

Certificate of Analysis

HR2-507 (pg 1)

Description

Optimize™ reagents are preformulated macromolecular crystallization grade solutions designed specifically for the crystallization of proteins, peptides, and nucleic acids. Each Optimize solution is formulated using high purity salts, polymers, and buffers. Sterile filtered Optimize reagents are formulated at convenient ready to use concentrations.

Optimize reagents remove the guesswork and make the process of reproducing preliminary screening conditions and general optimization faster, easier, and more convenient. When using Optimize reagents the user moves directly from the screen to the optimization with no time wasted searching for and formulating salts, buffers, and viscous polymers. This Certificate of Analysis indicates the quality and performance of the reagent.

Buffer Titration

The following table can be used to determine the appropriate mix of 0.5 M ADA and 1.0 M Sodium hydroxide (HR2-583) to give the desired pH. The volumes supplied below assume one will have a final buffer concentration of 0.1 M in a final reservoir volume of 1,000 microliters. This buffer will give pH values ± 0.01 at a temperature of 25°C.

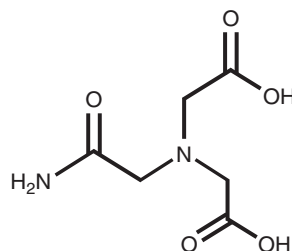
Titration Table for 0.5 M ADA with 1.0 M Sodium hydroxide

pH	1.0 M NaOH (μ l)	0.5 M ADA (μ l)
5.6	0	200
5.7	1	200
5.8	3	200
5.9	6	200
6.0	10	200
6.1	14	200
6.2	20	200
6.3	26	200
6.4	32	200
6.5	38	200
6.6	45	200
6.7	52	200
6.8	59	200
6.9	65	200
7.0	71	200
7.1	77	200
7.2	82	200
7.3	87	200
7.4	90	200
7.5	93	200

Technical Support

Inquiries regarding Optimize 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.

Danielle Pagano
Quality Control



Property Test

Product Name

Synonyms

Product Number

Lot Number

Formula

Formula Weight (M_r)

CAS Number

EC Number

Beilstein Registry Number

Merck

Purity

MDL Number

PubChem Substance ID

Titration (T) NaOH 0.1N Range

Appearance (Starting Material)

Appearance (Solution)

Loss On Drying

Residue On Ignition

Infrared Spectrum

Trace Analysis

Residue (Filter Test)

Melting Point (Starting Material)

Absorbance (λ)

UV Absorption

Lot (Sample) Results

0.5 M ADA

Useful pH range of ADA buffer is 5.6 - 7.5

N-(2-Acetamido)iminodiacetic acid or
N-(Carbamoylmethyl)iminodiacetic acid

HR2-507

$C_6H_{10}N_2O_5$

$H_2NCOCH_2N(CH_2CO_2H)_2$

190.16

[26239-55-4]

247-530-0

1787181

14,147

$\geq 99.0\%$

MFCD00008031

24845005

99.0 - 101.0%

White Powder

Clear, Colorless

$\leq 0.5\%$ loss on drying, 20°C (HV)

$\leq 0.1\%$

Corresponds

Passed

No residue

219°C (dec.) (lit.)

0.05 M in H_2O

λ : 260 nm A_{max} : 0.20
 λ : 280 nm A_{max} : 0.05

Certificate of Analysis

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<u>Property Test</u>	<u>Lot (Sample) Results</u>
pKa (20°C)	6.6
pKa (25°C)	6.6
Refractive Index	_____ at 20°C
Refractive Index Range	1.35009 - 1.35044 at 20°C
Conductivity	_____ mS/cm at 25°C
Conductivity Range	23.6 - 28.6 mS/cm at 25°C
Total Impurities	Insoluble matter, passes filter test
Al	≤ 0.0005%
As	≤ 0.00001%
Ba	≤ 0.0005%
Bi	≤ 0.0005%
Ca	≤ 0.001%
Cd	≤ 0.0005%
Cl	≤ 0.1%
Co	≤ 0.0005%
Cr	≤ 0.0005%
Cu	≤ 0.0005%
Fe	≤ 0.0005%
K	≤ 0.005%
Li	≤ 0.0005%
Mg	≤ 0.0005%
Mn	≤ 0.0005%
Mo	≤ 0.0005%
Na	≤ 0.05%
Ni	≤ 0.0005%
Pb	≤ 0.0005%
SO ₄	≤ 0.005%
Sr	≤ 0.0005%
Zn	≤ 0.0005%

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