

Constant
temperature
incubator/shaker
OD Monitor

For cell culture
related products

Shaker

Mixer
Rotator
Stirrer

Bead beater
homogenizer
ultrasonic
homogenizer

Aluminum
block Bath
Mini-size Bath

Water bath
Shaking Water bath
Immersion cooler

Hybridization
Incubator
Constant temperature
Chambers

Centrifugal
concentrators
Cold Trap

Freeze dryers

Submarine
Electrophoresis apparatus
Blotting device for
hybridization

Constant-temperature
water circulating
system [Chiller]

Appendix

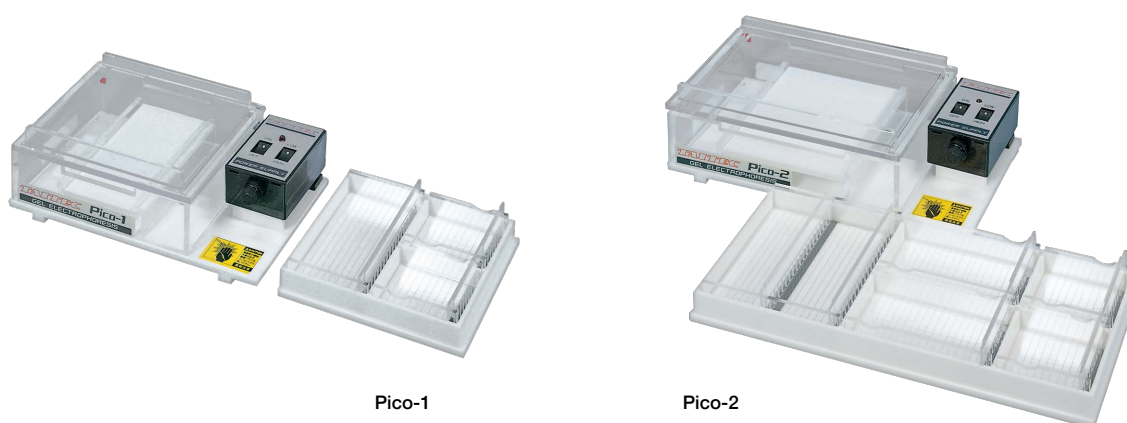
Submarine Electrophoresis apparatus

Blotting device for hybridization

- Submarine Electrophoresis apparatus (for R&D training, mainly at schools)
 - Submarine Electrophoresis apparatus Pico-1/Pico-2.....178
- Submarine Electrophoresis apparatus Compatible with Multichannel pipette (for R&D training, mainly at schools)
 - Maru-Raku Electrophoresis apparatus Pico-96/Pico-192.....179
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Submarine Electrophoresis apparatus Pico-1/Pico-2

For Agarose mini gel with power supply. Pico-1 can make two gel sizes while Pico-2 can make three gel sizes. Gel trays are Thick, Durable, and UV transparent.



Pico-1

Pico-2

Features

- 8/15 wells in Pico-1 and 8/18/32 wells in Pico-2
- Electrophoresis voltage is switchable between High/Low

The thickness of the Gel tray and Gel preparation bath is 5 mm for reducing Thermal deformation.

The thickness is doubled compared to the conventional one. Even if the hot gel solution is poured into it, the risk of deformation due to heat is reduced.

Applications

- Agarose gel Electrophoresis of DNA and RNA

For Agarose gel

Mini and Middle-sized Submarine electrophoresis apparatus.

Comes with multiple sizes of Gel Trays

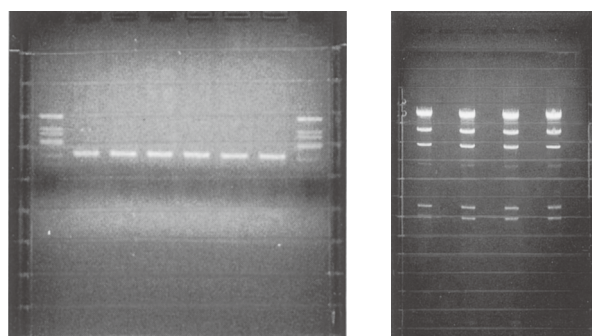
Pico-1 can make three different gel sizes while Pico-2 can make five different gel sizes.

Verification on Electrophoresis using a UV Permeable Gel tray

The gel on tray as placed on the UV transilluminator. It was photographed after electrophoresis of DNA fragment (325 bp) and amplified with PCR by 2% agarose gel (EtBr included) for 25 minutes at 100 V with Pico-1 (right figure).

The gel on whole tray was photographed after electrophoresis of λ DNA and cut by HindIII with 1% agarose gel at 100 V for 1.5 h with Pico-2. Because the trays in the Pico series did not absorb the UV light, the scale lines slightly reflected. The gel can be placed on the UV transilluminator as it is and confirmation during electrophoresis was also easy.

Multiple sizes of Gel Trays come as set and can be widely applied to fractionation of genomic DNA such as Southern blotting from confirmation of PCR products.



Model	Pico-1	Pico-2
Size of Gels/Number that is Productionable	W50 × L60 mm ×2 pcs W110 × L60 mm × 1 pc	W50 × L60 mm ×2 pcs W50 × L100 mm ×2 pcs W110 × L100 mm × 1 pc
Combs (included)	8 samples × 2 connected /1 pc 18 samples /1 pc	8 samples × 2 connected /2 pcs 18 samples /2 pcs
Size of Teeth combs	Width 4 mm, Thickness 1 mm	
Electrophoresis voltage	High/Low Changeable (by the included compact-sized power supply), AC100V/1A (Need a step-down transformer)	
Size of Electrophoresis bath (W×D×H)	207 × 129 × 68 mm	247 × 129 × 68 mm
Configuration	Electrophoresis bath × 1 pc, Gel preparation bath × 1 pc, Compact-sized power supply × 1 pc, UV transmission gel tray Combs × 1 pc (see above for Qty)	

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Appendix

Maru-Raku Electrophoresis apparatus Pico-96/Pico-192

Equipped with a newly devised guide to easily inject samples with the 8/12-channel pipette. One model for 96 samples and one model for 192 samples.



Pico-96



Pico-192

Features

- Compatible with 8/12-channel pipette
- Comes with a Power supply [Pico-96]

Ultra-easy sample injection with a newly devised guide

Removable pipette guide accurately guides the tip of the multi-channel pipette into the injection part and greatly reduces sample injection failures due to hand shaking, etc. Optimum for labs where large-scale electrophoresis is performed.

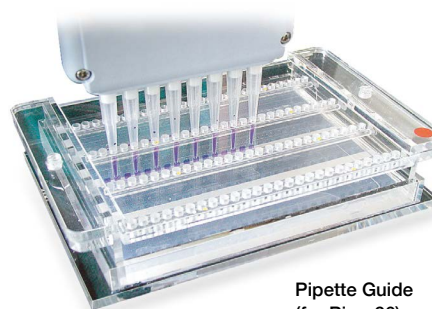
Electrophoreses on Max. 96 samples simultaneously with the compact size [Pico-96]

Although the size of the electrophoresis bath is the same as that for the conventional Mini gel, the Max. 96 samples can simultaneously be electrophoresed by the comb of the device.

It comes with a compact sized power supply that can switch voltage.

Applications

- Agarose gel electrophoresis of multiple samples such as PCR products

Pipette Guide
(for Pico-96)

Large-scale 192 samples. Buffer pH bias is reduced [Pico-192]

Mini sized and Middle size Submarine electrophoresis apparatus. The Max. 192 samples can be electrophoresed simultaneously in the Electrophoresis bath as well as Gel larger than the body of Pico-96 (compact power supply is not included in the Pico-192).

Because the buffer bath is also connected at the bottom, it can reduce the pH bias during electrophoresis and provide a cleaner electrophoresis pattern.

Model	Pico-96	Pico-192
Size of Gels/Number that is Productionable	W124 x L100 mm x 1 pc	W158 x L165 mm x 1 pc
Combs	26 samples /4 pcs	34 samples /6 pcs
Size of the Teeth combs	Width 3 mm, Thickness 1 mm	
Electrophoresis voltage	High/Low Changeable (by the included compact-sized power supply) AC100V/1A (Need a step-down transformer)	(*)
Size inside the Electrophoresis bath (WxDxH)	180 x 135 x 50 mm	236 x 168 x 43 mm
Pipette Guide	4-row integrated (4-row x 26 holes)	Separate type (34 holes)
Configuration	Electrophoresis bath x 1 pc, Gel preparation bath x 1 pc (*2), Pipette Guide x 1 pc, UV permeable gel tray and Combs x 1 pc (see above for Qty), Compact-sized power supply (Pico-96) x 1 pc	

(*) Prepare a power supply for electrophoresis separately.

(*2) When making a 5 mm thick gel, the Pico-96 requires approx. 70 mL of agarose solution and the Pico-192 requires approx. 140 mL of agarose solution.

•The movement distance is below 2.5 cm when electrophoresis of 96 samples with Pico-96.

•The movement distance is below 2.5 cm when electrophoresis of 96 samples with Pico-192. Below 2.5 cm with 192 samples.

Optional accessories (for addition or exchange)

Product name	Quantity
Gel preparation bath + UV transmission gel tray for Pico-96	1 pc each
Comb Set for Pico-96	4 pcs
Gel preparation bath + UV transmission gel tray for Pico-192	1 pc each
Comb Set for Pico-192	6 pcs

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Bead beater Ultrasonic homogenizer

Aluminum block Bath Mini-size Bath

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Hybridization Incubator Constant temperature Chambers

Centrifugal Concentrators Cold Trap

Freeze dryers

Submarine Electrophoresis apparatus water circulating hybridization

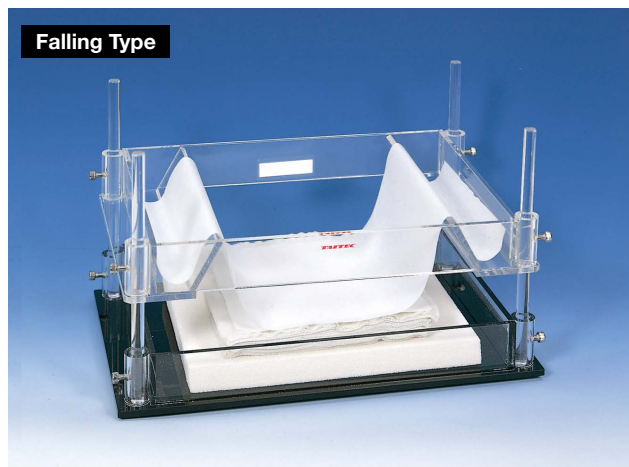
Constant-temperature water circulating system [Chilled]

Appendix

G Capillary Blotter C-set/D-set

The falling pad method increases the transfer efficiency as gravity promotes the transfer of the buffer in addition to water absorption by "Pad" and paper towel.

•Submarine Electrophoresis apparatus --> P.178



Model	G Capillary Blotter C-set	G Capillary Blotter D-set
Max. Gel size	150 x 220 mm	120 x 120 mm
Configuration	Pad bath PB-2426 (Base part 350 x 220 mm, Bath inner 290 x 200 x 40H mm)	
	Buffer bath (upper part) BF-2426	
	Pad P-1824 (180 x 240 mm)	Pad P-1515 (150 x 150 mm)

•If the new pads do not absorb enough water, soak them in the buffer for a while before use. Wash the pads with water and allow it to dry naturally after use (The water absorption decreases if it is put in the dryer, etc.)

Works with a smaller amount of buffer than the conventional one

The efficiency of the falling pad method and the effect of the water absorption pad reduces the buffer amount.

Features

- Smooth transfer of even DNA/RNA with a large molecular amount
- Resin water absorption pad can be washed in water and used for many times
- Works even with a small amount of buffer

Applications

- Transfer in Southern blotting
- Transfer in Northern blotting

The effective transfer in just 2 hours. Even DNA/RNA with a large molecular amount.

Conventionally, the membrane was placed on the gel, and the paper towel transferred the band to the membrane with the force of sucking up the buffer. In other words, it had defied gravity. This product was able to obtain the synergy effect and prompt transfer by adding gravity to the capillary force of the paper towel to buffer by placing the membrane under the gel. Smooth transfer of even DNA/RNA with a large molecular amount (See next page for the structure).

The Resin water absorption pad can be used for many times

The Resin water absorption pad is adopted to reduce the amount of paper towel used. It can be used for many times by washing with water and naturally drying after use.

The effect of the Falling pad method: Southern blot hybridization

Human genomic DNA was cleaved with restriction enzymes and fractionated by Agarose gel Electrophoresis, and then stained with ethidium bromide and confirmed with a UV transilluminator (Fig. 1).

Prepared two gels for comparison experiments. Subsequently performed the transfer using two gels. In order to compare between the falling method for 2 hours and the conventional method for overnight, the gels were stained again with ethidium bromide after the transfer was finished and verified remaining DNA in the gel (Conventional method: Fig. 2a, Falling pad method: Fig. 2b).

In falling pad method, no remaining DNA was observed. Also, hybridization was performed to confirm whether DNA was transferred to the membrane (A, B, C, D in Fig. 3). A: conventional method (10 x SSC buffer) and B to D : Falling pad method (using alkaline and 10/20 x SSC buffer in each). Verified the performance of the falling pad method for 2 hours was equivalent to that of the conventional method for overnight in each buffer.

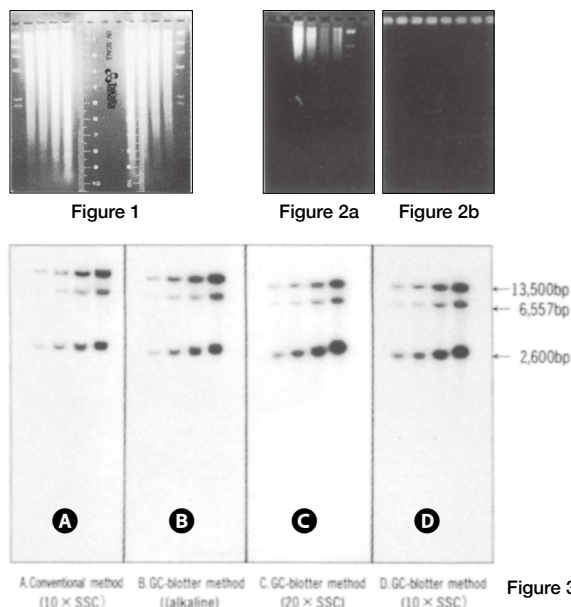


Figure 3

NEW

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Appendix

G Capillary Blotter Mini

For transfers with the conventional method. The Water absorption pad reduces the amount of paper towel used.

•Submarine Electrophoresis apparatus --> P.178

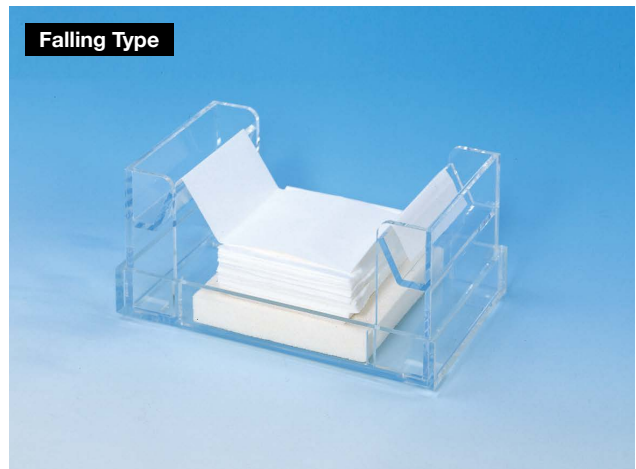
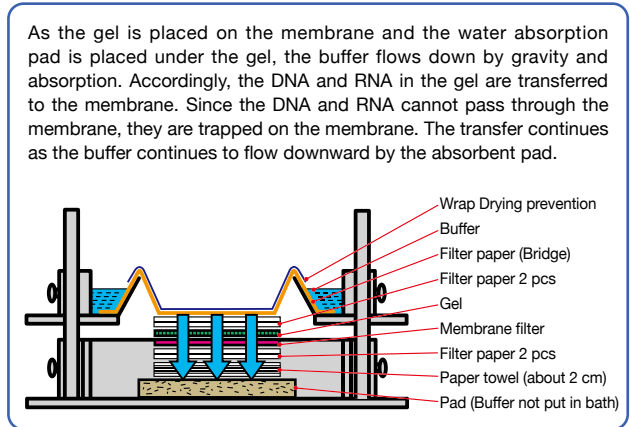
Features

- Smooth transfer of even DNA/RNA with a large molecular amount
- Resin water absorption pad can be washed in water and used for many times
- Small amount of buffer, Footprint is quite small

Applications

- Transfer in Southern blotting
- Transfer in Northern blotting

The structure of the G Capillary blotter



Falling Type

The performance is even equivalent to that of the G Capillary blotter

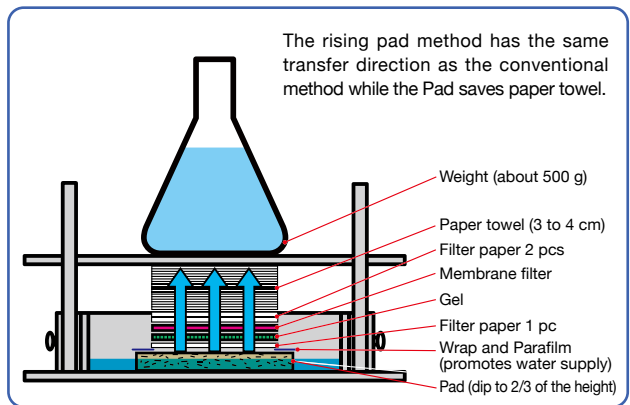
Footprint is quite small. Corresponds to the gel with up to 100 × 100 mm. The transfer efficiency is equivalent to that of the G Capillary blotter C-set/D-set.

Model	G Capillary Blotter Mini
Max. Gel size	100 × 100 mm
Configuration	Pad bath
	Buffer bath
	Pad P-1212 (120 × 120 mm)

Pad type blotter A-set/B-set

For transfers with the conventional method. The Water absorption pad reduces the amount of paper towel used.

The structure of the Pad type blotter



Rising Type

Model	Pad type blotter A-set	Pad type blotter B-set
Max. Gel size	150 × 220 mm	120 × 120 mm
Configuration	Pad bath PB-2426 (Buffer bath combined use) (Base part 350 × 220 mm, Bath inner 290 × 200 × 40H mm)	
	Pad P-1824 (180 × 240 mm)	Pad P-1515 (150 × 150 mm)

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- Bead beater homogenizer Ultrasonic homogenizer
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- Hybridization Incubator Constant-temperature Chambers
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- Appendix

