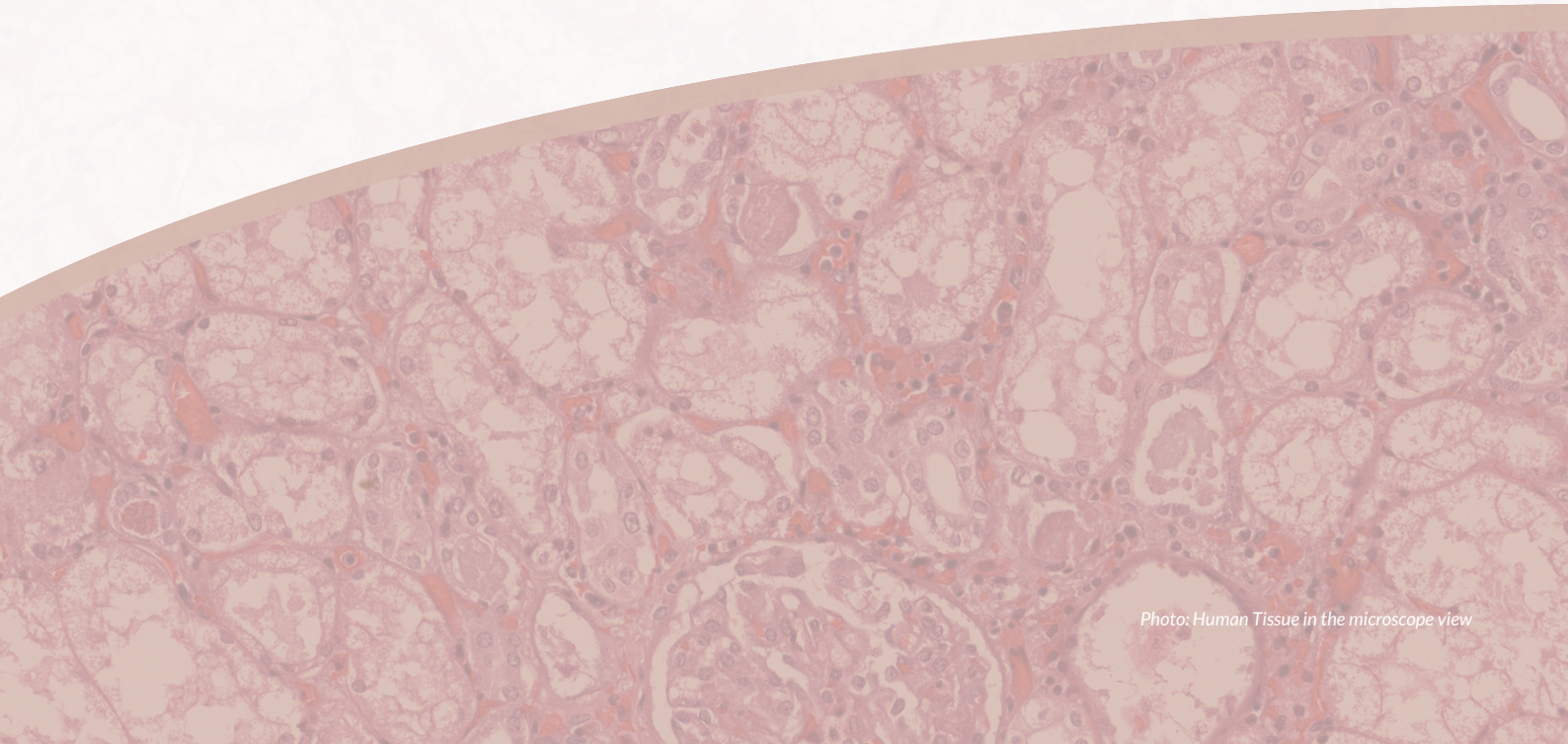


Photo: Human Tissue in the microscope view

Nucleic Acid Purification Kits Selection Guide:

		Product	Page	Ref.	Starting material	Format: Spin Columns	Format: Reagent	Format: Magnetic Bead
DNA	Genomic	HigherPurity™ Blood Genomic DNA Extraction Mini Spin Kit	86	AN0044 AN0045	Mammalian/human blood, cultured cells	✓		
		HigherPurity™ Blood Genomic DNA Extraction kit	94	AN0043	Mammalian/human blood, cultured cells		✓	
		HigherPurity™ Buccal Swab Genomic DNA Extraction kit	92	AN0036	Buccal Swab		✓	
		HigherPurity™ Buccal Saliva Genomic DNA Extraction kit	93	AN0037	Buccal Saliva		✓	
		HigherPurity™ Buccal Swab/Saliva Genomic DNA Extraction kit	93	AN0038	Buccal Swab Buccal Saliva		✓	
		HigherPurity™ Tissue Genomic DNA Purification kit	86	AN0210 AN0211	Tissue, cultured cells, mouse tail	✓		
		HigherPurity™ Stool DNA Isolation kit	88	AN0130 AN0131	Fresh or frozen stool samples	✓		
		HigherPurity™ FFPE DNA Isolation kit	87	AN0160	Tissue sections (FFPE)	✓		
		HigherPurity™ Plant DNA Purification kit	88	AN0110 AN0112	Plant tissues	✓		
		MagBeads™ Plant Genomic DNA Isolation kit	97	AN0531 AN0532 AN0533	Plant tissues			✓
		HigherPurity™ Soil DNA Isolation kit	90	AN0140 AN0141	Soil samples	✓		
		HigherPurity™ Bacterial Genomic DNA Isolation	89	AN0066 AN0067	Bacteria	✓		
		MagBeads™ Bacterial G (-) Genomic DNA Isolation	94	AN0501 AN0502 AN0503	Gram (-) Bacteria			✓
		MagBeads™ Bacterial G (+) Genomic DNA Isolation	95	AN0511 AN0512 AN0513	Gram (+) Bacteria			✓
		HigherPurity™ Yeast Genomic DNA Isolation Mini Spin Kit	89	AN0080 AN0081	Yeast	✓		
		MagBeads™ Yeast Genomic DNA Isolation kit	96	AN0551 AN0552 AN0553	Yeast			✓
	Plasmid	WideUSE™ Plasmid Purification kit	92	AN0068 AN0069	Plasmid propagated in *E. coli*	✓		
		Magbeads™ Plasmid Purification kit	96	AN0541 AN0542 AN0543	Plasmid propagated in *E. coli*			✓
	DNA Fragments	Clean-Easy™ PCR Purification kit	91	AN0063 AN0064	PCR mixture	✓		
		Clean-Easy™ Agarose Purification kit	91	AN0070 AN0071	Agarose gel slices	✓		
		MagBeads™ PCR Clean-up	95	AN0521 AN0522 AN0523	PCR mixture			✓
	Viral	HigherPurity™Viral DNA/RNA Mini Spin kit	90	AN0605	Serum, plasma, whole blood	✓		
	Others	HigherPurity™ Circulating Genomic DNA Purification Mini Spin Kit	87	AN0260	Serum, plasma, other body fluids	✓		
RNA	Tissue	HigherPurity™ Blood/Cultured Cell Total RNA kit	98	AN0142	Cultured cells, blood	✓		
		HigherPurity™Tissue Total RNA Purification kit	98	AN0150 AN0152	Cultured cells, tissues, total RNA	✓		
		HigherPurity™ Plant RNA Purification kit	97	AN0100 AN0102	Plant tissues	✓		
	Viral	HigherPurity™ Viral DNA/RNA Mini Spin kit	90	AN0605	Serum, plasma, whole blood	✓		
	Others	HigherPurity™ RNA Total (All Sizes) Isolation Kit	99	AN0280	Cultured cells, tissues, bacteria, yeast, blood, plants	✓		

DNA Spin Column based Purification

HigherPurity™ Blood Genomic DNA Extraction Mini Spin Kit

For a reliable, easy and rapid DNA purification from whole blood, plasma, serum, buffy coat and cell culture

Ordering info:

Cat No.	Size
AN0044-S	20 rxn
AN0044	50 rxn
AN0045	100 rxn

Includes for 50 rxn:

- 50 CleanEasy™ MiniSpin Columns
- 50 Collection tubes (2 mL)
- 20 mL BLY Buffer
- 15 mg Proteinase K
- 30 mL WB1 Buffer
- 6 mL WB2 Buffer
- 10 mL EB Buffer

Related products:

- Proteinase K (p.112)
- Horse-Power™ Taq DNA Pol. (p.103)

Description:

HigherPurity™ Blood Genomic DNA Extraction Mini Spin kit is a reliable, easy-to-use and rapid method for high-quality genomic DNA purification from various sources, including: whole blood, plasma, serum, buffy coat and cell culture. The kit uses HigherPurity™ breakthrough technology based in DNA ability to bind silica in the presence of high concentrations of chaotropic salts.

Advantages & Features:

- ✓ **Fast protocol:** results in 28 minutes.
- ✓ **High-quality** genomic DNA purification from various sources.
- ✓ **Reproducible** extraction of high molecular weight genomic DNA purified.
- ✓ **Safe and convenient:** avoids phenol/chloroform extraction.
- ✓ **Efficient:** 3-6 µg of genomic DNA from a 200 µl blood sample.
- ✓ **Pure genomic DNA:** ready-to-use in all Molecular Biology applications.

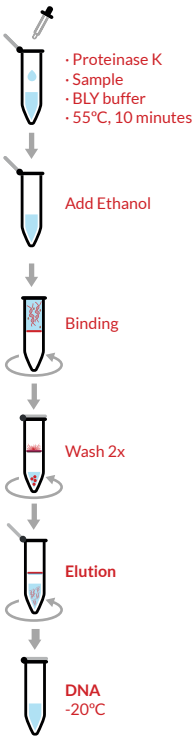
Applications:

- ✓ Purified DNA suitable for all common Molecular Biology applications, such as:
  - PCR.
  - Cloning.
  - DNA sequencing.
  - Southern blot analysis.

Quality control:

- ✓ Tested on a lot-to-lot basis by isolating total DNA from 200 µl of whole Human blood.
- ✓ DNA purified is analysed by:
  - Spectrophotometer: Ratio 260/280 (1.8-2.0).
  - Agarose gel electrophoresis.

Protocol:



HigherPurity™ Tissue Genomic DNA Purification Kit

For a highly efficient, easy and convenient purification of total DNA from a variety of tissue

Ordering info:

Cat No.	Size
AN0210-S	20 rxn
AN0210	50 rxn
AN0211	100 rxn

Includes for 50 rxn:

- 15 mL Buffer BLY1
- 15 mL Buffer BLY2
- 22 mL Wash Buffer 1
- 10 mL Wash Buffer 2
- 30 mL Elution Buffer
- 11 mg Proteinase K
- 0.55 mL RNAse A (100 mg/mL)
- 50 CleanEasy™ MiniSpin Columns
- 100 Collection tube (2 mL)
- 50 microtubes (1.5 mL)
- 50 Micropestle

Related products:

- Proteinase K (p.112)
- Horse-Power™ Taq DNA Polymerase (p.103)
- Custom solutions (p.147)
- RNAse (p.111)

Description:

HigherPurity™ Tissue Genomic DNA Purification Kit offers a highly efficient, rapid and convenient method for purification of total DNA from a variety of tissues. The kit is based in DNA ability to bind silica in the presence of high concentrations of chaotropic salts.

Advantages & Features:

- ✓ **Highly efficient:** yields up to 50 µg, depends on type of sample.
- ✓ **Pure genomic DNA:** ready-to-use in all Molecular Biology applications.
- ✓ **Easy and fast procedure:** it takes 54 minutes for purification of total DNA from a variety of tissues.
- ✓ **Mini format.**

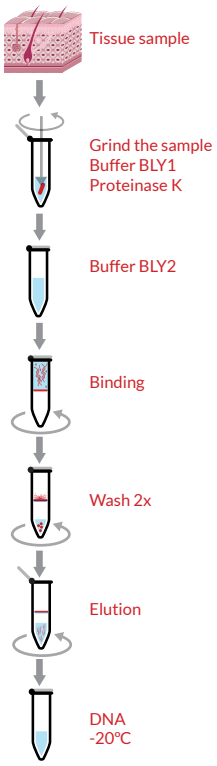
Applications:

- ✓ Purified DNA suitable for all common Molecular Biology applications, such as:
  - RT-PCR.
  - Southern blotting.
  - RFLP.

Quality control:

- ✓ Total DNA is isolated from a 30 mg thorax muscle tissue sample.
- ✓ Purified DNA is quantified using a spectrophotometer with a typical yield of more than 10 µg of genomic DNA and an A260nm/A280nm ratio of 1.8-2.0.
- ✓ Quality is further checked by agarose gel electrophoresis.

Protocol:



HigherPurity™ Circulating Genomic DNA Purification Mini Spin Kit

For a pure, concentrated and rapid purification of circulating DNA from serum and plasma

Ordering info:

Cat No.	Size
AN0260-S	20 rxn
AN0260	50 rxn

Includes for 50 rxn:

- 50 CleanEasy™ MiniSpin Columns
- 100 Collection tubes (2 mL)
- 15 mL BLY Buffer
- 30 mg Proteinase K
- 80 mL Binding Buffer
- 10 mL WB1 Buffer
- 4 mL Elution Buffer

Related products:

- Horse-Power™ Taq DNA Pol. (p.103)
- Proteinase K (p.112)
- RNAse (p.111)

Description:

The kit offers a pure, concentrated and rapid simultaneous purification of circulating DNA from cell–free samples such as serum and plasma (250 µl). The cell-free DNA in plasma and serum is known to be highly fragmented 50 - 1,000 bp. The degree of fragmentation depends on several parameters like origin DNA (fetal, tumor, microbial DNA), health of the donor blood, blood sampling procedure and handling of the sample.

The kit uses HigherPurity™ breakthrough technology based in nucleic acid ability to bind silica in the presence of high concentrations of chaotropic salts. For this, it is used a special columns designed for high recovery, especially of fragmented DNA in a range 100-1,000 bp and optimized Binding buffer.

Advantages & Features:

- ✓ **Fast protocol:** rapid isolation of circulating DNA in 58 minutes.
- ✓ **Sample size:** 250 µl (plasma or serum).
- ✓ **High purity:** complete removal of inhibitors.
- ✓ **Proven performance:** expected yield from 0.1-100 ng per mL (plasma/serum). Variable because each donor and disease status.
- ✓ **Concentrated:** elution volume from 25-50 µl.
- ✓ **Ready-to-use:** DNA obtained for direct use in PCR or real-time PCR.

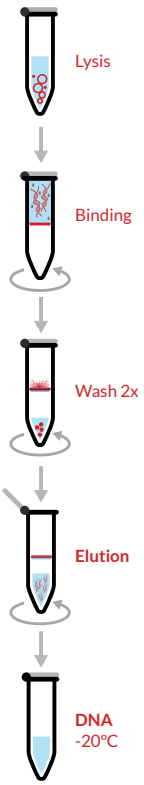
Applications:

- ✓ Circulating DNA from plasma or serum.
- ✓ Detection of biomarkers in various diseases.
- ✓ Analysis of fetal DNA from maternal plasma.

Quality control:

- ✓ DNA isolated from 250 - 1,000 µl of plasma/serum quantified by spectrophotometer and analysed by PCR.

Protocol:



HigherPurity™ FFPE DNA Isolation Kit

For easy, rapid and efficient extraction and purification of DNA From FFPE samples

Ordering info:

Cat No.	Size
AN00160-S	20 rxn
AN00160	50 rxn

Includes for 50 rxn:

- 30 mL Deparaffinization solution
- 10 mL Tissue Lysis Buffer
- 15 mL Lysis/ Binding Buffer
- 2 x 30 mg Proteinase K
- 18 mL Desinhibition Buffer
- 10 mL Wash Buffer
- 10 mL Elution Buffer
- 50 units MicroSpin Columns
- 100 units Collection tubes

Related products:

- Proteinase K (p.112)
- Horse-Power™ Taq DNA Pol. (p.103)
- RNAse (p.111)

Description:

HigherPurity™ Formalin fixation and paraffin embedding (FFPE) DNA Isolation Kit is an easy, rapid and efficient method for long-term preservation of most archived pathological specimens. It extraction involves two different phases: Deparaffinization and DNA extraction.

HigherPurity™ advanced technology omits the use of flammable and malodorous xylene or d-limonene commonly used for deparaffinization, a proprietary buffer formulation Deparaffinization solution is used for the complete dissolution of the wax to release the tissue.

Advantages & Features:

- ✓ **High quality:** of DNA obtained.
- ✓ **Very easy procedure:** it takes 173 minutes to paraffin removal with minimal handling.
- ✓ **Safe:** avoids xylene and other toxic solvents.
- ✓ **High purity of sample:** complete removal of contaminants and inhibitors for reliable downstream applications.
- ✓ **Concentrated:** low elution volume between 15-30 µl.
- ✓ **High durability:** optimized for long-term preservation of most archived pathological specimens.
- ✓ **Complete solution:** includes two different phases Deparaffinization and DNA extraction.

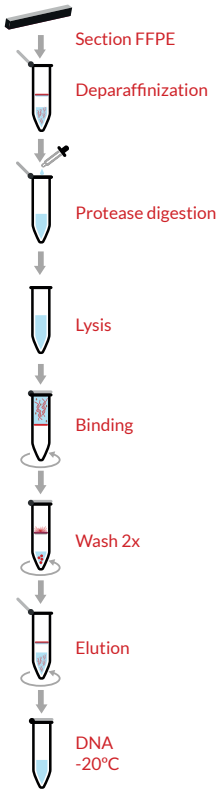
Applications:

- ✓ Rapid isolation of DNA from formalin-fixed, paraffin-embedded samples.
- ✓ Isolation of DNA from fresh and archived FFPE samples.
- ✓ Isolation of DNA from specimen of object slides.
- ✓ Typical downstream applications: PCR, qPCR, NGS, STR analysis.

Quality control:

- ✓ DNA isolated from tissue slice paraffin-embedded (10 µm) quantified by spectrophotometer and analysed by PCR.

Protocol:



HigherPurity™ Plant DNA Purification Kit

For a highly efficient, convenient and rapid purification of total DNA from a variety of plant tissues

Ordering info:

Cat No.	Size
AN00110-S	20 rxn
AN00110	50 rxn
AN00112	100 rxn

Includes for 50 rxn:

- 50 DNAprep spin columns
- 50 Filter columns
- 100 Elution tubes (1.5 mL)
- 100 Collection tubes (2 mL)
- 25 mL BL1A Buffer
- 25 mL BL1B Buffer
- 7.5 mL BL2 Buffer
- 15 mL BL3 Buffer
- 22.5 mL Wash Buffer 1
- 12 mL Wash Buffer 2
- 15 mL Elution Buffer
- 275 µl RNase A Solution (10 mg/mL)

Description:

HigherPurity™ Plant DNA Purification Kit offers a highly efficient, convenient and rapid method for purification of total DNA from a variety of plant tissues. The kit uses HigherPurity™ breakthrough technology based in DNA ability to bind silica in the presence of high concentrations of chaotropic salts.

Advantages & Features:

- ✓ **Highly efficient:** yields up to 5-40 µg total DNA from young leaves.
- ✓ **Pure genomic DNA:** ready-to-use in all Molecular Biology applications.
- ✓ **Really easy and fast procedure:** it takes 56 minutes to results with minimal handling steps.
- ✓ **Versatile:** high quality DNA obtained from several types of plants.
- ✓ **Mini format.**

Applications:

- ✓ Purified DNA suitable for all common Molecular Biology applications, such as:
  - RT-PCR.
  - Southern blotting.
  - RFLP.

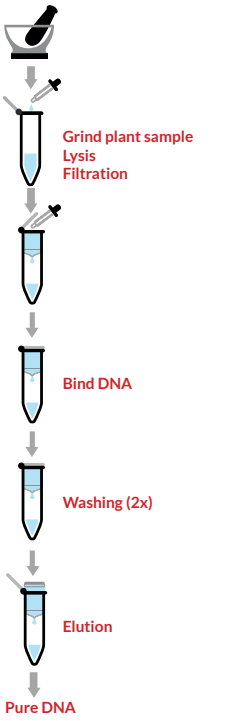
Quality control:

- ✓ Isolated from a 100 mg young leaf sample, quantified with a spectrophotometer and analysed by electrophoresis.

Related products:

- RNAse (p.111)
- HigherPurity™ Plant RNA Purification Kit (p.97)
- Horse-Power™ Taq DNA Polymerase (p.103)
- pSpark® DNA Cloning vectors (p.12)

Protocol:



HigherPurity™ Stool DNA Isolation Kit

For a reliable, easy and convenient high quality DNA isolation from fresh or frozen stool samples

Ordering info:

Cat No.	Size
AN0130-S	20 rxn
AN0130	50 rxn
AN0131	100 rxn

Includes for 50 rxn:

- 50 CleanEasy™ MiniSpin Columns
- 100 Collection tubes (2 mL)
- 50 Dry bead tube
- 50 microcentrifuge tube (1.5 mL)
- 12 g Glass Beads
- 20 mL Lysis Solution 1 (LS1)
- 15 mL Buffer A
- 15 mL Inhibitor Removal Buffer (IR-Buffer)
- 20 mL Buffer B
- 20 mL WB1 Buffer
- 20 mL EB Buffer
- 15 mg Proteinase K

Description:

HigherPurity™ Stool DNA Isolation Kit provides a reliable, easy and convenient technique to isolate high quality DNA from fresh or frozen stool samples. The kit uses HigherPurity™ breakthrough technology based in DNA ability to bind silica in the presence of high concentrations of chaotropic salts as guanidinium thiocyanate.

Fecal samples are rapidly and efficiently lysed by bead beating. The sample DNA is then bound to the surface of a Spin Filter membrane and washed and the bound DNA is then desorbed from the surface of the Spin Filter column. The inhibitors of the downstream PCR will be removed by utilizing the DNA binding column and the buffers system included in the kit.

Advantages & Features:

- ✓ **High purity:** eliminates humic acid, polysaccharides, phenol compounds and enzyme inhibitor from stool sample.
- ✓ **Efficient:** fecal samples are lysed by bead beating.
- ✓ **Time-saving protocol:** rapid isolation of ready-to-use DNA within 54 minutes with minimal handling steps.
- ✓ **Safe and convenient:** avoids phenol/chloroform extraction.
- ✓ **Sample Size:** 50~200 mg of fresh or frozen stool sample.
- ✓ **Extremely easy procedure:** to isolate high quality DNA from fresh or frozen stool samples.

Applications:

- ✓ Purified DNA suitable for all common Molecular Biology applications, such as:
  - Digestion with restriction enzymes.
  - Automated sequencing.
  - PCR template.
  - Southern Blots.

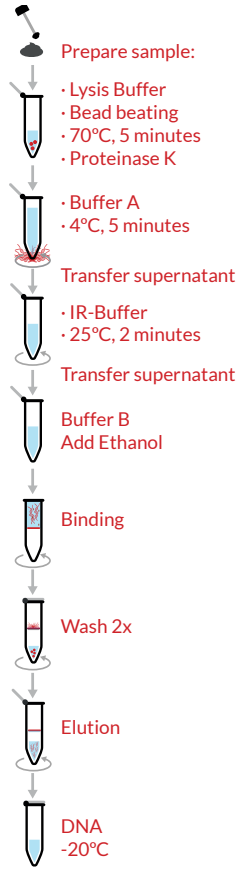
Quality control:

- ✓ Tested for isolation of DNA from stool sample.
- ✓ The quantity and quality of purified DNA attend to:
  - Ratio 260/280 (1.8-2.0).
  - Agarose gel electrophoresis.
  - Digestion with restriction endonucleases.

Related products:

- Proteinase K (p.112)
- Horse-Power™ Taq DNA Pol. (p.103)

Protocol:



HigherPurity™ Bacterial Genomic DNA Isolation Kit

For an accurate, easy and rapid high quality DNA isolation from both Gram negative and Gram positive bacteria

Ordering info:

Cat No.	Size
AN0066-S	20 rxn
AN0066	50 rxn
AN0067	100 rxn

Includes for 50 rxn:

- 50 CleanEasy™ MiniSpin Columns
- 50 Collection tubes
- 15 mL BR-1 Buffer
- 20 mL BLU Buffer
- 30 mL WB1 Buffer
- 30 mL WB2 Buffer
- 15 mL EB Buffer
- 30 mg Proteinase K
- 25 mg Lysozyme

Related products:

- Proteinase K (p.112)
- Horse-Power™ Taq DNA Pol. (p.103)
- pColiExpress™ Glue Enzyme kits (p.34)
- Molecular Microbiology services (p.140)

Description:

HigherPurity™ Bacterial Genomic DNA Isolation Kit provides an accurate, easy-to use and rapid method to isolate high quality DNA from both Gram negative and Gram positive bacteria. The kit uses HigherPurity™ breakthrough technology based in the ability to bind silica in the presence of high concentrations of chaotropic salts as guanidinium thiocyanate.

The extraction process uses comfortable CleanEasy™ MiniSpin Columns and includes an initial cell-wall lysis step with the appropriate enzyme to ensure efficient cell lysis and DNA release from the cell.

Advantages & Features:

- ✓ **Highly efficient:** yields up to 24 µg.
- ✓ **Really fast and easy procedure:** it takes 78 minutes to get results with minimal handling steps.
- ✓ **Safe:** avoids phenol/chloroform extraction.
- ✓ **Convenient:** ideal for bacterial DNA isolation from cell pellets after culturing.

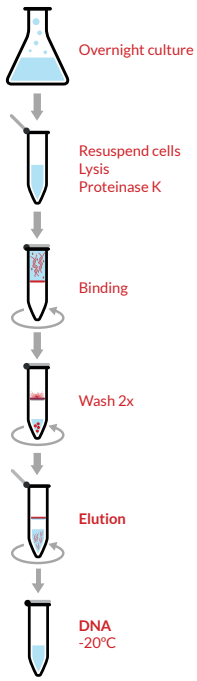
Applications:

- ✓ Purified DNA suitable for all common Molecular Biology applications, such as:
  - Digestion with restriction enzymes
  - Automated sequencing
  - PCR template.
  - Southern Blots.

Quality control:

- ✓ Tested on a lot-to-lot basis by isolating total DNA from *E. coli*.
- ✓ The quantity and quality of purified DNA attend to:
  - Ratio 260/280 (1.8-2.0).
  - Agarose gel electrophoresis.
  - Digestion with restriction endonucleases.

Protocol:



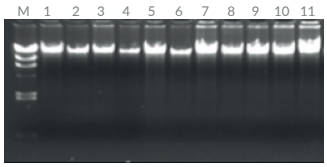


Figure 6.3.: Genomic DNA isolated from different strains of ***E. coli*** and ***B. subtilis*** purified with Bacterial Genomic DNA Isolation Kit

HigherPurity™ Yeast Genomic DNA Isolation Kit

For a easy, consistent and rapid high-quality genomic DNA purification from yeast

Ordering info:

Cat No.	Size
AN0080-S	20 rxn
AN0080	50 rxn
AN0081	100 rxn

Includes for 50 rxn:

- 50 Minispin columns
- 50 collection tubes
- 35 mL BLL Buffer
- 20 mL BLY Buffer
- 15 mg Proteinase K
- 5,000 U Lyticase
- 30 mL WB1 Buffer
- 6 mL WB2 Buffer
- 10 mL EB Buffer

Description:

HigherPurity™ Yeast Genomic DNA Extraction Kit is an easy, consistent and rapid method for high-quality genomic DNA purification from yeast. The kit uses HigherPurity™ breakthrough technology based DNA ability to bind silica in the presence of high concentrations of chaotropic salts. The kit combines the power of CleanEasy™ Spin Columns technology with the lyticase, glass beads and alkaline-SDS lysis of yeast cells. The cell wall of yeast cells are rapidly and efficiently lysed enzymatically by lyticase.

The sample DNA is then bound to the surface of a Spin Filter membrane and washed and the bound DNA is then desorbed from the surface of the Spin Filter column. The inhibitors of the downstream PCR will be removed by utilizing the DNA binding column and buffers system included in the kit.

Advantages & Features:

- ✓ **Proven performance:** isolating DNA from yeast and other cultured fungus.
- ✓ **Safe:** no phenol-chloroform extraction.
- ✓ **Pure and high quality genomic.**
- ✓ **DNA:** ready-to-use in all Molecular Biology applications.
- ✓ **Easy and fast protocol:** results in 88 minutes.

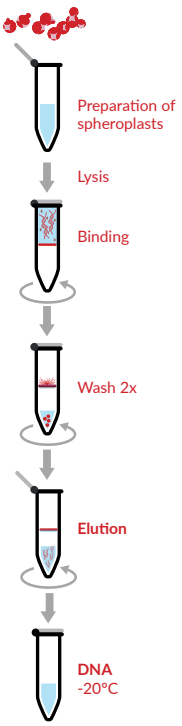
Applications:

- ✓ Purified DNA suitable for all common Molecular Biology applications, such as:
  - Digestion with restriction enzymes.
  - Automated sequencing.
  - PCR template.
  - Southern Blots.

Quality control:

- ✓ Tested on a lot-to-lot basis by isolating total DNA from 50 mg yeast.
- ✓ DNA purified is analysed by:
  - Spectrophotometer: Ratio 260/280 (1.8-2.0).
  - Agarose gel electrophoresis.

Protocol:



HigherPurity™ Soil DNA Isolation Kit

For a high quality, convenient and easy high quality DNA isolation from soil samples

Ordering info:

Cat No.	Size
AN0140-S	20 rxn
AN0140	50 rxn
AN0141	100 rxn

Includes for 50 rxn:

- 50 CleanEasy™ MiniSpin Columns
- 100 Collection tubes (2 mL)
- 50 Dry bead tube
- 12 g Glass Bead
- 40 mL Lysis Solution 1 (LS1)
- 20 mL WB1 Buffer
- 35 mL EB Buffer
- 15 mg Proteinase K
- 15 mL Inhibitor Removal Buffer (IR-Buffer)
- 50 microcentrifuge tube (1.5 mL)
- 15 mL Buffer A
- 25 mL Buffer B

Description:

HigherPurity™ Soil DNA Isolation Kit provides a high quality, convenient and easy-to use method technique to isolate high quality DNA from soil samples. The kit uses HigherPurity™ breakthrough technology based in DNA ability to bind silica in the presence of high concentrations of chaotropic salts as guanidinium thiocyanate.

Extractions are rapidly and efficiently lysed by bead beating. The sample DNA is then bound to the surface of a silica membrane that is inside the CleanEasy™ Spin Columns and washed and the bound DNA is then desorbed from the surface of the membrane. The inhibitors of the downstream PCR will be removed with the buffers system included in the kit.

Advantages & Features:

- ✓ **High quality** DNA isolated from soil samples.
- ✓ **Time-Saving:** rapid isolation of ready-to-use DNA within 58 minutes.
- ✓ **Easy, safe and convenient:** avoids phenol/chloroform extraction.
- ✓ **High purity:** eliminate humic acid, polysaccharides, phenol compounds and enzyme inhibitor from stool sample.
- ✓ **Sample Size:** mini Kit Prep: 0.2~1g of soil sample.
- ✓ **Efficient:** soil samples are lysed by bead beating.

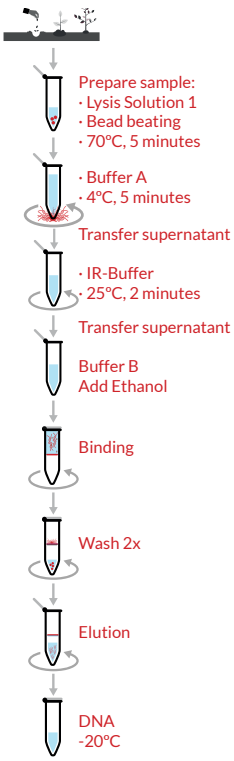
Applications:

- ✓ All Molecular Biology applications, such as:
  - Digestion with restriction enzymes.
  - Automated sequencing.
  - PCR template.
  - Southern Blots.

Quality control:

- ✓ Tested for isolation of DNA from soil sample.
- ✓ The quantity and quality of purified DNA attend to:
  - Ratio 260/280 (1.8-2.0).
  - Agarose gel electrophoresis.

Protocol:



HigherPurity™ Viral DNA/RNA Mini Spin Kit

For a efficient, safe and rapid simultaneous purification of viral DNA and RNA from cell –free samples

Ordering info:

Cat No.	Size
AN0605-S	20 rxn
AN0605	100 rxn

Includes for 100 rxn:

- 100 CleanEasy™ MiniSpin Columns
- 200 Collection tubes (2 mL)
- 25 mL BLY Buffer
- 40 mg Proteinase K
- 36 mL WB1 Buffer
- 20 mL WB2 Buffer
- 620 µg Carrier RNA (lyophilized)
- 15 mL Elution Buffer

Related products:

- BrightMAX™ DNA Ladders (p.116)
- RNA services (p.140)
- Proteinase K (p.112)

Description:

HigherPurity™ Viral DNA/RNA Mini Spin Kit offers an efficient, fast and simultaneous purification of viral DNA and RNA from cell–free samples such as serum, plasma and cerebrospinal fluid. The kit uses HigherPurity™ breakthrough technology based in nucleic acid ability to bind silica in the presence of high concentrations of chaotropic salts. The viral RNA/DNA molecules bind to the silica-based media and impurities such as proteins and nucleases are removed by thorough washing with Wash Buffer. The RNA/DNA is then eluted in sterile, RNase free water.

Advantages & Features:

- ✓ **Efficient:** 3-6 µg of genomic DNA from a 200 µl plasma/serum.
- ✓ **Fast:** results in less of 28 minutes.
- ✓ **Safe:** no phenol-chloroform extraction.
- ✓ **Ready-to-use:** genomic DNA, in all Molecular Biology applications.

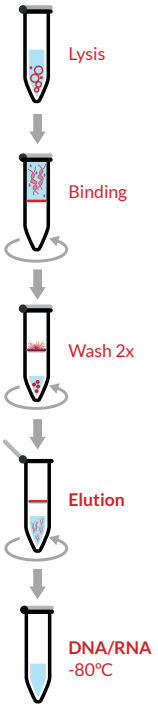
Applications:

- ✓ Purified DNA suitable for all common Molecular Biology applications, such as:
  - RT-PCR.
  - qRT-PCR.
  - qPCR.
  - Viral load monitoring.
  - Viral detection.
  - Viral genotyping.

Quality control:

- ✓ DNA isolated from 200 µl of plasma/serum and analysed by PCR.

Protocol:



CleanEasy™ Agarose Purification Kit

For an accurate, rapid and efficient DNA extraction from agarose gels

Ordering info:

Cat No.	Size
AN0070-S	20 rxn
AN0070	50 rxn
AN0071	100 rxn

Includes for 50 rxn:

- 50 CleanEasy™ MiniSpin Columns
- 50 Collection tubes (2 mL)
- 60 mL QG Buffer
- 11.25 mL PE Buffer
- 10 mL EB Buffer

Related products:

- Horse-Power™ Taq DNA Pol. (p.103)
- pColiExpress™ Glue Enzyme kits (p.34)
- BrightMAX™ DNA Ladders (p.116)
- Custom solutions (p.147)
- pSpark® DNA cloning vectors (p.12)

Description:

CleanEasy™ Agarose Purification Kit provides an accurate, rapid and efficient method to extract DNA from agarose gels. The kit uses HigherPurity™ breakthrough technology based in solubilisation and binding of DNA to a silica membrane in presence of chaotropic salts. Comfortable CleanEasy™ MiniSpin Columns contains an exclusive membrane that allows binding a unique DNA fragment, previously excised from agarose gel.

Advantages & Features:

- ✓ **Extremely fast and easy procedure:** it takes 5 minutes to results with minimal handling steps.
- ✓ **Reproducible yields:** > 80% DNA Recovery (0.7 -1% agarose) and reproducible yields of pure DNA.
- ✓ **Versatile:** compatible with a wide spectrum of size fragments, suitable since 100 bp up or any kind of agarose and gel buffer systems.
- ✓ **Pure genomic DNA:** ready-to-use in all Molecular Biology applications.

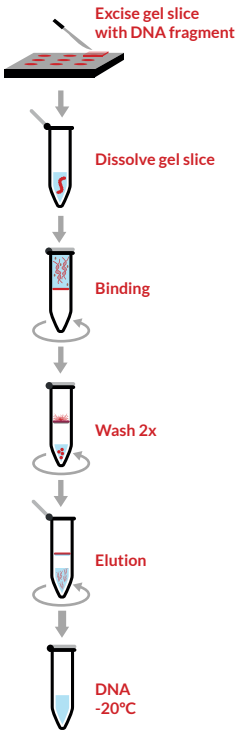
Applications:

- ✓ Purification of DNA fragments (obtained by PCR or digestion with restriction enzymes) from agarose gels.
- ✓ Purified DNA suitable for all common Molecular Biology applications, such as:
  - PCR.
  - Cloning.
  - DNA sequencing.
  - Southern blot analysis.

Quality control:

- ✓ Tested in the purification of a 0.5 kb DNA fragment excised from 2% agarose gel.
- ✓ The purified band is analysed in agarose gel electrophoresis and quantify by spectrophotometry 260/280nm.

Protocol:



CleanEasy™ PCR Purification Kit

For efficient, consistent and rapid purification of DNA and remove contaminants from reaction mixtures

Ordering info:

Cat No.	Size
AN0063-S	20 rxn
AN0063	50 rxn
AN0064	100 rxn

Includes for 50 rxn:

- 50 CleanEasy™ MiniSpin Columns
- 50 Collection tubes
- 25 mL PB Buffer
- 11.25 mL PE Buffer
- 9 mL EB Buffer

Related products:

- Horse-Power™ Taq DNA Polymerase (p.103)
- BrightMAX™ DNA Ladders (p.116)
- FastPANGEA™ Long PCR DNA Polymerase (p.106)
- Custom solutions (p.147)

Description:

CleanEasy™ PCR Purification kit provides an efficient, consistent and rapid method to purify DNA and remove contaminants from reaction mixtures (e.g. PCR, digestion or labeling reactions). Comfortable CleanEasy™ MiniSpin Columns contains an exclusive membrane that allows DNA adsorption in presence of chaotropic salts and the removal of contaminants.

Advantages & Features:

- ✓ **Really fast and easy procedure:** it takes 14 minutes to results with minimal handling steps.
- ✓ **Reproducible yields:** high DNA Recovery (70-90%) and consistent yields of pure DNA.
- ✓ **Sensitive:** proven performance for DNA fragments as short as 75 bp.
- ✓ **Pure genomic DNA:** ready-to-use in all Molecular Biology applications.

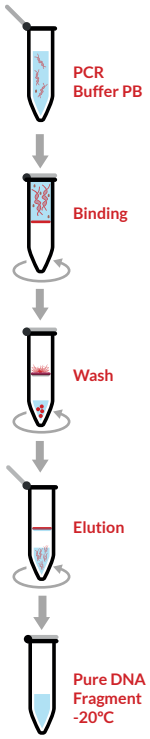
Applications:

- ✓ Removal of proteins and salts from PCR, restriction digestion, dephosphorylation, ligation or labelling reactions.
- ✓ Changing of a restriction enzyme buffer.
- ✓ Re-purification of genomic DNA.

Quality control:

- ✓ Tested in the purification of a 0.6 kb DNA fragment from PCR mixture.
- ✓ Purified band is analysed in agarose gel electrophoresis.

Protocol:



WideUse™ Plasmid Purification Kit

For a reliable, convenient and rapid routinary isolation of high quality plasmid preparations in mini format

Ordering info:

Cat No.	Size
AN0068-S	20 rxn
AN0068	50 rxn
AN0069	100 rxn

Includes for 50 rxn:

- 50 CleanEasy™ MiniSpin Columns
- 50 Collection tubes
- 16 mL S-I Buffer
- 16 mL S-II Buffer
- 16 mL S-III Buffer
- 30 mL Binding Buffer
- 8 mL Washing Buffer
- 10 mL Elution Buffer
- 160 µl RNAse

Description:

WideUse™ Plasmid Purification kit offers a reliable, convenient and rapid method for routinary isolation of high quality plasmid preparations in mini format. The kit uses HigherPurity™ breakthrough technology based in DNA ability to bind silica in the presence of high concentrations of chaotropic salts. Comfortable CleanEasy™ MiniSpin Columns have packet an exclusive silica membranes and it binds up to 24 µg DNA.

Advantages & Features:

- ✓ **Highly efficient:** yields up to 24 µg.
- ✓ **Pure plasmid DNA:** ready-to-use in all Molecular Biology applications.
- ✓ **Really fast and easy procedure:** it takes 56 minutes to results with minimal handling steps.
- ✓ **Safe:** avoids phenol/chloroform extraction.
- ✓ **Convenient:** ideal for routinary isolation of high quality plasmid preparations.

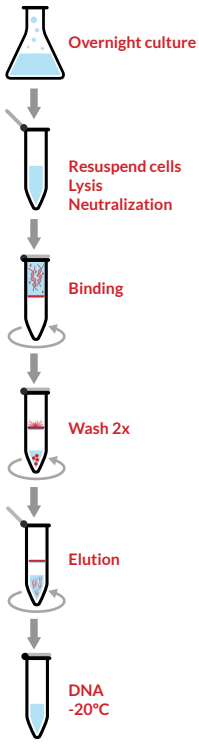
Applications:

- ✓ Purified DNA suitable for all common Molecular Biology applications, such as:
  - Digestion with restriction enzymes.
  - Automated sequencing.
  - PCR template.
  - Bacterial transformation.
  - Transfection.

Quality Control:

- ✓ Tested for the isolation of any plasmid DNA from transformed *E. coli*.
- ✓ The quality of purified DNA is analysed by:
  - Ratio 260/280 (1.8-2.0).
  - Agarose gel electrophoresis.
  - Digestion with restriction endonucleases.

Protocol:



DNA Reagent based Purification

HigherPurity™ Buccal Swab Genomic DNA Extraction Kit

For an efficient, convenient and easy DNA extraction from buccal swab

Ordering info:

Cat No.	Size
AN0036-S	20 rxn
AN0036	50 rxn

Includes for 50 rxn:

- 60 mL Resuspension Solution
- 12 mL S2 Buffer
- 10 mL S3 Buffer
- 1 mL S4 Buffer
- 15 mg Proteinase K
- 10 mL EB Buffer
- 50 units Sterile swabs

Related products:

- Proteinase K (p.112)
- Horse-Power™ Taq DNA Pol. (p.103)
- Custom solutions (p.147)
- RNAse (p.111)

Description:

HigherPurity™ Buccal Swab Genomic DNA Extraction kit provides an efficient, convenient and easy method for DNA extraction from buccal swab. The procedure includes sample collection, lysis, protein removing, DNA precipitation, washing and hydration.

Advantages & Features:

- ✓ **Convenient:** ideal for routine.
- ✓ **Highly Efficient:** 0.5-3 µg of genomic DNA from buccal swab.
- ✓ **Safe:** avoids phenol/chloroform extraction.
- ✓ **Pure genomic DNA:** ready-to-use in all Molecular Biology applications.
- ✓ **Easy protocol:** reduces sample collection distress and blood sample handling.
- ✓ **Versatile:** proven performance to isolate DNA from buccal swab of human, cats, dogs, sheeps, etc.

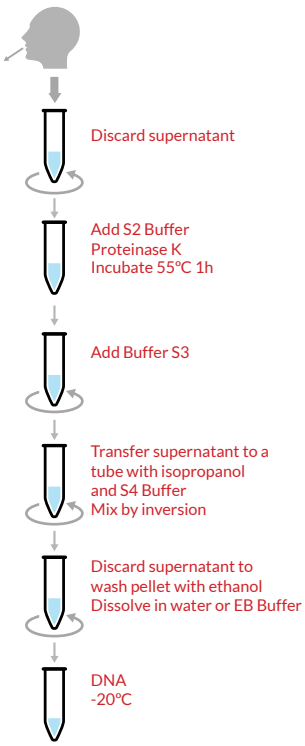
Applications:

- ✓ Purification of genomic DNA from buccal swab of different origins (human or animal).

Quality control:

- ✓ Analysed by a buccal swab DNA genomic extraction.
- ✓ DNA purified is analysed by:
  - Ratio 260/280 (1.8-2.0).
  - Agarose gel electrophoresis.

Protocol:



HigherPurity™ Buccal Saliva Genomic DNA Extraction Kit

For an efficient, consistent and rapid DNA extraction from buccal saliva

Ordering info:

Cat No.	Size
AN0037-S	20 rxn
AN0037	50 rxn

Includes for 50 rxn:

- 60 mL Resuspension Solution
- 12 mL S2 Buffer
- 10 mL S3 Buffer
- 1 mL S4 Buffer
- 15 mg Proteinase K
- 10 mL EB Buffer
- 50 Funnels
- 50 Saliva Collection Tube

Related products:

- Proteinase K (p.112)
- Horse-Power™ Taq DNA Polymerase (p.103)
- BrightMAX™ DNA Ladders (p.116)
- Custom solutions (p.147)
- RNAse (p.111)
- Saliva Sample collection Kit (p.100)

Description:

HigherPurity™ Buccal Saliva Genomic DNA Extraction kit provides an efficient, consistent and rapid method for DNA extraction from buccal saliva. The procedure includes sample collection, lysis, protein removing, DNA precipitation, washing and hydration.

Advantages & Features:

- ✓ **Convenient:** ideal for routine.
- ✓ **Safe:** avoids phenol/chloroform extraction.
- ✓ **Highly efficient:** 10 µg of genomic DNA from saliva.
- ✓ **Pure genomic DNA:** ready-to-use in all Molecular Biology applications.
- ✓ **Time-saving protocol:** reduces sample collection distress and blood sample handling.

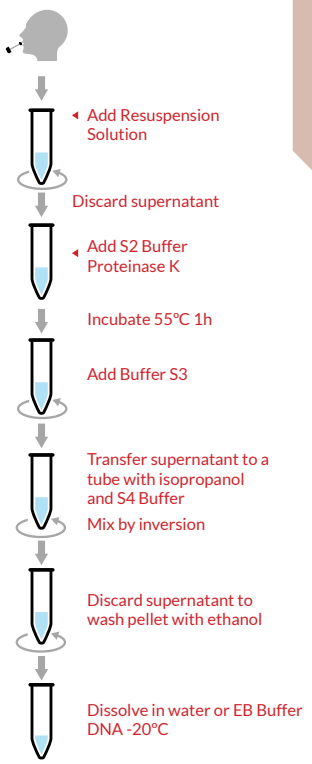
Applications:

- ✓ Purification of genomic DNA from buccal saliva of different origins (Human or animal).

Quality control:

- ✓ Analysed by saliva DNA genomic extraction.
- ✓ DNA purified is analysed by:
  - Ratio 260/280 (1.8-2.0).
  - Agarose gel electrophoresis.
  - Digestion with restriction endonucleases.

Protocol:



HigherPurity™ Buccal Swab/Saliva Genomic DNA Extraction Kit

For accurate, easy and rapid DNA extraction from buccal swab and saliva

Ordering info:

Cat No.	Size
AN0038 - S	20 rxn
AN0038	150 rxn

Includes for 150 rxn:

- 3 x 60 mL Resuspension Solution
- 36 mL S2 Buffer
- 30 mL S3 Buffer
- 3 mL S4 Buffer
- 45 mg Proteinase K · 10 mL EB Buffer
- 150 units Sterile swabs

Related products:

- Proteinase K (p.112)
- Horse-Power™ Taq DNA Polymerase (p.103)
- Custom solutions (p.147)
- RNAse (p.111)

Description:

HigherPurity™ Buccal Swab/Saliva Genomic DNA Extraction kit provides an accurate, easy-to use and rapid method for DNA extraction from buccal swab and saliva. The procedure includes sample collection, lysis, protein removing, DNA precipitation, washing and hydration.

Advantages & Features:

- ✓ **Safe:** avoids phenol-chloroform extraction.
- ✓ **Efficient:** 0.5-3 µg of genomic DNA from buccal swab or 10 µg from saliva.
- ✓ **Pure genomic DNA:** ready-to-use in all Molecular Biology applications.
- ✓ **Time-saving protocol:** reduces sample collection distress and blood sample handling.

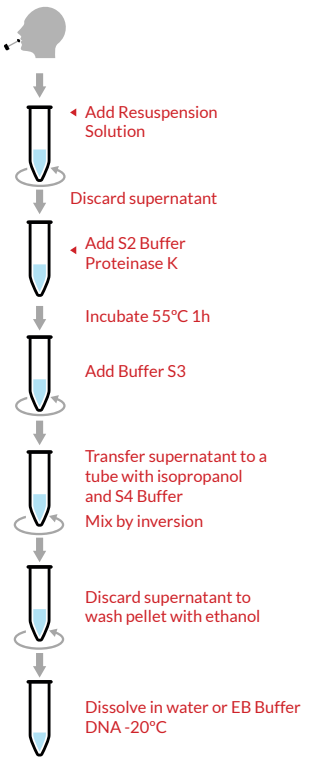
Applications:

- ✓ Purification of genomic DNA from Buccal Swab of different origins (Human or animal).
- ✓ Purification of genomic DNA from Saliva.

Quality control:

- ✓ Analysed by a Buccal Swab DNA Genomic extraction:
  - Ratio 260/280 (1.8-2.0).
  - Agarose gel electrophoresis.
  - Digestion with restriction endonucleases.

Protocol:



HigherPurity™ Blood Genomic DNA Extraction Kit

For a reliable, easy and high-quality genomic DNA purification from whole blood, serum or cell lines

Ordering info:

Cat No.	Size
AN0043-S	20 rxn
AN0043	150 rxn

Includes for 150 rxn:

- 2 x 60 mL S1 Buffer
- 36 mL S2 Buffer
- 12 mL S3 Buffer
- 30 mg Proteinase K
- 10 mL EB Buffer

Related products:

- Proteinase K (p.112)
- Horse-Power™ Taq DNA Polymerase (p.103)
- BrightMAX™ DNA Ladders (p.116)
- Custom solutions (p.147)
- RNAse (p.111)

Description:

HigherPurity™ Blood Genomic DNA Extraction kit is a reliable, easy-to-use and rapid method for high-quality genomic DNA purification from various sources, including: whole blood, serum and cell lines. The procedure includes: lysis, protein removal, DNA precipitation, washing and hydration.

Advantages & Features:

- ✓ **Really easy and fast protocol:** it takes 86 minutes to results.
- ✓ **Highly efficient:** 3-6 µg of genomic DNA from a 200 µl blood sample.
- ✓ **Versatile:** high quality DNA obtained from different sources.
- ✓ **Safe and convenient:** avoids phenol/chloroform extraction.
- ✓ **Pure genomic DNA:** ready-to-use in all Molecular Biology applications.
- ✓ **Reproducible extraction** of high molecular weight genomic DNA purified.

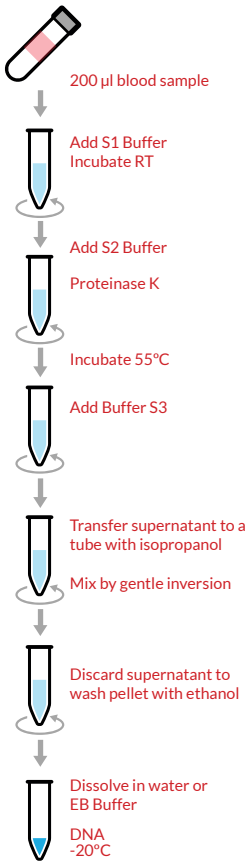
Applications:

- ✓ Purified DNA suitable for all common Molecular Biology applications, such as:
  - PCR.
  - Cloning.
  - DNA sequencing.
  - Southern blot analysis.

Quality control:

- ✓ Tested on a lot-to-lot basis by isolating total DNA from 200 µl of whole Human blood. DNA purified is analysed by:
  - Spectrophotometer: Ratio 260/280 (1.8-2.0).
  - Agarose gel electrophoresis.

Protocol:



DNA Magnetic Bead based Purification

MagBeads™ Bacteria G (-) Genomic DNA Isolation

For a consistent, easy and rapid high quality DNA isolation from Gram-negative bacteria

Ordering info:

Cat No.	Size
AN0501	50 rxn
AN0502	100 rxn
AN0503	250 rxn

Includes for 50 rxn:

- 0.5 mL MagBeads™ solution
- 15 mL Lysis Buffer solution 1
- 5 mL Lysis Buffer solution 2
- 10 mL WB1 Buffer
- 5 mL EB Buffer
- 500 µL RNAse A

Related products:

- Proteinase K (p.112)
- Horse-Power™ Taq DNA Pol. (p.103)
- Custom solutions (p.147)
- RNAse (p.111)
- CaxBeads™ Magnetic Particles (p.129)

Description:

MagBeads™ Bacteria G (-) Genomic DNA Isolation Kit provides a consistent, easy-to use and rapid method to isolate high quality DNA from Gram negative bacteria. The kit uses MagBeads™ breakthrough technology for extraction based on paramagnetic beads.

It has been optimized specifically for isolating bacterial DNA from cell pellets after culturing. The extraction process includes an initial cell-wall lysis step with the appropriate Buffer to ensure efficient cell lysis and DNA release from the cell, DNA binding to the surface of the magnetic beads, washing and elution.

Advantages & Features:

- ✓ **High quality:** 100% chloroform and phenol free.
- ✓ **Safe:** avoids the uses of dangerous and polluting chaotropic salts.
- ✓ **Harmless:** ideal for the downstream applications.
- ✓ **Time-saving protocol:** avoids centrifugation step in DNA purification process.
- ✓ **Cost avoidance:** saves on equipment costs and increases portability of the technique.

Applications:

- ✓ All Molecular Biology applications, such as:
  - Digestion with restriction enzymes.
  - Automated sequencing.
  - PCR template.
  - Southern Blot.

Quality control:

- ✓ Tested for isolation of DNA from *E. coli*. The quantity and quality of purified DNA attend to:
  - Ratio 260/280 (1.8-2.0).
  - Agarose gel electrophoresis.
  - Digestion with restriction endonucleases.

Protocol:

MagBeads™ Bacteria G (+) Genomic DNA Isolation

For effective, easy and convenient high quality DNA isolation from Gram-positive bacteria

Ordering info:

Cat No.	Size
AN0511	50 rxn
AN0512	100 rxn
AN0513	250 rxn

Includes for 50 rxn:

- 0.5 mL MagBeads™ solution
- 15 mL Suspension Buffer
- 1.5 mL Rupture Buffer
- 15 mL Lysis Buffer solution 1
- 5 mL Lysis Buffer solution 2
- 10 mL WB2 Buffer
- 5 mL EB Buffer
- 500 µL RNAse A

Related products:

- BrightMAX™ DNA Ladders (p.116)
- Molecular Microbiology services (p.140)
- RNAse (p.111)
- CaxBeads™ Magnetic Particles (p.129)

Description:

MagBeads™ Bacteria G (+) Genomic DNA Isolation Kit provides an effective, easy and convenient technique to isolate high quality DNA from Gram positive bacteria. The kit uses MagBeads™ advanced technology for extraction based on paramagnetic beads. Extraction process includes an initial cell-wall lysis step with the appropriate Buffer to ensure efficient cell lysis and DNA release from the cell, DNA binding to the surface of the magnetic beads, washing and elution.

Advantages & Features:

- **Proven performance:** for isolating bacterial DNA from cell pellets after culturing.
- **High quality:** 100% chloroform and phenol free.
- **Safe:** avoids the uses of dangerous and polluting chaotropic salts.
- **Harmless:** ideal for the downstream applications.
- **Time-saving protocol:** avoids centrifugation step in DNA purification process.
- **Cost-effective:** saves on equipment costs and increases portability of the technique.

Applications:

- All Molecular Biology applications, such as:
  - Digestion with restriction enzymes.
  - Automated sequencing.
  - PCR template.
  - Southern Blot.

Quality control:

- Tested for isolation of DNA from *Bacillus subtilis*. The quantity and quality of purified DNA attend to:
  - Ratio 260/280 (1.8-2.0).
  - Agarose gel electrophoresis.
  - Digestion with restriction endonucleases.

Protocol:

MagBeads™ PCR Clean-up

For an efficient, easy and rapid DNA purification and remove contaminants from reaction mixtures

Ordering info:

Cat No.	Size
AN0521	50 rxn
AN0522	100 rxn
AN0523	250 rxn

Includes for 50 rxn:

- 5 mL MagBeads™ PCR solution
- 5 mL EB Buffer

Related products:

- BrightMAX™ DNA Ladders (p.116)
- CaxBeads™ Magnetic Particles (p.129)

Description:

MagBeads™ PCR Clean-up Kit provides an efficient, easy and rapid method to purify DNA and remove contaminants from reaction mixtures (e.g. PCR or labeling reactions). Protocol comprises of binding, washing and eluting steps, where contaminants in the reaction mixture are efficiently removed.

Advantages & Features:

- **High quality:** purity of DNA attends to Ratio A260/A280 (1.8-2.0).
- **Highly efficient:** yields up to 5 µg of PCR DNA.
- **Fast protocol:** results in 5 minutes.
- **Easy-to-use:** avoid centrifugation step.
- **Convenient:** proven performance in manual or automated DNA isolation.
- **Scalable:** sample size is adjustable.

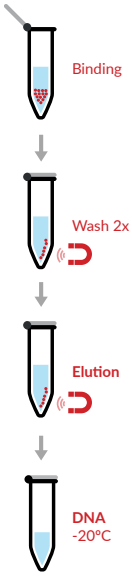
Applications:

- All Molecular Biology applications, such as:
  - Automated sequencing.
  - PCR template.
  - Southern Blot.

Quality control:

- Tested in the purification of a 0.6 kb DNA fragment from PCR mixture. The purified band is analysed in agarose gel electrophoresis.

Protocol:



MagBeads™ Plasmid Purification Kit

For a reliable, easy and high quality plasmid DNA isolation from bacteria cells

Ordering info:

Cat No.	
AN0541	50 rxn
AN0542	100 rxn
AN0543	250 rxn

Includes for 50 rxn:

- 0.5 mL MagBeads™ solution
- 6 mL Lysis Buffer 1
- 12 mL Lysis Buffer 2
- 9 mL Lysis Buffer 3
- 10 mL WB2 Buffer
- 5 mL EB Buffer
- 500 µL RNAse A

Related products:

- BrightMAX™ DNA Ladders (p.116)
- Custom solutions (p.147)
- WideUse™ Plasmid Purification Kit (p.92)
- CaxBeads™ Magnetic Particles (p.129)

Description:

MagBeads™ Plasmid Purification Kit provides a reliable, easy and convenient technique to isolate high quality plasmid DNA from bacteria cells. The kit uses for extraction MagBeads™ advanced technology based on paramagnetic beads.

Advantages & Features:

- ✓ **Proven performance:** for isolating plasmid DNA from overnight *E. coli* culture.
- ✓ **High quality:** 100% chloroform and phenol free.
- ✓ **Safe:** avoids the uses of dangerous and polluting chaotropic salts.
- ✓ **Harmless:** ideal for the downstream applications.
- ✓ **Time-saving protocol:** avoids centrifugation step in DNA purification process.
- ✓ **Cost-effective:** saves on equipment costs and increases portability of the technique.

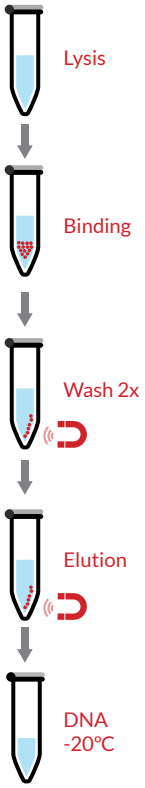
Applications:

- ✓ All Molecular Biology applications, such as:
  - Digestion with restriction enzymes.
  - Automated sequencing.
  - PCR template.
  - Bacterial transformation.
  - Transfection.

Quality control:

- ✓ Tested for the isolation of any plasmid DNA from transformed *E. coli*. The quality of purified DNA is analysed by:
  - Ratio 260/280 (1.8-2.0).
  - Agarose gel electrophoresis.
  - Digestion with restriction endonucleases.

Protocol:



MagBeads™ Yeast Genomic DNA Isolation Mini Kit

For an accurate, easy and convenient high quality DNA isolation from yeast

Ordering info:

Cat No.	Size
AN0551	50 rxn
AN0552	100 rxn
AN0553	250 rxn

Includes for 50 rxn:

- 0.5 mL MagBeads™ solution
- 1.5 mL Rupture Buffer
- 15 mL Lysis Buffer solution 1
- 5 mL Lysis Buffer solution 2
- 17.5 mL Binding Buffer
- 10 mL WB2 Buffer
- 5 mL EB Buffer
- 500 µL RNAse A

Related products:

- BrightMAX™ DNA Ladders (p.116)
- CaxBeads™ Magnetic Particles (p.129)

Description:

MagBeads™ Yeast Genomic DNA Isolation Kit provides an accurate, easy and convenient technique to isolate high quality DNA from yeast. The kit uses for extraction MagBeads™ advanced technology based on paramagnetic beads.

The extraction process includes an initial cell-wall lysis step with the appropriate Buffer to ensure efficient cell lysis and DNA release from the cell, DNA binding to the surface of the magnetic beads, washing and elution.

Advantages & Features:

- ✓ **High quality:** 100% chloroform and phenol free.
- ✓ **Safe:** avoids the uses of dangerous and polluting chaotropic salts.
- ✓ **Harmless:** ideal for the downstream applications.
- ✓ **Time-saving protocol:** avoids centrifugation step in DNA purification process.
- ✓ **Cost-effective:** saves on equipment costs and increases portability of the technique.

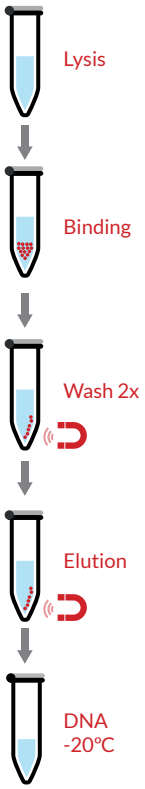
Applications:

- ✓ All Molecular Biology applications, such as:
  - Digestion with restriction enzymes.
  - Automated sequencing.
  - PCR template.
  - Southern Blots.

Quality control:

- ✓ Tested for isolation of DNA from *Pichia pastori*. The quantity and quality of purified DNA attend to:
  - Ratio 260/280 (1.8-2.0).
  - Agarose gel electrophoresis.
  - Digestion with restriction endonucleases.

Protocol:



MagBeads™ Plant Genomic DNA Isolation Kit

For efficient, easy and convenient isolation of high quality DNA from plant tissues

Ordering info:

Cat No.	Size
AN0531	50 rxn
AN0532	100 rxn
AN0533	250 rxn

Includes for 50 rxn:

- 0.5 mL MagBeads™ solution
- 15 mL Lysis Buffer 1
- 5 mL Lysis Buffer 2
- 10 mL Lysis Buffer 3
- 40 mL WB2 Buffer
- 5 mL EB Buffer
- 500 µL RNAse A

Related products:

- BrightMAX™ DNA Ladders (p.116)
- CaxBeads™ Magnetic Particles (p.129)
- RNAse (p.111)

Description:

MagBeads™ Plant Genomic DNA Isolation Kit provides an efficient, easy and convenient technique to isolate high quality DNA from plant tissues. Extraction is based on paramagnetic beads advanced technology. The extraction process includes an initial cell-wall lysis step with the appropriate Buffer to ensure efficient cell lysis and DNA release from the cell, DNA binding to the surface of the magnetic beads, washing and elution.

Advantages & Features:

- ✓ **Proven performance:** for isolating genomic DNA from Plant.
- ✓ **High quality:** 100% chloroform and phenol free.
- ✓ **Safe:** avoids the uses of dangerous and polluting chaotropic salts.
- ✓ **Harmless:** ideal for the downstream applications.
- ✓ **Time-saving protocol:** avoids the centrifugation step in the DNA purification process.
- ✓ **Cost-effective:** saves on equipment costs and increases portability of the technique.

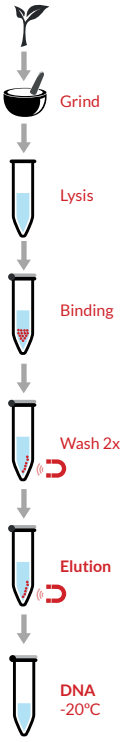
Applications:

- ✓ All Molecular Biology applications, such as:
  - Digestion with restriction enzymes.
  - Automated sequencing.
  - PCR template.
  - Southern Blot.

Quality control:

- ✓ Tested for the isolation of DNA from 100 mg of young leaves. The quantity and quality of purified DNA is analysed by:
  - Ratio 260/280 (1.8-2.0).
  - Agarose gel electrophoresis.
  - Digestion with restriction endonucleases.

Protocol:



RNA Spin Column based Purification

HigherPurity™ Plant RNA Purification Kit

For a highly efficient, easy and rapid of Total RNA purification from a variety of plant tissues

Ordering info:

Cat No.	Size
AN0100-S	20 rxn
AN0100	50 rxn
AN0102	100 rxn

Includes for 50 rxn:

- 50 RNAprep spin columns
- 100 Collection tubes (2 mL)
- 50 Filter column
- 30 mL L1 Buffer
- 30 mL L2 Buffer
- 30 mL WB1 Buffer
- 20 mL WB2 Buffer
- 6 mL RNase-free water
- 1.5 mL DNase Solution (1U/µl)

Related products:

- DNAse (p.112)
- Horse-Power™ Taq DNA Polymerase (p.103)
- HigherPurity™ Plant DNA Purification kit (p.88)
- RNA services (p.140)

Description:

HigherPurity™ Plant RNA Purification Kit offers a consistent, easy-to use and rapid method for purification of Total RNA from a variety of plant tissue. The kit uses HigherPurity™ breakthrough technology based in RNA ability to bind silica in the presence of high concentrations of chaotropic salts.

Advantages & Features:

- ✓ **Highly efficient:** yields up to 30 µg Total RNA from young leaves.
- ✓ **Pure RNA:** ready-to-use in all Molecular Biology applications.
- ✓ **Easy and fast procedure:** it takes 28 minutes with minimal handling.
- ✓ **Safe:** avoids phenol-chloroform extraction, centrifugation with CsCl gradients or precipitation with LiCl.
- ✓ **Mini format.**

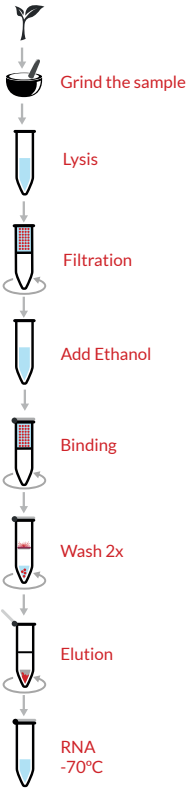
Applications:

- ✓ Purified RNA suitable for all common Molecular Biology applications, such as:
  - RT-PCR.
  - Northern blotting.

Quality control:

- ✓ Total RNA is isolated from a 100 mg young leaf sample.
- ✓ Purified RNA is quantified using a spectrophotometer with a typical yield of more than 10 µg of Total RNA and an A260nm/A280nm ratio of 1.9-2.1.
- ✓ Quality is further checked by agarose gel electrophoresis.

Protocol:



HigherPurity™ Blood/Cultured Cell Total RNA Kit

For a highly efficient, easy and convenient Total RNA from fresh whole Human blood and cultured cells

Ordering info:

Cat No.	Size
AN0145-S	20 preps
AN0145	50 preps
AN0146	100 preps

Includes for 50 rxn:

- 120 mL RL Buffer
- 25 mL Buffer
- 30 mL Wash Buffer 1
- 15 mL Wash Buffer 2 (concentrate)
- 10 mL RNase-free Water
- 50 RNAprep spin column
- 50 Filter Column
- 100 Collection Tube
- 50 Elution Tube

Description:

The kit is a highly efficient, easy and convenient **HigherPurity™ Blood/Cultured Cell Total RNA Kit** designed specifically for purifying Total RNA from fresh whole Human blood and cultured cells.

It is based in the use of special detergents and chaotropic salt to lyse cells and inactivate RNase. Once all contaminants have been removed the purified Total RNA is eluted by RNase-Free Water.

Advantages & Features:

- ✓ **Highly efficient:** yields up to 2 µg from whole blood or up to 30 µg from 1x10⁶ 293T cells.
- ✓ **Easy and fast protocol:** ready-to-use Total RNA in 19 minutes.
- ✓ **Convenient:** flexible column applicability (centrifugation and vaccum).
- ✓ **Optimized spin colums:** for Total RNA extraction.
- ✓ **High Binding capacity:** < 100 µg Total RNA/column.
- ✓ **Minimal Sample Volume:** less of 300 µl whole blood is needed.
- ✓ **Minimum elution volume:** 40 µl.

Quality control:

- ✓ Total RNA is isolated from 300 µl of fresh whole Human blood.
- ✓ Purified RNA is quantified using a spectrophotometer with a typical yield of more than 2 µg of Total RNA and an A260/A280 ratio of 1.8-2.0.
- ✓ Quality is further checked by agarose gel electrophoresis.

Applications:

- ✓ RT-PCR.
- ✓ Northern Blotting.
- ✓ Primer Extension.
- ✓ mRNA Selection.
- ✓ cDNA Synthesis.

Related products:

- BrightMAX™ DNA Ladders (p.116)
- RNA services (p.140)
- DNAse (p.112)

HigherPurity™ Tissue Total RNA Purification Kit

For an efficient, rapid and convenient purification of Total RNA from a variety of tissue and culture cells

Ordering info:

Cat No.	Size
AN0150-S	20 preps
AN0150	50 preps
AN0152	100 preps

Includes for 50 rxn:

- 25 mL Buffer BLY
- 30 mL Wash Buffer 1
- 15 mL Wash Buffer 2
- 10 mL RNase-free ddH2O
- 50 RNAprep spin column
- 50 Filter Column
- 100 Collection tube (2 mL)
- 50 microtube (1.5 mL)
- 50 Micropestle

Related products:

- Horse-Power™ Taq DNA Pol. (p.103)
- BrightMAX™ DNA Ladders (p.116)
- RNA services (p.140)
- DNAse (p.112)

Description

HigherPurity™ Tissue Total RNA Purification Kit offers an efficient, rapid and convenient method for purification of Total RNA from a variety of tissue and culture cells. The kit is based in nucleic acid ability to bind silica in the presence of high concentrations of chaotropic salts. Tissue samples can be efficiently homogenized in a microcentrifuge tube using the provided micropestle.

Advantages & Features:

- ✓ **Highly efficient:** yields up to to 50 µg, depends on type of sample.
- ✓ **Pure RNA:** ready-to-use in all Molecular Biology applications.
- ✓ **Easy and fast procedure:** it takes 28 minutes with minimal handling.
- ✓ **Mini format.**

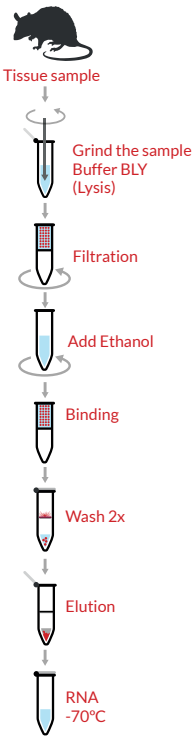
Applications:

- ✓ Purified DNA suitable for all common Molecular Biology applications, such as:
  - RT-PCR.
  - Northern blotting.
  - cDNA library construction.

Quality Control:

- ✓ Total RNA is isolated from a 30 mg thorax muscle tissue sample.
- ✓ Purified RNA is quantified using a spectrophotometer with a typical yield of more than 10 µg of Total RNA and an A260nm/A280nm ratio of 1.9-2.1.
- ✓ Quality is further checked by agarose gel electrophoresis.

Protocol:



HigherPurity™ RNA Total (All sizes) Isolation Kit

For an efficient, high quality and easy purification of Total RNA from small input amounts

Ordering info:

Cat No.	Size
AN0280-S	10 preps
AN0280	50 preps

Includes for 50 preps:

- 22 mL RNA Buffer Lysis
- 20 mL RNA Wash Buffer
- 6 mL RNA Elution Buffer
- 50 microRNA Spin Columns
- 100 Collection tubes

Description:

HigherPurity™ RNA Total (All sizes) Isolation Kit is ideal for an efficient, high quality and easy isolation and purification of Total RNA from cultured animal cells, tissue samples, blood, bacteria, yeast, fungi or plants. The kit purifies all size of RNA, from large mRNA and ribosomal RNA down to microRNA (miRNA) and small interfering RNA (siRNA). Purification is based on spin column chromatography.

Advantages & Features:

- **High quality** of Total RNA obtained.
- **Efficient:** streamlined protocol isolation of small RNA species using a 2 column process.
- **Convenient:** proven performance in all sizes of RNA, including all small RNA species (<200 nt) including miRNA, siRNA, tRNA and 5S rRNA.
- **Safe:** avoids the use of harmful chemicals as phenol or chloroform.
- **Easy and fast protocol:** results in 30-45 minutes.
- **Pure RNA:** ready-to-use in all downstream applications.

Quality control:

- RNA isolated from 10 mg tissue slice quantified by spectrophotometer and analysed by electrophoreshis.

Applications:

- real-time RT-PCR.
- RT-PCR.
- Northern blotting.
- Primer extension.
- RNase protection.
- Expression array assays.
- microRNA Cloning.

Related products:

- Custom solutions (p.147)
- DNAse (p.112)

Sample collection

Stool Sample Collection & Stabilization Kit

For a convenient, versatile and easy collection, transportation and storage of stool samples

Ordering info:

Cat No.	Size
SC0010	10 units
SC0011	50 units
SC0012	100 units

Includes for 50 units:

- 50 Stool Collection & Stabilization tubes pre-filled with 8ml of DNA Stabilization Buffer
- 1 Product Insert

Description:

Stool sample collection & stabilization is convenient, versatile and easy-to-use kit ideal for collection, transportation and storage of stool samples using a DNA stabilization buffer. It prevents degradation of DNA and ensures nucleic acid stability. The stabilized samples can be stored during various months at Room Temperatures and indefinitely at -20°C or -80°C.

Advantages & Features:

- **Easy to self-collect**.
- **Cost avoidance:** ship stool samples at Room Temperature.
- **High quality** samples obtained without need to immediately process.
- **Versatile:** compatible with various DNA purification kits.
- **Convenient:** eliminates odor during processing.
- **Fast protocol:** results in 58 minutes.

Quality control:

- DNA isolated from 200 mg feces preserved with our sample collection kit quantified by spectrophotometer and analysed by electrophoreshis.

Applications:

- DNA Isolation: DNA can be purified from the preserved stool sample.

Related products:

- HigherPurity™ Stool DNA Isolation Kit (p.90)
- PBS (p.133)
- Custom solutions (p.147)

Saliva Sample collection Kit

For an easy, convenient and safe collection, transportation and storage of Saliva samples

Ordering info:

Cat No.	Size
SC001	20 units
SC002	100 units
SC003	250 units

Includes for 100 units:

- 100 Funnels
- 100 Saliva Collection Tube
- 100 Saliva Preservation Solution (2.5 mL)

Related products:

- HigherPurity™ Buccal Saliva Genomic DNA Extraction Kit (p.93)
- HigherPurity™ Buccal Swab/Saliva Genomic DNA Extraction Kit (p.93)
- PBS (p.133)
- Custom solutions (p.147)

Description:

The kit offers an easy, convenient and safe collection, transportation and storage of saliva samples. It is based in an optimized Saliva Preservation Solution which allows stabilizes buccal cells and white blood cells found in saliva over 1 year at Room Temperature.

Advantages & Features:

- **Easy, fast and non-invasive:** sample collection method.
- **Pure DNA:** ready-to-use in all downstream applications, including sensitive downstream assays.
- **Convenient:** all-in-one kit, that includes all material needed.
- **Compatible** with most DNA isolation methods.
- **Safe:** samples are non-infectious thanks to its optimized Saliva Preservation solution.

Quality control:

- Rigorous quality control standards to guarantee lot-to-lot consistency.

Applications:

- PCR.
- qPCR.
- Sequencing.
- SNP analysis.
- Microarrays.
- RFLP.
- Southern Blot Analysis.
- Methylation studies.