Amendments to the claims:

The following listing of claims will replace all previous versions and listings of claims in the application.

Listing of Claims

1. (Currently Amended) A cassette for use in ~~an~~ non-capillary electrophoresis apparatus, the cassette having an upper portion and a lower portion, the cassette adapted to contain a substrate for receiving samples on which an electrophoresis analysis is to be conducted, the cassette comprising:

at least two liquid reservoirs formed in the cassette spaced apart from one another, each reservoir being adapted to receive a liquid buffer;

a substrate support located between the liquid reservoirs and adapted to support an electrophoresis substrate;

at least one port in fluid communication with at least one of the reservoirs and extending to an external surface of the cassette;

at least one electrode located within each liquid reservoir; and

at least one electrical contact located on an external surface of the cassette and electrically connected to the at least one electrode so as to permit current to pass between the electrical contact and the electrode;

wherein the upper portion includes a cover and the lower portion includes a body, the cover being attached to the body with a seal so as to form a substantially liquid tight seal between the cover and the body of the cassette to prevent leakage of buffer during use, the cover being spaced apart from the body for receipt of a substrate which contains samples to be tested with the substrate being located between the reservoirs, the reservoirs also being sealed so that buffer passes from between the reservoirs through the substrate.

Cancel claim 2.

3. (Currently Amended) The cassette according to claim 1, wherein there are four liquid reservoirs formed in the cassette; each reservoir being substantially orthogonal to an

adjacent reservoir, wherein there are four electrodes and four contacts, one electrode in each reservoir, each electrode being ~~substantially orthogonal to the adjacent electrodes and~~ electrically connected to a separate electrical contact located on an external surface; and wherein there are at least two ports for supplying and removing liquid and at least one port for venting gas, each liquid port providing fluid communication between an associated reservoir or an associated pair of non-adjacent reservoirs and an external surface of the cassette, the vent port(s) providing fluid communication between at least one reservoir and an external surface of the cassette for passage of gas.

Cancel claim 4.

5. (Currently Amended) The cassette according to claim [[4]] 1, wherein the upper portion of the cassette is spaced apart from the substrate support so as to define a substrate reservoir between the liquid reservoirs, which substrate reservoir is adapted to receive fluid; and wherein there is an additional port formed in the upper portion of the cassette which permits passage of fluid into and out of the substrate reservoir.

6. (Currently Amended) The cassette according to claim 5, wherein the additional port formed in the upper portion of the cassette permits flow of gas; and wherein there is a port formed in the substrate support which provides fluid communication between the substrate reservoir and an external surface of the cassette for passage of liquid out of the substrate reservoir.

Cancel claims 7-14.

15. (Original) The cassette according to claim 1, further comprising a heat sink attached to the substrate support for providing heat transfer from the substrate support.

Cancel claims 16-18.

19. (Currently Amended) The cassette according to claim 1, wherein the substrate support is ~~removably~~ attached to the ~~body~~ lower portion of the cassette such that it is removable and reattachable.

Cancel claims 20-41.

42. (Currently Amended) An electrophoresis substrate assembly comprising a substrate for receiving samples on which an electrophoresis analysis is to be performed, and an identification device associated with the substrate for providing information pertaining to an electrophoresis process.

43. (Currently Amended) An electrophoresis substrate having at least four edges and at least ~~one~~ four cutouts formed completely through the thickness of the substrate at the corners of the substrate so as to define a cross-shape.

Cancel Claims 44-45.

46. (New) An electrophoresis substrate assembly according to claim 42 wherein identification device is a part of the substrate and provides information regarding the substrate which information is used for establishing parameters to be used in the electrophoresis analysis.

47. (New) An electrophoresis substrate assembly according to claim 46 wherein identification device is a microchip directly on the substrate.

48. (New) An electrophoresis substrate assembly according to claim 42 wherein identification device is attached to a substrate support and provides information regarding the substrate which information is used for establishing parameters to be used in the electrophoresis analysis.

49. (New) An electrophoresis substrate assembly according to claim 42 wherein identification device is a part of a frame that surrounds the substrate, identification device providing information related to the substrate which information is used for establishing parameters to be used in the electrophoresis analysis.

50. (New) An electrophoresis substrate assembly according to claim 49 wherein identification device is a microchip directly on the frame.

51. (New) The cassette according to claim 1, wherein the substrate support has a width of at least about 8 cm and a length of at least about 8 cm.

52. (New) The cassette according to claim 1, wherein the reservoirs are sealed from each other such that flow of buffer can pass only through the substrate.