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MagSep Tissue gDNA Kit

Instructions for use

003 0450.906-02/012015

Table of contents

1 Operating instructions

1.1 Using this manual

- Before using this product for the first time, please read the entire manual.
- Read the software manual and the hardware manual of the epMotion.
- This manual is an intrinsic part of the product and should be kept in an accessible location.

1.2 Danger symbols and danger levels

The safety instructions of this operating manual indicate the following danger symbols and danger levels:

1.2.1 Danger symbols

 **General danger**	

1.2.2 Danger levels

DANGER	*Will* lead to severe injuries or death.
WARNING	*May* lead to severe injuries or death.
CAUTION	May lead to light to moderate injuries.
NOTICE	May lead to material damage.

1.3 Symbols used

Depiction	Meaning
1. 2.	Actions in the specified order
▸	Actions without a specified order
•	List
Text	Display text or software text
	Additional information

2 Product description

2.1 Main illustration

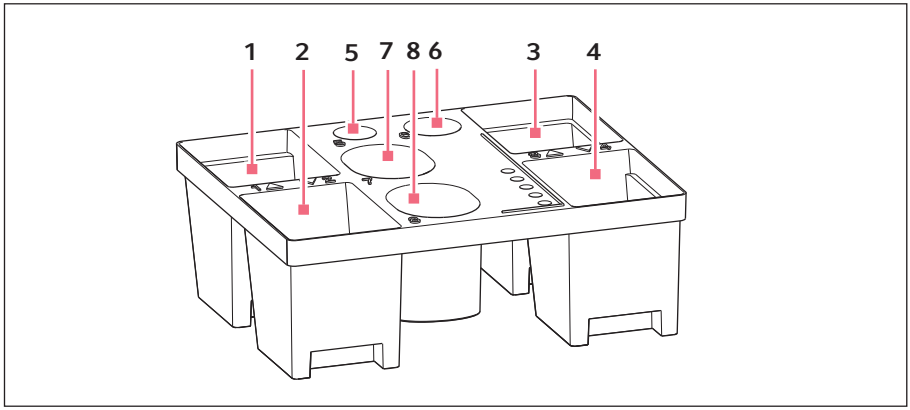


Fig. 2-1: MagSep Tissue gDNA Kit

1 Tissue BB (Binding Buffer)
2 Tissue WB 1 (Wash Buffer)
3 Tissue WB 2 (Wash Buffer)
4 Tissue WB 3 (Wash Buffer)
5 Tissue Beads
6 Tissue ProK (Proteinase K)
7 Tissue LB (Lysis Buffer)
8 Tissue EB (Elution Buffer)

The numbering of the picture corresponds to the number of reagents in the MagSep Tissue gDNA Kit.

2.2 Delivery package

Quantity	Description	Portion
4	Tissue BB (Binding Buffer)	11 mL
4	Tissue WB 1 (Wash Buffer)	18 mL
4	Tissue WB 2 (Wash Buffer)	18 mL
4	Tissue WB 3 (Wash Buffer)	26 mL
4	Tissue Beads	0.7 mL
4	Tissue ProK (Proteinase K)	30 mg
4	Tissue LB (Lysis Buffer)	6 mL
4	Tissue EB (Elution Buffer)	6 mL
4	Tissue PB (Proteinase Buffer)	1.4 mL
4	Tissue RNase A (Ribonuclease A)	6 mg
4	Safe-Lock tubes 2.0 mL DNA LoBind Pack of 50 tubes	
1	Manual for MagSep Tissue gDNA Kit	

3 Safety

3.1 Intended use

MagSep Tissue gDNA Kit components were developed, designed, distributed, and sold solely for research purposes. They are only suitable for in-vitro applications. No claim or representation is intended for its use for identifying any specific organism, or for clinical use (diagnostic, prognostic, therapeutic, or blood banking).

Rather, it is the responsibility of the user to verify the use of the MagSep Tissue gDNA Kit for a specific application range, because the performance characteristic of this kit has not been verified for a specific organism.

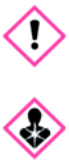
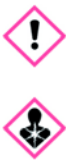
3.2 Warnings for intended use

DANGER! Danger due to reagents in the MagSep Tissue gDNA Kit.
MagSep Kits contain hazardous contents.

- Wear your personal protective equipment.
- Follow the safety instructions in the Safety signs chapter.

3.3 Safety signs on the reagents

Component	Hazard content	GHS symbol			Hazard phrases	Precaution phrases	CAS
Tissue BB (Binding Buffer)	Ethanol 35% – 55% Sodium perchlorate 20% – 40%		GHS02 GHS07	WARNING			64-17-5 7601-89-0
Tissue WB 1 (Wash Buffer)	Ethanol 20% – 35%		GHS02	WARNING			64-17-5
Tissue WB 2 (Wash Buffer)	Ethanol 20% – 35%		GHS02	WARNING			64-17-5
Tissue WB 3 (Wash Buffer)	Ethanol 55% – 75%		GHS02	DANGER			64-17-5

Component	Hazard content	GHS symbol			Hazard phrases	Precaution phrases	CAS
Tissue ProK (Proteinase K)	Proteinase K		GHS07 GHS08	DANGER	H315 H317 H319 H334 H335	P261 P264 P271 P272 P280 P302+P352 P304+P340 P305+P351 +P338 P312 P333+P313 P337+P313 P342+P311 P363 P403+P233 P405	39450-01-6
Tissue RNase A (Ribonuclease A)	RNase A		GHS07 GHS08	DANGER	H317 H334	P261 P272 P280 P302+P352 P304+P340 P333+P313 P342+P311 P363	9001-99-4

3.3.1 Hazard phrases

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.

3.3.2 Precaution phrases

P261	Avoid breathing dust/fumes/gas/mist/vapors/spray.
P264	Wash thoroughly after handling.
P271	Use only outdoors or a well-ventilated area.
P272	Contaminated work clothing shoud not be allowed out of the workplace.
P280	Wear protective gloves/eye protection.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+ P338	IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.
P312	Call a POISON CENTER of doctor/physician if you feel unwell.
P333+P313	If skin irritation or a rash occurs: Get medical advice/attention.
P337+P313	If eye irritation persists get medical advice/attention.
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER/doctor/ physician.
P363	Wash contaminated clothing before reuse.
P403+P233	Store in a well ventilated place. Keep container tightly closed.
P405	Store locked up.

4 Operation

4.1 The basic principle

The MagSep Tissue gDNA Kit purification procedure is based on reversible adsorption of nucleic acids to paramagnetic beads under appropriate buffer conditions. Tissue samples, cells or bacteria are lysed with Tissue LB (Lysis Buffer) and Proteinase K. Magnetic beads are added after lysis incubation. Binding conditions, forcing DNA binding to the magnetic beads, are adjusted by adding Tissue BB (Binding Buffer). After magnetic separation and removal of the supernatant, the paramagnetic beads are washed three times to remove contaminants and salt, followed by a drying step at high temperatures. Finally, highly purified DNA is eluted with low-salt Tissue EB (Elution Buffer) and can be directly used for downstream applications.

Optionally, to obtain pure DNA unwanted or excessive RNA amounts can be removed performing Ribonuclease A (RNase A) digest according to the respective sample preparation protocols.

The MagSep Tissue gDNA Kit is optimized for use with the Eppendorf epMotion automated pipetting system.

4.1.1 Kit specifications

The MagSep Tissue gDNA Kit is designed for rapid, automated, small-scale preparation of highly pure genomic DNA from tissue samples, cells, or bacteria using the 3D MagSep technology on the epMotion system. The obtained DNA is ready-to-use as a template for PCR, blotting, or any kind of enzymatic reaction. The actual processing time depends on the number of samples per batch.

The MagSep Tissue gDNA Kit can be used for the preparation of genomic DNA from tissue, cells, bacteria, and many other sources (e.g., mouse or rat tails, mouse ear punches, yeast, stool). Additional enzymes may be needed for lysis of certain bacterial and yeast strains. These enzymes are not included in this kit; see the relevant support protocol for details. For an optional RNA digest RNase A is included in this kit.

Tissue Beads are highly reactive, superparamagnetic beads. The binding capacity is approximately 0.4 µg of gDNA per 1 µL of Tissue bead suspension. 1 µL of suspension contains 130 µg of beads.

4.2 Preparations

4.2.1 Sample preparation

Use tubes suitable for centrifugation.

4.2.1.1 Tissue sample

- Sample material: up to 25 mg tissue

Preparing the sample

1. Place samples in a tube suitable for centrifugation.

Lyse sample

2. Add 25 µL Tissue ProK (Proteinase K) solution.
3. Add 200 µL Tissue LB (Lysis Buffer).
4. Shake for 1 h – 3 h, or overnight, at 56 °C

Optional

5. Cool lysate to ambient temperature.
6. Add 10 µL Tissue RNase A (Ribonuclease A).
7. Incubate for 10 min at ambient temperature.

Continue

8. Centrifuge for 5 min at 5600 × *g*.
9. Transfer 225 µL supernatant to the Safe-Lock tubes 2.0 mL provided with the kit.
10. Proceed with the Prep Assistant MagSep Tissue gDNA Kit for tissue lysate.

4.2.1.2 Mammalian cell or gram-negative bacteria culture

- Sample material: up to 1 × 10^6 cells or 1 mL bacteria overnight culture

Preparing the sample

1. Transfer samples to 2 mL tubes.
2. Centrifuge for 5 min at 5600 × *g*.
3. Remove supernatant.
4. Vortex to resuspend the cell pellet.

Optional

5. Add 10 µL Tissue RNase A (Ribonuclease A).
6. Incubate for 10 min at ambient temperature.
7. Proceed with the Prep Assistant MagSep Tissue gDNA Kit for cell/bacteria pellets.

4.2.1.3 Mouse, rat tails, or mouse ear punches sample

- Sample material: two pieces 0.6 cm mouse tail or one piece 0.6 cm rat tail (up to 25 mg).

Preparing the sample

1. Place samples in a 1.5 mL tube suitable for centrifugation.

Lyse sample

2. Add 200 µL Tissue LB (Lysis Buffer).
3. Add 25 µL Tissue ProK (Proteinase K) solution and vortex.
4. Incubate at 56 °C overnight or until complete lysis is obtained. Vortex occasionally during incubation.
5. To remove debris like residual bones or hair, centrifuge for 5 min at high speed, e.g., 11,000 × *g*.
6. Transfer 225 µL supernatant to Safe-Lock tube 2.0 mL provided with the kit.

Optional

7. Add 10 µL Tissue RNase A (Ribonuclease A).
8. Incubate for 10 min at ambient temperature.
9. Proceed with the MagSep Tissue gDNA Kit for tissue lysate.

4.2.1.4 Difficult-to-lyse bacteria sample

Some strains, especially gram-positive bacteria, are more difficult to lyse. Preincubation with a lytic enzyme is necessary in these cases. Up to 1 mL of bacterial culture can be used for the preparation depending on, e.g., density of culture, culture medium, and bacterial strain.

- Sample material: up to 1 mL bacteria overnight culture

Preparing the sample

1. Transfer samples to tubes suitable for centrifugation.
2. Centrifuge for 5 min at 8,000 × *g*.
3. Remove supernatant.

Lyse sample

4. Resuspend pelleted cells in 250 µL buffer containing 20 mM Tris/HCl, 2 mM EDTA; 1 % Triton X-100, pH 8 (instead Tissue LB (Lysis Buffer)) supplemented with 20 mg/mL lysozyme or 0.2 mg/mL lysostaphin.
5. Incubate for 30 min – 60 min at 37 °C.
6. Add 25 µL Tissue ProK (Proteinase K)solution and incubate at 56 °C until complete lysis is obtained.
7. If insoluble particles are visible, centrifuge for 5 min at high speed, e.g., 11,000 × *g*.
8. Transfer 225 µL lysate/supernatant to the Safe-Lock tubes 2.0 mL provided with the kit.

Optional

9. Add 10 µL Tissue RNase A (Ribonuclease A).
10. Incubate for 10 min at ambient temperature.
11. Proceed with the Prep Assistant MagSep Tissue gDNA Kit for tissue lysate.

4.2.1.5 Yeast sample

- Sample material: up to 3 mL YPD yeast culture (OD600 ≤ 10)

Preparing the sample

1. Transfer sample to tubes suitable for centrifugation.
2. Centrifuge for 10 min at 5,000 x *g*.
3. Remove supernatant.
4. Wash the cells once with 1 mL 10 mM EDTA, pH 8.
5. Centrifuge for 10 min at 5,000 x *g*.
6. Remove supernatant.

Lyse sample

7. Resuspend the pellet in 600 µL sorbitol buffer (1.2 M sorbitol, 10 mM $CaCl_2$, 0.1 M Tris/HCl pH 7.5, 35 mM ß-mercaptoethanol).
8. Add 50 U lyticase or zymolyase.
   Other protocols use 5 U – 200 U lyticase or zymolyase depending on enzyme quality or brand.
   The enzyme concentration may need to be increased if spheroplasts are not formed.
9. Incubate at 30 °C for 30 min. This step degrades the yeast cell wall, creating spheroplasts. Spheroplast formation may be checked microscopically.
10. Centrifuge the mixture for 10 min at 2,000 x *g*.
11. Remove supernatant.
12. Resuspend the pelleted spheroplasts in 200 µL Tissue LB (Lysis Buffer).
13. Add 25 µL Tissue ProK (Proteinase K) solution and vortex vigorously.
14. Incubate at 56 °C until complete lysis is obtained, at least 1 h – 3 h. Vortex occasionally during incubation.
15. If insoluble particles are visible, centrifuge for 5 min at high speed, e.g., 11,000 x g.
16. Transfer 225 µL lysate/supernatant the Safe-Lock tube 2.0 mL provided with the kit.

Optional

17. Add 10 µL Tissue RNase A (Ribonuclease A).
18. Incubate for 10 min at ambient temperature.
19. Proceed with the Prep Assistant MagSep Tissue gDNA Kit for tissue lysate.

4.2.1.6 Dried blood spot sample

- Sample material: one or two dried blood spots

Preparing the sample

1. Cut dried blood spots as accurately as possible.
2. Cut spots into small pieces and place them in a 1.5 mL tube. The area of the dried blood spots should be between 15 mm^2 and 30 mm^2.

Lyse sample

3. Add 200 µL Tissue LB (Lysis Buffer) and mix by vortexing.
4. Place the samples in a heating block and heat for 10 min at 94 °C.
5. Let the sample cool down.
6. Add 25 µL Tissue ProK (Proteinase K) solution.
7. Briefly spin the samples, and vortex them at 56 °C for 1 h. Vortex periodically during incubation. Make sure that the samples are completely covered with Tissue LB (Lysis Buffer) during incubation.
8. Transfer 225 µL supernatant to the Safe-Lock tube 2.0 mL provided with the kit.

Optional

9. Add 10 µL Tissue RNase A (Ribonuclease A).
10. Incubate for 10 min at ambient temperature.
11. Proceed with the Prep Assistant MagSep Tissue gDNA Kit for tissue lysate.

4.2.1.7 Stool sample

- Sample material: up to 250 mg feces.

Preparing the sample

1. Place sample in a tube suitable for centrifugation.
2. Add 1 mL TE buffer (10 mM Tris/Cl, 1 mM EDTA, pH 8).
3. Resuspend sample 30 s using vigorous vortexing.
4. Centrifuge sample for 15 min at 4,000 × g.
5. Remove supernatant.
6. Resuspend pellet in 0.2 mL – 1 mL Tissue LB (Lysis Buffer). Use as much buffer as needed for good resuspension of the sample. The prepared pellet contains, among other components, cells from the digestive tract and bacteria.
7. Transfer 200 µL of the resuspended sample to the new tube that is suitable for centrifugation.

Lyse sample

8. Add 25 µL Tissue ProK (Proteinase K) solution.
9. Vortex sample and incubate at 56 °C for at least 1 h - 3 h until complete lysis is obtained. Vortex occasionally during incubation or use a shaking incubator.
10. If insoluble particles are visible, centrifuge for 5 min at high speed, e.g., 11.000 × g.
11. Transfer 225 µL lysate/supernatant to 2.0 mL tube.

Optional

12. Add 10 µL Tissue RNase A (Ribonuclease A).
13. Incubate for 10 min at ambient temperature.
14. Proceed with the Prep Assistant MagSep Tissue gDNA Kit for tissue lysate.

4.2.1.8 Paraffin-embedded tissue sample

- Sample material: up to 25 mg paraffin-embedded tissue

1. Prepare sections from blocks of fixed, embedded tissue.
2. If possible, trim excess paraffin from the block before slicing.
3. Handle sections with tweezers or toothpicks and place samples in tubes suitable for centrifugation.
4. Add 1 mL xylene or n-octane.
5. Vortex vigorously and incubate at ambient temperature for about 30 min. Vortex occasionally during incubation or use a shaking incubator.
6. Centrifuge for 3 min at 11,000 × *g*.
7. Remove supernatant.
8. Add 1 mL ethanol, 96 % – 100 %.
9. Close and mix by inverting several times.
10. Centrifuge for 3 min at 11,000 × g.
11. Remove supernatant.
12. Repeat ethanol washing step.
13. Remove as much of the ethanol as possible.
14. Incubate the open tube at 37 °C until the ethanol has evaporated, ~ 15 min.

Lyse sample

15. Add 200 µL Tissue LB (Lysis Buffer)
16. Add 25 µL Tissue ProK (Proteinase K) solution and vortex.
17. Incubate at 56 °C for 1 h – 3 h or overnight. Vortex occasionally during incubation or use a shaking incubator.
18. Clear lysate by centrifugation at 5600 × *g*.
19. Transfer 225 µL supernatant to the Safe-Lock tube 2.0 mL provided with the kit.

Optional

20. Add 10 µL Tissue RNase A (Ribonuclease A).
21. Incubate for 10 min at ambient temperature.
22. Proceed with the Prep Assistant MagSep Tissue gDNA Kit for tissue lysate.

4.2.2 Preparing the components of the MagSep Tissue gDNA Kit

All buffers are delivered ready-to-use.

4.2.2.1 Handling of Tissue Beads

A homogeneous distribution of the magnetic beads to each tube in the PrepRack is essential for high tube-to-tube consistency.

1. Before loading the tray onto the epMotion, make sure that the Tissue Beads are completely resuspended.
2. Thoroughly shake the storage vessel, or briefly place it on a vortexer.
3. To avoid an incorrect level measurement result from the optical sensor, make sure that there are no drops of Tissue Beads in the cap or on the internal vessel wall.
4. Place the vessel correctly in the tray. Carefully push down the vessel after reinserting it into the tray.

4.2.2.2 Preparing Tissue RNase A (Ribonuclease A) solution

We recommend preparing a fresh Tissue RNase A (Ribonuclease A) solution for each set of 24 reagents.

1. Add 600 µL of water and mix gently to dissolve lyophilized Tissue RNase A (Ribonuclease A).
   This Tissue RNase A (Ribonuclease A) solution can be stored at 4 °C for up to 3 months. Divided into aliquots the Tissue RNase A (Ribonuclease A) solution can be stored at -20 °C for a longer period.

4.2.2.3 Preparing Tissue ProK (Proteinase K) solution

We recommend preparing a fresh Tissue ProK (Proteinase K) solution for each set of 24 reagents.

1. Add 1.1 mL of Tissue PB (Proteinase Buffer) and mix gently to dissolve lyophilized Tissue ProK (Proteinase K).
   This Tissue ProK (Proteinase K) solution is stable at -20 °C for up to 6 months.
2. Before next use mix gently the Tissue ProK (Proteinase K) solution.
3. Place Tissue ProK (Proteinase K) solution in Position 6.

4.2.3 Starting process

Prerequisites

- epMotion is ready for operation.
- Make sure that all samples and all kit components are prepared as described.

1. Transfer samples to Safe-Lock tubes 2.0 mL provided with the kit.
2. Place the sample/elution tubes row-by-row in the racks, starting at position 1.

3. For gDNA extraction from cell or bacteria pellets, place Tissue ProK (Proteinase K) solution at position 6 in the tray.
4. Vortex the Tissue Beads.
5. Open the reagent flasks.
6. Empty the liquid waste.
7. Start the application Prep Assistant MagSep Tissue gDNA Kit at the EasyCon tablet. The software assistant guides you through the set-up for automated nucleic acid purification.

4.3 Process

Procedure in the epMotion for

- Tissue lysate
- Cell/bacteria pellets

Steps in procedure	Command	Description
Lyse sample (only for cell/bacteria pellets)	Reagent Transfer	Dispense 200 µL Tissue LB (Lysis Buffer).
	Reagent Transfer	Dispense 25 µL Proteinase K.
	Thermomixer	Shake for 10 min, 1200 rpm, 56 °C.
Bind NA to Tissue Beads	Reagent Transfer	Dispense 24 µL Tissue Beads.
	Thermomixer	Shake for 30 s, 1200 rpm.
	Reagent Transfer	Dispense 360 µL Tissue BB (Binding Buffer).
	Thermomixer	Shake for 5 min, 900 rpm (cell/ bacteria pellet 1200 rpm).
	Separation	Separate for 2 min, 25 °C.
	Pool one Destination	Remove supernatant.
	Thermomixer	Shake for 30 s, 1200 rpm.
1st wash	Reagent Transfer	Dispense 600 µL Tissue WB 1 (Wash Buffer).
	Thermomixer	Shake for 2 min, 1200 rpm, 25 °C.
	Separation	Separate for 2 min.
	Pool one Destination	Remove supernatant.
	Thermomixer	Shake for 30 s, 1200 rpm.
2nd wash	Reagent Transfer	Dispense 600 µL Tissue WB 2 (Wash Buffer).
	Thermomixer	Shake for 2 min, 1200 rpm, 25 °C.

Steps in procedure	Command	Description
	Separation	Separate for 2 min.
	Pool one Destination	Remove supernatant.
	Thermomixer	Shake for 30 s, 1200 rpm.
3rd wash	Reagent Transfer	Dispense 800 µL Tissue WB 3 (Wash Buffer).
	Thermomixer	Shake for 2 min, 1200 rpm.
	Separation	Separate for 2 min.
	Pool one Destination	Remove supernatant.
Drying step	Thermomixer	Incubate for 7 min, 55 °C.
	Thermomixer	Shake for 7 min, 1200 rpm, 55 °C.
Elution	Reagent Transfer	Dispense 25 – 200 µL Tissue EB (Elution Buffer).
	Thermomixer	Shake for 5 min, 1300 rpm, 55 °C.
	Separation	Separate for 2 min.
	Sample Transfer	Transfer eluted DNA.

4.4 Finishing

4.4.1 Completing the process

1. Close the reagent bottles tightly after use. Alcohol may evaporate.

4.4.2 Elution procedures

Elution of purified genomic DNA can be carried out at a volume of 25 µL – 200 µL. For an optimal ratio of yield and concentration, perform the elution depending on your sample material with a volume of 50 µL – 100 µL.

For optimal performance of isolated DNA in subsequent downstream applications, we recommend storage, especially long term, at -20 °C. Several freeze-thaw cycles will not interfere with most downstream applications.

5 Troubleshooting

Problem	Cause	Solution
Salt ingredients of Tissue LB (Lysis Buffer) or Tissue BB (Binding Buffer) precipitate.	• Storage at low temperatures.	▸ Incubate the buffer at 40 °C and shake well.
Poor or no DNA yield.	• Wrong flask arrangement in the tray.	▸ Check the position of all reagents in the tray.
	• Salt ingredients of Tissue LB (Lysis Buffer) or Tissue BB (Binding Buffer) precipitate.	▸ Incubate the buffer at 40 °C and shake well.
	• Incomplete lysis.	▸ Sample not thoroughly homogenized and mixed with Tissue LB (Lysis Buffer)/ Proteinase K. ▸ Decreased Proteinase K activity. Store dissolved Proteinase K at -20 °C up to 6 months.
	• Too much sample material used.	▸ Do not use more sample material than recommended (25 mg for most tissue types). ▸ If insoluble material like bones or hair remains in the lysate, spin down the debris and transfer the clear supernatant to a new 2 mL tube, suitable for centrifugation, before proceeding on the epMotion.
RNA detected via gel electrophoresis or excessive DNA yield quantified.	• RNA was co-purified in large amounts.	▸ RNA digest using RNase A. See the respective protocol options.
Low purity.	• Salt ingredients of Tissue LB (Lysis Buffer) or Tissue BB (Binding Buffer) precipitate.	▸ Incubate the buffer at 40 °C and shake well.

Problem	Cause	Solution
	• Too much sample material used.	▸ Do not use more sample material than recommended (25 mg for most tissue types). ▸ If insoluble material like bones or hair remains in the lysate, spin down the debris and transfer the clear supernatant to a new 2 mL tube, suitable for centrifugation, before proceeding on the epMotion.
Carry-over of beads	• High DNA concentration in the eluate.	▸ Increase the elution volume.
	• Not suitable or too much sample material.	▸ Decrease the used sample material.
Suboptimal performance of DNA in downstream applications.	• Wrong array in the tray.	▸ Check the position of all reagents in the tray.
	• Salt ingredients of Tissue LB (Lysis Buffer) or Tissue BB (Binding Buffer) precipitate.	▸ Incubate the buffer at 40 °C and shake well.
	• Ethanol evaporation from wash buffers.	▸ Close reagent flasks tightly after use.
Cross contamination.	• The *re-use tips* option is selected even though a SafeRack is not loaded.	▸ Be sure that a SafeRack is loaded. ▸ Be sure that the option *re-use tips* is not selected.
Faulty level detection.	• Vessel is not correctly positioned.	▸ Make sure that the vessel is placed on the bottom of the tray. Carefully press the vessel down after reinserting it into the tray.
	• Bead solution on the internal vessel wall.	▸ Make sure that there are no drops of bead solution in the cap or on the internal vessel wall.

6 Transport, storage and disposal

6.1 Storage conditions

Reagent flasks must be stored tightly closed. Alcohol may evaporate.

Buffers and Beads of the MagSep Tissue gDNA Kit	Stable at 18 °C – 25 °C for up to one year. Do not store below 18 °C, as salt ingredients may precipitate.
Tissue ProK (Proteinase K) solution	Stable at -20 °C for up to 6 months.
Tissue RNase A (Ribonuclease A) solution	Stable at 4 °C for up to 3 months. For storage up to 1 year the Tissue RNase A (Ribonuclease A) solution should be divided into aliquots and stored at -20 °C.

7 Technical data

Technology	Magnetic bead technology
Sample material	<25 mg tissue, $<10^6$ cells or bacteria
Fragment size	300 bp – 30 kbp
Typical yield	10 µg – 20 µg
$A_{260/280}$	1.7 – 1.9
Elution volume	25 µL – 200 µL
Binding capacity	0.4 µg of gDNA per 1 µL of Tissue bead suspension

8 Ordering information

8.1 Recommended pipette tips

epT.I.P.S. Motion SafeRack are intended for the reuse of tips within an epMotion application. They feature compartments which separates adjacent tips. The compartments prevent cross contamination of residual liquid in used tips. The use of epT.I.P.S. Motion SafeRacks is recommended when the *Re-use tips* option is selected in the software assistant.

Order no. (International)	Description
	epT.I.P.S. Motion Filter 50 µL
	10 SafeRacks with 96 tips each
0030 014.618	PCR clean
	epT.I.P.S. Motion Filter 1 000 µL
	10 SafeRacks with 96 tips each
0030 014.650	PCR clean

8.2 Alternative pipette tips

Order no. (International)	Description
	epT.I.P.S. Motion 50 µL
	10 racks with 96 tips each
0030 014.405	Eppendorf Quality
0030 015.207	Sterile
	epT.I.P.S. Motion 1 000 µL
	10 racks with 96 tips each
0030 014.480	Eppendorf Quality
0030 015.240	Sterile
	epT.I.P.S. Motion Filter 50 µL
	10 racks with 96 tips each
0030 014.413	PCR clean
0030 015.215	PCR clean and Sterile
	epT.I.P.S. Motion Filter 1 000 µL
	10 racks with 96 tips each
0030 014.499	PCR clean
0030 015.258	PCR clean and Sterile
	epT.I.P.S. Motion 50 µL
	10 SafeRacks with 96 tips each
0030 014.600	Eppendorf Quality
	epT.I.P.S. Motion 1 000 µL
	10 SafeRacks with 96 tips each
0030 014.642	Eppendorf Quality

8.3 MagSep Kits

Order no. (International)	Description
	MagSep Tissue gDNA Kit
0030 450.000	Reagent kit for DNA purification of 4 × 24 tissue and cell samples
	MagSep Blood gDNA Kit
0030 451.007	Reagent kit for DNA purification of 4 × 24 blood samples
	MagSep Viral DNA/RNA Kit
0030 452.003	Reagent kit for viral DNA/RNA purification of 4 × 24 cell free biological fluid samples.

Evaluate Your Manual

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