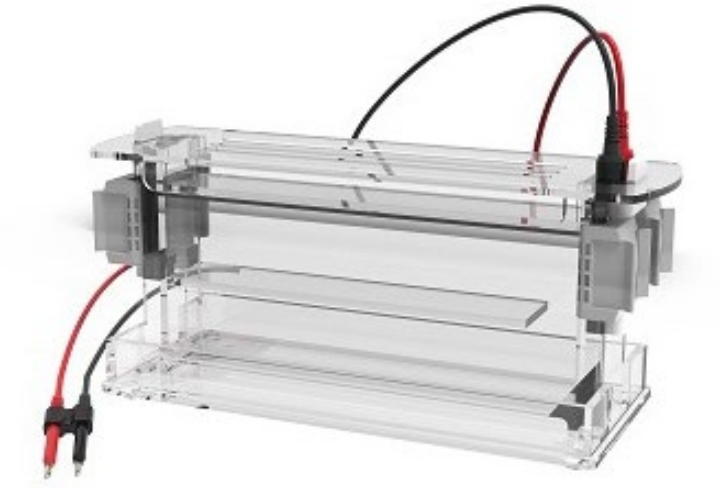
high-throughput vertical electrophoresis cell for ssr

High-throughput vertical electrophoresis cell is an electrophoresis system designed for large-scale DNA analysis, suitable for non-denaturing polyacrylamide gel, nPAGE electrophoresis experiments.

High-throughput vertical electrophoresis cells play an important role in short tandem repeat sequences, SSR analysis, population genetic studies, molecular marker-assisted breeding and other fields. This high throughput vertical electrophoresis cell can run two large gel plates at the same time, supporting the simultaneous separation of up to 200 samples, which improves the experimental efficiency for high-density and high-throughput electrophoretic analysis.



Features

1. Designed for non-denaturing gels: suitable for a wide range of non-denaturing polyacrylamide gel electrophoresis experiments, with clear bands and high resolution.
2. Temperature control interface: the electrophoresis cell is equipped with a circulating water interface, which can be connected to a cooling system to maintain a constant temperature, reduce the interference of thermal effects on the migration rate, and enhance the separation stability.
3. Integrated glass structure: glass plate and side bar integrated design, good sealing, glue loading is not easy to leak, improve the efficiency of glue making.

4. Large-capacity sample processing: standard double-plate structure, can electrophoresis 200 samples at the same time, suitable for high-throughput screening, detection and analysis.
5. Three independent platinum electrode systems: each gel plate is equipped with independent electrodes, uniform electric field, stable conduction, and guaranteed electrophoresis repeatability.
6. Compatible with multi-channel pipettes: Optional 68-tooth or 102-tooth high-precision sampling comb, designed for multi-channel pipettes, improving the speed and consistency of sampling.

Advantages

1. high throughput design: suitable for research or quality control processes that require a large number of samples to be processed at once, significantly reducing the number of experiments and time.
2. Stable thermal control: It can be connected to the cooling circulatory system to effectively inhibit gel denaturation caused by Joule heat during electrophoresis and ensure the consistency of results.
3. Convenient operation and precise positioning: the integrated structure simplifies the process of gel making and assembly, and avoids the leakage of gel that may be brought by the traditional pad structure.
4. high sample reproducibility: three sets of electrodes ensure that the electric field of each gel plate is independent and consistent, reducing the problem of skewed strips or uneven migration speed.
5. high sampling efficiency: multi-tooth sampling comb and multi-channel pipette with the use of significantly improve the efficiency of sampling, reduce human error.

Working Principle

High Throughput Vertical Electrophoresis cell is based on the classical principle of electrophoresis: charged molecules such as DNA migrate along the gel medium under the action of an applied electric field, and molecules of different lengths or conformations are separated due to different resistance. Non-denaturing polyacrylamide gels are used as a separation medium to preserve the natural conformation of DNA and are suitable for population polymorphism detection such as SSR labeling.

The upper and lower electrodes of the electrophoresis cell conduct the electric field uniformly to each gel plate through three sets of high-purity platinum wires, ensuring no interference between samples under double-plate operation. The external cooling circulator is used to keep the temperature of the buffer constant, preventing heat buildup that can cause electrophoretic migration distortion or sample denaturation.

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Model	**EV30A**	**EV30B**	**EV30C**
Gel size	300x85mm	300x130mm	300x190mm
Gel thickness	1.0mm		
Sample combs	68 (optional) and 102 teeth, both suitable for loading with multi-channel pipettes		