

StockOptions™ AMPD buffer kit is a preformulated, sterile filtered set of titrated buffer stocks. The StockOptions buffer stock reagents are supplied as 1.0 M stock solutions in 10 milliliter volumes. Each StockOptions AMPD buffer reagent is carefully titrated using Hydrochloric acid. StockOptions AMPD is comprised of 20 unique reagents covering the pH range of 7.8 to 9.7 in 0.1 pH unit increments.

Suggested Use

StockOptions AMPD is designed to help researchers improve the speed, accuracy, precision, and quality of the formulation of crystallization screen solutions and crystallization optimization solutions. Researchers can use the individual StockOptions reagents to conveniently formulate custom screen solutions or standard screen solutions from Hampton Research kits such as Slice pH™. StockOptions AMPD reagents can also be used to create solutions for the refinement and optimization of preliminary crystallization conditions. Finally, StockOptions AMPD reagents can be used to create accurate, precise, reproducible, high quality solutions for the production of single crystals. Utilizing the reagents in the StockOptions AMPD buffer kit it is possible to formulate and screen 20 unique pH levels.

During crystallization experiments the AMPD buffer system can be utilized at a 0.1 M final concentration during the screening, optimization, and production of biological macromolecular crystals. One can dilute the StockOptions AMPD buffer solution 1:10 to achieve a final concentration of 0.1 M. For example, dilute 1 milliliter of StockOptions AMPD to a final volume of 10 milliliters to achieve a final concentration of 0.1 M AMPD.

Please note the final pH of the solution created using StockOptions may vary based upon what other reagents are added to the StockOptions AMPD buffer.

Specifications

Useful pH Range: 7.8 - 9.7



Buffer Reagent: AMPD

C₄H₁₁NO₂ M_r 105.15 CAS No [115-69-5] EC No 204-100-7 pKa = 8.8

Titrated with: Hydrochloric acid

HCl M_r 36.46 CAS No [7647-01-0] EC No 231-595-7

Example

Make a custom 10 ml screen reagent of:

Solution Composition:

30% w/v Polyethylene glycol 8,000,
0.1 M AMPD pH 9.5

Suggested Stock Solutions:

50% w/v Polyethylene glycol 8,000 (HR2-535),
1.0 M AMPD pH 9.5 (StockOptions AMPD)

1. Pipet 3 ml of deionized, sterile filtered water into the tube.
2. Pipet 1 ml of 1.0 M AMPD pH 9.5 into the tube.
3. Pipet 6 ml of 50% w/v Polyethylene glycol 8,000 into a sterile screw top tube.
4. Seal the tube, and mix until the solution is homogeneous.

For Best Results

Use Hampton Research Optimize™ together with StockOptions reagents for best results.

Technical Support

Inquiries regarding StockOptions AMPD Buffer Kit reagent formulation, interpretation of screen results, optimization strategies and general inquiries regarding crystallization are welcome. Please e-mail, fax, or telephone your request to Hampton Research. Fax and e-mail Technical Support are available 24 hours a day. Telephone technical support is available 8:00 a.m. to 4:30 p.m. USA Pacific Standard Time.

Hampton Research
34 Journey

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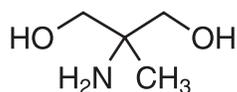
Technical Support e-mail: tech@hrmail.com

Website: www.hamptonresearch.com

Tube #	pH \diamond	Buffer	Titrant
1.	7.8	1.0 M AMPD	Hydrochloric acid
2.	7.9	1.0 M AMPD	Hydrochloric acid
3.	8.0	1.0 M AMPD	Hydrochloric acid
4.	8.1	1.0 M AMPD	Hydrochloric acid
5.	8.2	1.0 M AMPD	Hydrochloric acid
6.	8.3	1.0 M AMPD	Hydrochloric acid
7.	8.4	1.0 M AMPD	Hydrochloric acid
8.	8.5	1.0 M AMPD	Hydrochloric acid
9.	8.6	1.0 M AMPD	Hydrochloric acid
10.	8.7	1.0 M AMPD	Hydrochloric acid
11.	8.8	1.0 M AMPD	Hydrochloric acid
12.	8.9	1.0 M AMPD	Hydrochloric acid
13.	9.0	1.0 M AMPD	Hydrochloric acid
14.	9.1	1.0 M AMPD	Hydrochloric acid
15.	9.2	1.0 M AMPD	Hydrochloric acid
16.	9.3	1.0 M AMPD	Hydrochloric acid
17.	9.4	1.0 M AMPD	Hydrochloric acid
18.	9.5	1.0 M AMPD	Hydrochloric acid
19.	9.6	1.0 M AMPD	Hydrochloric acid
20.	9.7	1.0 M AMPD	Hydrochloric acid

\diamond pH is the measured pH at 25.0 degrees Celsius of the 1.0 M AMPD solution.
pH adjustment performed using Hydrochloric acid.

Buffer Reagent: AMPD



$C_4H_{11}NO_2$ M_r 105.15 CAS No [115-69-5] EC No 204-100-7 $pK_a = 8.8$

Titrated with: Hydrochloric acid

HCl M_r 36.46 CAS No [7647-01-0] EC No 231-595-7

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Solutions for Crystal Growth

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