WSE-4056/57/58

QBlot Kit C/M/W

August 6, 2025 5th edition

1. Precautions for safe use of this product

To use this product safely, please read this instruction manual carefully first. Please refrain from operating the product until you fully understand the contents of this instruction manual. This instruction manual describes only how to use this product for the specified purpose. Please refrain from using the product for purposes or in ways not described in this instruction manual. If you use the product for purposes or in ways not described in this instruction manual, you are solely responsible for all necessary safety measures and unforeseen circumstances. Also, please carefully read and understand the instruction manuals of any devices you will be using at the same time.

2. Purpose of use

This product is a transfer pack for transferring proteins from a gel after electrophoresis to a membrane in a semi-dry blotting method. The membrane equilibrated with transfer buffer and a stack in place of filter paper are packed separately for the anode and cathode. There is no need to equilibrate the membrane or prepare methanol or transfer buffer, which are required for normal blotting.

3. Product Configuration

Name	WSE- 4056	WSE- 4057	WSE- 4058
Gel Wash Buffer	100 mL	100 mL	100 mL
Bottom Stack (PVDF) (with PVDF membrane)	10 Pack	10 Pack	Six Pack
Top Stack	10 Pack	10 Pack	Six Pack

4. Composition

Name	Main components
Gel Wash Buffer	Tris(hydroxymethyl) aminomethane (5x stock solution)
Bottom Stack (PVDF) (with PVDF membrane)	Buffer water-absorbing sheet, PVDF membrane
Top Stack	Buffer water absorption sheet

This Product does not contain any poisonous or deleterious substances under the Poisonous and Deleterious Substances Control Law, or any substances subject to notification that exceed the exemption amounts stipulated under the Industrial Safety and Health Law or the PRTR Law. For details, please download the SDS for this product from the ATTO website (https://www.atto.co.jp/)

5. Storage

- Store unopened Gel Wash Buffer at room temperature.
- Store unopened Bottom Stack (PVDF) and Top Stack horizontally at refrigerated (2–10 °C).
- Unopened, they are stable up to the expiration date (shown on the label).
- Diluted Gel Wash Buffer can also be stored at room temperature. Use as soon as possible.

6. Disposal method

Dispose of reagents in accordance with the disposal method of your institution.

- Bottle Material Body and lid: Polypropylene
- Pack material Membrane: PVDF
  Stack: Nonwoven
  Bag:Polypropylene

7. Items required other than this product

- Polyacrylamide gel

Name	Size	Compatible gel
WSE- 4056 **QBlot Kit C**	60-65 × 60-63 × 0.75mm thick	**c - PAGEL Neo** 60 x 60 x 0.75mm thick **cp-PAGEL Neo** 60 x 60 x 0.75mm thick
WSE- 4057 **QBlot Kit M**	80-90 × 65- 85 × 1mm thick	**e-PAGEL HR** 90 x 83 x 1mm thick **e-PAGEL** 90 x 83 x 1mm thick
WSE- 4058 **QBlot Kit W**	80-145 × 65- 85 × 1mm thick	**m-PAGEL** 140 × 80 × 1mm thick

- Semi-dry blotting device

Name	Compatible semi-dry blotting equipment
WSE- 4056 **QBlot Kit C**	WSE-4025 HorizeBlot 2M WSE-4045 HorizeBlot 4M WSE-4115 Powered Blot Ace WSE-4125 Powered Blot 2M
WSE- 4057 **QBlot Kit M**	WSE-4025, WSE-4045, WSE-4115, WSE- 4125
WSE- 4058 **QBlot Kit W**	WSE-4025, WSE-4045, WSE- 4125

- Power supply: Maximum output 1.5 to 3A
  (WSE-3100 Power Station Ghibli I)
  (WSE-3500 Power Station HC)
  (AE-8135 My Power II 300 : Standard power supply only)

- Blotting Roller
  A pipette or 15mL tube can also be used.

8. Precautions for Use

- The Gel Wash Buffer in this product is a 5x stock solution. Please dilute to 1/5 with distilled water before use.
- A PVDF membrane is included in the Bottom Stack of this product. The membrane is easily scratched and stained, so do not use sharp tweezers, and handle it with clean, gloved hands. Other companies' blotting devices may also have a maximum load current and voltage. Please use according to the instruction manual that comes with each device.
- The stack may discolor. This is due to differences in lots and does not affect the quality.

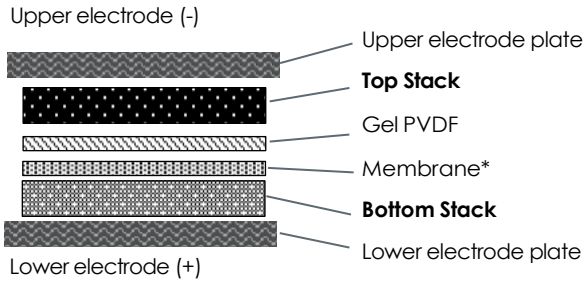
9. How to use

A. Dilution of Reagents

Dilute the Gel Wash Buffer 5 times with distilled water. This makes 1x Gel Wash Buffer. The amount of solution required per gel is 50mL. Mix 10mL of Gel Wash Buffer with 40mL of distilled water.

B. Blotting

1. After electrophoresis, place the gel in a container containing 1x Gel Wash Buffer (50mL/sheet). Rinse the surface lightly (within a few minutes) to remove fine gel pieces and SDS bubbles. Do not soak or shake the gel for a long time.



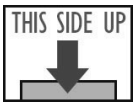
*PVDF membrane is packed with **Bottom Stack**

2. Refer to the diagram above and stack the Bottom Stack (including PVDF membrane), gel, and Top Stack in that order. The box contains alternating packs of Bottom Stack and Top Stack. Take out one set for each gel.

(1) With the label facing up, open the package marked (+) Anode.

(2) Remove the Bottom Stack and PVDF membrane together. The PVDF membrane is on the label side. Remove them with clean, gloved hands, being careful not to damage the membrane.

(3) Place the Bottom Stack on the bottom electrode plate with the PVDF membrane facing up. Make sure to check which way the mark on the label (right) is facing.



(4) Carefully remove any air bubbles with a blotting roller wetted with 1× Gel Wash Buffer.

(5) Place the gel on top of the PVDF membrane in the same direction as the mark on the pack label (above). Do not replace the gel once it has been placed on the membrane.

(6) Carefully remove any air bubbles with a blotting roller to ensure adhesion.

(7) Next, with the label facing up, open the package marked (-) Cathode.

(8) Next, with the label facing up, open the package labeled (-) Cathode.

(9) Remove the Top Stack with clean, gloved hands. Place the Top Stack on top of the gel, aligning the orientation of the gel with the mark on the pack label.

(10) Carefully remove any air bubbles with a blotting roller to ensure tight contact.

(11) Gently place the upper electrode plate on the Top Stack and connect the blotter and power supply with the lead wires. Follow the instructions in the instruction manual that came with each device for how to use the blotter and power supply.

3. The power supply conditions for the QBlot Kit series are as shown in the table below.

- Power for 15 to 30 minutes at a constant voltage of 12V, or for 5 to 10 minutes at a constant voltage of 24V. Use a power supply that can output a maximum current of approximately 3.0A. Follow the instructions in the instruction manual that comes with each device for how to use the power supply.

WSE-4056 **QBlot Kit C**	12V c.v. 0.15A/gel c.c.	15~30 min	c.v. : 0.1~0.2A/gel c.c. : 5~20V
	24V c.v. 0.3A/gel c.c.	5~10	c.v. : 0.2~0.4A/gel c.c. : 15~30V
WSE-4057 **QBlot Kit M**	12V c.v. 0.25A/gel c.c.	15~30	c.v. : 0.1~0.4A/gel c.c. : 5~20V
	24V c.v. 0.6A/gel c.c.	5~10	c.v. : 0.5~0.8A/gel c.c. : 15~30V
WSE-4058 **QBlot Kit W**	12V c.v. 0.3A/gel c.c.	15~30	c.v. : 0.2~0.6A/gel c.c. : 5~20V
	24V c.v. 0.9A/gel c.c.	5~10	c.v. : 0.7~1.1A/gel c.c. : 15~30V

- When transferring with a constant current, apply a constant current of 3 to 4 mA/cm2 per gel area for 15 to 30 minutes under standard conditions. Under high-speed conditions, apply a constant current of 7 to 8 mA/cm2 per gel area for 5 to 10 minutes.
- When using a powered blotting device, Powered Blot Ace (WSE-4115) or Powered Blot 2M (WSE-4125), set the standard (12V) to ``STD" or ``12V" and the high-speed (24V) to ``RAPID" or ``24V." Please also refer to the instruction manual that came with the device.

10. Reference materials

You can access the operation videos for the QBlot Kit series by scanning the QR code on the right.

Even when following the same protocol, small variations in technique may result in large differences in outcomes. For detailed experimental tips, please visit the ATTO website (https://www.atto.co.jp/) to download our know-how resources.

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