

# **Columns**





# MaikoSpin® RNA



#### MaikoSpin® kit for the isolation of RNA of highest integrity

- Eficient removal of contaminating DNA rDNase included for on-column DNA digestion
- Efficient sample homogenization and reduction of viscosity MaikoSpin® Filters (shredders) included
- Up to 70 ug ready to use RNA
- Parallel purification of genomic DNA possible by using the MaikoSpin® RNA/DNA Buffer Set



## Product at a glance

Technology	Silica-membrane technology
Format	Mini spin columns
Sample material	<5 x 10 <sup>6</sup> cultured cells, <10 <sup>9</sup> bacterial cells, <10 <sup>8</sup> yeast cells, <30 mg tissue
Fragment size	>200 b
Typical yield	14 ug from 10 <sup>6</sup> HeLa cells, 70 ug from 10 <sup>9</sup> bacterial cells
A260/A280	1.9 - 2.1
Typical RIN (RNA integrity number)	> 9
Elution volume	40 - 120 uL
Preparation time	30 min / 6 preps
Binding capacity	200 ug

# Applications\*

- Total RNA isolation from cultured cells, tissue (standard protocol)
- Support protocol for total RNA from <10<sup>9</sup> bacterial cells (Gram-negative, Gram-positive) or <10<sup>8</sup> yeast cells
- Support protocol for total RNA from\_<100 ul biological fluids</li>
- Support protocol for RNA clean-up from reaction mixtures
- Support protocol for total RNA from samples stored in RNA/ater®
- Typical downstream applications: real-time RT-PCR, Northern blotting, primer extension, array technology, RNase protection assays

Product	Preps	Specification	REF
MaikoSpin® RNA	50	MaikoSpin® RNA Columns with Collection Tubes, Collection tubes (2 ml), Collection Tubes (1.5 ml), MaikoSpin® Filters, buffers, RNase-free rDNase	MA-77706913
	250	as above	MA-77706914







# MaikoSpin® RNA Plant



#### Plant RNA mini spin kit - for all kinds of plant material

- Optimized lysis procedure two alternative lysis buffers included
- Efficient removal of contaminating DNA rDNase included for on-column digestion
- Efficient sample homogenization and reduction of viscosity MaikoSpin® Filters (shredders) included
- Up to 70 ug ready-to-use-RNA
- Parallel purification of genomic DNA possible by using the MaikoSpin® RNA/DNA Buffer Set



Technology	Silica-membrane technology
Format	Mini spin columns
Sample material	<100 mg Tissue
Fragment size	>200 b
Typical yield	3 - 70 ug from 100 mg plant material
A260/A280	1.9 - 2.1
Elution volume	60 ul
Preparation time	30 min / 6 preps
Binding capacity	200 ug

# **Applications\***

- Total RNA from plant cells and tissue
- Total RNA from filamentous fungi
- Typical downstream applications: real-time RT-PCR, Northern blotting, primer extension, array technology, RNase protection assays

## **Ordering information**

Product	Preps	Specification	REF
MaikoSpin® RNA Plant	50	MaikoSpir® RNA Plant Columns with Collection Tubes, Collection tubes (2 ml), Collection Tubes (1.5 ml), MaikoSpin® Filters, buffers, RNase-free rDNase	MA-77706915
	250	as above	MA-77706916





**RNA** 





#### **Features**

#### Improved RNA quality from formalin-fixed, paraffin-embedded samples

- Enhanced RT-PCR performance RNA is well decrosslinked and less fragmented
- Very easy parafin removal Paraffin Dissolver included
- Minimun number of working staps in a streamlined workflow
- Efficient on-column DNA removal, rDNase included
- Higher sensitivity with concentrated RNA elution volume as little as 5 uL



# Product at a glance

Technology	Silica-membrane technology
Format	Mini spin columns - XS design
Sample material	
Typical yield	Depending on amount and quality of the sample
A260/A280	1.9 - 2.1
Typical RIN (RNA integrity number)	Strongly depending on sample quality (2-6)
Elution volume	5 - 30 ulL
Preparation time	70 min / 6 preps
Binding capacity	110 ug

# Applications\*\*

- Rapid isolation of RNA from formalin-fixed, paraffin-embedded samples,
   e.g., carcinoma (unstained), colon carcinoma (hematoxylin stained), colon mucosa, adenocarcinoma of colon transversum, liver (rat/human), liver carcinoma (hematoxylin stained), lymph node, spleen (rat/human), pancreas (rat/human; diabetic/non-diabetic), placenta
- Isolation of RNA from fresh and archived FFPE samples
- Isolation of RNA from specimen on objet slides (stained or unstained)
- Typical downstream application: RT-PCR

Product	Preps	Specification	REF
MaikoSpin® FFPE RNA	50	MaikoSpin® FFPE Columns, Collection tubes (2 ml), Collection Tubes (1.5 ml), Parafin Dissolver, buffers, Proteinase K, RNase-free rDNase	MA-77706917
	250	as above	MA-77706918







# MaikoSpin® Plasma XS

#### **Features**

#### For rapid purification of circulating DNA from plasma and serum

- High recovery even of fragmented DNA >50 bp
- Elution in as little as 5 uL
- Concentrated DNA even from dilute samples
- DNA ready to use for real-time PCR



# Product at a glance

Technology	Silica-membrane technology
Format	Mini spin columns - XS design
Sample material	720 ul plasma or serum (multiple loading steps)
Fragment size	>50 bp
Typical yield	0.1 - 100 ng per mL plasma, depending on sample
Typical concentration	1.2 - 12 000 pg/ul, depending on sample
Elution volume	5 - 30 uL
Preparation time	High sensitivity procedure: 22 - 27 min / 6 preps Rapid procedure: 15 - 20 min / 6 preps

# Applications\*

- Circulating DNA from plasma or serum
- Ideal for analysis of fetal DNA from material plasma
- Ideal for detection of tumor markers in plasma

Product	Preps	Specification	REF
MaikoSpin® Plasma XS	50	MaikoSpin® Plasma XS Columns with Collection Tubes, Collection tubes (2 ml), buffers, Proteinase K	MA-77706919
	250	as above	MA-77706920







# MaikoSpin® Blood



#### **Features**

#### For rapid purification of high-quality DNA from blood

- Ready-to-use DNA in less than 30 min
- Complete removal of PCR inhibitors
- Suitable for whole blood, treated with citrate, EDTA, heparin, CPDA
- Consistently high DNA yields
- Also suitable for isolation of viral DNA or bacterial DNA from blood samples

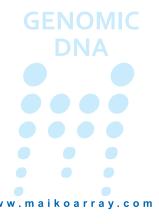
# Product at a glance

Technology	Silica-membrane technology
Format	Mini spin columns
Sample material	5 x 200 uL whole blood, serum, plasma, body fluids <5 x 10 <sup>6</sup> 10 cultured cells
Fragment size	200 bp - approx. 50 kbp
Typical yield	4 - 6 ug
A260/A280	1.6 - 1.9
Typical Concentration	40 100 ng/uL
Elution volume	60 - 200 uL
Preparation time	~ 30 min/prep
Binding capacity	60 ug

# Applications\*

- Genomic, bacterial, viral DNA isolation
- DNA from whole blood (human or animal blood, fresh or frozen)
- DNA from whole blood treated with citrate, EDTA, heparin, CPDA
- DNA from serum, plasma, buffy coat, platelets, body fluids (e.g., amniotic fluid)
- DNA from cultured cells
- Typical downstream applications: PCR, Southern blotting, enzymatic reactions

Product	Preps	Specification	REF
MaikoSpin® Blood	50	MaikoSpin® Blood Columns with Collection Tubes, Collection tubes (2 ml), buffers, Proteinase K	MA-77706921
	250	as above	MA-77706922







#### **Features**

Allround kit with highest sensitivity for purification of total DNA from clinical or forensic samples, tissues, cells, yeast, bacteria, or viruses

- High DNA recovery and purity
- Reliable DNA purification for reproducible results
- Suitable for a huge variety of starting materials

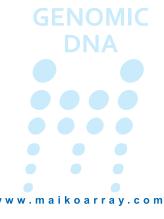


Technology	Silica-membrane technology
Format	Mini spin columns
Sample material	<25 mg tissue
Fragment size	10 <sup>2</sup> - 10 <sup>7</sup> cultured cells
Typical yield	200 bp - approx. 50 kbp
A260/A280	20 - 35 ug
Typical RIN (RNA integrity number)	1.7 - 1.9
Elution volume	60 - 100 uL
Preparation time	~ 20 min/prep (excl. lysis)
Binding capacity	60 ua

# **Applications\***

- DNA from tissue (e.g., mouse tails)
- DNA from cells (e.g., cultured human or animal cells, bacteria, yeast)
- DNA from clinical samples (e.g., stool, urine, biopsy samples)
- DNA from forensic samples (e.g., dried blood spots, hair, buccal swabs, cigarette stubs)
- DNA from FFPE tissue
- DNA from blood samples storage cards
- Tipical downstream applications: multiplex PCR, Southern blotting, enzymatic reactions

Product	Preps	Specification	
MaikoSpin <sup>®</sup> Tissue	50	MaikoSpin® Tissue Columns, Collection tubes (2 ml), buffers, Proteinase K	
	250	as above	







# MaikoSpin® Tissue XS

#### **Features**

#### Purification of genomic, bacterial, and viral DNA from smallest samples

- High sensitivity for DNA isolation from small sample quantities, like biopsy materials, forensic, or FACS sorted cells
- Elution in as little as 5 uL resulting in concentrated DNA
- Excellent DNA recovery and purity for reliable results
- DNA ready to use for multiplex PCR and all common downstream applications



#### Product at a glance

Technology	Silica-membrane technology		
Format	Mini spin columns		
Sample material	Tissue samples:	0.025 - 10 mg	
	Blood samples:	1 - 30 uL, fresh or frozen	
	Cultured cells:	10 - 10 000	
	Guthrie cards:	spots of 5 - 30 mm <sup>2</sup>	
Fragment size	200 bp - approx. 50 kbp		
Typical yield	100 HeLa cells:	0.1 - 0.5 ng	
	1 000 HeLa cells:	1 - 5 ng	
	10 000 HeLa cells:	10 - 50 ng	
	0.025 mg mouse liver:	20 - 100 ng	
	0.25 mg mouse liver:	200 - 1 000 ng	
	2.5 mg mouse liver:	600 - 3 000 ng	
A260/A280	1.7 - 1.9		
Elution volume	5 - 30 uL		
Preparation time	~ 40 min/prep (excl. lysis)		
Binding capacity	110 ug		

## **Applications\***

- DNA isolation from tissue (e.g., mouse kidney, laser micro-dissections)
- DNA isolation from cells (e.g., bacteria, yeast, cultured cells)
- DNA isolation from clinical samples (e.g., biopsy samples, fine needle aspirates)
- DNA isolation from forensic samples (e.g., dried blood spots, buccal swabs, finger prints)
- DNA suitable for sensitive applications (e.g., multiplex PCR, real-time PCR)

Product	Preps	Specification	REF
MaikoSpin® Tissue XS	50	MaikoSpin® Tissue XS Columns, Collection tubes (2 ml), buffers, Proteinase K	MA-77706925
	250	as above	MA-77706926







# MaikoSpin® RNA Virus



#### For reliable purification of viral RNA and DNA\* from cell-free biological fluids

- Reliable and reproducible isolation of viral RNA and DNA\* free of impurities
- Safe and well-established procedure
- Proven for a large variety of viruses including influenza viruses, HCV, HIV, Bird Flu Virus, Blue Tongue Virus
- Carrier RNA included for highest sensitivity in downstream applications
- Fast and convenient protocol viral RNA and DNA\* within only 30 min



## Product at a glance

Technology	Silica-membrane technology
Format	Mini spin columns
Sample material	≤150 uL serum, plasma, cell-free biological fluids
Fragment size	100 bp - approx. 50 kbp
Elution volume	50 uL
Preparation time	30 min/4 - 6 preps
Binding capacity	40 ug

## Applications\*\*

- Viral RNA from 150 uL serum, serum, plasma, cell-free biological fluids
- H CV, HBV, HAV, HIV, HSV, HPV, VZV, EBV, parvovirus B19, H5N1, H1N1
- Support protocol for parallel isolation of viral RNA and DNA\*
- Typical downstream application: RT-PCR, enzimatic reactions

Product	Preps	Specification	REF
MaikoSpin® RNA Virus	50	MaikoSpin® RNA Virus Columns with Collection Tubes, Collection tubes (2 ml), buffers, Carrier RNA	MA-77706927
	250	as above	MA-77706928







# MaikoSpin® Blood





#### For rapid preparation of viral DNA from blood and biological fluids

- Highest sensitivity for viral DNA
- Reliable and reproducible DNA isolation in less than 30 min
- Complete removal of PCR inhibitors
- Proven for a large variety of viruses including HBV, CMV, HPV, TTV, EBV
- Also suitable for isolation of genomic DNA



## Product at a glance

Technology	Silica-membrane technology
Format	Mini spin columns
Sample material	<200 uL serum, plasma, or blood
Fragment size	200 bp - approx. 50 kbp
A260/A280	1.6 - 1.9
Elution volume	60 - 100 uL
Preparation time	>30 min/prep
Binding capacity	60 ug

# **Applications**

- Viral DNA from blood, serum, plasma, and biological fluids
- Genomic and bacterial DNA from blood and biological fluids
- HBV, CMV, HPV, TTV, EBV
- Typical downstream applications: real-time PCR, enzymatic reactions

Product	Preps	Specification	REF
MaikoSpin® Blood	50	MaikoSpin® RNA Columns with Collection Tubes, Collection tubes (2 ml), buffers, Proteinase K	MA-77706929
	250	as above	MA-77706930







# MaikoSpin® FFPE RNA/DNA

#### **Features**

#### Parallel isolation of RNA and DNA from formalin-fixed, paraffin-embedded samples

- Get RNA and DNA from the same FFPE specimen without sample splitting
- Save time, money, and precious sample material
- Very easy paraffin removal Paraffin Dissolver included
- Enhanced RT-PCR performance high decrosslinking efficiency
- High quality DNA ready to use for genotyping
- Higher sensitivity with concentrated RNA elution in as little as 5 uL



#### Product at a glance

Technology	Silica-membrane technology
Format	Mini spin columns - XS design
Sample material	<7 sections (10 um) of 250 mm <sup>2</sup> total area (<15 mg paraffin*)
Typical yield	Depending on amount and quality of the sample
Typical RIN (RNA integrity number)	strongly depending on sample quality (2 - 6)
Elution volume RNA	5 - 30 uL
Elution volume DNA	10 - 30 uL
Preparation time	90 min / 6 preps (plus 3 h to overnight for lysis)
Binding capacity	110 ug RNA

# **Applications**

- Rapid isolation of RNA and DNA, or RNA only from formalin-fexed, paraffin-embedded samples,
  e.g., colon carcinoma (unstained), colon carcinoma (hematoxylin stained), colon mucosa, adenocarcinoma of colon
  transversum, lever (rat/human), liver carcinoma (hematoxylin stained), lymph node, spleen (rat / human), pancreas
  (rat human; diabetic / non-diabetic), placenta
- Isolation of RNA and DNA, or RNA only from fresh and archived FFPE samples
- Isolation de RNA and DNA, or RNA only from specimen on objetct slides (stained or unstained)
- RNA ready to use in RT-PCR, DNA ready to use in PCR

Product	Preps	Specification	REF
MaikoSpin® FFPE RNA/DNA	50	MaikoSpin® FFPE Columns, Collection Tubes (2 ml), Collection tubes (1.5 ml), Paraffin Dissolver, buffers, Proteinase K, RNase-free rDNase	MA-77706930
	250	as above	MA-77706931







# MaikoSpin® Blood QuickPure



#### For ultra-fast purification of highly concentrated DNA from blood

- Ultra-fast procedure
- Wasihing and drying in one combined step (hands-ontime <10 min)
- Consistently high DNA yields
- Elution volume only 30 50 uL
- Highly concentrated DNA, ready to use for sensitive downstream applications





# **Applications**

- DNA from whole blood (human or animal, fresh or frozen
- DNA from whole blood with citrate, EDTA, heparin, CPDA
- DNA from buffy coat, platelets, body fluids (e.g., amniotic fluid), serum, plasma
- DNA from cultured cells
- Typical downstream applications: real-time PCR, enzymatic reactions

Product	Preps	Specification	REF
MaikoSpin® Blood QuickPure	50	MaikoSpin® Blood QuickPure Columns with Collection Tubes, Collection tubes (2 ml), buffers, Proteinase K	MA-77706932
	250	as above	MA-77706933









#### **Features**

Improved DNA quality from formalin-fixed, paraffin-embedded samples - no xylene needed

- Very easy paraffin removal Paraffin Dissolver included
- Concentrated DNA by elution in small volume
- Overcoming formalin crosslinking of DNA by incubation in decrosslinking buffer
- High quality DNA for improved performance in PCR



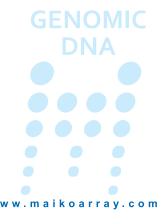
# Product at a glance

Technology	Silica-membrane technology
Format	Mini spin columns - XS design
Sample material	<7 sections (10 um) of 250 mm total area ( 15 mg paraffin*)
Typical yield	Depending on amount and quality of the sample
DNA quality	Strongly depending on sample quality
Elution volume	50 - 30 uL
Preparation time	70 min/ 6preps (excl. lysis)
Binding capacity	110 ug

# **Applications**

- Rapid isolation of DNA from formalin-fixed, paraffin-embedded samples
- Isolation of DNA from fresh and archive FFPE samples
- Isolation of DNA from specimen of object slides
- Typical dowunstream application: PCR

Product	Preps	Specification	REF
MaikoSpin® FFPE DNA	50	MaikoSpin® FFPE DNA Columns, Collection Tubes (2ml), Paraffin Dissolver, buffers, Proteinase K	MA-77706934
	250	as above	MA-77706935







# MaikoSpin® Plant II



# For rapid preparation of viral DNA from blood and biological fluids

- Highest sensitivity for viral DNA
- Reliable and reproducible DNA isolation in less than 30 min
- Complete removal of PCR inhibitors
- Proven for a large variety of viruses including HBV, CMV, HPV, TTV, EBV
- Also suitable for isolation of genomic DNA



Technology	Silica-membrane technology
Format	Mini spin columns
Sample material	<200 uL serum, plasma, or blood
Fragment size	200 bp - approx. 50 kbp
A260/A280	1.6 - 1.9
Elution volume	60 - 100 uL
Preparation time	>30 min/prep
Binding capacity	60 ug

# **Applications**

- Viral DNA from blood, serum, plasma, and biological fluids
- Genomic and bacterial DNA from blood and biological fluids
- HBV, CMV, HPV, TTV, EBV
- Typical downstream applications: real-time PCR, enzymatic reactions

Product	Preps	Specification	REF
MaikoSpin® Plant II	50	MaikoSpin® Plant II Columns MaykoSpin Filters, Collection Tubes (2ml), buffers, RNase A	MA-77706936
	250	as above	MA-77706937









# MaikoSpin® Soil



#### Isolation of total DNA from diverse soil types

- Two alternative lysis buffers and a special additive (Enhancer SX) for optimal processing of various soil samples --- high yield and high purity
- MaikoSpin Bead Tubes with ceramic beads for most efficient cell disruption of Gram-positive bacteria, archaea, yeast, fungi, and algae in soil, sludge or sediment
- MaikoSpin Inhibitor Removal Column to eliminate all PCR inhibitors, such as humic substances - DNA is ready-to-use for PCR without dilution



# Product at a glance

Technology	Silica-membrane technology					
Format	Mini spin columns					
Sample material	<500 mg soil, sludge, or sediment					
Typical yield	2 - 10 ug					
Elution volume	3 0- 100 uL					
Preparation time	90 min/10 preps					
Binding capacity	50 ug					

# **Applications**

- Total DNA from microorganisms in soil and sediment
- Quantify and detect microorganims from environmental samples
- Typical downstream applications: PCR, real-time PCR, Southern blotting, microarray technology

Product	Preps	Specification	REF	
MaikoSpin® Soil	50	MaikoSpin® Soil Columns MaykoSpin Bead Tubes, MaykoSpin Inhibitor Removal Columns, Collection tubes (2 ml, lid), buffers	MA-77706938	
	250	as above	MA-77706939	





