uD10

Gradient Diluter

Product Description

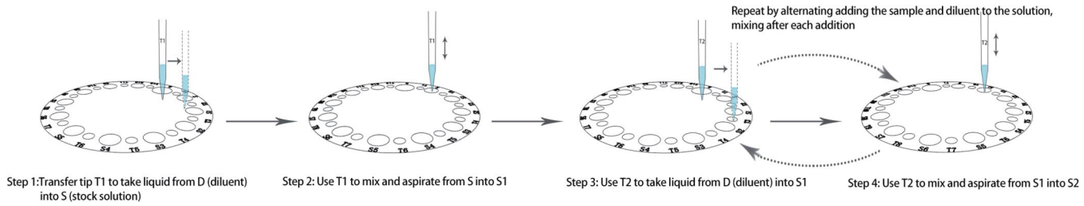
Ultrassay uD10 Gradient Diluters are a laboratory tool used to create precise dilutions of a solution. It works by combining two solutions of different concentrations to create a gradient of concentrations which is commonly used to study the effects of drugs or other chemicals on cells or tissues, to create standard curves for quantitative assays, and to perform experiments that require precise control over concentration gradients.

uD10 Gradient Diluters are versatile tools that can be used in a wide range of applications in the life sciences and drug research.

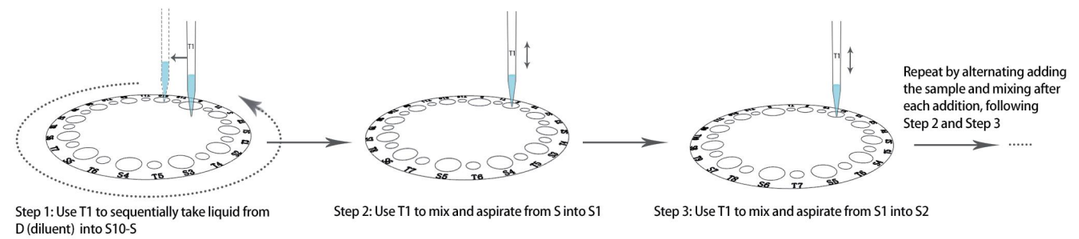
Product Feature

- Fast & Accurate Dilution: uD10 Gradient Diluters allow for a fast and efficient operation within 10 minutes for diluting 10 gradients which can increase the throughput and efficiency. The accuracy of the dilution process is ensured by the automatic liquid uptake position adjustment technique.
- No-wash design: uD10 Gradient Diluters adopt a turntable design and is equipped with disposable pipette tips for non-contact liquid handling, leaving no sample residue and requiring no cleaning.
- Flexibility: uD10 Gradient Diluters feature a simple and an user-friendly software for easily operation. Connect with external tablet/PC via wireless, enabling remote operation of instruments placed in a bio-safety cabinet.
- Wide Dilution Range: uD10 Gradient Diluters offer a wide dilution ratio range of up to 25,000 between stock and S1, allowing for a variety of applications.
- Data Management: The historical record function simplifies data management and analysis, allowing the user to view and export set parameters and information of each gradient concentration to USB disk.
- Safe and Reliable Operation: The EP tube cover anti-rebound function prevents spills and contamination during the dilution process.
- Time and Cost Savings: uD10 Gradient Diluters can save time and reduce costs compared to manual dilution methods, particularly when creating complex gradients.

Standard Working Mode



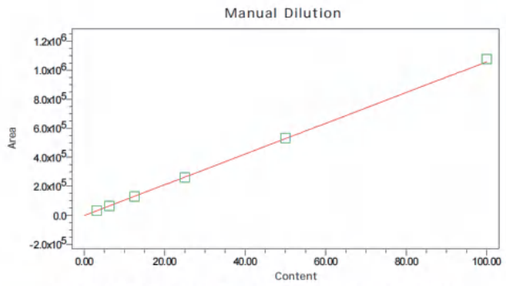
Quick Working Mode



Applications

- In microbiology, uD10 Gradient Diluters are used to create antibiotic gradient plates, which can be used to determine the minimum inhibitory concentration (MIC) of an antibiotic against a particular microorganism. This information is important for selecting the most effective antibiotic for treating an infection.
- In molecular biology, uD10 Gradient Diluters are used to create gradient PCR reactions, which can be used to optimize the annealing temperature for a particular set of primers.
- In pharmacology, uD10 Gradient Diluters are used to create dose-response curves, which can be used to determine the potency of a drug against a particular biological target.
- In biochemistry, uD10 Gradient Diluters are used to create gradients of different biochemical compounds, such as the preparation of standard solution of Liquid Chromatography application.

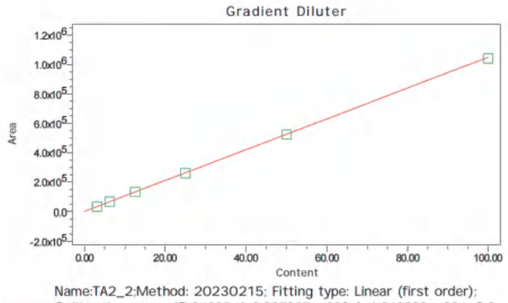
Performance



Name:TA2_2;Method: 20230215; Fitting type: Linear (first order); Calibration curve ID 24614; A -1.358014e+003; b 1.059482e+004; C 0.000000e+000; D 0.000000e+000; R^2 0.999761

Peak: TA2_2

	Name	Level	Xvalue	Response	Result	% SD	手工点
1	TA2_2		3.125000	31951.834156	3.143976	0.607	否
2	TA2_2		6.250000	64580.283337	6.223637	-0.422	否
3	TA2_2		12.500000	129293.428548	12.331638	-1.347	否
4	TA2_2		25.000000	260277.169063	24.694639	-1.221	否
5	TA2_2		50.000000	531538.322321	50.297834	0.596	否
6	TA2_2		100.000000	1077059.281301	101.787252	1.787	否



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Peak: TA2_2

	Name	Level	Xvalue	Response	Result	% SD	手工点	忽略
1	TA2_2		3.125000	33413.529667	3.095683	-0.938	否	否
2	TA2_2		6.250000	67495.494576	6.344376	1.510	否	否
3	TA2_2		12.500000	133592.364955	12.644730	1.158	否	否
4	TA2_2		25.000000	262010.641767	24.885561	-0.458	否	否
5	TA2_2		50.000000	523917.871392	49.850560	-0.299	否	否
6	TA2_2		100.000000	1039826.144078	99.026941	-0.973	否	否

Using manual dilution and Gradient Diluter to do the serial dilution of teicoplanin in a top hospital. The diluted samples were tested on the Liquid Chromatography. The figure A shown the result of manual dilution, and figure B shown the result of Gradient Diluter.

Technical Specification

Model	uD10S	uD10
Sample Capacity	10	9
Volume	20~200μL	10~1000μL
Resolution	0.01μL	0.05μL
Accuracy	200μL (Accuracy±1.5%, CV≤1%) 20μL (Accuracy±4%, CV≤2%)	1000μL (Accuracy±1%, CV≤0.5%) 100μL (Accuracy±2%, CV≤1%)
Communication Interface	Automatic calculation based on the target concentration in Culture media	Automatic
Communication Distance	Bluetooth	
Power Consumption	5m	
Power Supply	100W	
Analysis Software	AC 110~240V, 50/60Hz	
Weight/Dimension	uDiluter-II	
Resolution	4KGS, 238mm*154mm*344mm	

Accurate, you can trust!

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