

PACKING SLIP

1

**THE MIDLAND
CERTIFIED REAGENT COMPANY**
3112-A West Cuthbert Avenue
MIDLAND, TEXAS 79701

(800) 247-8766 Ext.

Customer Number: NGUYEN Q
Customer Name: QUOL THANG NGUYEN
PO Number: 20326798
Terms: NET 30
Date: 9/21/05

Bill To: QUOL THANG NGUYEN
UNIVERSITY OF CA-SAN DIEGO
DISBURSEMENTS DIVISION 0955
9500 GILMAN DRIVE/ PO#20326798
LA JOLLA CA 92093-0955

Ship To: QUOL THANG NGUYEN
QUOL THANG NGUYEN
UREY HALL ROOM 7108 MC0319
9500 GILMAN DRIVE
SAN DIEGO CA 92093

Oligo Name	Oligo Number	Length	Grade	Scale	Lot Number	Order #
	1	37 mer	RP	1	092605-00148	OPTS00031777
5' - (_TXRED) (_C6Amino) TAGGGATCCTCTGTGGCCCAATTTGCAACCAGCCCTA (_BHQ-2) -3'						
TARGET	2	27 mer	GF	.05	291905-0004C	OPTS00031777
5' - CTGGTTGCAAATTGGGCCACAGAGGAT -3'						

Thank You!

Not For Drug Use, For Research Only



THE MIDLAND CERTIFIED REAGENT COMPANY, INC.

3112-A West Cuthbert Ave. ♦ Midland, TX 79701 ♦ Voice: 800-247-8766 or 915-694-7950

Fax: 915-694-2387 ♦ e-mail: robb@coligos.com ♦ Web site: <http://www.mcre.com>

Molecular Beacon Analysis

The Molecular Beacon (Lot 092605-00148; 5' TXRED- TAGGG ATCCTCTGTGGCCCAATTTGCAACCAG CCCTA -BHQ2 3') and target (Lot 291905-0004C; 5'-CTGGTTGCAAATTGGGCCACAGAGGAT -3') were analyzed in our laboratories to determine the signal-to-noise ratio of this pair.

The analysis was performed at RT on a Hitachi F-2000 Fluorescence Spectrophotometer, utilizing a 2 ml cuvette and a buffer containing 20 mM Tris-HCl, pH 8.0, 50 mM KCl, and 5 mM MgCl₂. The excitation wavelength used was 583 nm and the emission wavelength was set to 603 nm. Two milliliters of buffer was added to the cuvette and the arbitrary fluorescence units were noted for the buffer alone (F_{buffer}). Molecular Beacon was added to the cuvette to a final concentration of 50 nM. The increase in fluorescence due to background was allowed to stabilize and the value was recorded (F_{close}). A 4-fold molar excess of the target solution was added and the fluorescence was monitored for a total of 2970 secs. The highest value was recorded (F_{open}).

The Signal to background to noise ratio was calculated as follows:

$$(F_{\text{open}} - F_{\text{buffer}})/(F_{\text{close}} - F_{\text{buffer}})$$

F_{buffer} 0.0185

F_{close} 0.317

F_{open} 4.228

S/N 14.1

Documented by:



Robb Lee

This Molecular Beacon Probe is sold under a license to The Midland Certified Reagent Company, granted by the Public Health Research Institute of the City of New York, Inc. This product comes with only limited field-of-use rights for research purposes only, under PHRI Patent Rights.

THE MIDLAND CERTIFIED REAGENT COMPANY INC.

Certificate of Analysis

No. _____ GF

The product described below was manufactured in the laboratories of The Midland Certified Reagent Company Inc. of Midland, Texas.

The analytical data reported hereon were obtained in the laboratories of The Midland Certified Reagent Company Inc. by individuals qualified to perform the analytical procedures. Details of analytical procedures are available to bona fide customers free of charge on request.

PRODUCT _____

LOT NUMBER _____ 291905-0004C _____

This custom oligodeoxynucleotide was synthesized using cyanoethyl phosphoramidite chemistry. After removal of the protecting groups by hydrolysis with concentrated ammonium hydroxide, the product was desalted by gel filtration chromatography (hence GF grade). GF grade oligonucleotides are generally suitable for use as sequencing primers, primers for amplification of DNA or RNA, and for many other purposes. The oligonucleotide has been dried in the ammonium salt form, although trace amounts of other ions may also be present. The quantity of material is given in nanomoles and in A260 Units. One A260 Unit is equivalent to approximately 30-35 micrograms of DNA. The molecular weight (MW) is calculated for the free acid form of the DNA.

Order #: OPTS00031777

Ordered By QUOL THANG NGUYEN

Name: TARGET, 27-mer

Sequence:

5'-CTGGTTGCAAATTGGGCCACAGAGGAT-3'

Mw(g/mol) = 8364.7Tm61.2

Number of shipping Vials: 1

Quantity:

µg / vial = 132.4

nmole / vial = 15.8

A260 / vial = 4.7


Released By:

Richard V. Case, Ph.D.

THE MIDLAND CERTIFIED REAGENT COMPANY INC.

Certificate of Analysis

No. _____ RP

The product described below was manufactured in the laboratories of The Midland Certified Reagent Company Inc. of Midland, Texas.

The analytical data reported hereon were obtained in the laboratories of The Midland Certified Reagent Company Inc. by individuals qualified to perform the analytical procedures. Details of analytical procedures are available to bona fide customers free of charge on request.

PRODUCT _____

LOT NUMBER _____ 092605-00148

This custom oligodeoxynucleotide was synthesized using cyanoethyl phosphoramidite chemistry. After removal of the protecting groups by hydrolysis with concentrated ammonium hydroxide, the product was purified by Reversed Phase HPLC (RP grade). A copy of the HPLC elution profile is attached to this Certificate of Analysis. With the exception of oligonucleotides containing 5' Thiol Modifier C6, the trityl-positive fractions were pooled, dried, and detritylated, The oligonucleotide was purified from the trityl group by gel filtration chromatography. The product is furnished as the dried ammonium salt form unless otherwise indicated on the Oligonucleotide Synthesis Record. The quantity of material is given in nanomoles and in A260 Units. One unit is equivalent to approximately 30-35 micrograms of DNA. The molecular weight (MW) is calculated for the free acid form of the DNA.

Order #: OPTS00031777

Ordered By QUOL THANG NGUYEN

Name: , 37-mer

Sequence:

5'-(TXRED)(C6Amino)TAGGGATCCTCTGTGGCCCAATTTGCAACCAGCCCTA
Q-2)-3'

Mw(g/mol) = 12742.1 M_n 69.6

Number of shipping Vials: 6

Quantity:

µg / vial = 224.5

nmole / vial = 17.6

A260 / vial = 6.7



Released By:

Richard V. Case, Ph.D.

CUSTOM OLIGONUCLEOTIDE SYNTHESIS RECORD

Operator GH Date 9/26/05 Time 4:35 ^A Ⓟ Lot # 092605-148
 1 2 3 4
 5 6 7 8
 9 10 11 12 Customer Quol Thang Nguyen
 13 14 15 16 SUPPORT: A C G T I U NH₃ 3'-BHQ-2 Oligo Name _____
 17 18 19 20

LL 500A 1000A _____ PHOSPHORAMIDITES: _____
 Mfrgr Glen Lot # 6507226 PURGE? NO by GH
 Net Weight .0278 grams A 11.1 to @ _____ c
 X Loading 40 μmole/g G 12.1 to @ _____ c
 = 1.11 μmole C 14.5 to @ _____ c
 prepared by GH T 10.0 to @ _____ c

TRON

ORDER INSTRUCTIONS

DNA Grade: GF AE PAGE TSP Ⓟ
 Service: ND STD AE PAGE TSP
 Ship: 1 2 4 10 & ALL _____ OD
 Ship: M Tu W Th F S _____ / _____

X= Amino C6 TEA Lot # 0509257 @ base 31 PH
 X Port Date 9-27-05

DEPROTECTION:

Vial # _____ @ RT °C
 9-27 Start 930 Ⓟ P by PA
 9-28 Finish 10 Ⓟ P by PA

REAGENTS: Final _____
 Wash ACN 3.0 / _____
 Tetrazole 80 / _____
 Capping A 90 / _____
 Capping B 80 / _____
 Detritylating 400+ / _____
 Oxidizer 90 / _____

TRITYLS

Total # = 38
 Tube No. 525 534 540
37 331
 by PA

DEBLOCKING COLUMN

Date: 09-28-05
 Time: 11:05 AM
 Run by Sj
 Tube # A₂₆₀ Nat
 1 _____
 2 _____ (2 tubes)
 3 .999 x 101 x 2.5 ml
 4 _____
 5 _____
 6 _____
 Read by Sj

DESALTING COLUMN

Absorbance at 260 nm
 Date: 10-20-05
 Time: 5:10 PM
 1 615
 2 .245
 3 .415 .275 x 101 x 5.5
 4 .115
 5 .015
 6 _____
 7 _____
 8 _____
 Packaged by PA

24 hrs

99.0

POST SYNTHESIS LABELING LOG

Tech initials AV

Date: 5/30/05

Time: 5:00

Oligo Lot #: 092605-148

Scale 1.0

5'/Internal

Dye Texas Red

Form: NHS / ITC / Other _____

Manufacturer Biotium

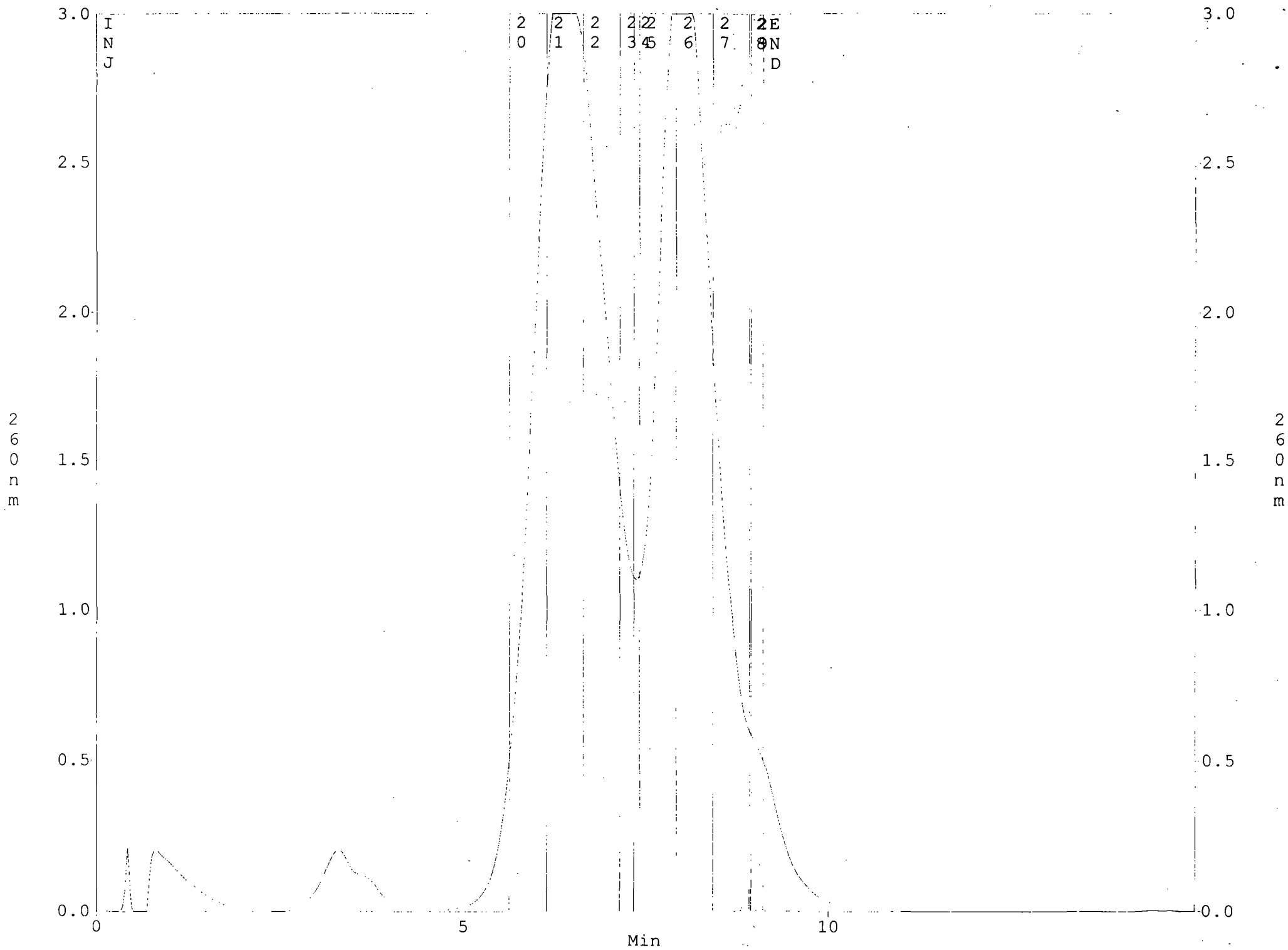
Dye Lot #: 4T1101

Product #: 90039

Labeling pH 9.5

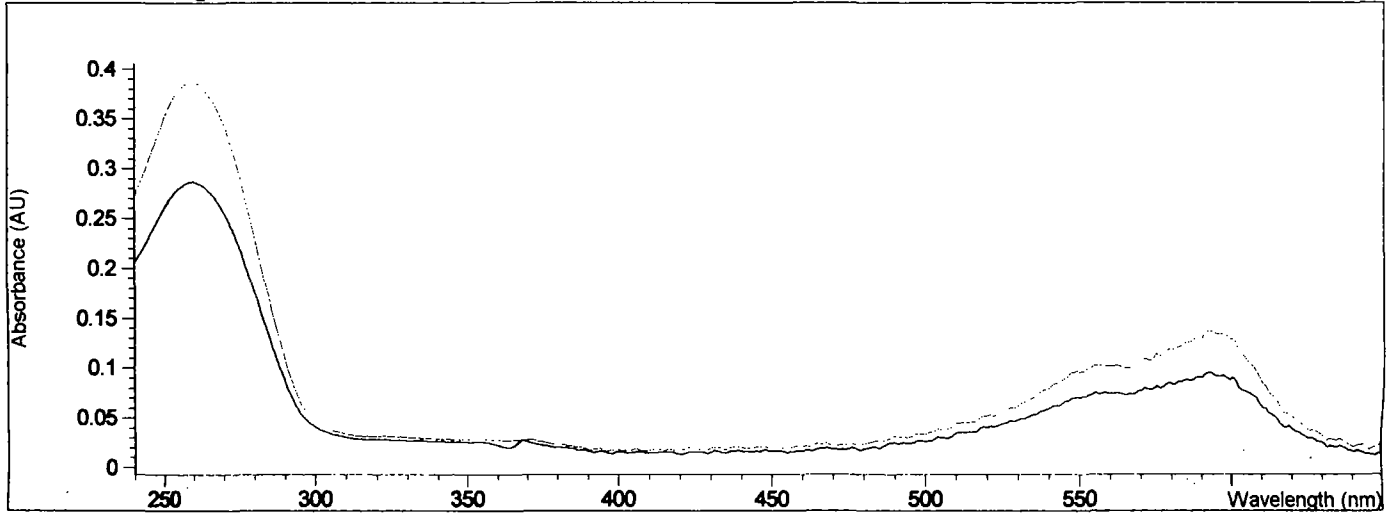
Buffer: NaCO₃/NaHCO₃ Other 0.1M

Recovery procedure: Precipitation / DS column



Method file : <untitled>
 Information : Default Method
 Data File : <untitled>

Overlaid Spectra:



Equation : Ratio = WL3/WL2

Where : WL1 = Abs(260nm), WL2 = Abs(579nm), WL3 = Abs(592nm), Wt = Weight, V = Volume

#	Name	Dilut. Factor	Ratio	Abs<260nm>
1		1.00000	1.11800	0.28704
2		1.00000	1.14720	0.38692

#	Name	Abs<579nm>	Abs<592nm>
1		8.5186E-2	9.5234E-2
2		0.11919	0.13673

Report generated by : ROBB

Signature:

*** End Ratio/Equation Report ***

sec	I
0	0.018) <i>Fontex</i>
30	0.019)
60	0.317 - <i>Fuse</i>
90	1.663
120	2.222
150	2.429
180	2.534
210	2.606
240	2.654
270	2.683
300	2.700
330	2.726
360	2.750
390	2.759
420	2.776
450	2.782
480	2.809
510	2.822
540	2.838
570	2.837
600	2.856
630	2.867
660	2.867
690	2.890
720	2.906
750	2.933
780	2.920
810	2.918
840	2.937
870	2.955
900	2.953
930	2.979
960	2.977
990	2.986
1020	2.981
1050	3.009
1080	3.006
1110	2.962
1140	2.942
1170	2.969
1200	3.014
1230	3.159
1260	3.326
1290	3.517
1320	3.692
1350	3.829
1380	3.954
1410	4.001
1440	4.068
1470	4.089
1500	4.105
1530	4.117
1560	4.130
1590	4.141
1620	4.111
1650	4.132
1680	4.135
1710	4.128
1740	4.124
1770	4.114
1800	4.129
1830	4.145
1860	4.155
1890	4.183
1920	4.189
1950	4.188
1980	4.180
2010	4.182
2040	4.179
2070	4.194

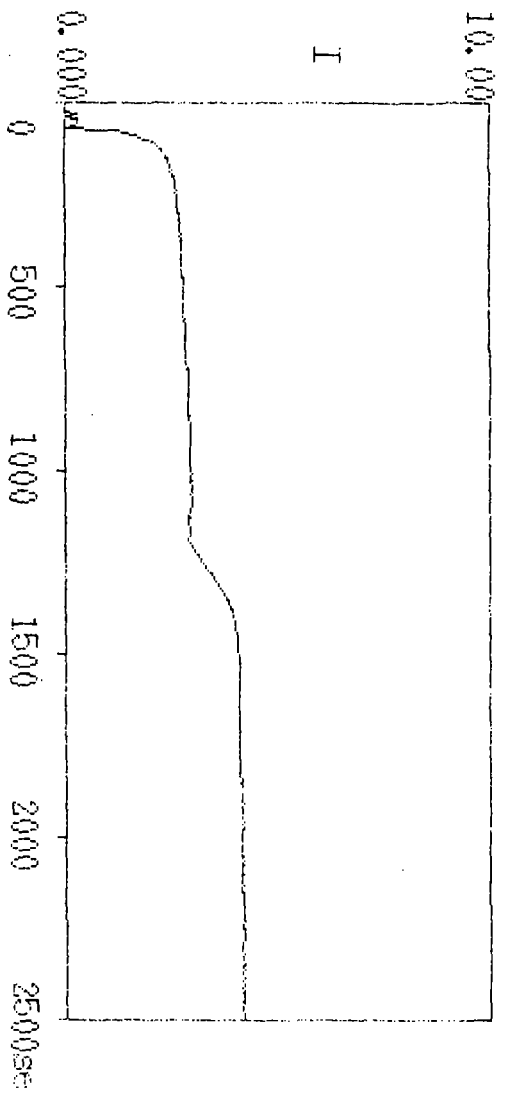
$$slw = \frac{(4.228 - 0.018)}{(0.317 - 0.005)} = \frac{4.2095}{0.212} = 19.85$$

19.1

2100	4.198
2130	4.187
2160	4.203
2190	4.215
2220	4.228 <i>Excess</i>
2250	4.187
2280	4.207
2310	4.193
2340	4.184
2370	4.193
2400	4.206
2430	4.198
2460	4.204
2490	4.207
2520	4.203
2550	4.197
2580	4.198
2610	4.208
2640	4.206
2670	4.218
2700	4.214
2730	4.206
2760	4.204
2790	4.209
2820	4.218
2850	4.230
2880	4.216
2910	4.222
2940	4.215
2970	4.216

TIME SCAN/0926-148

10/05/05 16:38



Midland Certified Reagent Co.

Original Filename: h:\masspec1\092605\00148-02.ms

This File # 3 = H:\MASSPEC1\092605\00148-02.MS

Comment: See file name for lot #

Method: STD-DNA1
Accelerating Voltage: 20000
Grid Voltage: 92.000 %
Guide Wire Voltage: 0.050 %
Delay: 375 ON
Sample: 55

Laser: 2400
Scans Averaged: 64
Pressure: 1.13e-06
Low Mass Gate: 700.0
Negative Ions: ON
Collected: 10/5/05 5:20 PM

