

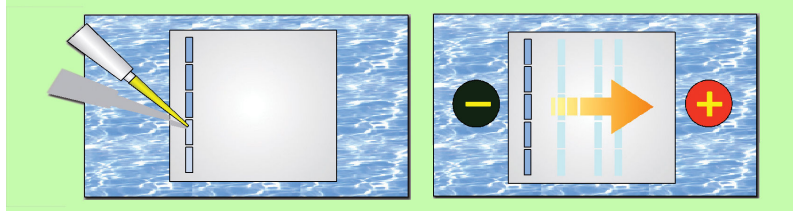
# Electrophoresis Systems for Nucleic Acids

## Submerge Series

- ATTO provides submarine type electrophoresis equipments as “Submerge series”. These have horizontal type chamber used for electrophoresis of agarose gel.

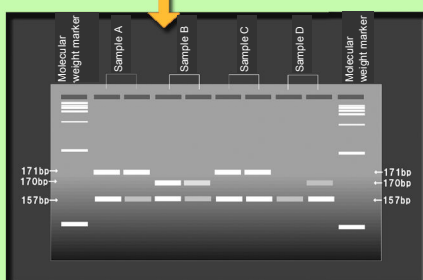
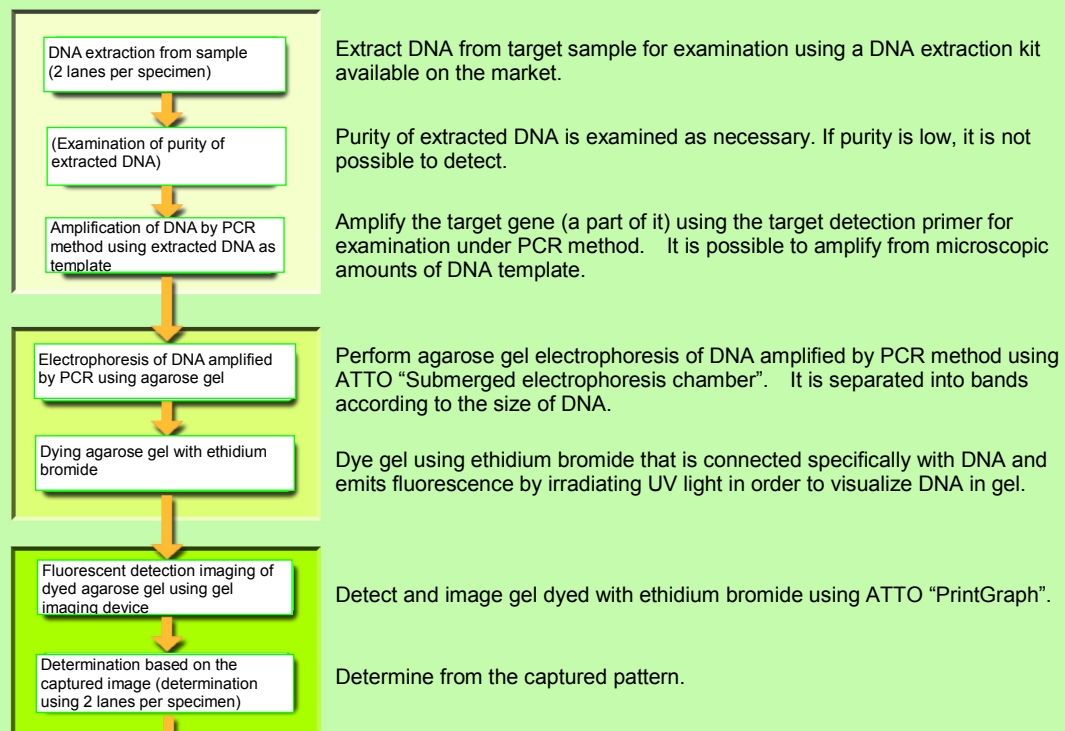
### Principle

When nucleic acid (DNA/RNA) is dissolved in buffer solution, etc. it has a negative charge. When this solution (sample) is added to agarose gel and electrophoresed in buffer solution for a regulated time, the level of migration shown is in accordance with the size of nucleic acid due to the molecular sieving effect of gel. When this is dyed with ethidium bromide, etc. and detected, the electrophoresis pattern of nucleic acid can be obtained. It is possible to obtain the size from this pattern (size marker is necessary) or to obtain information on gene type for individual recognition.



### Usage example, Gene Test

Gene test is used in wide range of fields including examination of bacteria and virus infection, examination of GMO (genetically modified organisms) or food allergens, determination of breed of agricultural products (plants), animals, fish, insects and bacteria and forensic medicine/anthropology as well as in the diagnosis of diseases including cancer. Generally, a method of DNA extraction ~ PCR method (gene amplification method) ~ Agarose gel electrophoresis ~ Gel imaging/analysis is used.







- Determination example of result Positive: Sample A, B, C, Negative: Sample D  
Determination is made according to the presence of the target gene for examination (band) based on whether a band of marker DNA is detected or not.

# Electrophoresis Systems for Nucleic Acids

## Submerge Series

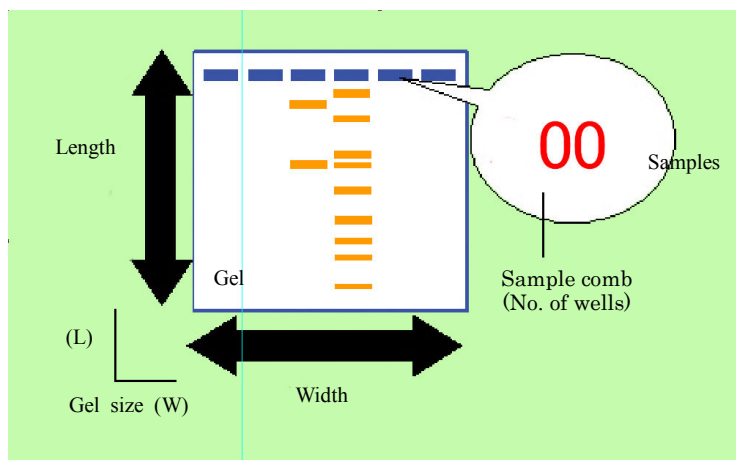
### ■ ATTO Submarine Electrophoresis System Lineup

Type	AE-6100	AE-6111	AE-6125	AE-1633
Gel size	80 mm (W) x 100 mm (L)	120 mm (W) x 160 mm (L)	150 mm (W) x 200 mm (L)	200 mm (W) x 150 mm (L)
Sample Comb	10 wells (well width: 3mm)	26/13 wells (double teeth comb) (well width: 3 and 6 mm)	32/16 wells (double teeth comb) (well width: 3 and 6 mm)	42/21 wells (double teeth comb) (well width: 3 and 6 mm)
Buffer	300 to 500 mL	700 to 1200 mL	1300 to 1800 mL	1600 to 1900 mL
Dimensions	190 (W) x 100 (D) x 80 mm (H) 0.5 kg	286 (W) x 150 (D) x 83 mm (H) 1.5 kg	350 (W) x 183 (D) x 100 mm (H) 1.8 kg	330 (W) x 233 (D) x 100 mm (H) 2.0 kg
				

### ● Selection standard for electrophoresis apparatus

Please select a submerged series electrophoresis system according to the sample, either “Gel size” or “Sample comb”.

E.g.: If the number of samples (specimens) is large, it is recommended to choose a spec. with a large width (W), and to choose a spec. with long gel (L) if the number of bands is large.



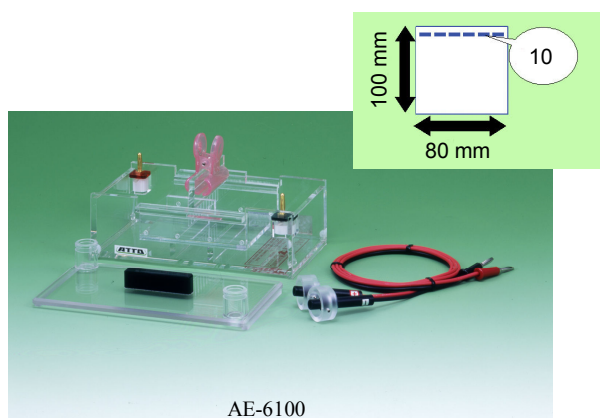
### Selection of Power Supply

Power supply	Name	AE-6100	AE-6111	AE-6125	AE-6133
AE-8155	myPower II 500	○	△	×	×
AE-8135	myPower II 300	○	○	△	△
AE-8450	powerStation 1000VC	○	○	○	○
AE-8750	powerStation 1000XP	○	○	○	○
AE-8800	ConstaPower 3000	○	○	△	△
AE-8300	CrossPower 150	○	△	×	×

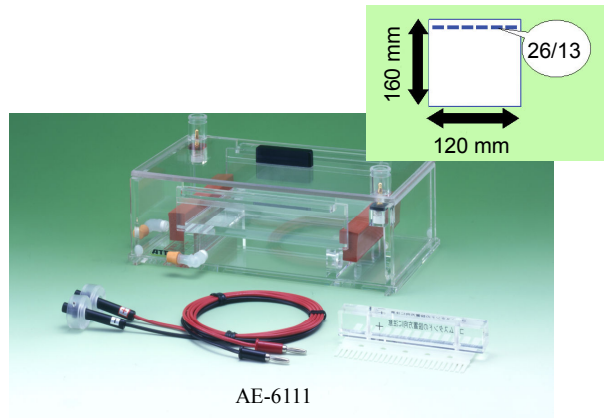
○: Recommended    △: OK (Performance may be limited according to the specification of the model)    ×: Not suitable

# Electrophoresis Systems for Nucleic Acids

## Small Type Submarine Electrophoresis System



AE-6100



AE-6111

Code No.	Type	Name
2322153	AE-6100	Agarose EP Kit, 1mm
2322110	AE-6100	Agarose EP Kit, 1.5 mm
2322178	AE-6111	Agarose EP Kit

### Features

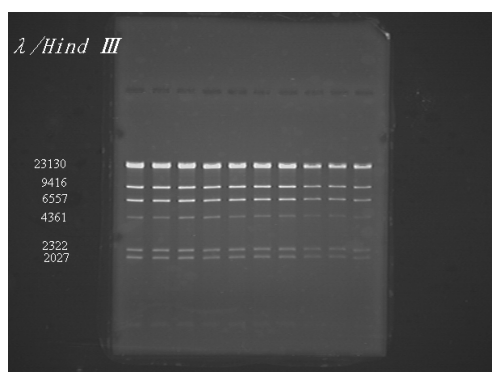
- Easy-to-use size, small/middle sized electrophoresis chamber
- UV light transmission gel rack
- Gel cavity (hole) (AE-6100) or groove (AE-6111) from which gel does not slip out is furnished.
- New shaped sample comb produces sharp band images, and No. of double blade type specimens/band width are selectable.

### Specifications

Name	AE-6111 Agarose EP Kit	AE-6100 Agarose EP Kit
Gel size	120 (W) x 160 (L) mm	80 (W) x 100 (L) mm
Gel thickness	Up to 8 mm	Up to 10 mm
Sample Comb	1 mm 26/13-well double teeth comb (Well width: 3 and 6 mm)	1 or 1.5 mm 10-well
Comb tooth length	12 mm	15 mm
Material	Acrylic plastic, except platinum for electrodes, polycarbonate for safety cover, polypropylene for combs, silicone rubber for dams and drain tube, neoprene rubber for buffer inlet and outlet stoppers	Acrylic plastic, except platinum electrode and polycarbonate lid
Buffer volume	700 - 1200 mL depending on gel thickness and use of buffer circulator	300 - 500 mL depending on gel thickness
Dimensions	286 (W) x 150 (D) x 83 (H) mm, 1.5 kg	190 (W) x 100 (D) x 80 (H) mm, 0.5 kg

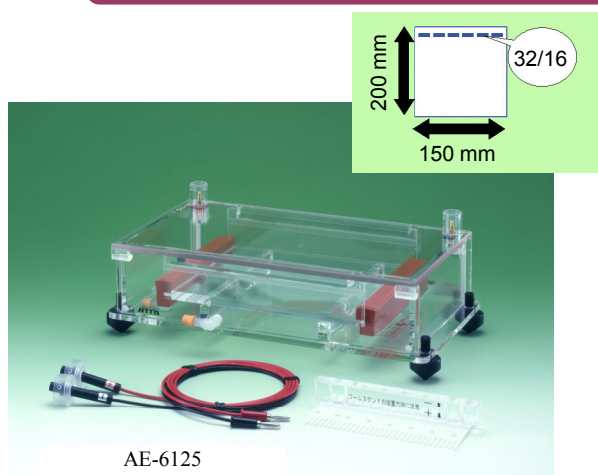
\*Please refer to the list at the end of the catalog for optional combs and comb holders

### Pattern Data

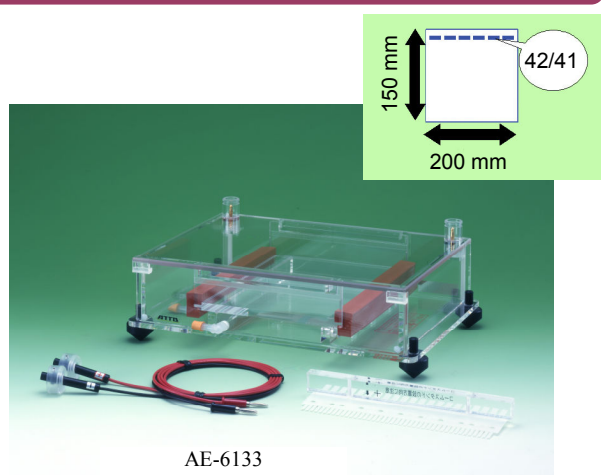


# Electrophoresis Systems for Nucleic Acids

## Wide Type Submarine Electrophoresis System



AE-6125

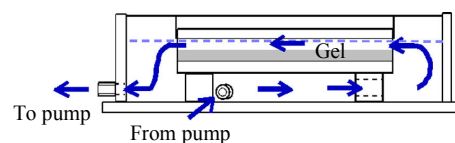
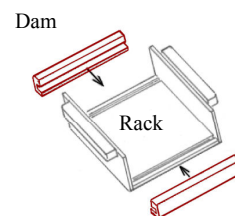
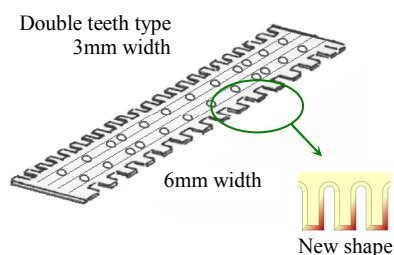


AE-6133

Code No.	Type	Name
2322170	AE-6125	Agarose EP Kit
2322173	AE-6133	Agarose EP Kit

### Features

- The image of each band is shown sharply by using new shaped sample comb.
- No. of specimens and band width can be selected freely by using a double teeth type new sample comb. Gaps of 8 lane pipette is supported.
- Fabrication of gel using a new dam makes the preparatory operation simple.  
Presence of gel retaining groove can be selected.
- UV light transmission gel rack is used.
- Nozzle for buffer solution circulation is furnished on the main body of electrophoresis tank as standard. Overall gel is circulated with no irregularity as if it is wrapped, without affecting the electrophoresis pattern. It is used for controlling temperature.
- Gel can be fabricated and electrophoresis pattern can be created neatly with a foot or a level(standard accessory) for horizontal adjustment.



### Specifications

Name	AE-6125 Agarose EP Kit	AE-6133 Agarose EP Kit
Gel size	150 (W) x 200 (L) mm	200 (W) x 150 (L) mm
Gel thickness	Up to 8 mm	Up to 8 mm
Sample Comb	1 mm 32/16-well double tooth comb (Well width: 3 and 6 mm)	1 mm 42/21-well double tooth comb (Well width: 3 and 6 mm)
Comb tooth length	12 mm	12 mm
Material	Acrylic plastic, except platinum for electrodes, polycarbonate for safety cover, Delrin for adjustable feet, polypropylene for combs, silicone rubber for dams and drain tube, neoprene rubber for buffer inlet and outlet stoppers	Acrylic plastic, except platinum for electrodes, polycarbonate for safety cover, Delrin for adjustable feet, polypropylene for combs, silicone rubber for dams and drain tube, neoprene rubber for buffer inlet and outlet stoppers
Buffer volume	1300 - 1800 mL depending on gel thickness and use of buffer circulator	1600 - 1900 mL depending on gel thickness and use of buffer circulator
Dimensions	350 (W) x 183 (D) x 100 (H) mm, 1.8 kg	330 (W) x 233 (D) x 100 (H) mm, 2.0 kg