April 2010

MagAttract® DNA M96 Handbook

MagAttract DNA Blood M96 Kit

MagAttract DNA Tissue M96 Kit

For DNA purification from human whole blood and soft-tissue biopsies

For use with the BioRobot® M96

QIAGEN®

Sample & Assay Technologies

QIAGEN Sample and Assay Technologies

QIAGEN is the leading provider of innovative sample and assay technologies, enabling the isolation and detection of contents of any biological sample. Our advanced, high-quality products and services ensure success from sample to result.

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- Purification of DNA, RNA, and proteins
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- Automation of sample and assay technologies

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Contents

Kit Contents

MagAttract DNA Blood M96 Kits	(192)	(960)
Catalog no.	**951436**	**951438**
Number of preps	**192**	**960**
MagAttract Suspension D	6 ml	2 x 12 ml
Buffer MDL	102 ml	4 x 102 ml
Buffer MDW	125 ml	3 x 125 ml
Handbook	1	1

MagAttract DNA Tissue M96 Kits	(192)	(960)
Catalog no.	**953436**	**953438**
Number of preps	**192**	**960**
MagAttract Suspension D	6 ml	2 x 12 ml
Buffer MDL	102 ml	4 x 102 ml
Buffer MDW	125 ml	3 x 125 ml
Buffer G2	60 ml	2 x 60 ml
QIAGEN® Proteinase K	1.4 ml	6 ml
Handbook	1	1

Storage

All buffers and reagents should be stored at 4–8°C.

The ready-to-use QIAGEN Proteinase K solution is stable for up to one year after delivery when stored at room temperature. To prolong the lifetime of QIAGEN Proteinase K, storage at 2–8°C is recommended.

Product Use Limitations

The MagAttract M96 DNA Kits are intended for molecular biology applications. These products are not intended for the diagnosis, prevention, or treatment of a disease.

Product Warranty and Satisfaction Guarantee

QIAGEN guarantees the performance of all products in the manner described in our product literature. The purchaser must determine the suitability of the product for its particular use. Should any product fail to perform satisfactorily due to any reason other than misuse, QIAGEN will replace it free of charge or refund the purchase price. We reserve the right to change, alter, or modify any product to enhance its performance and design. If a QIAGEN product does not meet your expectations, simply call your local Technical Service Department or distributor. We will credit your account or exchange the product — as you wish. Separate conditions apply to QIAGEN scientific instruments, service products, and to products shipped on dry ice. Please inquire for more information.

A copy of QIAGEN terms and conditions can be obtained on request, and is also provided on the back of our invoices. If you have questions about product specifications or performance, please call QIAGEN Technical Services or your local distributor (see back cover or visit www.qiagen.com).

Technical Assistance

At QIAGEN, we pride ourselves on the quality and availability of our technical support. Our Technical Service Departments are staffed by experienced scientists with extensive practical and theoretical expertise in sample and assay technologies and the use of QIAGEN products. If you have any questions or experience any difficulties regarding MagAttract DNA M96 Kits or QIAGEN products in general, please do not hesitate to contact us.

QIAGEN customers are a major source of information regarding advanced or specialized uses of our products. This information is helpful to other scientists as well as to the researchers at QIAGEN. We therefore encourage you to contact us if you have any suggestions about product performance or new applications and techniques.

For technical assistance and more information, please see our Technical Support Center at www.qiagen.com/Support or call one of the QIAGEN Technical Service Departments or local distributors (see back cover or visit www.qiagen.com).

Safety Information

When working with chemicals, always wear a suitable lab coat, disposable gloves, and protective goggles. For more information, please consult the appropriate material safety data sheets (MSDSs). These are available online in convenient and compact PDF format at www.qiagen.com/Support/MSDS.aspx where you can find, view, and print the MSDS for each QIAGEN kit and kit component.

CAUTION: DO NOT add bleach or acidic solutions directly to the sample-preparation waste.

Buffers MDL and MDW contain guanidine hydrochloride, which can form highly reactive compounds when combined with bleach.

If liquid containing these buffers is spilt, clean with suitable laboratory detergent and water. If the spilt liquid contains potentially infectious agents, clean the affected area first with laboratory detergent and water, and then with 1% (v/v) sodium hypochlorite. If liquid containing potentially infectious agents is spilt on the BioRobot® M96, clean the affected area first with laboratory detergent and water, and then with 1% (v/v) sodium hypochlorite, followed by water.

The following risk and safety phrases apply to components of MagAttract DNA M96 Kits.

QIAGEN Proteinase K

Contains proteinase K: sensitizer, irritant. Risk and safety phrases:* R36/37/38-42/43. S23-24-26-36/37

Buffer MDL

Contains guanidine hydrochloride: harmful, irritant. Risk and safety phrases:* R22-R36/38. S13-26-36-46

Buffer MDW

Contains guanidine hydrochloride: harmful, irritant. Risk and safety phrases:* R22-R36/38. S13-26-36-46

24-hour emergency information

Emergency medical information in English, French, and German can be obtained 24 hours a day from:

Poison Information Center Mainz, Germany

Tel: +49-6131-19240

* R22: Harmful if swallowed; R36/38: Irritating to eyes and skin; R36/37/38: Irritating to eyes, respiratory system, and skin; R42/43: May cause sensitization by inhalation and skin contact; S13: Keep away from food, drink, and animal feed; S23: Do not breathe spray; S24: Avoid contact with skin; S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice; S36: Wear suitable protective clothing; S36/37: Wear suitable protective clothing and gloves; S46: If swallowed, seek medical advice immediately and show this container or label.

Quality Control

In accordance with QIAGEN's ISO-certified Quality Management System, each lot of MagAttract DNA M96 Kits is tested against predetermined specifications to ensure consistent product quality.

Introduction

The MagAttract DNA Blood M96 Kit provides fully automated purification of total (genomic and mitochondrial) DNA from human whole blood (fresh, frozen, or dried spots). The MagAttract DNA Tissue M96 Kit is designed for automated purification of total DNA from soft-tissue biopsies. MagAttract technology provides high-quality DNA, which is suitable for direct use in downstream applications, such as amplification or other enzymatic reactions. The BioRobot M96 performs all steps of the sample preparation procedure. Up to 96 samples are processed in a single run.

Principle and procedure

MagAttract technology combines the speed and efficiency of silica-based DNA purification with the convenient handling of magnetic particles. Some protocols require short pretreatment steps (for example, tissue samples require a proteinase K digestion). DNA binds to the silica surface of the magnetic particles in the presence of a chaotropic salt (see flowchart, page 10). DNA bound to the magnetic particles is efficiently washed with wash buffer and 70% ethanol, and then rapidly rinsed with distilled water, which considerably improves the purity of the DNA. High-quality DNA is eluted in water or buffer.

Starting material

The amounts of starting material for use in MagAttract DNA M96 procedures are shown in Table 1. The elution volumes for each protocol can be adjusted to give a concentration of high-quality DNA appropriate for the intended downstream application.

Yield of purified DNA

DNA yields depend on the sample type, the number of nucleated cells in the sample, and the protocol used for isolation of DNA. Table 2 shows typical yields obtained from different sample types. Elution in smaller volumes increases the final DNA concentration in the eluate, but slightly reduces overall DNA yield. We recommend using an elution volume appropriate for the intended downstream application.

Table 1. Amounts of starting material and elution volumes used in MagAttract DNA M96 procedures

Sample	Kit	Protocol	Amount of starting material	Elution volume
Fresh or frozen blood	MagAttract DNA Blood M96 Kit	50 µl Blood	50 µl	50, 75, or 100 µl
Dried blood spots	MagAttract DNA Blood M96 Kit	Dried Blood	4 discs (see Table 2)	50, 75, or 100 µl
Soft tissue	MagAttract DNA Tissue M96 Kit	Tissue Standard	Up to 7 mg (see Table 2)	50, 75, or 100 µl

Table 2. DNA yields obtained from different sample types using MagAttract DNA M96 procedures

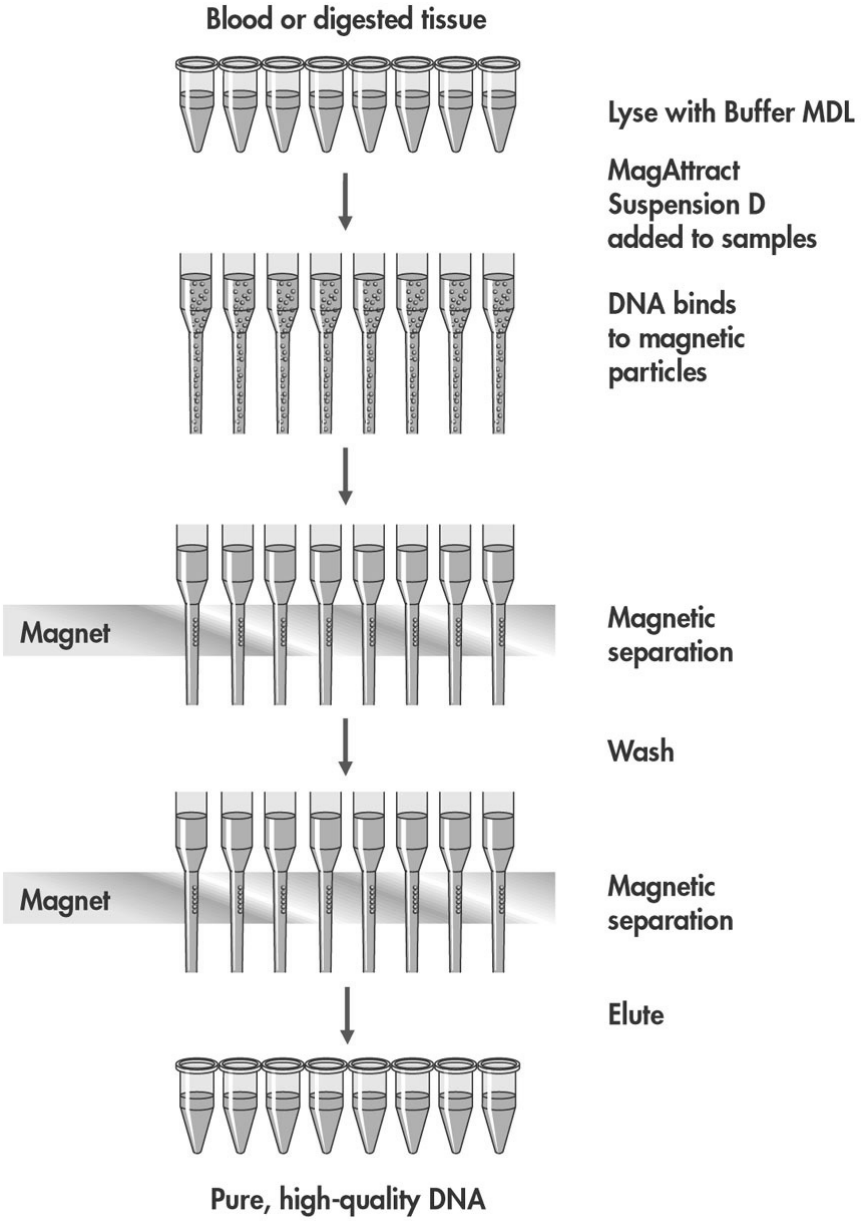
Sample type	Sample volume	DNA yield
Fresh or frozen blood*	50 µl	0.6–0.7 µg†
Dried blood spots	4 discs‡	0.2–0.5 µg†
Fresh or frozen soft tissue	50 µl (7 mg digested tissue)	0.4–1.3 µg†

* Whole blood with 5 x 106 white blood cells/ml.

† Using an elution volume of 100 µl.

‡ A 3.25 mm (1/8 inch) diameter disc punched out from 903 Specimen Collection Paper stained with dried blood contains white blood cells from approximately 5 µl whole blood; we recommend using 4 punched-out discs as starting material.

The MagAttract DNA M96 Procedure



Equipment and Reagents to Be Supplied by User

When working with chemicals, always wear a suitable lab coat, disposable gloves, and protective goggles. For more information, consult the appropriate material safety data sheets (MSDSs), available from the product supplier.

For all protocols

- BioRobot M96 workstation
- Filter-Tips, 200 µl, M96 (10 x 96), cat. no. 996722
- Reagent Holders, small, M96 (10), cat. no. 9015187
- Reagent Holders, large, M96 (5), cat. no. 9015184
- Ethanol (70%)
- Distilled or deionized water (for washing of DNA)
- DNA elution solution (either RNase-free water or low-salt buffer such as 10 mM Tris·Cl, pH 7.5)
- 96-well microplates with round-bottom wells (Greiner, cat. no. 650101)
- 96-well PCR plates (ABgene, cat. no. AB-0600) and 8-cap strips for use with them (ABgene, cat. no. AB-0602)
- 96-well microplates with 400 µl wells (NUNC, cat. no. 267245)

For DNA isolation from dried blood

- Recommended: 903 Specimen Collection Paper (Schleicher & Schuell, cat. no. 10538414)
- Recommended: 903 Generic Blood Collection Card (Schleicher & Schuell, cat. no. 10538019)
- Manual paper punch, 1/8 inch (Schleicher & Schuell, cat. no. 10495010) or, alternatively, DBS puncher (Perkin Elmer Wallac)
- 96-well blocks with 650 µl wells (ABgene, cat. no. AB-0765)
- Adhesive PCR film (ABgene, cat. no. AB-0558)

For DNA isolation from soft tissue

- 1.5 ml tubes with screw caps
- 96-well blocks with 650 µl wells (ABgene, cat. no. AB-0765)

Important Notes

Lysis with Proteinase K

The MagAttract DNA Tissue M96 Kit contains Proteinase K, which is the enzyme of choice for lysis buffers used in the tissue protocol. QIAGEN Proteinase K is isolated from the saprophytic fungus *Tritirachium album* and is particularly suitable for short digestion times. It possesses a high specific activity, which remains stable over a wide range of temperatures and pH values, with substantially increased activity at higher temperatures. The activity of the Proteinase K solution is 600 mAU/ml solution (or 40 mAU/mg protein). This activity provides optimal results in the tissue protocol.

MagAttract Suspension D

Shake the bottle containing MagAttract Suspension D and vortex for 3 minutes (before first use) or 1 minute (before subsequent uses) to ensure that the magnetic silica particles are fully resuspended.

Residual reagents

At the end of a protocol run, the reagent holders may contain residual reagent; they can be used if running another protocol within 24 hours. If running another protocol within a few hours, cover the reagent holders with film. If running another protocol the next day, cover the reagent holders with film and store them at 4–8°C until use.

Quantification of DNA

Carryover of magnetic particles may affect the absorbance reading at 260 nm (A_{260}) of the purified DNA but should not affect downstream applications. The measured absorbance at 320 nm (A_{320}) should be subtracted from all absorbance readings. See "Quantification of DNA", Appendix, page 21 for more information.

Protocol: Isolation of Total DNA from Fresh or Frozen Human Whole Blood

For automated purification of total DNA from fresh or frozen human whole blood using the MagAttract DNA Blood M96 Kit.

Important points before starting

- Before beginning the procedure, read "Important Notes" (page 12).
- Whole blood samples treated with EDTA, ACD, or heparin can be used, and may be either fresh or frozen. Yield and quality of the purified DNA depend on the blood storage conditions used. Fresher blood samples may yield better results.
  - For short-term storage (up to 10 days), collect blood in tubes containing EDTA as an anticoagulant, and store the tubes at 2–8°C. However, for applications requiring maximum fragment size, such as Southern blotting, we recommend storage at 2–8°C for up to 3 days only, as low levels of DNA degradation will occur after this time.
  - For long-term storage, collect blood in tubes containing a standard anticoagulant (preferably EDTA, if high-molecular-weight DNA is required), and store tubes at –70°C.

Procedure

1. **If necessary, thaw and equilibrate up to 96 whole blood samples at room temperature (15–25°C). Ensure that the blood samples are well mixed.**
2. **Transfer 50 µl of each blood sample into a well of a 96-well microplate with 400 µl wells.**
3. **Switch on the BioRobot M96.**

   The power switch is on the right side of the instrument.
4. **Switch on the computer and monitor.**
5. **Launch the QIAsoft M Operating System.**

   Upon startup, the computer displays the QIAsoft M startup window. Click "Start" to continue.

   If the QIAsoft M startup window does not appear, either double-click the QIAsoft M icon on the desktop or click the Microsoft® Windows® "Start" menu and select QIAsoft M Operating System → QIAsoft M V1.0 for BioRobot M96.
6. **Click the dark green arrow button and select "MagAttract DNA Blood" from the drop-down menu that appears. Select the protocol "50 µl Blood".**

7. **Click the "Select" button to confirm the protocol selected. Select the number of samples and the elution volume in the corresponding dialog fields. Click "Next".**

   The QIAsoft M software will now guide you through the remaining steps required to set up the BioRobot M96 for the protocol selected; these steps include the option of entering names for your samples. Be sure to follow all instructions that appear. Wear gloves when loading the required items on the worktable.

   Note: Before placing the microplate containing the blood samples onto the "Samples/Deep Wells" slot, ensure that the microplate adapter is already placed there. See the *BioRobot M96 User Manual* for details.

8. **Close the workstation door and start the protocol when instructed by the software. All subsequent steps are automated. The software displays a table of results when the protocol is finished.**
9. **Retrieve the PCR plate containing the purified DNA from the heat/cool block. The DNA is ready to use, or can be stored at 2–8°C for 24 h or at –20°C for longer periods.**

   Carryover of magnetic particles in eluates will not affect most downstream applications. If the risk of magnetic-particle carryover needs to be minimized (e.g., for applications such as real-time PCR), the microplate containing eluate should first be applied to a suitable magnetic separator and the eluate transferred to a clean microplate (see Appendix, page 21).

Protocol: Isolation of Total DNA from Dried Human Whole Blood

For automated purification of total DNA from dried human whole blood using the MagAttract DNA Blood M96 Kit.

Important point before starting

- Before beginning the procedure, read “Important Notes” (page 12).

Procedure

1. **Collect 70 µl of each blood sample onto a ring marked on 903 Specimen Collection Paper. Allow the blood to air-dry.**

   Either untreated blood or blood containing anticoagulant (EDTA, ACD, or heparin) can be used.

2. **For each dried blood sample, use the manual paper punch to cut out four 3.25 mm (1/8 in.) diameter discs.**
3. **Transfer each set of 4 discs to a well of a 96-well block with 650 µl wells. Add 400 µl Buffer MDL to the wells containing discs.**
4. **Cover the 96-well block with adhesive PCR film and incubate at 90–94°C for 30 min without shaking. Carefully remove the film after incubation. Do not remove the discs from the block.**

   The block can be incubated in a water bath with lid or inside an incubator.

   Note: Take care when removing the adhesive PCR film after incubation: ensure that condensation on the film does not contaminate the samples.

5. **Switch on the BioRobot M96.**

   The power switch is on the right side of the instrument.

6. **Switch on the computer and monitor.**
7. **Launch the QIAsoft M Operating System.**

   Upon startup, the computer displays the QIAsoft M startup window. Click “Start” to continue.

   If the QIAsoft M startup window does not appear, either double-click the QIAsoft M icon on the desktop or click the Microsoft Windows “Start” menu and select QIAsoft M Operating System → QIAsoft M V1.0 for BioRobot M96.

8. **Click the dark green arrow button and select “MagAttract DNA Blood” from the drop-down menu that appears. Select the protocol “Dried Blood”.**

9. **Click the "Select" button to confirm the protocol selected. Select the number of samples and the elution volume in the corresponding dialog fields. Click "Next".**

   The QIAsoft M software will now guide you through the remaining steps required to set up the BioRobot M96 for the protocol selected; these steps include the option of entering names for your samples. Be sure to follow all instructions that appear. Wear gloves when loading the required items on the worktable.

   CAUTION: Before placing the 96-well block onto the "Samples/Deep Wells" slot, ensure that the microplate adapter there is removed. See the *BioRobot M96 User Manual* for details.

10. **Close the workstation door and start the protocol when instructed by the software. All subsequent steps are automated. The software displays a table of results when the protocol is finished.**

11. **Retrieve the PCR plate containing the purified DNA from the heat/cool block. The DNA is ready to use, or can be stored at 2–8°C for 24 h or at –20°C for longer periods.**

    Carryover of magnetic particles in eluates will not affect most downstream applications. If the risk of magnetic-particle carryover needs to be minimized (e.g., for applications such as real-time PCR), the microplate containing eluate should first be applied to a suitable magnetic separator and the eluate transferred to a clean microplate (see Appendix, page 21).

Protocol: Isolation of Total DNA from Soft-Tissue Biopsies

For automated purification of total DNA from soft-tissue biopsies using the MagAttract DNA Tissue M96 Kit.

Important point before starting

- Before beginning the procedure, read “Important Notes” (page 12).

Procedure

1. **Transfer the soft-tissue biopsy into a 1.5 ml sample tube (with screw cap). For most tissue types, a sample size of 7 mg is recommended.**
2. **Add 95 µl Buffer G2.**
   Ensure tissue pieces are fully submerged in Buffer G2.
3. **Add 5 µl Proteinase K solution, and mix by tapping on the tube gently.**
4. **Incubate at 56°C until the tissue is completely lysed. Vortex 2–3 times per hour during incubation to disperse the sample, or place the sample in a thermomixer or shaking water bath or on a rocking platform.**
   Lysis time varies depending on the type of tissue processed. Lysis is usually complete in 3 h. Lysis overnight is possible and does not influence the preparation.
5. **Homogenize the sample by pipetting up and down several times. Large pieces of insoluble material, which could clog pipet tips, should be removed by brief centrifugation (300 x *g*, 1 min). Transfer 50 µl supernatant to a well of a 96-well block.**
6. **Switch on the BioRobot M96.**
   The power switch is on the right side of the instrument.
7. **Switch on the computer and monitor.**
8. **Launch the QIAsoft M Operating System.**
   Upon startup, the computer displays the QIAsoft M startup window. Click “Start“ to continue.

   If the QIAsoft M startup window does not appear, either double-click the QIAsoft M icon on the desktop or click the Microsoft Windows “Start” menu and select QIAsoft M Operating System → QIAsoft M V1.0 for BioRobot M96.
9. **Click the dark green arrow button and select “MagAttract DNA Tissue“ from the drop-down menu that appears. Select the protocol “Tissue Standard”.**

10. **Click the "Select" button to confirm the protocol selected. Select the number of samples and the elution volume in the corresponding dialog fields. Click "Next".**

    The QIAsoft M software will now guide you through the remaining steps required to set up the BioRobot M96 for the protocol selected; these steps include the option of entering names for your samples. Be sure to follow all instructions that appear. Wear gloves when loading the required items on the worktable.

    CAUTION: Before placing the 96-well block onto the "Samples/Deep Wells" slot, ensure that the microplate adapter there is removed. See the *BioRobot M96 User Manual* for details.

12. **Close the workstation door and start the protocol when instructed by the software. All subsequent steps are automated. The software displays a table of results when the protocol is finished.**
13. **Retrieve the PCR plate containing the purified DNA from the heat/cool block. The DNA is ready to use, or can be stored at 2–8°C for 24 h or at –20°C for longer periods.**

    Carryover of magnetic particles in eluates will not affect most downstream applications. If the risk of magnetic-particle carryover needs to be minimized (e.g., for applications such as real-time PCR), the microplate containing eluate should first be applied to a suitable magnetic separator and the eluate transferred to a clean microplate (see Appendix, page 21).

Troubleshooting Guide

This troubleshooting guide may be helpful in solving any problems that may arise. For more information, see also the Frequently Asked Questions page at our Technical Support Center: www.qiagen.com/FAQ/FAQList.aspx. The scientists in QIAGEN Technical Services are always happy to answer any questions you may have about either the information and protocols in this handbook or sample and assay technologies (for contact information, see back cover or visit www.qiagen.com).

	Comments and suggestions
Software error	
QIAsoft M software error dialog box displayed	If the QIAsoft M software displays an error dialog box during a protocol run, refer to the Troubleshooting Guide in the *BioRobot M96 User Manual*.
Low DNA yield	
a) MagAttract Suspension D was not completely resuspended	Before starting the procedure, ensure that MagAttract Suspension D is fully resuspended. Vortex for at least 3 minutes before first use, and for 1 minute before subsequent uses.
b) Frozen blood samples were not mixed properly after thawing	Thaw frozen blood samples at room temperature (15–25°C) and ensure that they are well mixed.
c) Reagents were loaded onto worktable in wrong order	Ensure that all reagents are loaded onto the worktable in the correct order. Repeat the purification procedure with new samples.
d) Incomplete digestion of tissue samples	Ensure that the tissue is completely digested by extending the time of incubation with Proteinase K.
DNA does not perform well in downstream applications	
a) Insufficient DNA used in downstream application	Quantify the purified DNA by spectrophotometric measurement of the absorbance at 260 nm (see "Quantification of DNA", Appendix, page 21).
b) Excess DNA used in downstream application	Excess DNA can inhibit some enzymatic reactions. Quantify the purified DNA by spectrophotometric measurement of the absorbance at 260 nm (see "Quantification of DNA", Appendix, page 21).

	Comments and suggestions
c) Degraded DNA obtained from tissue samples	Too much sample may have been used. For most sample types, 7 mg tissue is sufficient per 100 µl total reaction volume.

A_{260}/A_{280} ratio for purified nucleic acids is low

Absorbance reading at 320 nm was not subtracted from the absorbance readings at 260 nm and 280 nm	To correct for the presence of magnetic particles in the eluate, an absorbance reading at 320 nm should be taken and subtracted from the absorbance readings obtained at 260 nm and 280 nm (see "Quantification of DNA", Appendix, page 21).

Appendix: Storage, Quantification, and Determination of Purity of DNA

Storage of DNA

Purified DNA may be stored at 2–8°C for 24 hours or at –20°C for longer periods.

Quantification of DNA

The concentration of DNA should be determined by measuring the absorbance at 260 nm (A_{260}) in a spectrophotometer. Absorbance readings at 260 nm should fall between 0.1 and 1.0 to be accurate. An absorbance of 1 unit at 260 nm corresponds to 50 µg of DNA per ml (A_{260} = 1 → 50 µg/ml). Use a low-salt buffer of neutral pH (e.g., 10 mM Tris·Cl, pH 7) to dilute the samples and to calibrate the spectrophotometer. The ratio between the absorbance values at 260 nm and 280 nm gives an estimate of DNA purity (see "Purity of DNA", below). Carryover of magnetic particles in the eluate may affect the A_{260} reading, but should not affect the performance of the DNA in downstream applications. If the purified DNA is to be analyzed by real-time PCR, the microplate containing the eluate should first be applied to a suitable magnetic separator and the eluate transferred to a clean microplate (see below).

To quantify DNA isolated using the MagAttract DNA M96 System:

- Transfer the DNA from the PCR plate to a flat-bottom microplate. Apply the microplate to a suitable magnetic separator (e.g., QIAGEN 96-Well Magnet Type A, cat. no. 36915) for 10 minutes.
- If a suitable magnetic separator is not available, transfer the DNA to microcentrifuge tubes, and centrifuge the tubes for 1 minute at full speed in a microcentrifuge to pellet any remaining magnetic particles.
- Once separation is complete, carefully withdraw 10–50 µl of isolated DNA and dilute to a final volume of 100 µl in the DNA elution solution.
- Measure the absorbance at 320 nm, 280 nm, and 260 nm. Subtract the absorbance reading obtained at 320 nm from the readings obtained at 260 nm and 280 nm to correct for the presence of magnetic particles.

Concentration of DNA sample = 50 µg/ml x ($A_{260} - A_{320}$) x dilution factor

Total amount of DNA isolated = concentration x volume of sample in ml

Purity of DNA

Purity is determined by calculating the ratio of corrected absorbance at 260 nm to corrected absorbance at 280 nm, i.e., ($A_{260} - A_{320}$)/($A_{280} - A_{320}$). Pure DNA has an A_{260}/A_{280} ratio of 1.7–1.9.

References

QIAGEN maintains a large, up-to-date online database of scientific publications utilizing QIAGEN products. Comprehensive search options allow you to find the articles you need, either by a simple keyword search or by specifying the application, research area, title, etc.

For a complete list of references, visit the QIAGEN Reference Database online at www.qiagen.com/RefDB/search.asp or contact QIAGEN Technical Services or your local distributor.

Ordering Information

Product	Contents	Cat. no.
MagAttract DNA Blood M96 Kit (192)	MagAttract Suspension D and buffers for up to 192 preps	951436
MagAttract DNA Blood M96 Kit (960)	MagAttract Suspension D and buffers for up to 960 preps	951438
MagAttract DNA Tissue M96 Kit (192)	MagAttract Suspension D and buffers for up to 192 preps	953436
MagAttract DNA Tissue M96 Kit (960)	MagAttract Suspension D and buffers for up to 960 preps	953438
BioRobot M96*	Robotic workstation for automation of magnetic-particle purification technology	9000709
Starter Pack, M96	96-well microplates, 400 µl (4); 96-well blocks, 650 µl (2); 96-well microplates (25); PCR plates (8); PCR plate 8-cap strips (48); filter-tips (10 x 96); tip waste bags (2)	996999
Filter-Tips, 200 µl, M96 (10 x 96)	Sterile, disposable filter-tips, stacked; pack of 10 x 96	996722
Reagent Holders, small, M96 (10)	Reagent holders (10 ml); pack of 10	9015187
Reagent Holders, large, M96 (5)	Reagent holders (45 ml); pack of 5	9015184
96-Well Magnet Type A	Magnet for separating magnetic particles in wells of 96-well plates, 2 x 96-Well Microplates FB	36915

For up-to-date licensing information and product-specific disclaimers, see the respective QIAGEN kit handbook or user manual. QIAGEN kit handbooks and user manuals are available at www.qiagen.com or can be requested from QIAGEN Technical Services or your local distributor.

* QIAGEN Robotic Systems are not available in all countries; please inquire.

Notes

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Notes

Limited License Agreement

Use of this product signifies the agreement of any purchaser or user of the MagAttract DNA M96 Kits to the following terms:

1. The MagAttract DNA M96 Kits may be used solely in accordance with the *MagAttract DNA M96 Handbook* and for use with components contained in the Kit only. QIAGEN grants no license under any of its intellectual property to use or incorporate the enclosed components of this Kit with any components not included within this Kit except as described in the *MagAttract DNA M96 Handbook* and additional protocols available at www.qiagen.com.
2. Other than expressly stated licenses, QIAGEN makes no warranty that this Kit and/or its use(s) do not infringe the rights of third-parties.
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Belgium ■ Orders 0800-79612 ■ Fax 0800-79611 ■ Technical 0800-79556

Brazil ■ Orders 0800-557779 ■ Fax 55-11-5079-4001 ■ Technical 0800-557779

Canada ■ Orders 800-572-9613 ■ Fax 800-713-5951 ■ Technical 800-DNA-PREP (800-362-7737)

China ■ Orders 86-21-3865-3865 ■ Fax 86-21-3865-3965 ■ Technical 800-988-0325

Denmark ■ Orders 80-885945 ■ Fax 80-885944 ■ Technical 80-885942

Finland ■ Orders 0800-914416 ■ Fax 0800-914415 ■ Technical 0800-914413

France ■ Orders 01-60-920-926 ■ Fax 01-60-920-925 ■ Technical 01-60-920-930 ■ Offers 01-60-920-928

Germany ■ Orders 02103-29-12000 ■ Fax 02103-29-22000 ■ Technical 02103-29-12400

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Japan ■ Telephone 03-6890-7300 ■ Fax 03-5547-0818 ■ Technical 03-6890-7300

Korea (South) ■ Orders 080-000-7146 ■ Fax 02-2626-5703 ■ Technical 080-000-7145

Luxembourg ■ Orders 8002-2076 ■ Fax 8002-2073 ■ Technical 8002-2067

Mexico ■ Orders 01-800-7742-639 ■ Fax 01-800-1122-330 ■ Technical 01-800-7742-436

The Netherlands ■ Orders 0800-0229592 ■ Fax 0800-0229593 ■ Technical 0800-0229602

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Singapore ■ Orders 1800-742-4362 ■ Fax 65-6854-8184 ■ Technical 1800-742-4368

Spain ■ Orders 91-630-7050 ■ Fax 91-630-5145 ■ Technical 91-630-7050

Sweden ■ Orders 020-790282 ■ Fax 020-790582 ■ Technical 020-798328

Switzerland ■ Orders 055-254-22-11 ■ Fax 055-254-22-13 ■ Technical 055-254-22-12

UK ■ Orders 01293-422-911 ■ Fax 01293-422-922 ■ Technical 01293-422-999

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