

## CLAIMS

1. A biomolecule analyzer, comprising:
  - a transfer membrane;
  - a conveying unit that conveys the transfer membrane along a predetermined conveying direction;
  - a separation unit that is installed so as to abut the transfer membrane, separates analyte by way of electrophoresis, and dispenses the analyte that has been separated to the transfer membrane;
  - an electrode that is disposed at a position which is separated by a certain distance in the conveying direction from a contact location between the separation unit and the transfer membrane and is located below the transfer membrane; and
  - an insulating electrode cover that is disposed at an upper part of the electrode to abut the electrode or be separated from the electrode,
    - wherein one end part of the electrode cover is at a lower part of an end part of the contact location on a side of the electrode, and
    - wherein the electrode cover slopes relative to the conveying direction, and the one end part of the electrode cover is located at a position lower than the other end part of the electrode cover.
2. A biomolecule analyzer, comprising:
  - a transfer membrane;
  - a conveying unit that conveys the transfer membrane along a predetermined conveying direction;
  - a separation unit that is installed so as to abut the transfer membrane, separates analyte by way of electrophoresis, and dispenses the analyte that has been separated to the transfer membrane;
  - an electrode that is disposed at a position which is separated by a certain distance in the conveying direction from a contact location between the separation unit and the transfer membrane and is located below the transfer membrane;
  - an insulating electrode cover that is disposed at an upper part of the electrode to abut the electrode or be separated from the electrode; and
  - a buffer tank in which the electrode is disposed,
    - wherein the electrode cover is curved to a side of the electrode at a lower part of an end part of the contact location on a side of the electrode, so that one end part of the electrode cover is positioned at a lower part of the electrode,
    - wherein a slit is formed between the one end part of the electrode cover and a bottom face of the buffer tank, and
    - wherein the electrode cover slopes relative to the conveying direction, and the one end part of the electrode cover is located at a position lower than the other end part of the electrode cover.
3. A biomolecule analyzer, comprising:
  - a transfer membrane;
  - a conveying unit that conveys the transfer membrane along a predetermined conveying direction;
  - a separation unit that is installed so as to abut the transfer membrane, separates analyte by way of electrophoresis, and dispenses the analyte that has been separated to the transfer membrane;
  - an electrode that is disposed at a position which is separated by a certain distance in the conveying direction from a contact location between the separation unit and the transfer membrane and is located below the transfer membrane; and
  - an insulating electrode cover that is disposed at an upper part of the electrode to abut the electrode or be separated from the electrode; and
  - a first insulating member that is disposed at a lower part of an end part of the contact location on a side of the electrode,
    - wherein one end part of the electrode cover is extended until an upper part of the first insulating member,
    - wherein a slit is formed between the electrode cover and the first insulating member, and

wherein the electrode cover slopes relative to the conveying direction, and the one end part of the electrode cover is located at a position lower than the other end part of the electrode cover.

4. The biomolecule analyzer according to claim 1, further comprising a buffer tank in which the electrode is disposed,

wherein a slit is formed between the one end part of the electrode cover and a bottom face of the buffer tank.

5. The biomolecule analyzer according to any one of claims 1 to 4, further comprising, at a lower part of an end part of the contact location on an opposite side to the side of the electrode, a second insulating member.

6. The biomolecule analyzer according to any one of claims 1 to 5, wherein a water contact angle to a surface of the electrode cover is no more than 90°.

7. A biomolecule analyzer, comprising:

a buffer solution tank;

a transfer membrane that is disposed inside the buffer solution tank;

a conveying unit that conveys the transfer membrane along a predetermined conveying direction;

a separation unit that perpendicularly abuts the transfer membrane and is installed vertically, separates analyte by way of electrophoresis, and dispenses the analyte that has been separated to the transfer membrane;

an electrode that is disposed at a position separated by a certain distance in the conveying direction from a contact location between the separation unit and the transfer membrane; and

an insulating electrode cover that is disposed between the electrode and the contact location, wherein a first concave part is provided at a position on a bottom part of the buffer solution tank that is interposed by the electrode and the contact location, and

wherein the electrode cover hangs down towards the first concave part.

8. The biomolecule analyzer according to claim 7, wherein a second concave part is provided to the buffer solution tank at a position separated by a certain distance in the conveying direction from the first concave part, and

wherein the electrode is disposed at the second concave part.

9. The biomolecule analyzer according to claim 7 or 8, wherein the electrode cover includes a convex part that hangs down towards the first concave part.

10. The biomolecule analyzer according to claim 9,

wherein the convex part of the electrode cover consists of a plurality of convex parts,

wherein the first concave part of the buffer solution tank consists of a plurality of concave parts, and

wherein the plurality of convex parts is disposed so as to individually hang down to the plurality of concave parts.

11. The biomolecule analyzer according to claim 7 or 8, wherein an end part of the electrode cover is movably inserted in the first concave part.

12. The biomolecule analyzer according to claim 9 or 10, wherein the convex part of the electrode cover is movably inserted in the first concave part.

13. The biomolecule analyzer according to any one of claims 7 to 12, wherein the first concave part is provided at a lower part of an end part of the contact location on a side of the electrode.

14. The biomolecule analyzer according to any one of claims 7 to 13, wherein a face of the electrode cover that opposes the buffer solution tank slopes relative to the conveying direction, and wherein an end part of the face opposing the buffer solution tank that is farther from the contact location is farther from the electrode in a direction orthogonal to an in-plane direction of the transfer membrane, than an end part of the electrode cover that is closer to the contact location.

15. The biomolecule analyzer according to any one of claims 7 to 14, wherein the electrode cover has a side wall that widens towards a bottom face of the buffer solution tank along two sides that are parallel to the conveying direction.
16. The biomolecule analyzer according to any one of claims 7 to 15, wherein a water contact angle of a surface of the electrode cover is no more than  $90^{\circ}$ .