

TECHNICAL MANUAL

Maxprep™ Liquid Handler Method for Preprocessing of Maxwell® FSC DNA IQ™ Casework Kit Samples in Tubes Technical Manual

Instructions for Use of Products
AS9100, AS9101, AS9200, AS9201

Use in combination with the *Maxwell® FSC DNA IQ™
Casework Kit Technical Manual, #TM499* and the
*Preprocessing Methods for the Maxprep™ Liquid Handler
Technical Manual, #TM529*



Maxprep™ Liquid Handler Method for Preprocessing of Maxwell® FSC DNA IQ™ Casework Kit Samples in Tubes

All technical literature is available at: www.promega.com/protocols/
 Visit the web site to verify that you are using the most current version of this Technical Manual.
 E-mail Promega Technical Services if you have questions on use of this system: techserv@promega.com

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1. Description

The Maxwell® FSC DNA IQ™–Tubes method for the Maxprep™ Liquid Handler is designed to automate the preparation of Maxwell® deck trays for liquid and solid support samples for the Maxwell® FSC DNA IQ™ Casework Kit when using samples in individual tubes. The Maxprep™ Liquid Handler can add preprocessed samples from sample tubes to Maxwell® FSC Cartridges, transfer plungers to Maxwell® FSC Cartridges and dispense elution buffer to elution tubes. Administrators can create variant methods in the Maxprep™ software that specify preprocessing options to meet the needs of the laboratory. The creation of variant preprocessing methods is described in the *Maxprep™ Liquid Handler Technical Manual*, #TM529.

2. Materials to Be Supplied by the User

- Maxwell® FSC DNA IQ™ Casework Kit (Cat.# AS1550)
- Maxprep™ 1000µl Conductive Disposable Tips, Filtered (Cat.# AS9303)
- Maxprep™ 300µl Conductive disposable Tips, Filtered (Cat.# AS9302)
- Maxprep™ Reagent Reservoir, 50ml (Cat.# AS9304)

3. Maxprep™ Preprocessing Protocol

3.A. Maxwell® FSC DNA IQ™ Method Selection and Setup

Prior to running this method, samples should be digested using one of the protocols in Section 3 of the *Maxwell® FSC DNA IQ™ Casework Kit Technical Manual, #TM499*. Proceed with digestion protocols up to just before the addition of 200µl of Lysis Buffer. The Maxprep™ Liquid Handler will perform Lysis Buffer addition to the digested samples. Prepared samples in tubes are placed on the Maxprep™ Liquid Handler for the preprocessing method that will add Lysis Buffer to the samples, prepare the deck tray(s) and transfer samples to cartridges.

1. In the Maxprep™ software, touch **Start** to access the ‘Methods’ screen. On the ‘Methods’ screen, select a method using one of the two options below:
 - a. Touch the Maxwell® FSC DNA IQ™–Tubes preprocessing method or laboratory-specific variant of the Maxwell® FSC DNA IQ™–Tubes preprocessing method.
 - b. Use a bar code reader to scan the 2D bar code on the kit box to filter the available methods for the Maxwell® FSC DNA IQ™ Kit. Touch the Maxwell® FSC DNA IQ™–Tubes preprocessing method or laboratory-specific variant of the Maxwell® FSC DNA IQ™–Tubes preprocessing method.
2. Verify that the appropriate preprocessing method or variant method has been selected and touch the **Proceed** button. Touch the **Run** button on the method run screen to start the run.
3. Enter any method-specific variables (Sample Number, Elution Volume) on the initial method screen.
4. Prior to placing Maxwell® deck tray(s) on the Maxprep™ Liquid Handler, prepare the deck tray(s) with cartridges and elution tubes. Change gloves before handling Maxwell® FSC Cartridges and Elution Tubes (0.5ml). Place the cartridges to be used in the deck tray(s) with well #1 (the largest well in the cartridge) facing away from the elution tubes. Press down on the cartridge to snap it into position. Carefully peel back the seal so that all plastic comes off the top of the cartridge. Ensure that all sealing tape and any residual adhesive are removed before placing cartridges in the instrument. Place an open, empty elution tube into the elution tube position for each cartridge in the deck tray(s).

Notes:

1. Specimen or reagent spills on any part of the deck tray should be cleaned with a detergent-water solution, followed by a bacteriocidal spray or wipe and then water. Do not use bleach on any instrument parts.
2. Use only the 0.5ml Elution Tubes provided in the kit; other tubes may be incompatible with the Maxwell® Instrument.

5. Follow instrument setup instructions displayed in the method. You will be directed by the Maxprep™ software where to place the following items on the instrument:
 - Maxprep™ Plunger Holders and Maxwell® FSC Plunger Packs (2; one may be partially full)
 - 24-position Maxwell® Front Deck Tray or 16-position Maxwell® Deck Tray containing Maxwell® FSC Cartridges with seals removed and open elution tubes
 - 24-position Maxwell® Back Deck Tray or 16-position Maxwell® Deck Tray containing Maxwell® FSC Cartridges with seals removed and open elution tubes
 - Maxprep™ Reagent Reservoir, 50ml with Lysis Buffer
 - Maxprep™ Reagent Reservoir, 50ml with Elution Buffer
 - 10mm diameter tube carriers with ClickFit Microtubes, 1.5ml or CW Microtubes, 1.5ml containing centrifuged samples (all tubes within a carrier must be of the same type)
 - Maxprep™ 1000µl Conductive Disposable Tips, Filtered (2; one rack may be partially full)
 - Maxprep™ 300µl Conductive Disposable Tips, Filtered (rack may be partial or full)
6. Close the instrument door and touch the **Next** button to start the automated preprocessing of samples.

3.B. Maxprep™ Liquid Handler Preprocessing Protocol

The Maxprep™ Liquid Handler will prepare samples prior to extraction using a Maxwell® Instrument. The Maxprep™ Liquid Handler performs the following steps:

1. Transfers plungers to each of the cartridges in the Maxwell® deck tray(s).
2. Transfers the specified volume of Elution Buffer to each elution tube in the Maxwell® deck tray(s).
3. Adds 200µl of lysis buffer to each sample tube and transfers the mixture to its corresponding Maxwell® FSC cartridge.

When the method is complete, open the instrument door and move the deck tray(s) to the Maxwell® Instrument for extraction. Remove primary sample tubes and used tips from the waste bin of the instrument and discard as hazardous waste following your institution's recommended guidelines. Either discard or tightly cap and store remaining reagents.

Consumables for Maxprep™ preprocessing methods are designed to be used with potentially infectious substances. Use appropriate protective equipment (e.g., gloves and goggles) when handling infectious substances. Adhere to your institutional guidelines for the handling and disposal of all infectious substances when used with this system.





It is the manufacturer's responsibility to provide equipment electromagnetic compatibility information to the customer or user.

It is the user's responsibility to ensure that a compatible electromagnetic environment for the equipment can be maintained in order that the device will perform as intended.

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