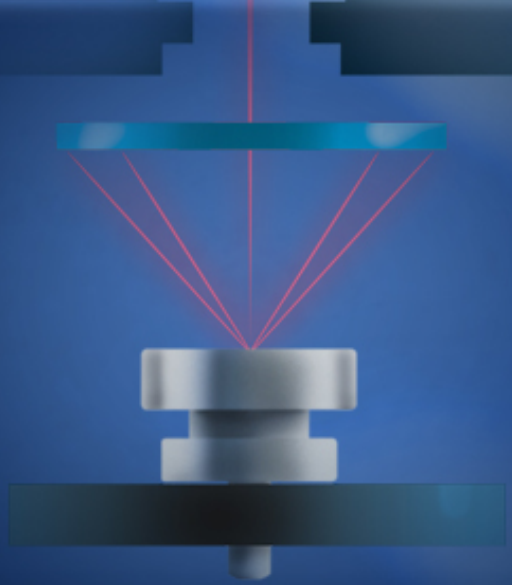

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QX-202C CAPSULE QUICK USER GUIDE

UQX017 Issue 1.1

June 2006

General precautions

Use powder-free gloves only

During preparation and storage, never place capsules on any surface other than the Capsule Plate

Never touch the capsule membrane

Refer to QX-202C user manual and Quick Imaging Guide for further information

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Step 1: Check Starter Kit contents

QX-202C Capsules:
Each plastic strip containing 12 capsules

One box of Gilson Microman® pipette
One box of 100 capillaries
Two boxes of 50 pistons each

x2

MP-12 Capsule Plates:
2 boxes containing one plate and cover each

One box containing:
IB-64 Imaging Buffer
RT-56 Calibration Capsule

QX-202C User Manual and Quick Imaging guide

Step 2: Open Imaging Buffer and Calibration Capsule box

Note: Read data sheets

Use caution when using sharp objects

IB-64 Imaging Buffer

RT-56 Calibration Capsule

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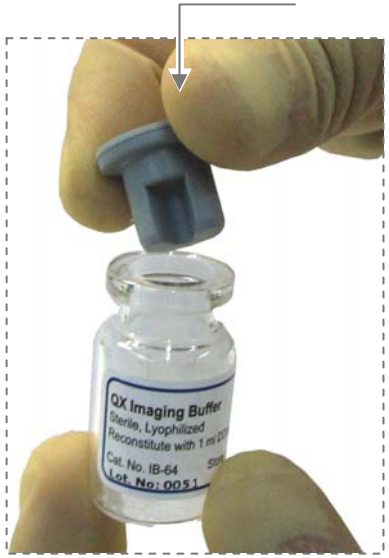
Step 3: Reconstitute Imaging Buffer

Open metal cap

a

Open rubber seal

b



Add 1ml of double distilled water

c

d

Shake vial to fully dissolve powder

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Step 4: Open MP-12 Capsule Plate box

Use caution when using sharp objects

a

b

c

d

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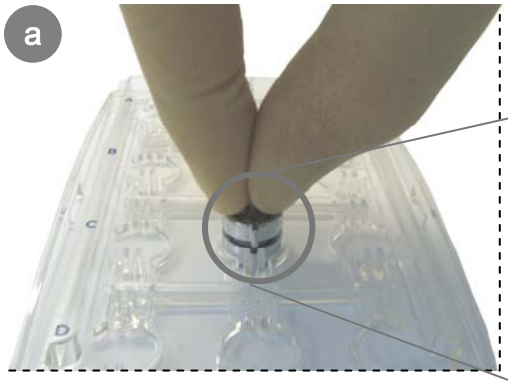
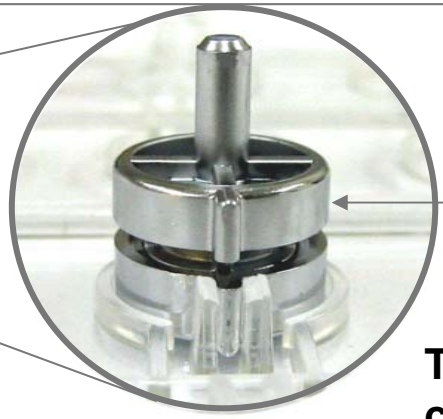
Step 5: Place the Calibration Capsule on plate

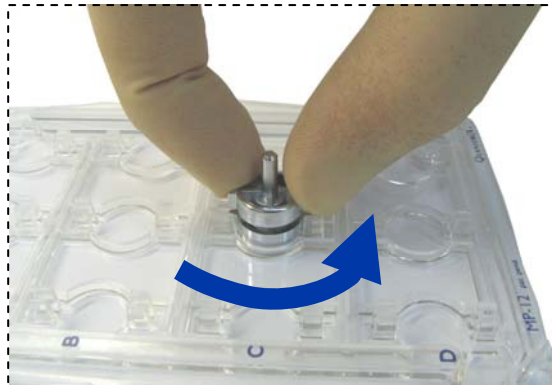
a



Fit capsule wings in slots



b

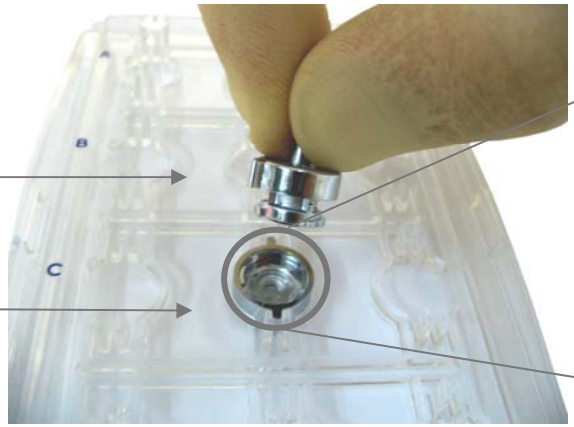


Turn sealing stub counter-clockwise to open

c

Sealing Stub

Sample Dish



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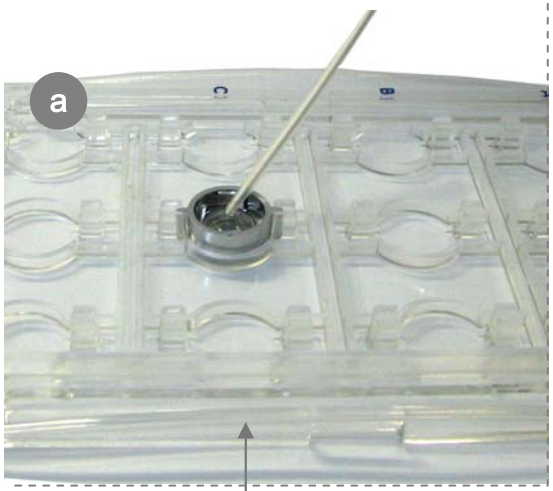
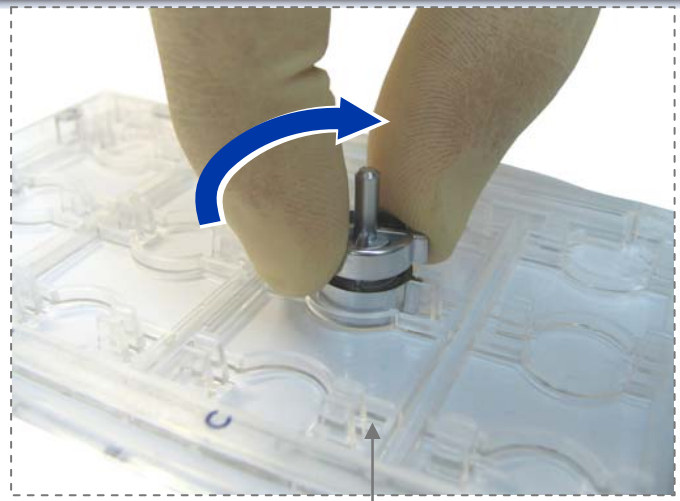
Step 6: Add Imaging Buffer to Calibration Capsule

a



Add 15µl Imaging Buffer by using the Microman®. See instructions in step 11

b



Close capsule – turn stub clockwise

Capsule is properly sealed only when wings are aligned

CAUTION

Do not touch the capsule membrane with the piston

c

STOP

Optimize your SEM imaging parameters by the using the calibration capsule.
For calibration capsule imaging instructions see the Quick Guide for Imaging with WETSEM™

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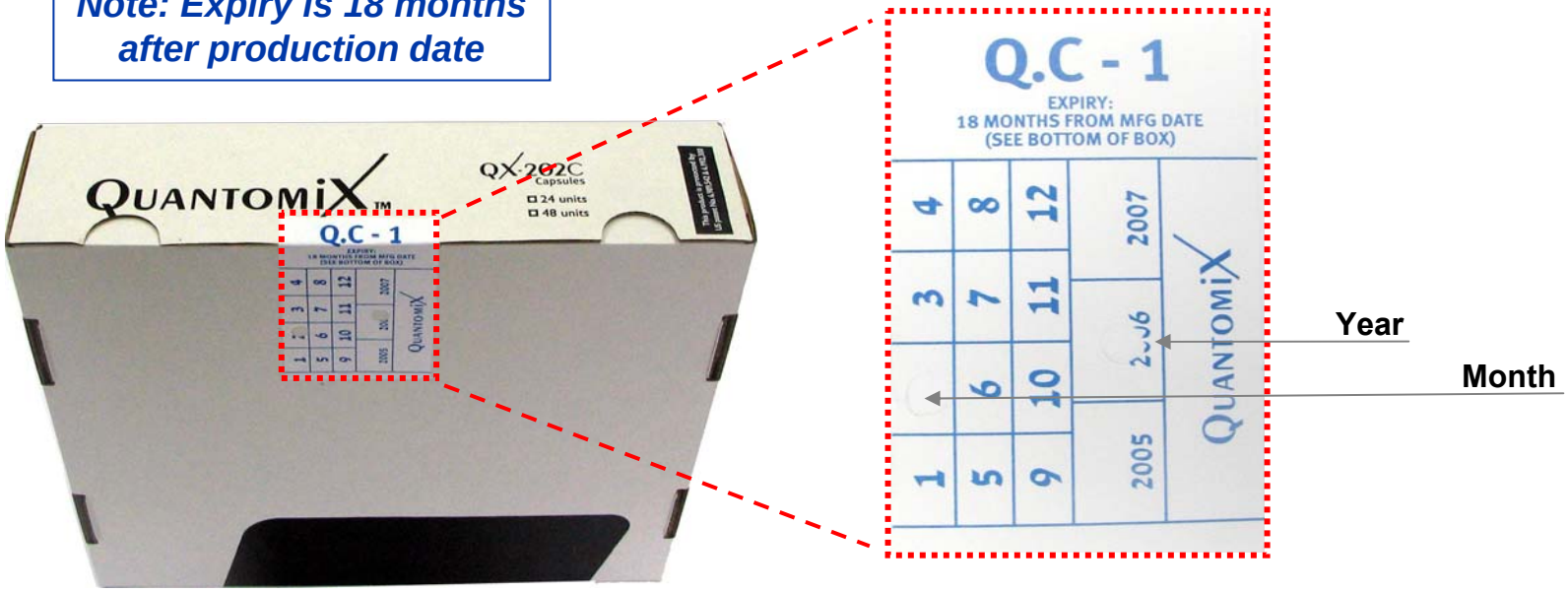
Step 7: Check expiry & record lot

Note: Expiry is 18 months after production date



Record QX-202C lot number

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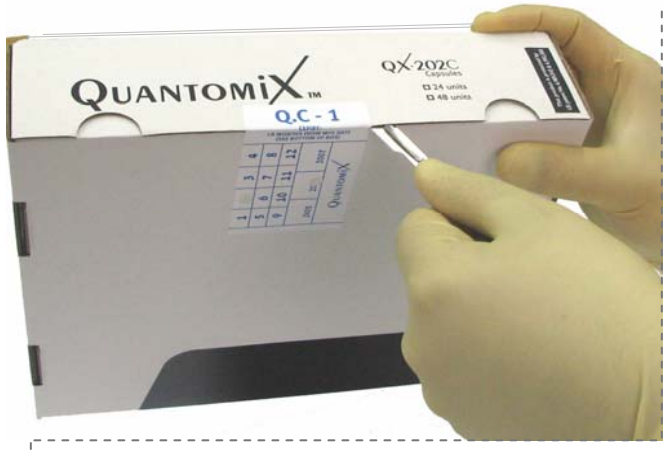
Step 8: Open the QX-202C box

Use caution when using sharp objects

a



b

c

d

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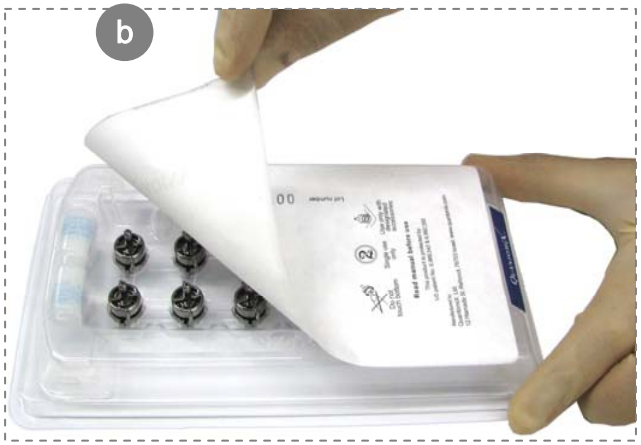
Step 9: Place capsules on plate

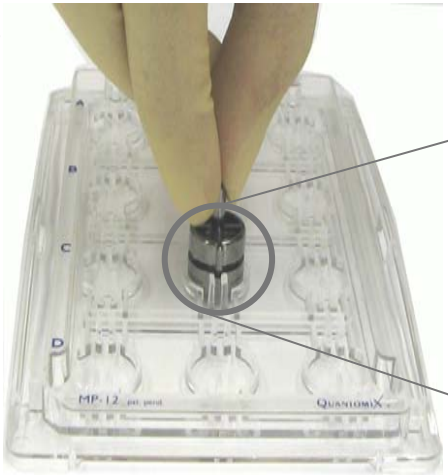
a

b

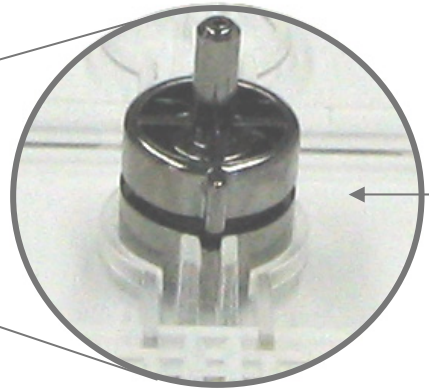


c

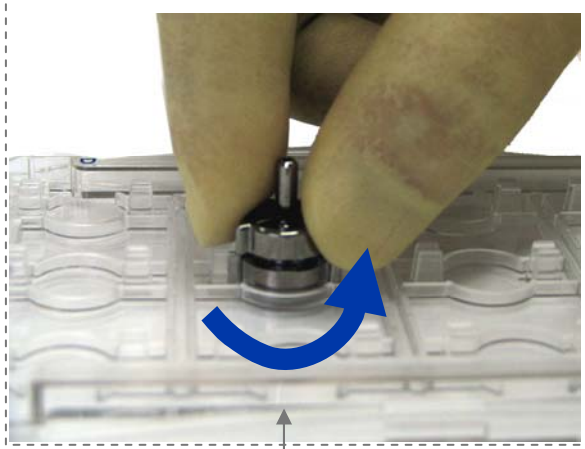
d



Fit capsule wings in slots



e



Turn counter-clockwise to open

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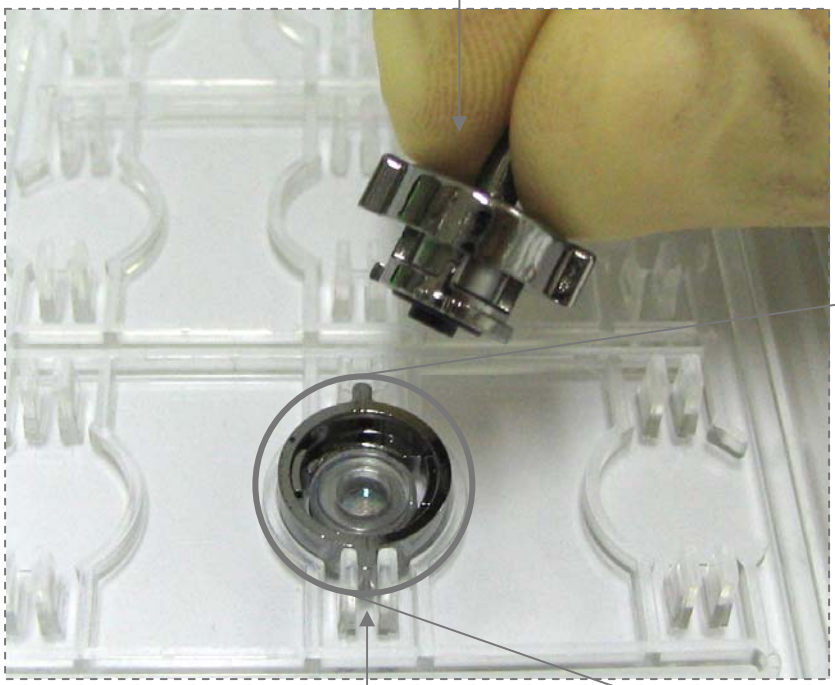
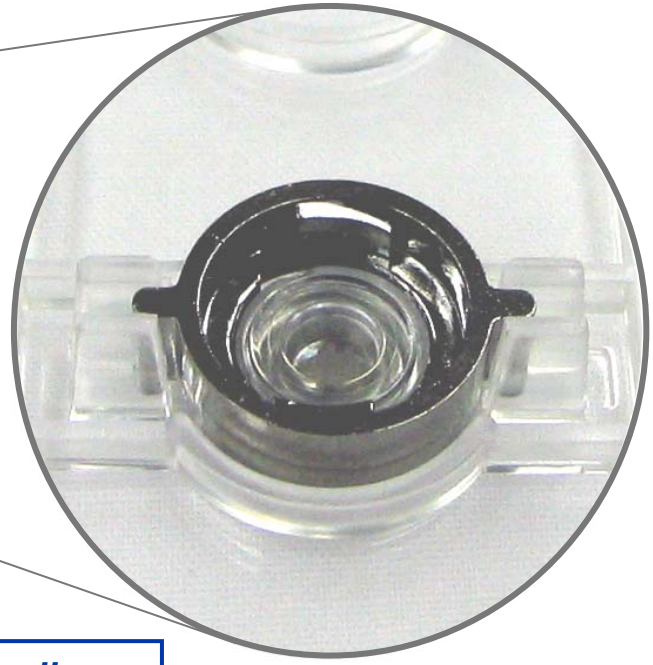
Step 10: Remove the Sealing Stub



CAUTION

If the rubber seal accidentally detaches from the stub, re-position it with the flat surface away from the liquid dish



Note: Once removed, store the sealing stub in its original package for future use

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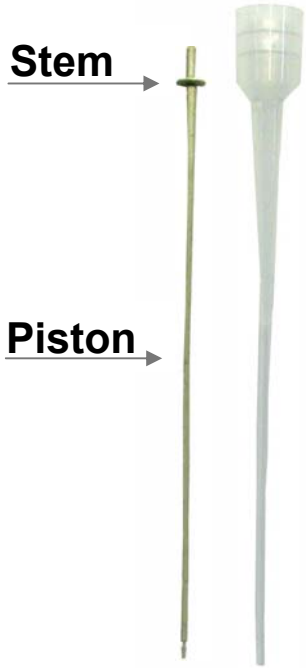
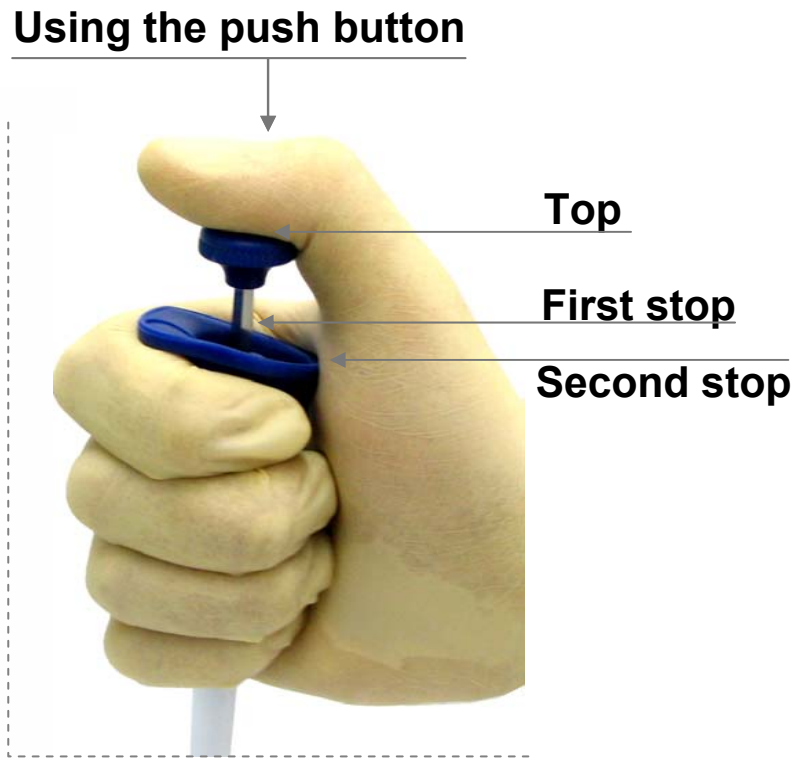
Step 11: Using the Applicator; Description





STOP *Detailed Microman instructions for use can be found in the Gilson Microman® user guide*

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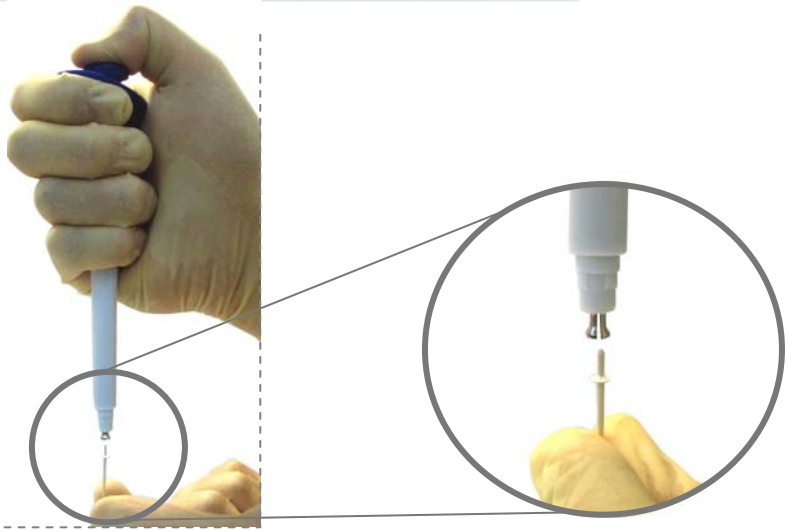
Step 12: Using the Applicator; Mounting the capillary-piston

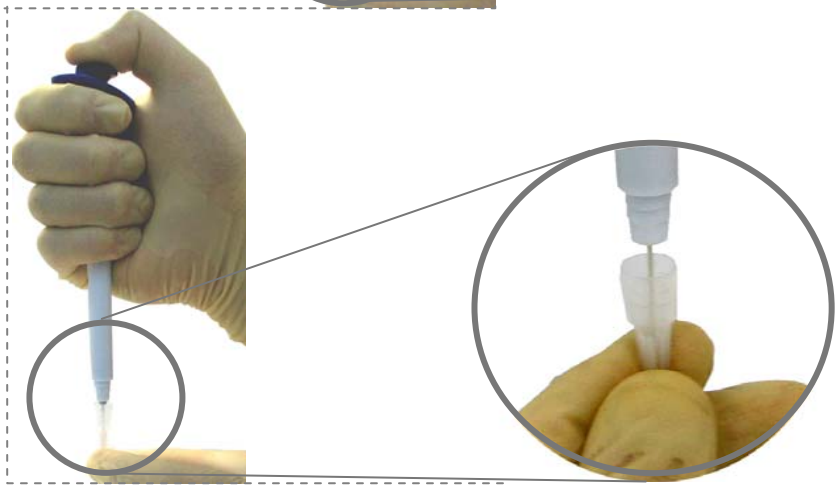
a

Press the push-button to the second stop to open the clamp and slide the stem into the clamp



b

Slide the mounted piston into the capillary and push until it snaps onto the capillary-holder



STOP ***Detailed Microman instructions for use can be found in the Gilson Microman® user guide***

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Step 13: Using the Applicator; Pipetting

a

Set the volume by turning the volumeter

b

For aspirating and dispensing press the push-button to the first stop

STOP *Detailed Microman instructions for use can be found in the Gilson Microman® user guide*

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Step 14: Sample preparation

Prepare the reaction mixture

a

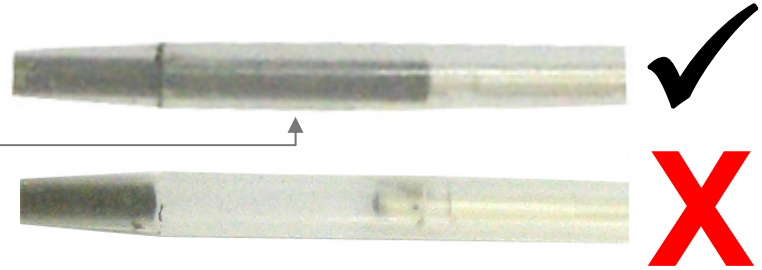
Aspirate 6.5 - 7.5µl of the mixture

b

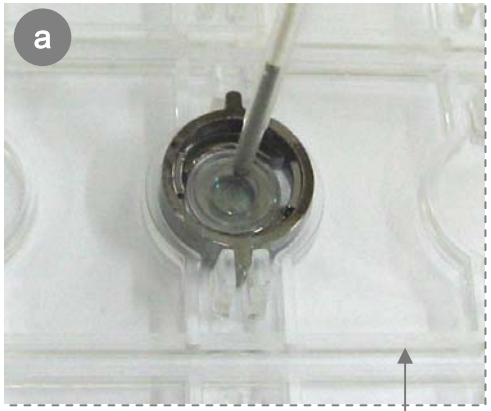
Wipe liquids outside the capillary

CAUTION

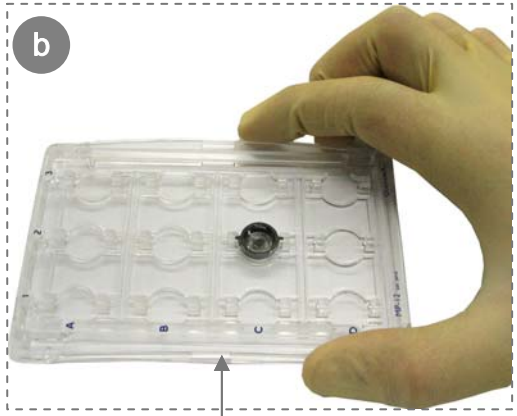
Make sure the capillary is correctly filled



Step 15: Preparing the sample



Dispense the sample into the sample dish



Gently tap the plate against the bench top

CAUTION

Do not touch the capsule membrane with the piston

Close capsule – turn stub clockwise

Capsule is properly sealed only when wings are aligned

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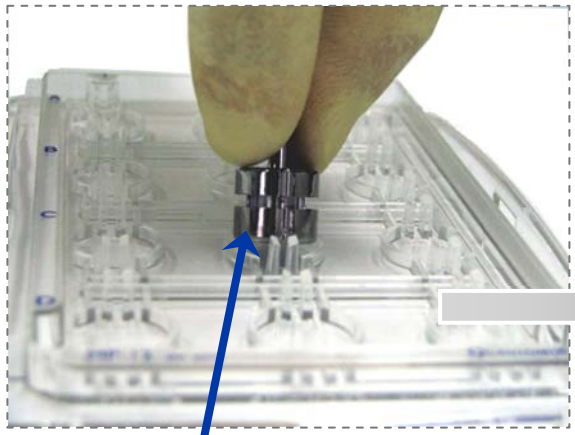
Final step: Place capsule in SEM



Gently tilt and pull to remove

Note: Label here using a felt tip marker for future identification

- *Set stage at minimal height*
- *Capsule membrane should face up*
- *Capsule's height is 18mm (Above stage surface – 10mm)*
- *A stub adaptor may be required*

Sample is now ready for WETSEM imaging

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Recommended SEM parameters

Suitable Parameter Range for WETSEM™ Imaging

Parameter	Recommended Range	Comments
Acceleration Voltage	15 - 30 kV	Not lower than 10.0 kV
Probe Current (based on source type)		
Tungsten filament	0.4 – 1.0 nA	Not higher than 1.0 nA
FEG	0.1 - 0.5 nA	Not higher than 0.5 nA
Working Distance (based on detector type)		
Semiconductor (BSE)	6 - 10 mm	Acceptable 5 -15 mm
Robinson (BSE)	10 - 20 mm	Better efficiency at high kV
Scintillator (BSE)	6 -10 mm	Acceptable 6 -10 mm
Everhart-Thornley (SE)	8 -12 mm	Acceptable 6 -15 mm
In-lens / Through the lens	2 – 4 mm	Manufacturer dependent

For further assistance and inquiries please contact our support department at tech@quantomix.com

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