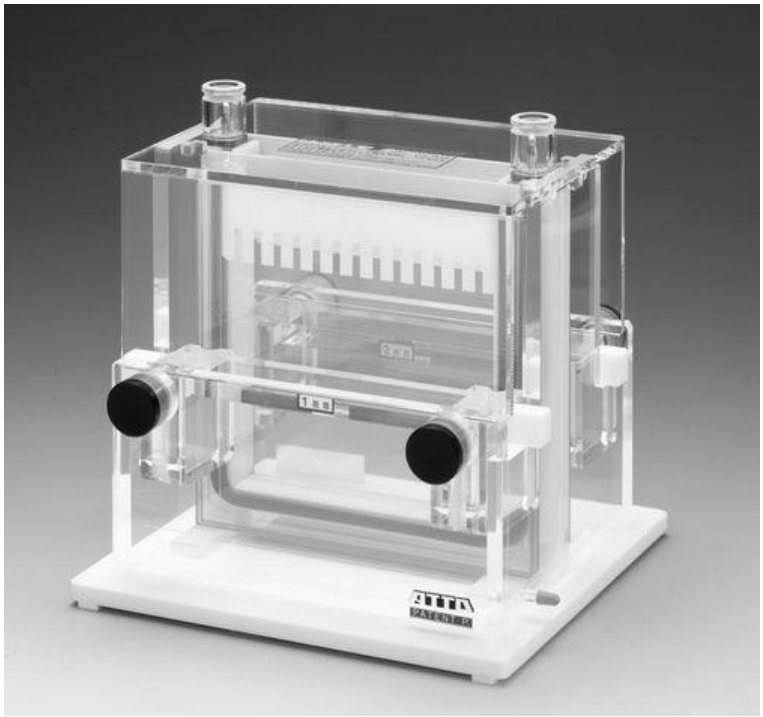
AE-6220 Dual Slab Electrophoresis Chamber



Operation Manual

June 2006
Version 2.0
ATTO Corporation

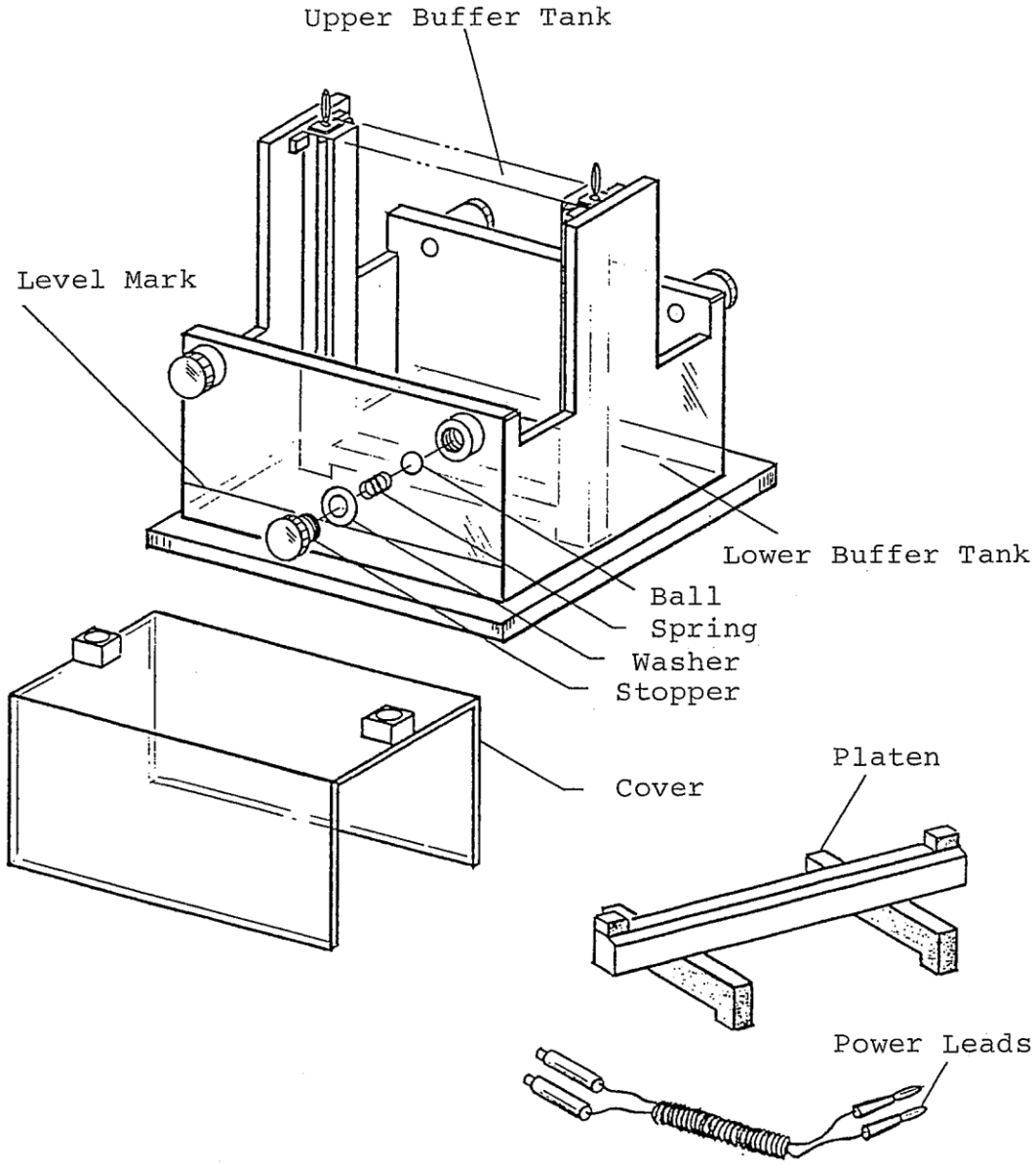
Safety Warning

- Prior to using this apparatus, operating and/or handling instructions of this apparatus and apparatus, reagents, and/or chemicals that are used with this apparatus must have been understood.
- Use of this apparatus includes application of electricity, which may be fatal or injurious to human. Care should be taken against electricity when applying it to this apparatus.
- Use of this apparatus includes handling of reagents and/or chemicals that may be chemically hazardous or carcinogenic. Care should be taken for protection from hazardous or carcinogenic reagents and/or chemicals when handling them.
- Environments of high temperature, high humidity, dust, corrosive has, excessive source-voltage fluctuation excessive electrical noise, and physical shock or vibration should be avoided.
- This apparatus and apparatus that are used with this apparatus should be installed on a flat, level, solid and stable surface.
- Prior to operating this apparatus, the apparatus and its components and/or parts should be thoroughly clean and dry. Caution should be exercised against water or moisture which may cause electrical hazards.

1. SPECIFICATIONS

Application: Vertical electrophoresis of a polyacrylamide slab gel, which is prepared with Atto AE-6210 gel casting apparatus.
Gel accommodation: 2 gels
Plate size: 160 x 160 mm
Buffer volume: 480 ml + 450 ml
Materials: Acrylic plastic and stainless steel, except platinum for electrodes and silicone rubber for gasket.
Dimensions: 21.1 x 19.6 x 20.5 cm (W x D x H)
Weight: 2.3 kg.

2. PART NAMES



3. SET COMPOSITION

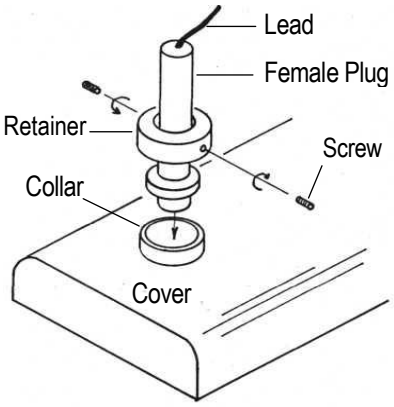
Item	Quantity
Dual Slab Chamber Unit	1
Buffer Seal Gasket	2
Compression Applicator	4
Cover	1
Platen	2
Power Leads (pair)	1

4. PREPARATION

Fix Power Input Leads to Safety Cover.

⚠ CAUTION

Prior to use, power input leads must be fixed to safety cover, so that electricity cannot be applied unless electrophoresis chamber is covered by safety cover, for safety against electrical hazards.



Note:
The electrophoresis chamber has 1 pair of electrode terminals, red-colored anode and black-colored cathode, where 1 pair of power input leads will be respectively connected. The safety cover has 1 pair of cylindrical opening, where the power input leads will be fixed respectively. One of the power input leads is red and its female plug is marked " + ", and the another is black and its female plug is marked " – ". The female plugs of the power input leads have retainers attached on them, and each of the retainers has 2 screws.

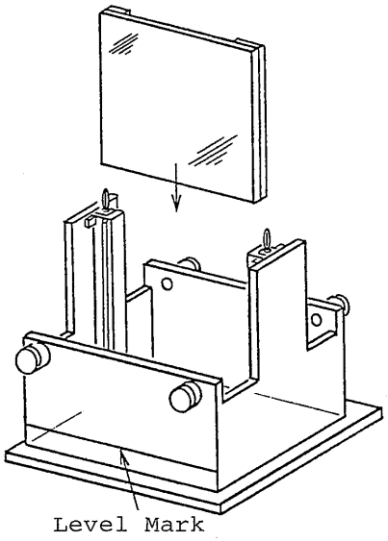
4.1 Fix Input Leads
Temporarily place the safety cover on the electrophoresis chamber, while matching the openings of the cover to the electrode terminals of the chamber. Identify one of the openings to correspond to the red anode terminal and another opening to correspond to the black cathode terminal. Prepare the power input leads. Once loosen the screws in the retainers of the leads, with the Allen key supplied. Insert the female plugs of the leads into the corresponding openings of the cover respectively, taking care to match the polarities of the plugs and openings. Fit the retainers of the leads over the collars of the openings. Tighten the screws evenly with the Allen key. Ensure that now the plugs can move in the openings with a range but they cannot be removed from the openings. Note that the plugs are intentionally loose fit so that the female plugs can be smoothly connected to and disconnected from the male electrode terminals of the chamber.

4.2 To connect the input leads
Gently push down each female plug of the leads, with fingers, until it stops.

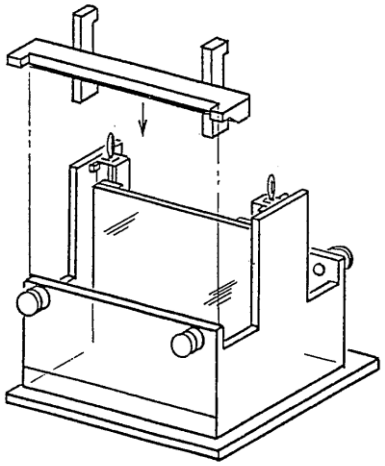
4.3 To disconnect the input leads
While holding the safety cover with a hand, gently pull up each female plug with fingers.

Caution:
Do not disconnect the female plugs forcibly by pulling up the safety cover, which may damage the plugs and/or the electrode terminals.

5. OPERATION

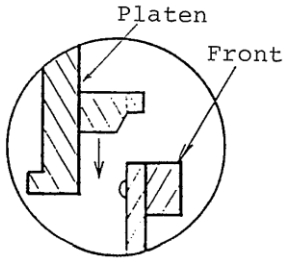


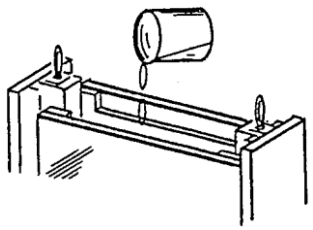
5.1
Introduce about 450 ml of buffer into the lower buffer tank up to the level mark. Slowly lower a gel sandwich with its notched glass plate facing the upper buffer tank into the lower buffer tank, while slightly slanting it to avoid trapping air bubbles at the bottom of the gel.



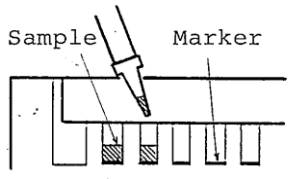
5.2
Press down the platen between the gel sandwich and the front panel of the lower buffer tank, until it stops.

5.3
Set the second gel sandwich in the electrophoresis chamber as same as the first one.

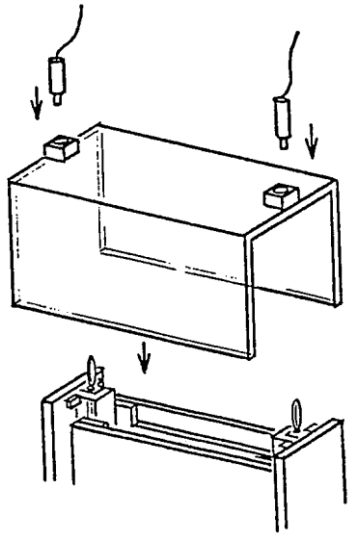




5.4
Gently introduce about 480 ml of buffer into the upper buffer tank.



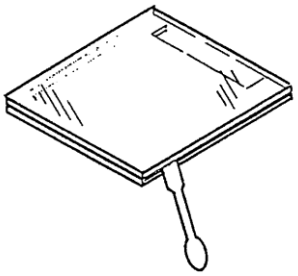
5.5
Apply marker stain, if used, into the sample wells, and apply samples into the wells.



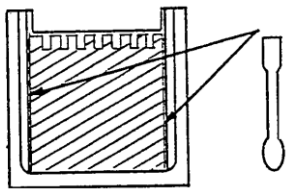
5.6
Place the cover over the chamber. Ensure that the power supply to be used is turned off, and connect the power leads.

5.7
Start electrophoresis. Current or voltage and run time are decided according to samples and conditions. In case of serum protein, usually 60 mA constant current is applied for about 90 minutes. During electrophoresis, do not touch the apparatus and the electrical connections.

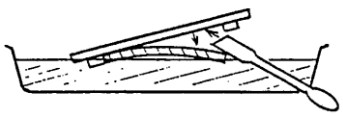
5.8
After electrophoresis, ensure that the power supply is turned off, disconnect the power leads, and remove the lid.



5.9
Gently take out the gel sandwich from the chamber. Peel off the plain glass plate, by gently prizing the glass plates with a spatula.



5.10
Cut off the side-edges of the gel along the inner edges of the side-spacers of the notched glass plate with the spatula.



5.11
While holding the glass plate with the gel over staining solution, gradually peel off the gel with the spatula, to immerse the gel into the solution. It usually takes 2 to 4 hours to stain the gel. It usually takes 3 to 12 hours to destain the gel.

6. MAINTENANCE

After usage, clean the chamber and its parts with water, and dry them at room temperature. Avoid organic solvents and high temperature which may damage them. Long continued compression on the buffer seal gasket decreases the seal effect of the gasket. Keep the gasket from compression when not used.

7. SPARE PARTS

Code No.	Name
2392085	AE-6220 Dual Slab Chamber
2392049	Platen, RS
2392051	Compression Applicator, RS (Set of 2392052 + 2392053 + 2392054 + 2392055)
2392052	Stopper
2392053	Spring
2392054	Ball
2392055	Washer
2398019	Buffer Seal Gasket (1 m)
2392341	Power Leads (Pair)
2392088	Electrode assy, AE-6220
2392086	Cover, AE-6220
2392096	Base Chamber, AE-6220
2392087	Dual Slab Chamber Unit (incl. 2 x 2398019 + 4 x 2392051)

Warranty

Atto Corporation warrants all its products subject to the terms and conditions set forth below.

1. This warranty covers all new products that are sold by Atto Corporation (hereinafter called Atto).

2. Expendable items are not covered by this agreement.

3. Claims under this warranty are limited to defects in material and workmanship of the products.

4. Malfunction and/or damage due to neglect, abuse, operation or repair contrary to specifications and/or instructions presented by Atto are not warranted.

5. Atto shall not be liable to consequential damage, labor, loss or expense directly or indirectly arising from us of the products.

6. Damage due to transit is not covered by this warranty.

7. The warranty period is one (1) calendar year from a date when the products are shipped from Atto to an original purchaser.

8. This warranty is not applied to any defect that is reported to Atto later than one (1) calendar month from a date of warranty termination.

9. Atto Shall supply parts to replace faulty parts of defective products under this warranty, free of charge.

10. Atto shall repair defective products under this warranty which cannot be repaired at field, free of charge.

11. Atto shall replace defective products under this warranty which cannot be repaired, free of charge.

12. Freight charges for return and replacement shipments under this warranty are shared by Atto and a purchaser, that is one way by either party and another way by another party.

13. Warranty period of repaired products and replacement products or parts is three (3) calendar months from a date when the said products or parts are shipped from Atto, or a remaining term of an original warranty period of the defective products, whichever lasts longer.

14. Return of the products for credit or refund is not accepted unless otherwise agreed in writing by Atto.

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