



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date: 12-Aug-09

Cindy Arnold
Tronox, LLC.
PO Box 55
Henderson, NV 89009
(407) 859-3939

CASE NARRATIVE

Project:

Work Order: TRX09072041

Cooler Temp: 4 °C

Alpha's Sample ID	Client's Sample ID	Matrix
09072041-01A	EB071009-SO	Aqueous
09072041-02A	TR-8B	Aqueous
09072041-03A	M-97B	Aqueous
09072041-04A	TR-6B	Aqueous
09072041-05A	EB-071709-GW	Aqueous

Enclosed please find the analytical results of the samples received by Alpha Analytical, Inc. under the above mentioned Work Order/Chain-of-Custody.

Alpha Analytical, Inc. has a formal Quality Assurance/Quality Control program, which is designed to meet or exceed the EPA requirements. All relevant QC met quality assurance objectives for this project unless otherwise stated in the footnotes.

If you have any questions with regards to this report, please contact Walter Hinchmann, Project Manager, at (800) 283-1183.

Roger Scholl

Randy Gardner

Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com

**Organic Acids by HPLC
Alpha Acids
QC Deliverables
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TRX09072041

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**Chain of Custody
Organic Acids by HPLC**

Billing Information :

Northgate Environmental Management, Inc
1100 Quail Street, Suite 102
Newport Beach, CA 92660

CHAIN-OF-CUSTODY RECORD

Alpha Analytical, Inc.

255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778
TEL: (775) 355-1044 FAX: (775) 355-0406

NV

WorkOrder : TRX09072041

Report Due By : 5:00 PM On : 07-Aug-09

Client:
Tronox, LLC.
PO Box 55
Henderson, NV 89009

Report Attention Phone Number Email Address
Cindy Arnold (407) 859-3939 x carnold@nngen.com
Frank Hagar (949) 498-7056 x frank.hagar@nngen.com

EDD Required : No

Sampled by : Doug Davis, Dana Brown

PO :
Client's COC # : 2027.001.00235/266/297/3 Job :
QC Level : 4 = Final Rpt, MBLK, LCS, MS/MSD, Initial/ConCal data

Cooler Temp 4 °C Samples Received 20-Jul-09 Date Printed 20-Jul-09

Alpha Sample ID	Client Sample ID	Collection Matrix Date	No. of Bottles			Requested Tests	Sample Remarks
			Alpha	Sub	TAT		
TRX09072041-01A	EB071009-SO	AQ 07/10/09 11:02	1	0	14	OrganicAcids	
TRX09072041-02A	TR-8B	AQ 07/14/09 11:45	1	0	14	OrganicAcids	
TRX09072041-03A	M-97B	AQ 07/16/09 08:45	1	0	14	OrganicAcids	
TRX09072041-04A	TR-6B	AQ 07/17/09 07:50	1	0	14	OrganicAcids	
TRX09072041-05A	EB-071709-GW	AQ 07/17/09 09:45	1	0	14	OrganicAcids	

Comments: Security seals intact. Frozen ice. Level IV QC. Do not email PDF's or EDD. needs to be uploaded to an ftp site. Project requires reporting all samples down to TDL. Use TDL report format.

Logged in by: Fatima Salama Patricia Edrosa Signature Patricia Edrosa Print Name
 Company Alpha Analytical, Inc. Date/Time 7/20/09 9:15

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report. Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

Sample Results
Organic Acids by HPLC



Alpha Analytical, Inc.

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ANALYTICAL REPORT

Tronox, LLC.
PO Box 55
Henderson, NV 89009
Job#:

Attn: Cindy Arnold
Phone: (407) 859-3939
Fax:

Alpha Analytical Number: TRX09072041-01A
Client I.D. Number: EB071009-SO

Sampled: 07/10/09
Received: 07/20/09
Analyzed: 07/20/09

Organic Acids by HPLC Alpha Acids

Compound	Concentration	Reporting Limit	TDL
1 Dimethyl phosphorodithioic acid	ND	0.25 mg/L	0.13
2 Benzenesulfonic acid	ND	0.050 mg/L	0.025
3 Phthalic acid	ND	0.050 mg/L	0.025
4 Diethyl phosphorodithioic acid	ND	0.050 mg/L	0.025
5 4-Chlorobenzenesulfonic acid	ND	0.050 mg/L	0.025

Note : TDL's as defined in client Laboratory Manual for Analytical Services (March 2009).

Sample data was verified by spike addition confirmation.

ND = Not Detected

Roger Scholl

Randy Gardner

Walter Hinchman

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Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com

Alpha Analytical, Inc. currently holds appropriate and available NDEP certifications for the data reported - certification #NV16.

CAH
8/6/09

Report Date



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ANALYTICAL REPORT

Tronox, LLC.
PO Box 55
Henderson, NV 89009
Job#:

Attn: Cindy Arnold
Phone: (407) 859-3939
Fax:

Alpha Analytical Number: TRX09072041-02A
Client I.D. Number: TR-8B

Sampled: 07/14/09
Received: 07/20/09
Analyzed: 07/20/09

Organic Acids by HPLC Alpha Acids

Compound	Concentration	Reporting Limit	TDL
1 Dimethyl phosphorodithioic acid	ND	0.25 mg/L	0.13
2 Benzenesulfonic acid	ND	0.050 mg/L	0.025
3 Phthalic acid	ND	0.050 mg/L	0.025
4 Diethyl phosphorodithioic acid	ND	0.050 mg/L	0.025
5 4-Chlorobenzenesulfonic acid	ND	0.050 mg/L	0.025

Note : TDL's as defined in client Laboratory Manual for Analytical Services (March 2009).

Sample data was verified by spike addition confirmation.

ND = Not Detected

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ANALYTICAL REPORT

Tronox, LLC.
PO Box 55
Henderson, NV 89009
Job#:

Attn: Cindy Arnold
Phone: (407) 859-3939
Fax:

Alpha Analytical Number: TRX09072041-03A
Client I.D. Number: M-97B

Sampled: 07/16/09
Received: 07/20/09
Analyzed: 07/21/09

Organic Acids by HPLC Alpha Acids

	Compound	Concentration	Reporting Limit	TDL
1	Dimethyl phosphorodithioic acid	ND	0.25 mg/L	0.13
2	Benzenesulfonic acid	ND	0.050 mg/L	0.025
3	Phthalic acid	ND	0.050 mg/L	0.025
4	Diethyl phosphorodithioic acid	ND	0.050 mg/L	0.025
5	4-Chlorobenzenesulfonic acid	ND	0.050 mg/L	0.025

Note : TDL's as defined in client Laboratory Manual for Analytical Services (March 2009).

Sample data was verified by spike addition confirmation.

ND = Not Detected

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WJH
8/6/09

Report Date



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ANALYTICAL REPORT

Tronox, LLC.
PO Box 55
Henderson, NV 89009
Job#:

Attn: Cindy Arnold
Phone: (407) 859-3939
Fax:

Alpha Analytical Number: TRX09072041-04A
Client I.D. Number: TR-6B

Sampled: 07/17/09
Received: 07/20/09
Analyzed: 07/21/09

Organic Acids by HPLC Alpha Acids

	Compound	Concentration	Reporting Limit	TDL
1	Dimethyl phosphorodithioic acid	ND	0.25 mg/L	0.13
2	Benzenesulfonic acid	ND	0.050 mg/L	0.025
3	Phthalic acid	ND	0.050 mg/L	0.025
4	Diethyl phosphorodithioic acid	ND	0.050 mg/L	0.025
5	4-Chlorobenzenesulfonic acid	ND	0.050 mg/L	0.025

Note: TDL's as defined in client Laboratory Manual for Analytical Services (March 2009).

Sample data was verified by spike addition confirmation.

ND = Not Detected

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CAH
8/6/09

Report Date



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ANALYTICAL REPORT

Tronox, LLC.
PO Box 55
Henderson, NV 89009
Job#:

Attn: Cindy Arnold
Phone: (407) 859-3939
Fax:

Alpha Analytical Number: TRX09072041-05A
Client I.D. Number: EB-071709-GW

Sampled: 07/17/09
Received: 07/20/09
Analyzed: 07/21/09

Organic Acids by HPLC Alpha Acids

	Compound	Concentration	Reporting Limit	TDL
1	Dimethyl phosphorodithioic acid	ND	0.25 mg/L	0.13
2	Benzenesulfonic acid	ND	0.050 mg/L	0.025
3	Phthalic acid	ND	0.050 mg/L	0.025
4	Diethyl phosphorodithioic acid	ND	0.050 mg/L	0.025
5	4-Chlorobenzenesulfonic acid	ND	0.050 mg/L	0.025

Note: TDL's as defined in client Laboratory Manual for Analytical Services (March 2009).

Sample data was verified by spike addition confirmation.

ND = Not Detected

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8/6/09

Report Date

Raw Data
Chromatograms and Quantitation Reports
Organic Acids by HPLC

METHOD HPLC ACIDS
HPLC #3 UV DETECTOR
Test Code: XXX_XX

Result *7/22/09 ✓*
Peer/QC
Report *Ca 7/22/09 original*
EV 8/6/09

Data Reprocessed On 07/22/2009 10:17:00

Sample Name: SAMP TRX09072041-01A 2X Date: 07/20/2009 15:46:37
Data File : C:\DX\DATA\072009\B4664001.D05
Method : C:\DX\METHOD\ACID.MET
ACI Address: 1 System: 2 Inject#: 5 Vial: Detector: OTHER
Analyst : Column:

Calibration Volume Dilution Points Rate Start Stop Area Reject
External 1 2 18000 5Hz 0.00 60.00 1000

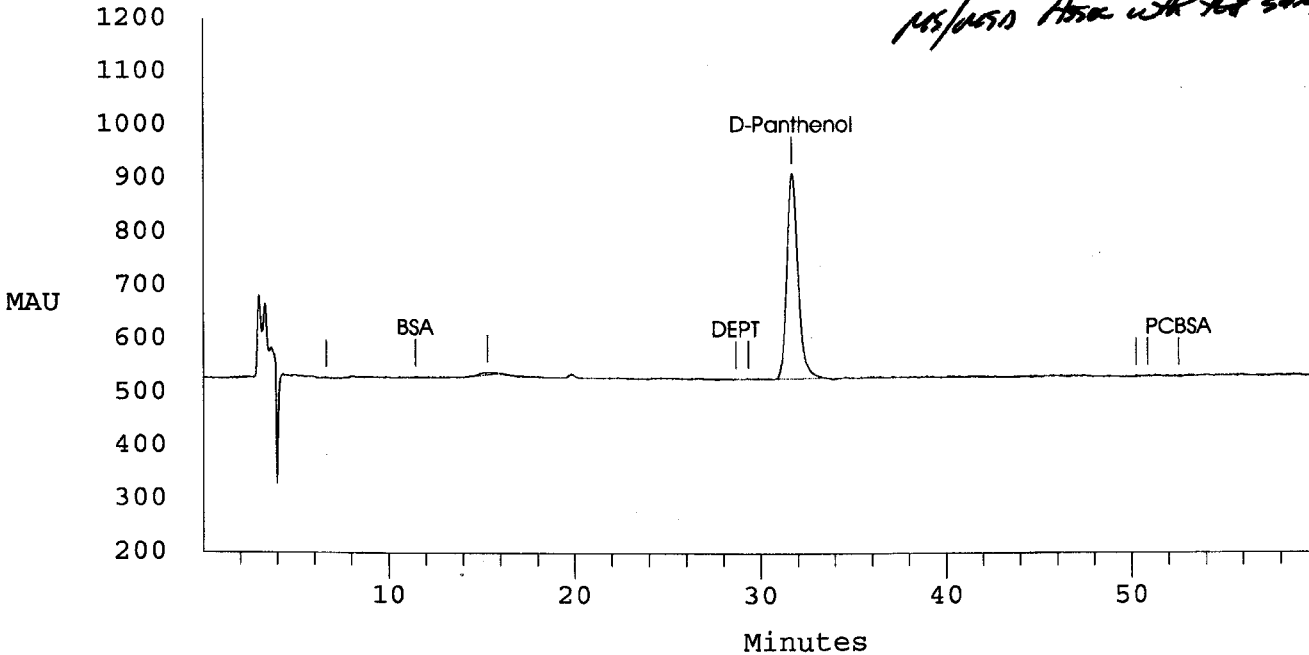
***** Component Report: Components Found *****

Ret Time	Response Factor	Component Name	Area	Concentration mg/L
11.47	3.287e-007	BSA	8154	0.005
28.67	6.615e-007	DEPT	1062	0.000
31.67	6.430e-006	D-Panthenol	1630832	20.626
52.53	2.254e-007	PCBSA	2579	-0.007
Totals			1642627	20.624

no peak @ 0.25/0.25 mg/L
DEPT: no peak @ 0.25/0.25 mg/L

File: B4664001.D05 Sample: SAMP TRX09072041-01A 2X

no peak Area with the sample



METHOD HPLC ACIDS
HPLC #3 UV DETECTOR
Test Code: XXX_XX

Result *7/22/09 ✓*
Peer/QC
Report *CA PV Final* *WT*

Data Reprocessed On 07/22/2009 10:17:13

=====
Sample Name: SAMP TRX09072041-02A 2X Date: 07/20/2009 18:54:49
Data File : C:\DX\DATA\072009\B4667001.D08
Method : C:\DX\METHOD\ACID.MET
ACI Address: 1 System: 2 Inject#: 8 Vial: Detector: OTHER
Analyst : Column:
=====

Calibration Volume Dilution Points Rate Start Stop Area Reject

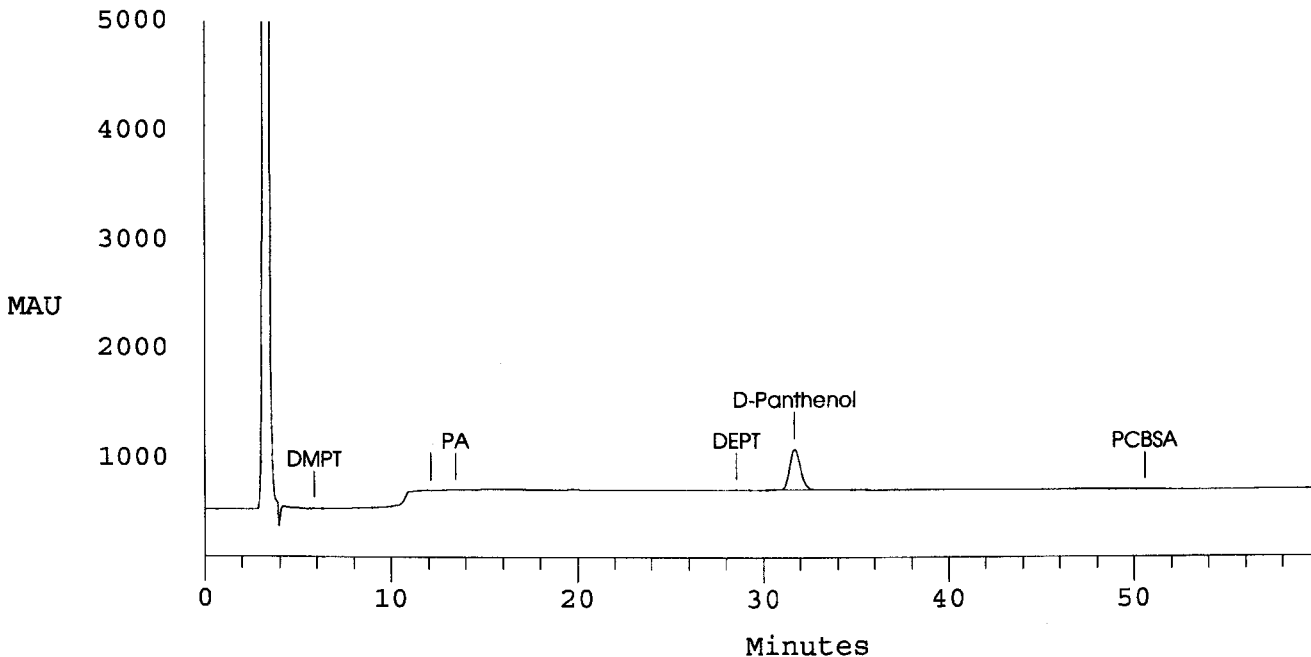
External 1 2 18000 5Hz 0.00 60.00 1000

***** Component Report: Components Found *****

Ret Time	Response Factor	Component Name	Area	Concentration mg/L
5.87	1.446e-006	DMPT	2432	-0.014
13.47	2.720e-007	PA	1710	-0.037
28.57	6.615e-007	DEPT	3800	0.004
31.70	6.430e-006	D-Panthenol	1538523 <i>20</i>	19.439
50.60	2.254e-007	PCBSA	9709	-0.004
Totals			1556174	19.389

NO f... 0.251005 mg/L
J. Alg... NO f... 0.251005 mg/L

File: B4667001.D08 Sample: SAMP TRX09072041-02A 2X



METHOD HPLC ACIDS
HPLC #3 UV DETECTOR
Test Code: XXX_XX

Result *7/22/09*
Peer/QC
Report *Ca Final*

Data Reprocessed On 07/22/2009 10:17:35

Sample Name: SAMP TRX09072041-03A 2X Date: 07/21/2009 00:08:27
Data File : C:\DX\DATA\072009\B4672001.D13
Method : C:\DX\METHOD\ACID.MET
ACI Address: 1 System: 2 Inject#: 13 Vial: Detector: OTHER
Analyst : Column:

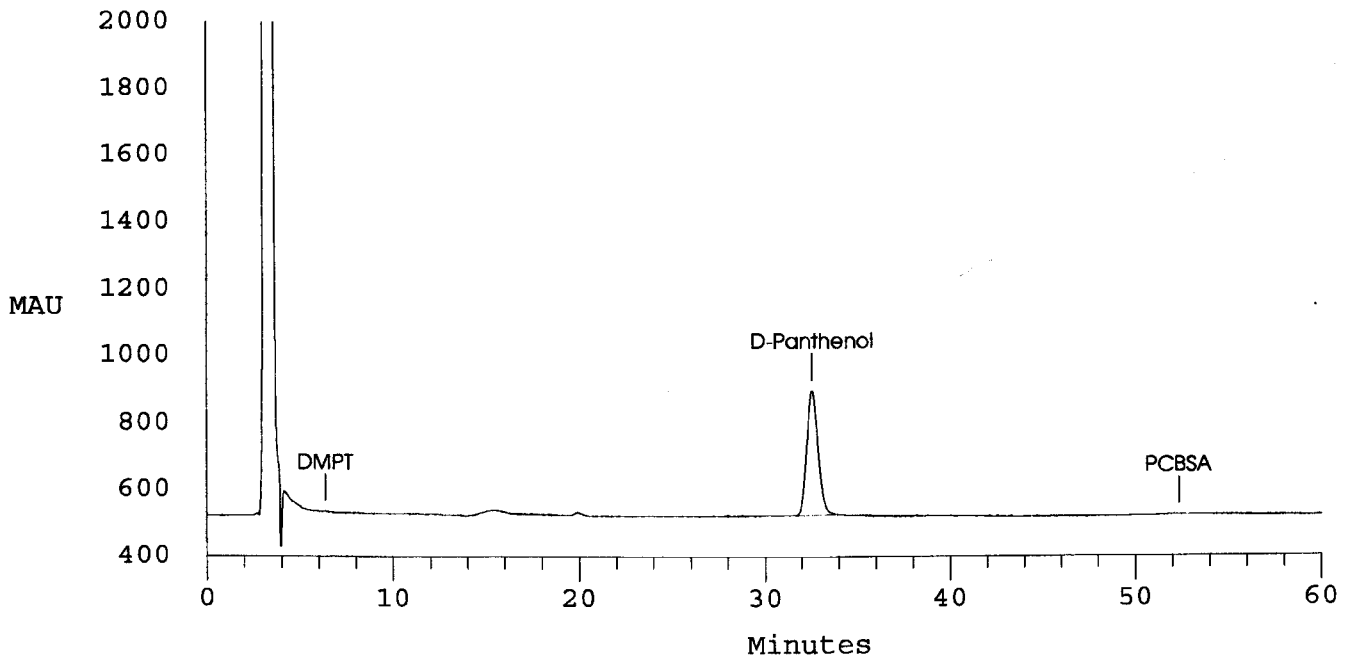
Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	2	18000	5Hz	0.00	60.00	1000	

***** Component Report: Components Found *****

Ret Time	Response Factor	Component Name	Area	Concentration mg/L
6.37	1.446e-006	DMPT	2252	-0.014
32.57	6.430e-006	D-Panthenol	1563884	19.765
52.37	2.254e-007	PCBSA	3160	-0.007
Totals			1569296	19.744

NO FOUND 0.25/0.05 mg/L
J-Hy: NO FOUND 0.25/0.25 mg/L

File: B4672001.D13 Sample: SAMP TRX09072041-03A 2X



METHOD HPLC ACIDS
HPLC #3 UV DETECTOR
Test Code: XXX_XX

Result *1/22/09*
Peer/QC
Report *Calif* Final *af*

Data Reprocessed On 07/22/2009 10:17:48

=====
Sample Name: SAMP TRX09072041-04A 2X Date: 07/21/2009 02:13:51
Data File : C:\DX\DATA\072009\B4674001.D15
Method : C:\DX\METHOD\ACID.MET
ACI Address: 1 System: 2 Inject#: 15 Vial: Detector: OTHER
Analyst : Column:
=====

Calibration Volume Dilution Points Rate Start Stop Area Reject

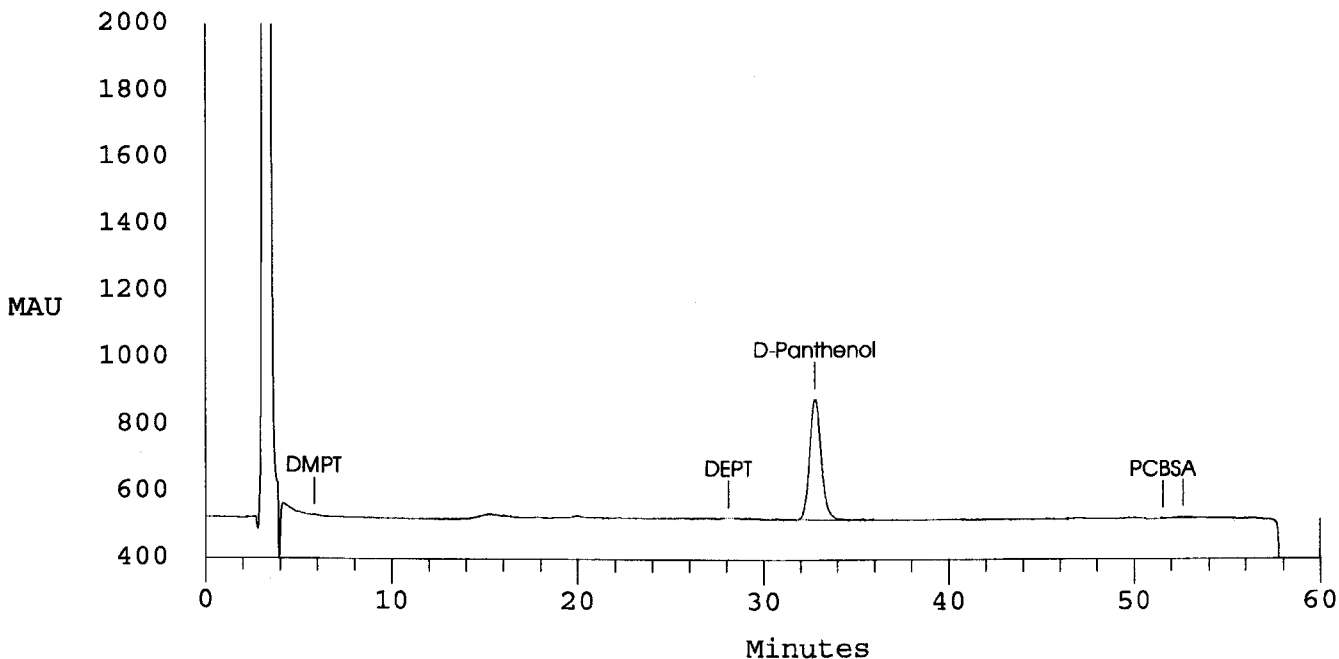
External 1 2 18000 5Hz 0.00 60.00 1000

***** Component Report: Components Found *****

Ret Time	Response Factor	Component Name	Area	Concentration mg/L
5.83	1.446e-006	DMPT	2967	-0.012
28.10	6.615e-007	DEPT	2224	0.002
32.77	6.430e-006	D-Panthenol	1569168	19.833
51.57	2.254e-007	PCBSA	4335	-0.006
Totals			1578694	19.817

no for all e 0.25/0.25 mg/L
D-Play: no for all e
0.25/0.25 mg/L

File: B4674001.D15 Sample: SAMP TRX09072041-04A 2X



METHOD HPLC ACIDS
HPLC #3 UV DETECTOR
Test Code: XXX_XX

Result *7/22/09*
Peer/QC
Report *ea Rinal*

Data Reprocessed On 07/22/2009 10:18:00

=====
Sample Name: SAMP TRX09072041-05A 2X Date: 07/21/2009 04:19:19
Data File : C:\DX\DATA\072009\B4676001.D17
Method : C:\DX\METHOD\ACID.MET
ACI Address: 1 System: 2 Inject#: 17 Vial: Detector: OTHER
Analyst : Column:
=====

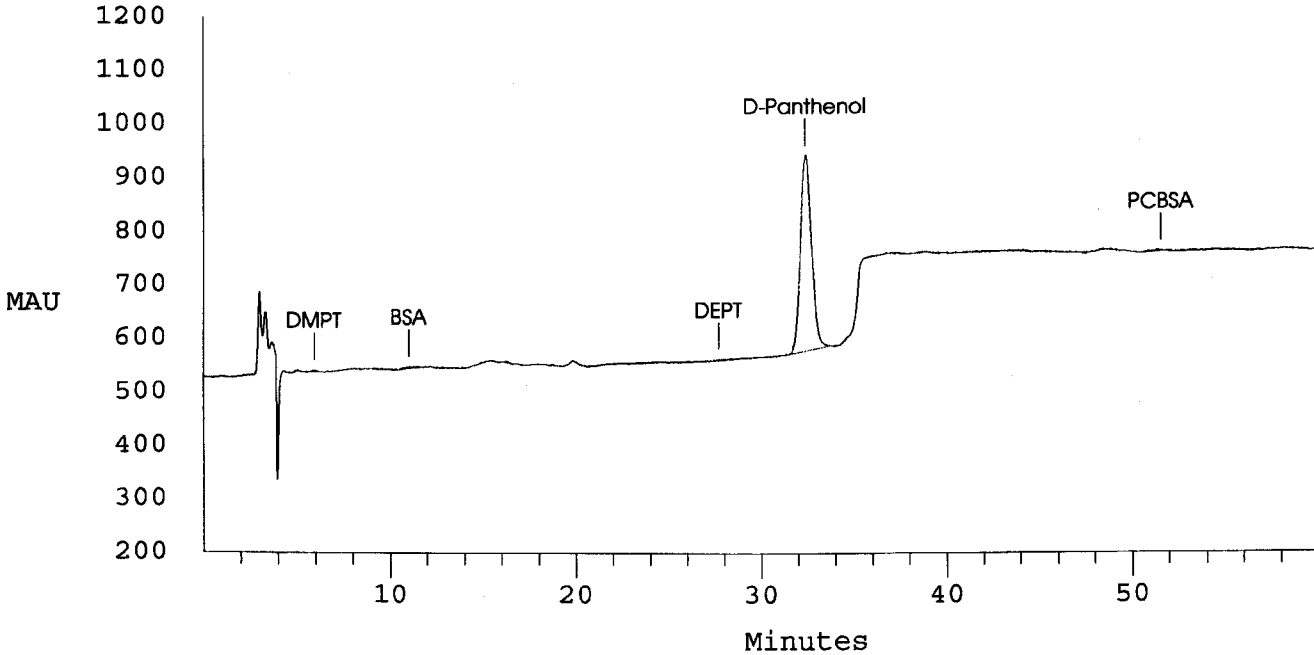
=====
Calibration Volume Dilution Points Rate Start Stop Area Reject
External 1 2 18000 5Hz 0.00 60.00 1000
=====

***** Component Report: Components Found *****

Ret Time	Response Factor	Component Name	Area	Concentration mg/L
5.93	1.446e-006	DMPT	5343	-0.005
11.03	3.287e-007	BSA	11418	0.007
27.70	6.615e-007	DEPT	4501	0.005
32.40	6.430e-006	D-Panthenol	1545347	19.527
51.57	2.254e-007	PCBSA	11165	-0.003
Totals			1577775	19.530

no f... 0.25/0.5 mg/L
20 19.527 0.125/0.25 mg/L

File: B4676001.D17 Sample: SAMP TRX09072041-05A 2X



**Confirmation Raw Data
Chromatograms and Quantitation Reports
Organic Acids by HPLC**

METHOD HPLC ACIDS
 HPLC #3 UV DETECTOR
 Test Code: XXX_XX

Result *7/24/09 ✓*
 Peer/QC
 Report _____ Final _____

Data Reprocessed On 07/22/2009 10:17:20

```

=====
Sample Name: SAMP TRX09072041-02A 2X + 0.2 Date: 07/20/2009 19:57:31
Data File : C:\DX\DATA\072009\B4668001.D09
Method : C:\DX\METHOD\ACID.MET
ACI Address: 1 System: 2 Inject#: 9 Vial: Detector:OTHER
Analyst : Column:
=====
  
```

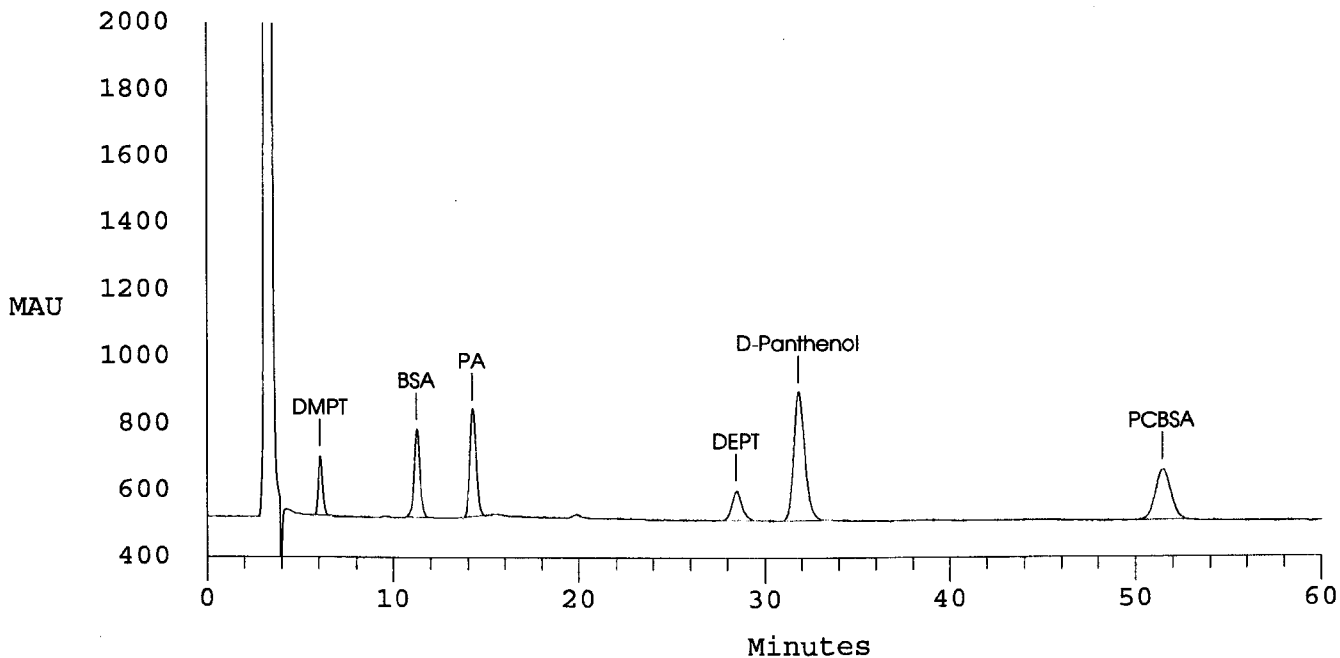
```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External 1 2 18000 5Hz 0.00 60.00 1000
  
```

***** Component Report: Components Found *****

Ret Time	Response Factor	Component Name	Area	Concentration mg/L
6.07	1.446e-006	DMPT	297127	0.838
11.27	3.287e-007	BSA	571444	0.375
14.23	2.720e-007	PA	773013	0.383
28.47	6.615e-007	DEPT	336936	0.445
31.83	6.430e-006	D-Panthenol	1626452	20.570
51.43	2.254e-007	PCBSA	895287	0.395
Totals			4500258	23.006

File: B4668001.D09 Sample: SAMP TRX09072041-02A 2X + 0.2



METHOD HPLC ACIDS
HPLC #3 UV DETECTOR
Test Code: XXX_XX

Result *7/22/09*
Peer/QC
Report _____ Final _____

Data Reprocessed On 07/22/2009 10:17:42

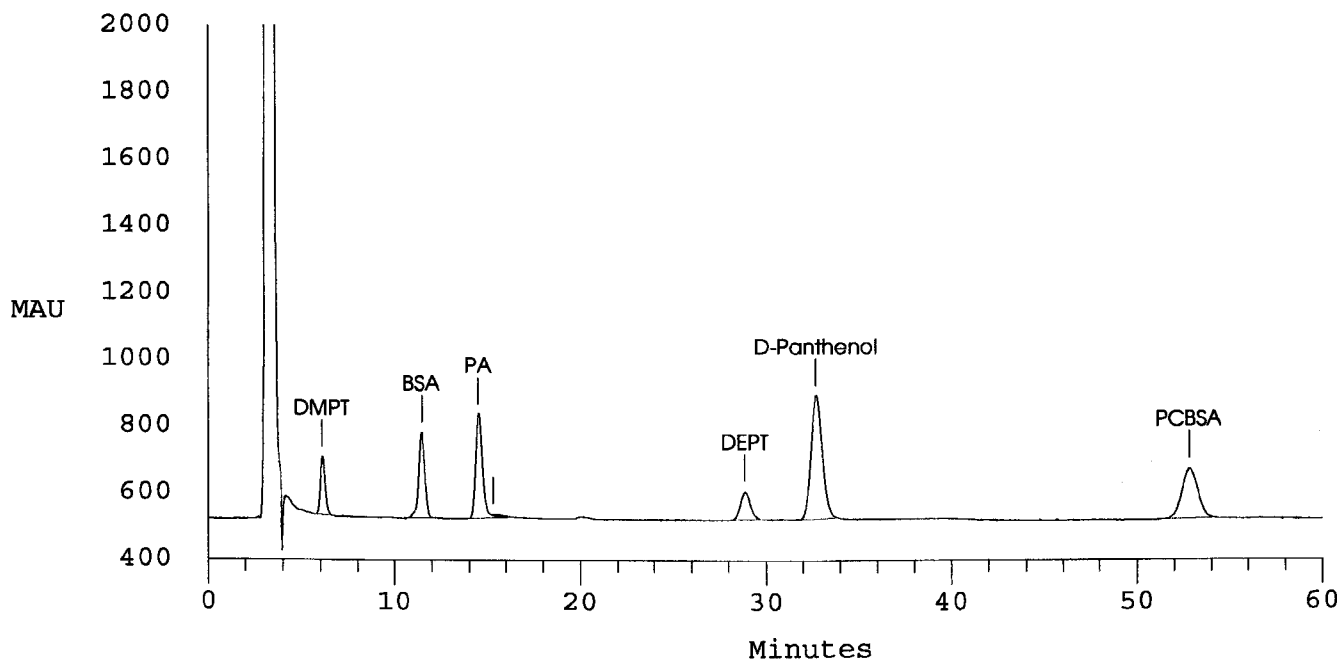
=====
Sample Name: SAMP TRX09072041-03A 2X + 0.2 Date: 07/21/2009 01:11:08
Data File : C:\DX\DATA\072009\B4673001.D14
Method : C:\DX\METHOD\ACID.MET
ACI Address: 1 System: 2 Inject#: 14 Vial: Detector: OTHER
Analyst : Column:
=====

=====
Calibration Volume Dilution Points Rate Start Stop Area Reject
=====
External 1 2 18000 5Hz 0.00 60.00 1000
=====

***** Component Report: Components Found *****

Ret Time	Response Factor	Component Name	Area	Concentration mg/L
6.10	1.446e-006	DMPT	301257	0.850
11.47	3.287e-007	BSA	559633	0.367
14.50	2.720e-007	PA	828977	0.414
28.87	6.615e-007	DEPT	306942	0.405
32.70	6.430e-006	D-Panthenol	1557165	19.679
52.83	2.254e-007	PCBSA	875327	0.386
Totals			4429301	22.101

File: B4673001.D14 Sample: SAMP TRX09072041-03A 2X + 0.2



METHOD HPLC ACIDS
HPLC #3 UV DETECTOR
Test Code: XXX_XX

Result *7/22/09*
Peer/QC
Report _____ Final _____

Data Reprocessed On 07/22/2009 10:17:54

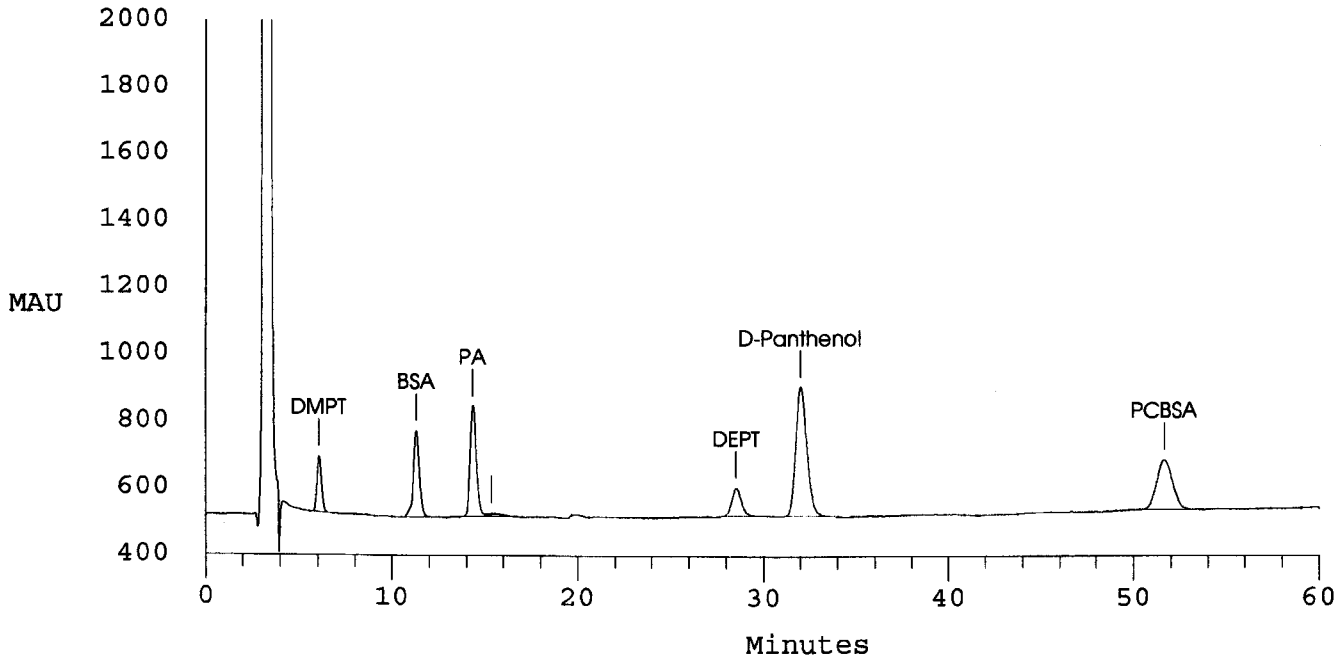
=====
Sample Name: SAMP TRX09072041-04A 2X + 0.2 Date: 07/21/2009 03:16:37
Data File : C:\DX\DATA\072009\B4675001.D16
Method : C:\DX\METHOD\ACID.MET
ACI Address: 1 System: 2 Inject#: 16 Vial: Detector: OTHER
Analyst : Column:
=====

=====
Calibration Volume Dilution Points Rate Start Stop Area Reject
=====
External 1 2 18000 5Hz 0.00 60.00 1000
=====

***** Component Report: Components Found *****

Ret Time	Response Factor	Component Name	Area	Concentration mg/L
6.07	1.446e-006	DMPT	282776	0.797
11.33	3.287e-007	BSA	573253	0.376
14.33	2.720e-007	PA	786688	0.391
28.53	6.615e-007	DEPT	319691	0.422
32.00	6.430e-006	D-Panthenol	1620066	20.488
51.67	2.254e-007	PCBSA	884037	0.390
Totals			4466511	22.863

File: B4675001.D16 Sample: SAMP TRX09072041-04A 2X + 0.2



METHOD HPLC ACIDS
 HPLC #3 UV DETECTOR
 Test Code: XXX_XX

Result *7/22/09 ✓*
 Peer/QC
 Report _____ Final _____

Data Reprocessed On 07/22/2009 10:18:03

```

=====
Sample Name: SAMP TRX09072041-05A 2X + 0.2 Date: 07/21/2009 05:21:59
Data File  : C:\DX\DATA\072009\B4677001.D18
Method     : C:\DX\METHOD\ACID.MET
ACI Address: 1 System: 2 Inject#: 18 Vial:          Detector:OTHER
Analyst    :          Column:
=====
  
```

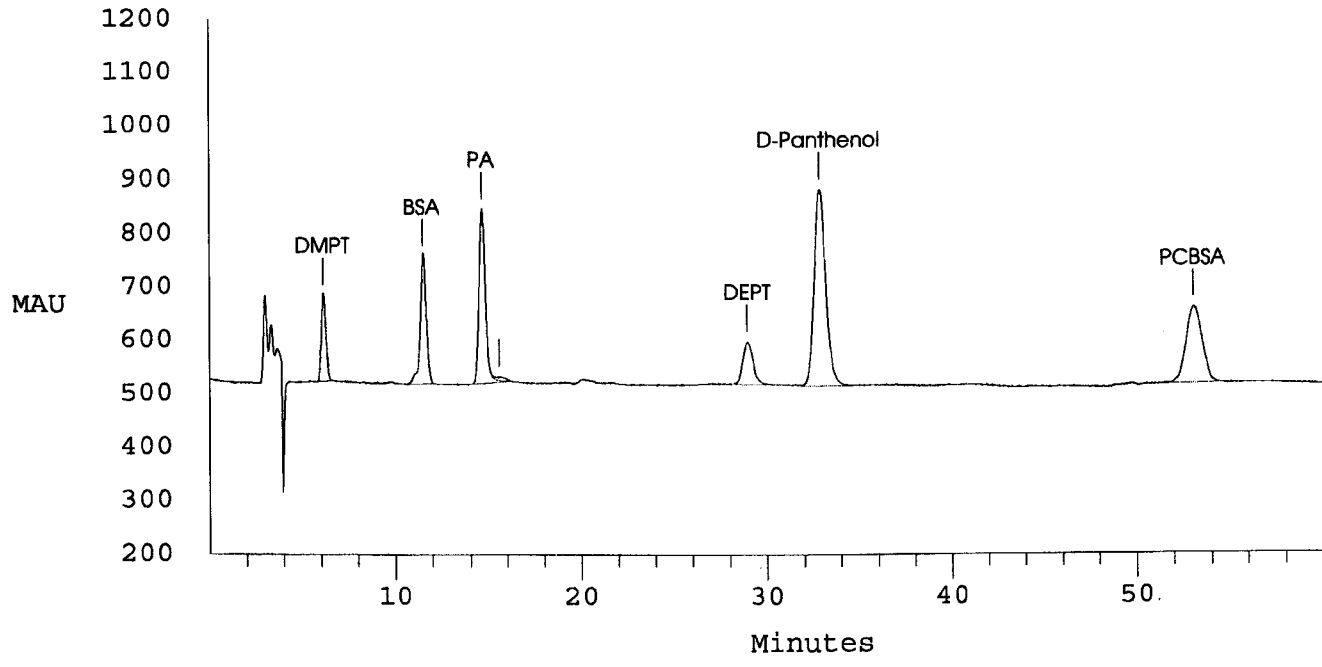
```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1           2 18000 5Hz  0.00 60.00      1000
  
```

***** Component Report: Components Found *****

Ret Time	Response Factor Name	Component	Area	Concentration mg/L
6.10	1.446e-006	DMPT	282338	0.795
11.47	3.287e-007	BSA	551424	0.362
14.63	2.720e-007	PA	802236	0.399
28.93	6.615e-007	DEPT	296000	0.391
32.83	6.430e-006	D-Panthenol	1590022	20.101
53.03	2.254e-007	PCBSA	855025	0.377
Totals			4377044	22.425

File: B4677001.D18 Sample: SAMP TRX09072041-05A 2X + 0.2



**Method Blank
Laboratory Control Spike (LCS)
Matrix Spike (MS) and Duplicate (MSD)**

Summary Data

Organic Acids by HPLC



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:
05-Aug-09

QC Summary Report

Work Order:
09072041

Method Blank

Method Blank		Type	Test Code: Alpha Acids							
File ID:		Batch ID: 22368		Analysis Date: 07/20/2009 12:38						
Sample ID: MBLK-22368		Units : mg/L	Run ID: HPLC_3_090720A		Prep Date: 07/20/2009					
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dimethyl phosphorodithioic acid	ND	0.25								
Benzenesulfonic acid	ND	0.05								
Phthalic acid	ND	0.05								
Diethyl phosphorodithioic acid	ND	0.05								
4-Chlorobenzenesulfonic acid	ND	0.05								

Laboratory Control Spike

Laboratory Control Spike		Type	Test Code: Alpha Acids							
File ID:		Batch ID: 22368		Analysis Date: 07/20/2009 13:41						
Sample ID: LCS-22368		Units : mg/L	Run ID: HPLC_3_090720A		Prep Date: 07/20/2009					
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dimethyl phosphorodithioic acid	1.06	0.25	1		106	50	150			
Benzenesulfonic acid	0.46	0.05	0.5		92	60	140			
Phthalic acid	0.528	0.05	0.5		106	60	140			
Diethyl phosphorodithioic acid	0.521	0.05	0.5		104	60	140			
4-Chlorobenzenesulfonic acid	0.497	0.05	0.5		99	60	140			

Sample Matrix Spike

Sample Matrix Spike		Type	Test Code: Alpha Acids							
File ID:		Batch ID: 22368		Analysis Date: 07/20/2009 16:49						
Sample ID: 09072041-01AMS		Units : mg/L	Run ID: HPLC_3_090720A		Prep Date: 07/20/2009					
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dimethyl phosphorodithioic acid	2.12	0.25	2	0	106	50	150			
Benzenesulfonic acid	0.941	0.05	1	0	94	60	140			
Phthalic acid	1.04	0.05	1	0	104	60	140			
Diethyl phosphorodithioic acid	1.04	0.05	1	0	104	60	140			
4-Chlorobenzenesulfonic acid	1	0.05	1	0	100	60	140			

Sample Matrix Spike Duplicate

Sample Matrix Spike Duplicate		Type	Test Code: Alpha Acids							
File ID:		Batch ID: 22368		Analysis Date: 07/20/2009 17:52						
Sample ID: 09072041-01AMSD		Units : mg/L	Run ID: HPLC_3_090720A		Prep Date: 07/20/2009					
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dimethyl phosphorodithioic acid	2.2	0.25	2	0	110	50	150	2.12	3.5(20)	
Benzenesulfonic acid	0.949	0.05	1	0	95	60	140	0.941	0.8(20)	
Phthalic acid	1.07	0.05	1	0	107	60	140	1.039	2.5(20)	
Diethyl phosphorodithioic acid	1.12	0.05	1	0	112	60	140	1.038	7.2(20)	
4-Chlorobenzenesulfonic acid	1.02	0.05	1	0	102	60	140	1.004	1.3(20)	

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

Sample data was verified by spike addition confirmation.

Method Blank
Laboratory Control Spike (LCS/LCSD)
Matrix Spike (MS) and Duplicate (MSD)

Raw Data
Organic Acids by HPLC

METHOD HPLC ACIDS
HPLC #3 UV DETECTOR
Test Code: XXX_XX

Result *7/22/09*
Peer/QC
Report _____ Final _____

Data Reprocessed On 07/22/2009 10:16:52

=====
Sample Name: MBLK ...MBLK-22368 Date: 07/20/2009 12:38:23
Data File : C:\DX\DATA\072009\B4661001.D02
Method : C:\DX\METHOD\ACID.MET
ACI Address: 1 System: 2 Inject#: 2 Vial: Detector:OTHER
Analyst : Column:
=====

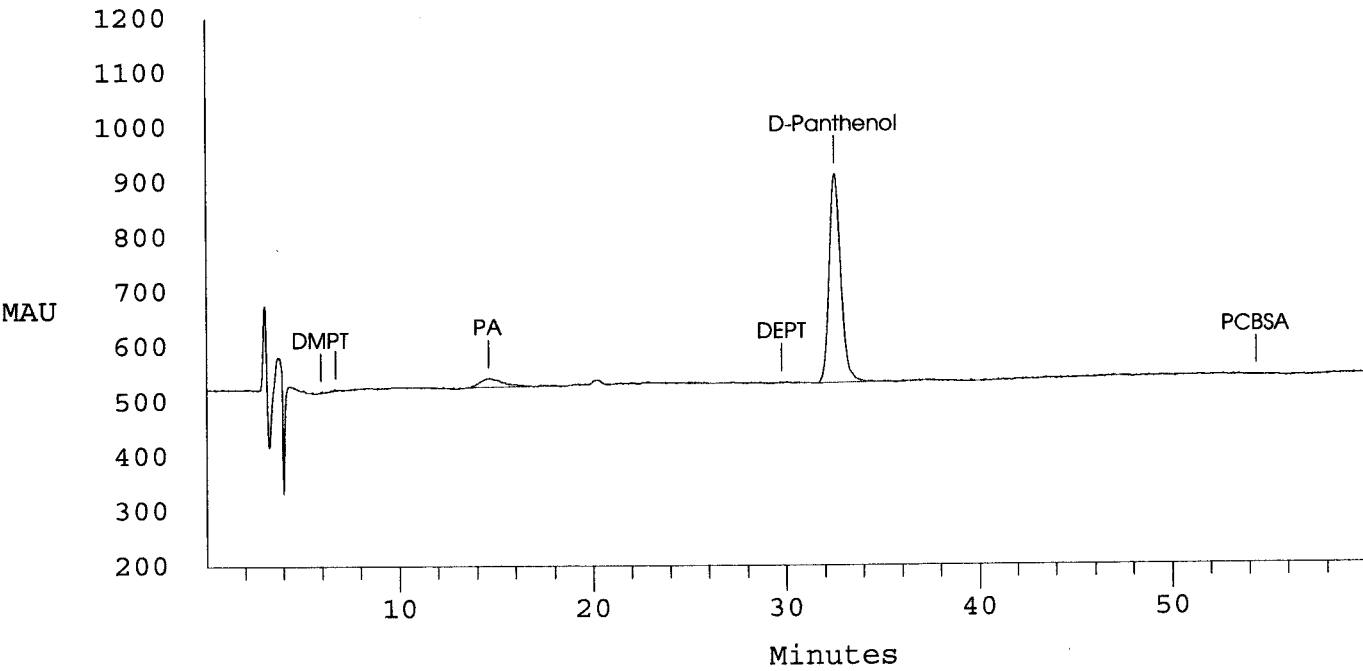
=====
Calibration Volume Dilution Points Rate Start Stop Area Reject
External 1 1 18000 5Hz 0.00 60.00 1000
=====

***** Component Report: Components Found *****

Ret Time	Response Factor	Component Name	Area	Concentration mg/L
5.93	1.446e-006	DMPT	4441	-0.004
14.60	2.720e-007	PA	144960	0.021
29.77	6.615e-007	DEPT	3700	0.002
32.50	6.430e-006	D-Panthenol	1604421	10.143
54.33	2.254e-007	PCBSA	2440	-0.004
Totals			1759962	10.158

*NO Lead e
07/20/09 10:16*

File: B4661001.D02 Sample: MBLK ...MBLK-22368



METHOD HPLC ACIDS
 HPLC #3 UV DETECTOR
 Test Code: XXX_XX

Result *7/22/09 ✓*
 Peer/QC
 Report _____ Final _____

Data Reprocessed On 07/22/2009 10:16:55

```

=====
Sample Name: LCS ...LCS-22368          Date: 07/20/2009 13:41:05
Data File  : C:\DX\DATA\072009\B4662001.D03
Method     : C:\DX\METHOD\ACID.MET
ACI Address: 1 System: 2 Inject#: 3 Vial:          Detector:OTHER
Analyst    :                               Column:
=====
  
```

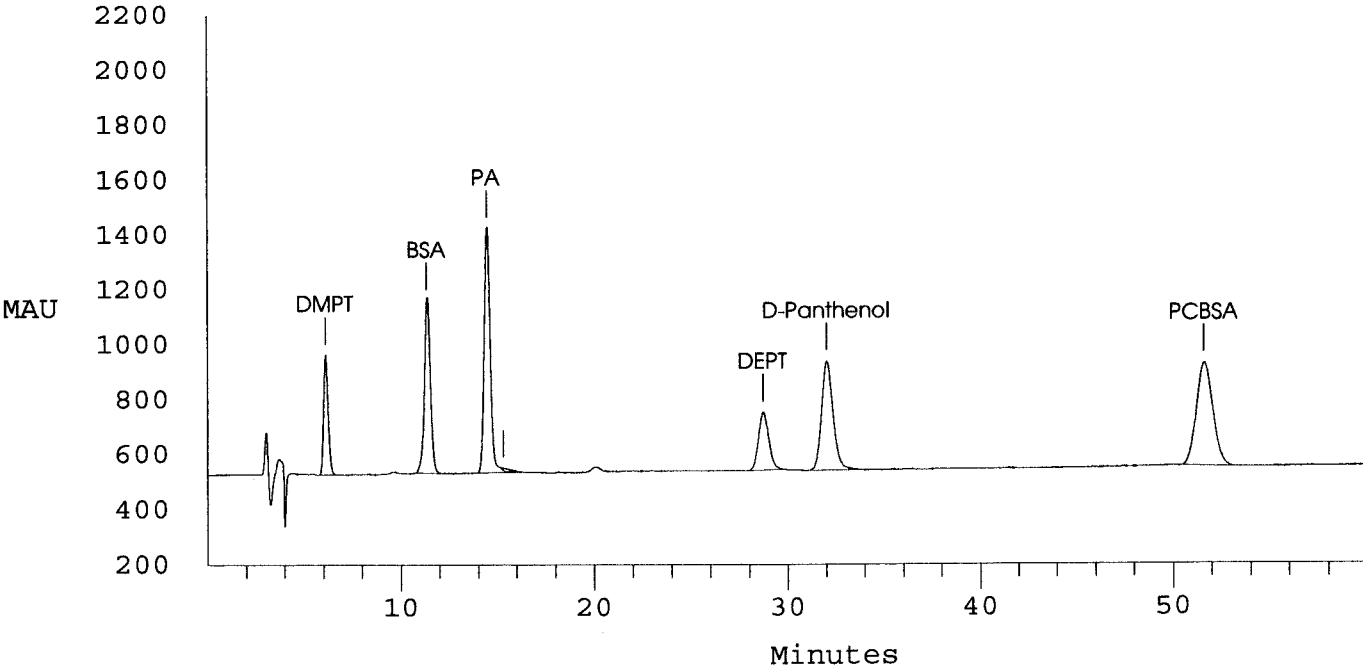
```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External           1           1 18000 5Hz  0.00 60.00      1000
  
```

***** Component Report: Components Found *****

Ret Time	Response Factor	Component Name	Area	Concentration mg/L
6.10	1.446e-006	DMPT	738099	1.057
11.33	3.287e-007	BSA	1399308	0.460
14.43	2.720e-007	PA	2010991	0.528
28.70	6.615e-007	DEPT	788437	0.521
32.00	6.430e-006	D-Panthenol	1665289	10.535
51.57	2.254e-007	PCBSA	2222424	0.497
Totals			8824548	13.597

File: B4662001.D03 Sample: LCS ...LCS-22368



METHOD HPLC ACIDS
 HPLC #3 UV DETECTOR
 Test Code: XXX_XX

Result *7/22/09*
 Peer/QC
 Report _____ Final _____

Data Reprocessed On 07/22/2009 10:17:00

```

=====
Sample Name: SAMP TRX09072041-01A 2X      Date: 07/20/2009 15:46:37
Data File  : C:\DX\DATA\072009\B4664001.D05
Method     : C:\DX\METHOD\ACID.MET
ACI Address: 1 System: 2 Inject#: 5 Vial:      Detector: OTHER
Analyst    :                               Column:
=====
  
```

```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1           2 18000 5Hz  0.00 60.00      1000
  
```

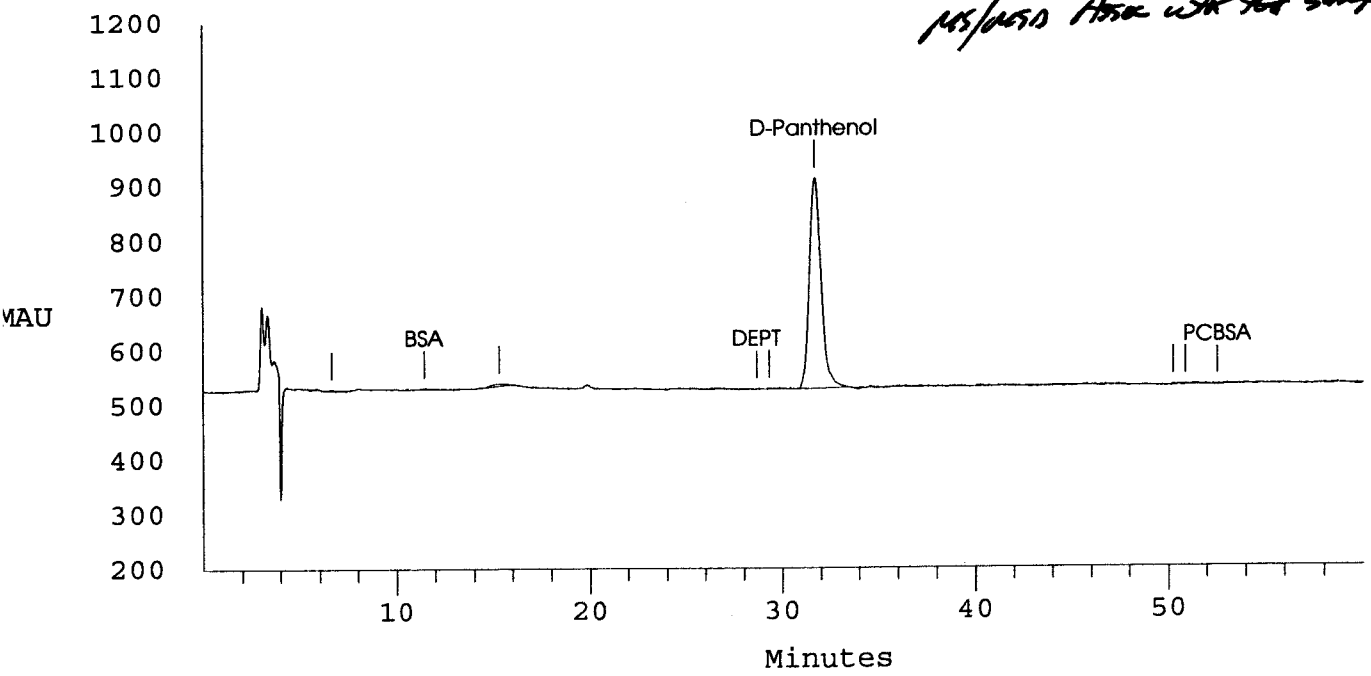
***** Component Report: Components Found *****

Ret Time	Response Factor	Component Name	Area	Concentration mg/L
11.47	3.287e-007	BSA	8154	0.005
28.67	6.615e-007	DEPT	1062	0.000
31.67	6.430e-006	D-Panthenol	1630832	20.626
52.53	2.254e-007	PCBSA	2579	-0.007
Totals			1642627	20.624

no peak @ 0.25/0.25 mg/L
DEPT: no peak @ 0.25/0.25 mg/L

File: B4664001.D05 Sample: SAMP TRX09072041-01A 2X

no peak Area with the sample



METHOD HPLC ACIDS
 HPLC #3 UV DETECTOR
 Test Code: XXX_XX

Result *7/22/09*
 Peer/QC
 Report _____ Final _____

Data Reprocessed On 07/22/2009 10:17:03

```

=====
Sample Name: MS TRX09072041-01AMS 2X Date: 07/20/2009 16:49:20
Data File : C:\DX\DATA\072009\B4665001.D06
Method : C:\DX\METHOD\ACID.MET
ACI Address: 1 System: 2 Inject#: 6 Vial: Detector: OTHER
Analyst : Column:
=====
  
```

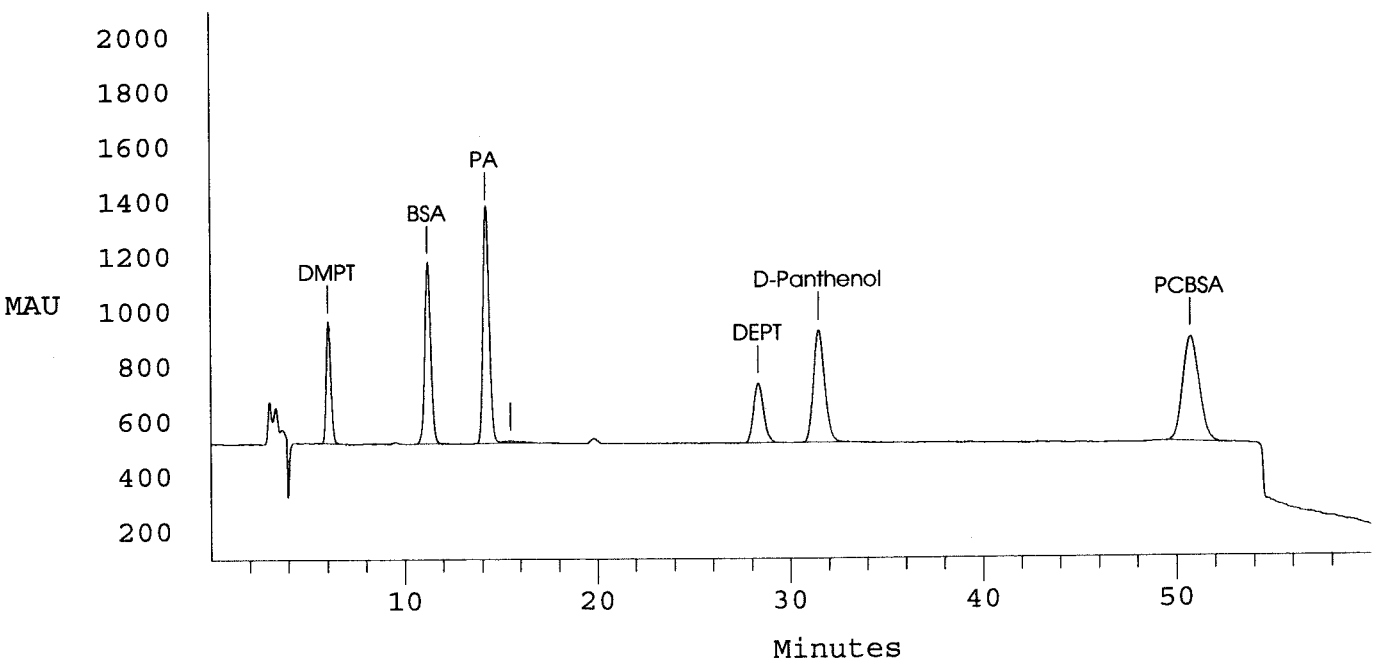
```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External 1 2 18000 5Hz 0.00 60.00 1000
  
```

***** Component Report: Components Found *****

Ret Time	Response Factor	Component Name	Area	Concentration mg/L
6.03	1.446e-006	DMPT	740434	2.120
11.20	3.287e-007	BSA	1431783	0.941
14.20	2.720e-007	PA	1978977	1.039
28.33	6.615e-007	DEPT	784925	1.038
31.47	6.430e-006	D-Panthenol	1662637	21.035
50.70	2.254e-007	PCBSA	2245456	1.004
Totals			8844213	27.176

File: B4665001.D06 Sample: MS TRX09072041-01AMS 2X



METHOD HPLC ACIDS
 HPLC #3 UV DETECTOR
 Test Code: XXX_XX

Result *7/24/09*
 Peer/QC
 Report _____ Final _____

Data Reprocessed On 07/22/2009 10:17:07

```

=====
Sample Name: MSD TRX09072041-01AMSD 2X      Date: 07/20/2009 17:52:02
Data File  : C:\DX\DATA\072009\B4666001.D07
Method     : C:\DX\METHOD\ACID.MET
ACI Address: 1 System: 2 Inject#: 7 Vial:
Analyst    :                               Column:
=====
  
```

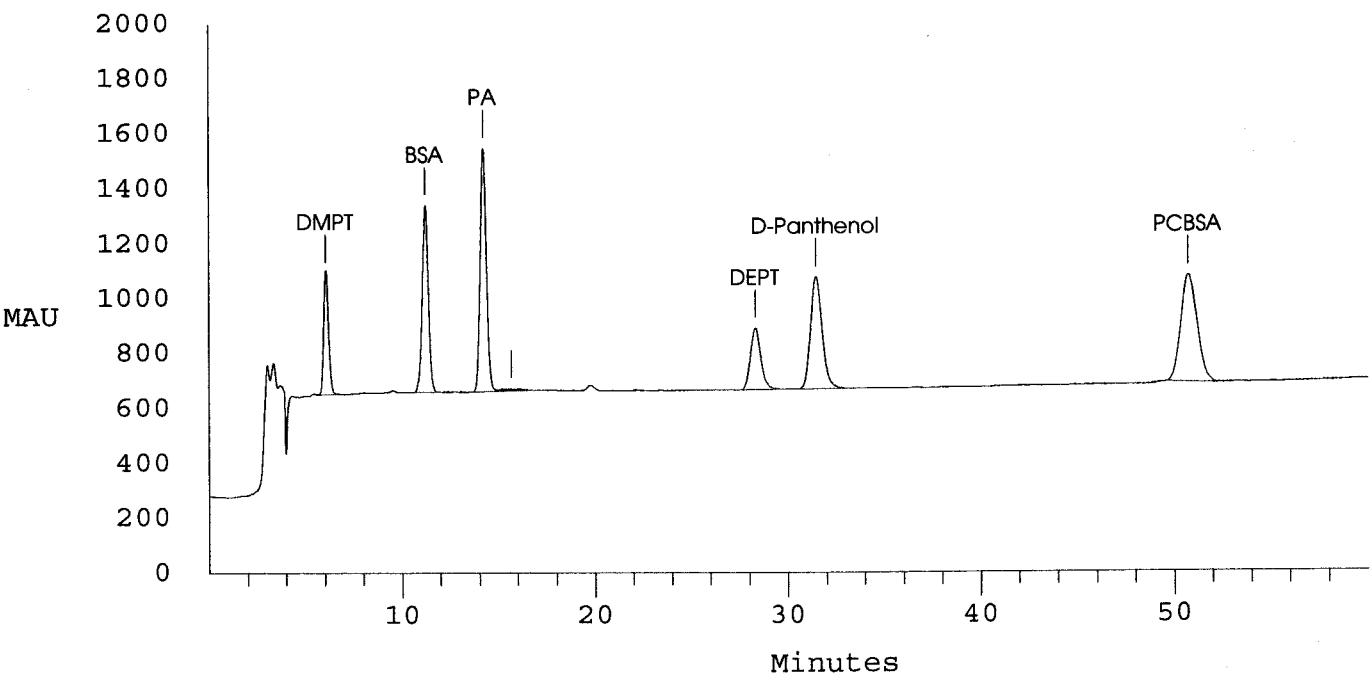
```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External           1           2 18000 5Hz  0.00 60.00      1000
  
```

***** Component Report: Components Found *****

Ret Time	Response Factor	Component Name	Area	Concentration mg/L
6.03	1.446e-006	DMPT	766232	2.195
11.20	3.287e-007	BSA	1444773	0.949
14.20	2.720e-007	PA	2027158	1.065
28.30	6.615e-007	DEPT	844352	1.116
31.43	6.430e-006	D-Panthenol	1696281	21.468
50.70	2.254e-007	PCBSA	2274295	1.017
Totals			9053091	27.810

File: B4666001.D07 Sample: MSD TRX09072041-01AMSD 2X



**Initial Calibration
Summary Data
Organic Acids by HPLC**

Organic Acids Initial Calibration (IC)
 Summary Table
 Proprietary In-house Procedure

Lab Name: Alpha Analytical, Inc.
 Instrument ID: HPLC #3
 Analyst Initials: JV
 QC Rev Initials: WH

Batch: 22368
 Date: 7/20/2009

		Concentration (mg/L)							
	IC-1	IC-2	IC-3	IC-4	IC-5	IC-6	IC-7	IC-8	
Date Analyzed	4411001.d08	4412001.d09	4413001.d10	4414001.d11	4415001.d12	4416001.d13	4417001.d14	4418001.d15	
Time Analyzed	6/2/2009 5:24:20 PM	6/2/2009 6:32:55 PM	6/2/2009 7:41:30 PM	6/2/2009 8:50:10 PM	6/2/2009 9:58:46 PM	6/2/2009 11:07:22 PM	6/3/2009 12:16:05 AM	6/3/2009 1:24:37 AM	
DMPT	0.0625	0.1250	0.2500	0.6250	1.2500	2.5000	3.7500	5.0000	
BSA	0.0250	0.0500	0.1000	0.2500	0.5000	1.0000	1.5000	2.0000	
PA	0.0250	0.0500	0.1000	0.2500	0.5000	1.0000	1.5000	2.0000	
DEPT	0.0250	0.0500	0.1000	0.2500	0.5000	1.0000	1.5000	2.0000	
PCBSA	0.0250	0.0500	0.1000	0.2500	0.5000	1.0000	1.5000	2.0000	

		Response							
	IC-1	IC-2	IC-3	IC-4	IC-5	IC-6	IC-7	IC-8	
Date Analyzed	4411001.d08	4412001.d09	4413001.d10	4414001.d11	4415001.d12	4416001.d13	4417001.d14	4418001.d15	
Time Analyzed	6/2/2009 5:24:20 PM	6/2/2009 6:32:55 PM	6/2/2009 7:41:30 PM	6/2/2009 8:50:10 PM	6/2/2009 9:58:46 PM	6/2/2009 11:07:22 PM	6/3/2009 12:16:05 AM	6/3/2009 1:24:37 AM	
DMPT	46797	87948	168367	449022	889036	1730732	2610389	3456889	
BSA	61771	137858	284793	784576	1547455	3057536	4581387	6056782	
PA	121982	196509	435976	1047983	1941613	3745198	5624396	7372870	
DEPT	34682	61428	160275	406470	751885	1494805	2284394	3018277	
PCBSA	105332	201649	464100	1152183	2262016	4485504	6696299	8851547	

Calibration Factor (CF) = Response/Concentration (mg/L)

	IC-1	IC-2	IC-3	IC-4	IC-5	IC-6	IC-7	IC-8	Average Calibration Factor (CF)	Standard Deviation	Relative Standard Deviation (RSD%)
Date Analyzed	4411001.d08	4412001.d09	4413001.d10	4414001.d11	4415001.d12	4416001.d13	4417001.d14	4418001.d15			
Time Analyzed	6/2/2009 5:24:20 PM	6/2/2009 6:32:55 PM	6/2/2009 7:41:30 PM	6/2/2009 8:50:10 PM	6/2/2009 9:58:46 PM	6/2/2009 11:07:22 PM	6/3/2009 12:16:05 AM	6/3/2009 1:24:37 AM			
DMPT	748752	703584	673468	718435	711229	692293	696104	691378	704405	22530	3.20
BSA	2470840	2757160	2847930	3138304	3094910	3057536	3054258	3028391	2931166	226589	7.73
PA	4879280	3930180	4359760	4191932	3883226	3745198	3749597	3686435	4063201	407293	10.05
DEPT	1387280	1225560	1602750	1625880	1503770	1494805	1522929	1509139	1484389	126203	8.50
PCBSA	4213280	4032980	4641000	4608732	4524032	4485504	4464199	4425774	4424438	204912	4.63

**Initial Calibration
Raw Data
Organic Acids by HPLC**

METHOD HPLC ACIDS
 HPLC #3 UV DETECTOR
 Test Code: XIX_XX

Result *ca/3/09*
 Peer/QC
 Report _____ Final _____

Data Reprocessed On 06/03/2009 07:06:17

 Sample Name: .25/.0625/.025 ug/mL LC090531-3 Date: 06/02/2009 17:24:20
 Data File : C:\DX\DATA\060209\B4411001.D08
 Method : C:\DX\METHOD\ACID.MET
 ACI Address: 1 System: 2 Inject#: 8 Vial: Detector: OTHER
 Analyst : Column: -----

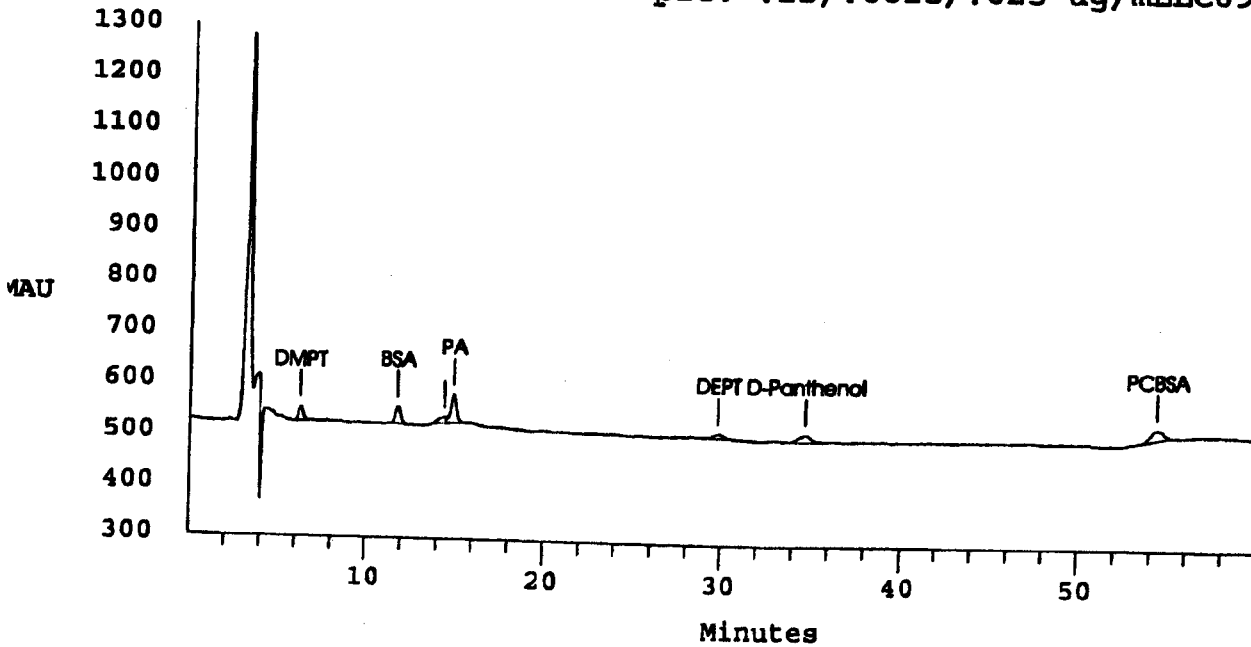
 Calibration Volume Dilution Points Rate Start Stop Area Reject

 External 1 1 18000 5Hz 0.00 60.00 1000

***** Component Report: Components Found *****

Ret Time	Response Factor	Component Name	Area	Concentration mg/L
6.20	1.446e-006	DMPT	46797	0.057
11.73	3.287e-007	BSA	61771	0.020
14.87	2.720e-007	PA	121982	0.014
29.73	6.615e-007	DEPT	34682	0.022
34.67	6.430e-006	D-Panthenol	65700	0.250
54.30	2.254e-007	PCBSA	105332	0.020
Totals			436264	0.384

File: B4411001.D08 Sample: .25/.0625/.025 ug/mL LC090531-3



METHOD HPLC ACIDS
HPLC #3 UV DETECTOR
Test Code: XXX_XX

Result *93%*
Peer/QC
Report Final

Data Reprocessed On 06/03/2009 07:06:19

Sample Name: .5/.125/.05 ug/mL LC090531-04 Date: 06/02/2009 18:32:55
Data File : C:\DX\DATA\060209\B4412001.D09
Method : C:\DX\METHOD\ACID.MET
ACI Address: 1 System: 2 Inject#: 9 Vial: Detector: OTHER
Analyst : Column:

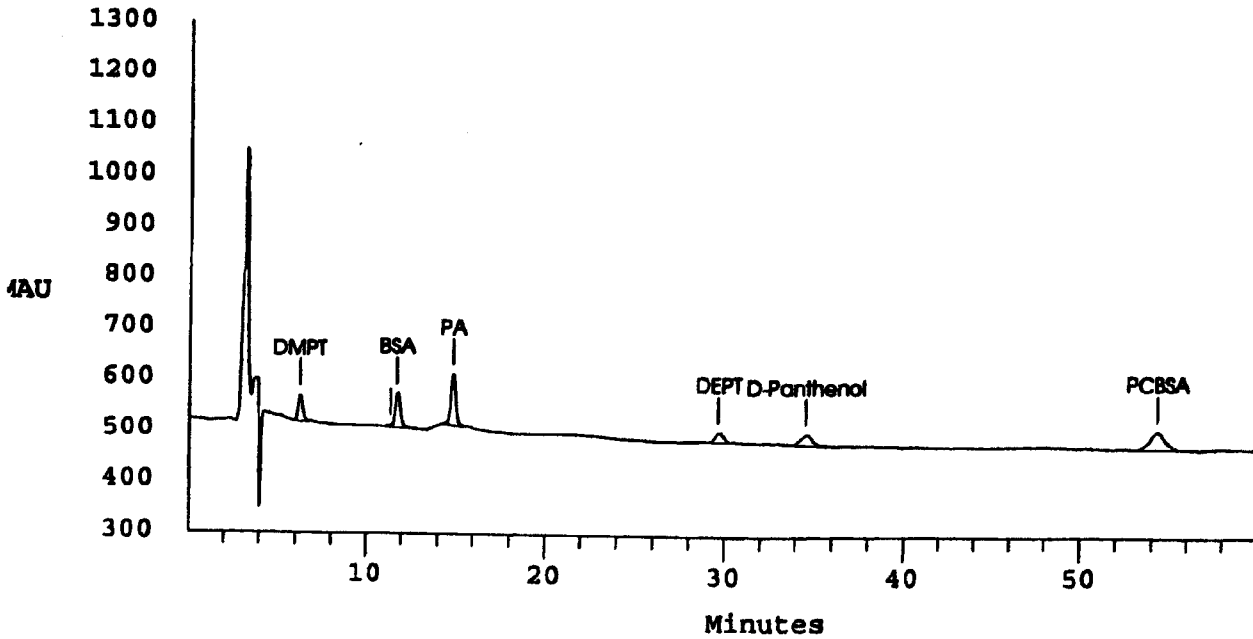
Calibration Volume Dilution Points Rate Start Stop Area Reject

External 1 1 18000 5Hz 0.00 60.00 1000

***** Component Report: Components Found *****

Ret Time	Response Factor	Component Name	Area	Concentration mg/L
6.20	1.446e-006	DMPT	87948	0.117
11.70	3.287e-007	BSA	137877	0.045
14.83	2.720e-007	PA	196509	0.035
29.60	6.615e-007	DEPT	61428	0.040
34.50	6.430e-006	D-Panthenol	93929	0.431
54.23	2.254e-007	PCBSA	201649	0.041
Totals			779340	0.709

File: B4412001.D09 Sample: .5/.125/.05 ug/mL LC090531-04



METHOD HPLC ACIDS
HPLC #3 UV DETECTOR
Test Code: XXX_XX

Result *U/SPT*
Peer/QC
Report Final

Data Reprocessed On 06/03/2009 07:06:22

Sample Name: 1.0/.25/.1 ug/mL C090531-05 Date: 06/02/2009 19:41:30
Data File : C:\DX\DATA\060209\B4413001.D10
Method : C:\DX\METHOD\ACID.MET
ACI Address: 1 System: 2 Inject#: 10 Vial: Detector: OTHER
Analyst : Column:

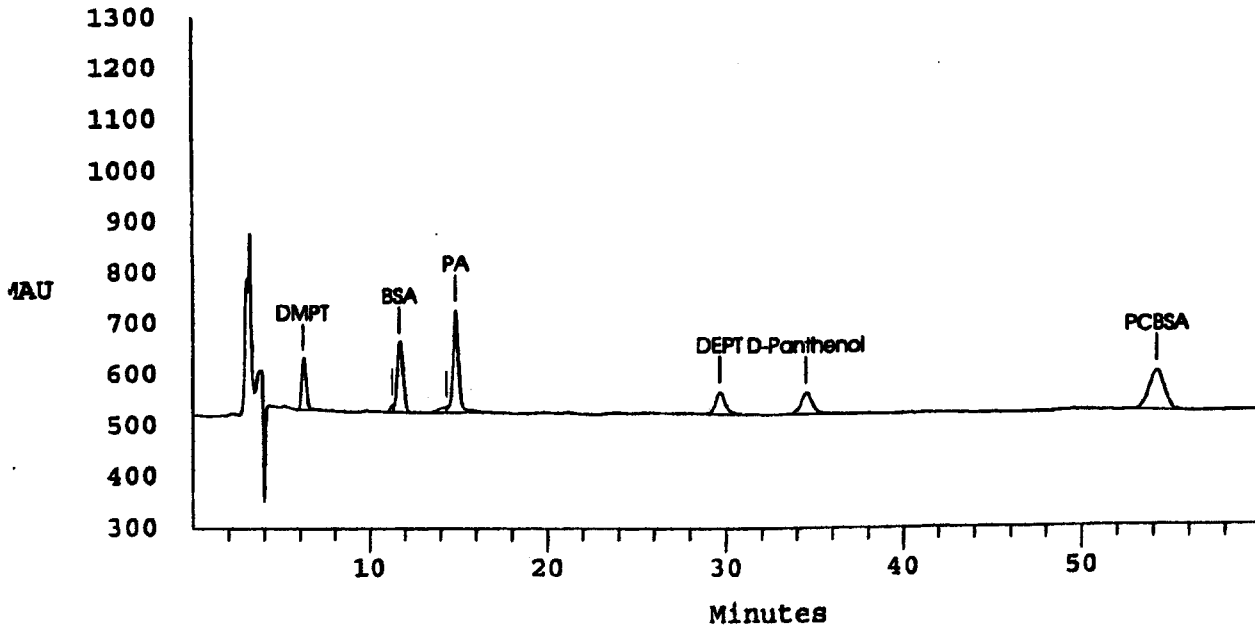
Calibration Volume Dilution Points Rate Start Stop Area Reject

external 1 1 18000 5Hz 0.00 60.00 1000

***** Component Report: Components Found *****

Ret Time	Response Factor	Component Name	Area	Concentration mg/L
6.17	1.446e-006	DMPT	168367	0.233
11.70	3.287e-007	BSA	284793	0.093
14.83	2.720e-007	PA	435976	0.100
29.60	6.615e-007	DEPT	160275	0.106
34.47	6.430e-006	D-Panthenol	178457	0.975
54.13	2.254e-007	PCBSA	464100	0.100
Totals			1691969	1.607

File: B4413001.D10 Sample: 1.0/.25/.1 ug/mL C090531-05



METHOD HPLC ACIDS
 HPLC #3 UV DETECTOR
 Test Code: XXX_XX

Result *U/S/TS*
 Peer/QC *U/S*
 Report Final

Data Reprocessed On 06/03/2009 07:06:24

 Sample Name: 2.5/.625/.25 ug/mL LC090531-06 Date: 06/02/2009 20:50:10
 Data File : C:\DX\DATA\060209\B4414001.D11
 Method : C:\DX\METHOD\ACID.MET
 ACI Address: 1 System: 2 Inject#: 11 Vial: Detector: OTHER
 Analyst : Column:

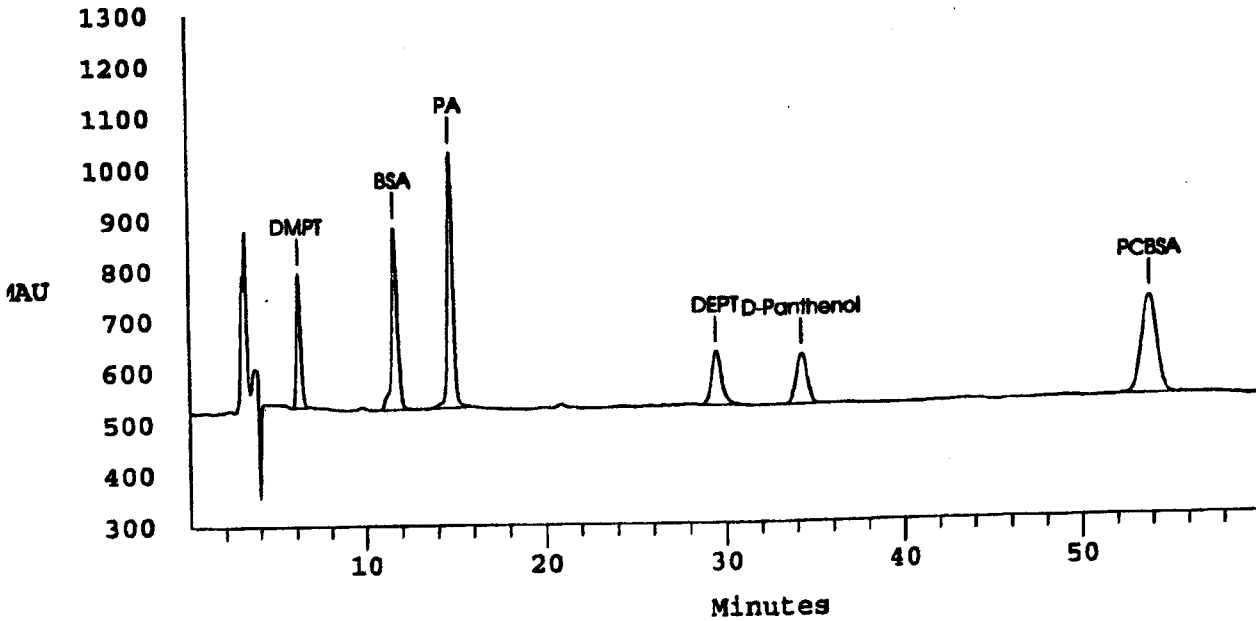
 Calibration Volume Dilution Points Rate Start Stop Area Reject

 External 1 1 18000 5Hz 0.00 60.00 1000

***** Component Report: Components Found *****

Ret Time	Response Factor	Component Name	Area	Concentration mg/L
6.17	1.446e-006	DMPT	449022	0.639
11.67	3.287e-007	BSA	784576	0.258
14.77	2.720e-007	PA	1047983	0.266
29.43	6.615e-007	DEPT	406470	0.268
34.23	6.430e-006	D-Panthenol	403888	2.424
53.77	2.254e-007	PCBSA	1152183	0.255
Totals			4244121	4.111

File: B4414001.D11 Sample: 2.5/.625/.25 ug/mL LC090531-06



METHOD HPLC ACIDS
 HPLC #3 UV DETECTOR
 Test Code: XIX_XX

Result *493170*
 Peer/QC
 Report _____ Final _____

Data Reprocessed On 06/03/2009 07:06:27

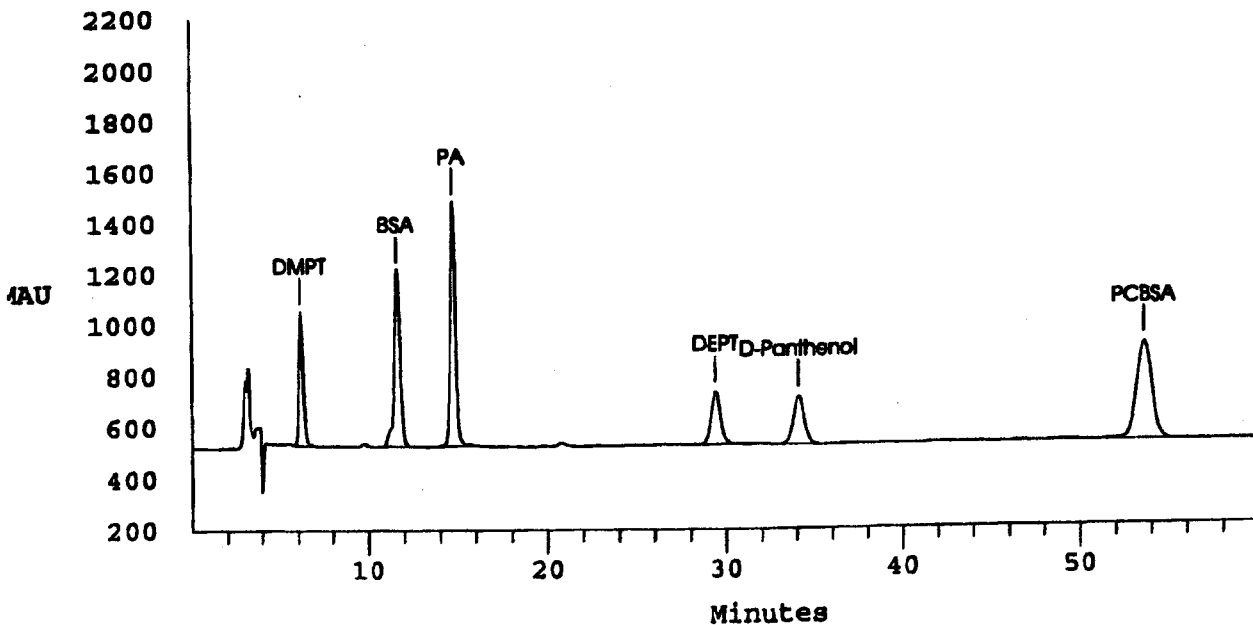
 Sample Name: 5.0/1.25/.5 ug/mL LC090531-07 Date: 06/02/2009 21:58:46
 Data File : C:\DK\DATA\060209\B4415001.D12
 Method : C:\DK\METHOD\ACID.MET
 ACI Address: 1 System: 2 Inject#: 12 Vial: Detector: OTHER
 Analyst : Column:

 Calibration Volume Dilution Points Rate Start Stop Area Reject
 External 1 1 18000 5Hz 0.00 60.00 1000

***** Component Report: Components Found *****

Ret Time	Response Factor	Component Name	Area	Concentration mg/L
6.13	1.446e-006	DMPT	889036	1.275
11.60	3.287e-007	BSA	1547455	0.508
14.70	2.720e-007	PA	1941613	0.509
29.37	6.615e-007	DEPT	751885	0.497
34.07	6.430e-006	D-Panthenol	821858	5.112
53.53	2.254e-007	PCBSA	2262016	0.506
Totals			8213862	8.407

File: B4415001.D12 Sample: 5.0/1.25/.5 ug/mL LC090531-07



METHOD HPLC ACIDS
 HPLC #3 UV DETECTOR
 Test Code: XXX_XX

Result *0/3/08*
 Peer/QC
 Report Final

Data Reprocessed On 06/03/2009 07:06:29

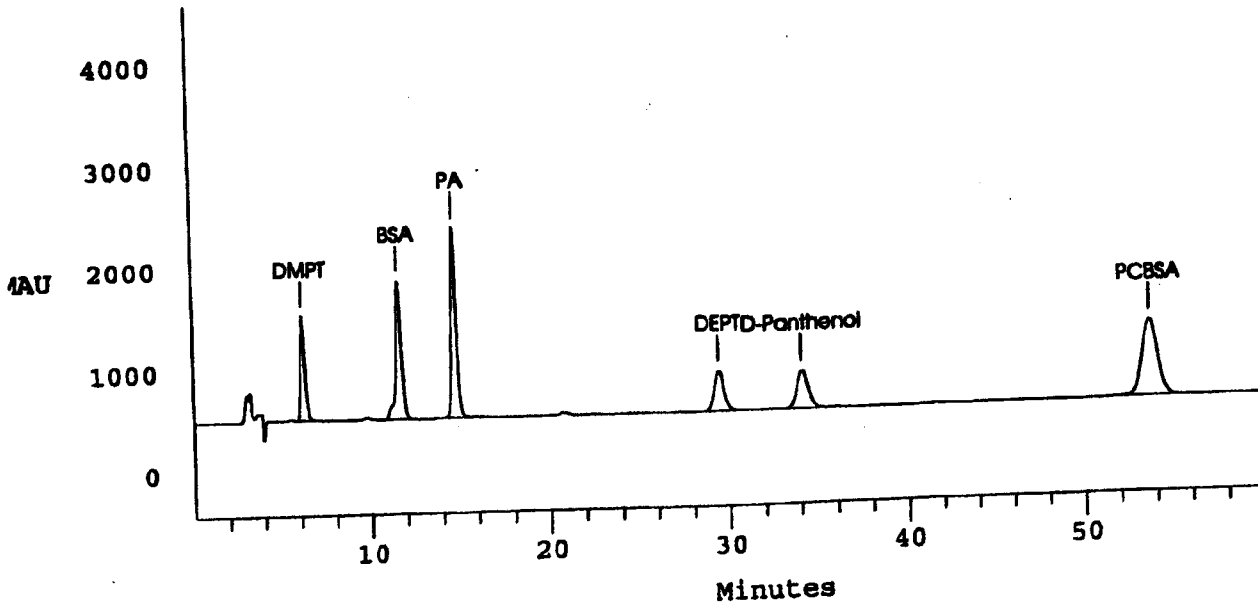
 Sample Name: 10/2.5/1.0 ug/mL LC090531-08 Date: 06/02/2009 23:07:22
 Data File : C:\DX\DATA\060209\B4416001.D13
 Method : C:\DX\METHOD\ACID.MET
 ACI Address: 1 System: 2 Inject#: 13 Vial: Detector: OTHER
 Analyst : Column:

 Calibration Volume Dilution Points Rate Start Stop Area Reject
 External 1 1 18000 5Hz 0.00 60.00 1000

***** Component Report: Components Found *****

Ret Time	Response Factor	Component Name	Area	Concentration mg/L
6.13	1.446e-006	DMPT	1730732	2.492
11.60	3.287e-007	BSA	3057536	1.005
14.70	2.720e-007	PA	3745198	1.000
29.40	6.615e-007	DEPT	1494805	0.988
34.07	6.430e-006	D-Panthenol	1593392	10.072
53.57	2.254e-007	PCBSA	4485504	1.007
Totals			16107168	16.564

File: B4416001.D13 Sample: 10/2.5/1.0 ug/mL LC090531-08



METHOD HPLC ACIDS
 HPLC #3 UV DETECTOR
 Test Code: XXX_XX

Result *4/3/09*
 Peer/QC
 Report Final

Data Reprocessed On 06/03/2009 07:06:31

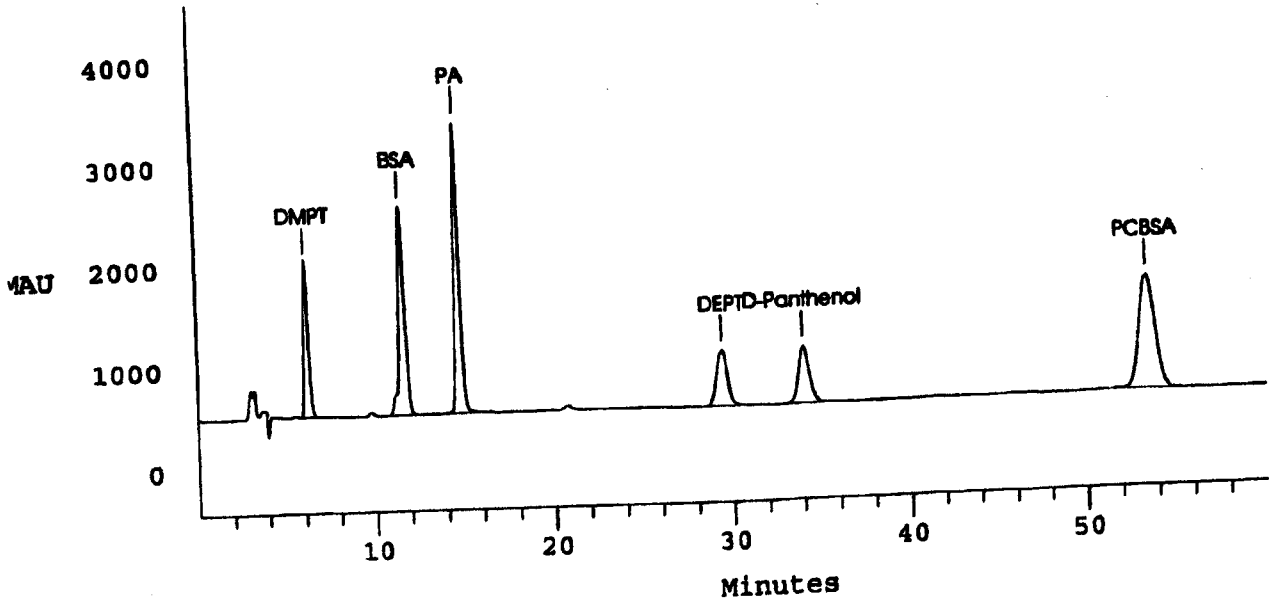
Sample Name: 15/3.75/1.5 ug/mL LC090531-09 Date: 06/03/2009 00:16:05
 Data File : C:\DX\DATA\060209\B4417001.D14
 Method : C:\DX\METHOD\ACID.MET
 ACI Address: 1 System: 2 Inject#: 14 Vial: Detector: OTHER
 Analyst : Column:

Calibration Volume Dilution Points Rate Start Stop Area Reject
 External 1 1 18000 5Hz 0.00 60.00 1000

***** Component Report: Components Found *****

Ret Time	Response Factor	Component Name	Area	Concentration mg/L
6.13	1.446e-006	DMPT	2610389	3.763
11.60	3.287e-007	BSA	4581387	1.506
14.70	2.720e-007	PA	5624396	1.511
29.40	6.615e-007	DEPT	2284394	1.511
33.97	6.430e-006	D-Panthenol	2385431	15.165
53.37	2.254e-007	PCBSA	6696299	1.505
Totals			24182296	24.961

File: B4417001.D14 Sample: 15/3.75/1.5 ug/mL LC090531-09



METHOD HPLC ACIDS
 HPLC #3 UV DETECTOR
 Test Code: KKK_XX

Result ^{7/2/09}
 Peer/QC ✓
 Report _____ Final _____

Data Reprocessed On 06/03/2009 07:06:34

 Sample Name: 20/5.0/2.0 ug/mL C090531-10 Date: 06/03/2009 01:24:37
 Data File : C:\DX\DATA\060209\B4418001.D15
 Method : C:\DX\METHOD\ACID.MBT
 ACI Address: 1 System: 2 Inject#: 15 Vial: Detector: OTHER
 Analyst : Column:

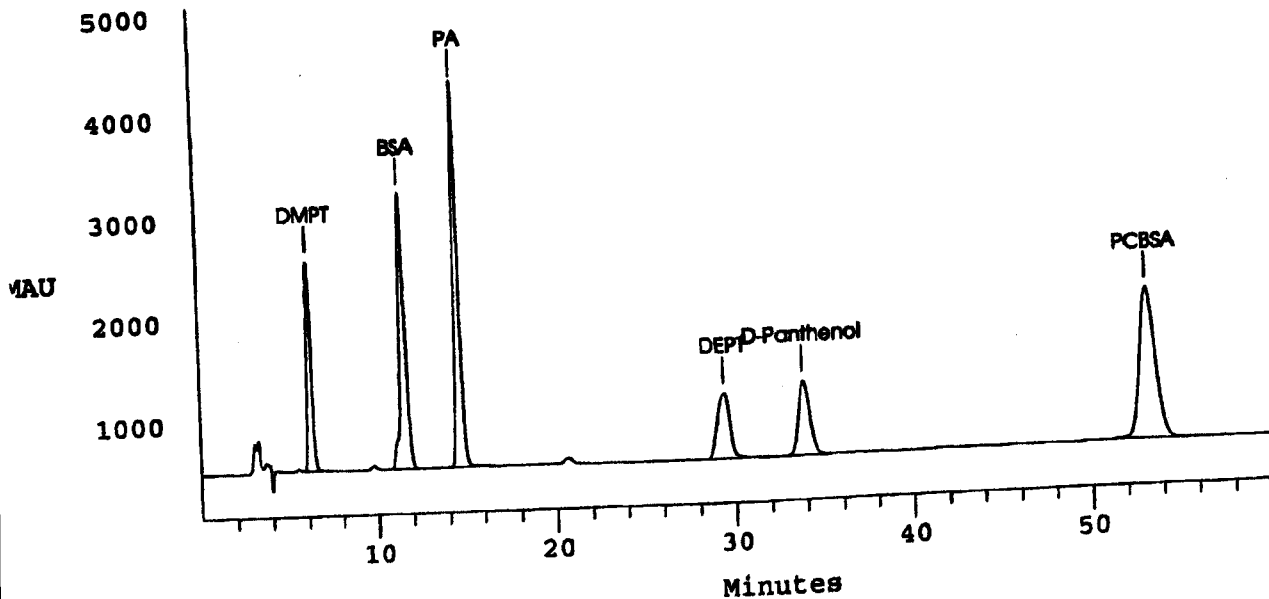
 Calibration Volume Dilution Points Rate Start Stop Area Reject

 External 1 1 18000 5Hz 0.00 60.00 1000

***** Component Report: Components Found *****

Ret Time	Response Factor	Component Name	Area	Concentration mg/L
6.13	1.446e-006	DMPT	3456889	4.987
11.53	3.287e-007	BSA	6056782	1.991
14.60	2.720e-007	PA	7372870	1.987
29.37	6.615e-007	DEPT	3018277	1.996
33.80	6.430e-006	D-Panthenol	3109486	19.820
53.10	2.254e-007	PCBSA	8851547	1.991
Totals			31865852	32.772

File: B4418001.D15 Sample: 20/5.0/2.0 ug/mL C090531-10



STROD HPLC ACIDS
 PLC #3 UV DETECTOR
 est Code: XXX_XX

Result *4/3/09*
 Peer/QC
 Report Final

Data Reprocessed On 06/03/2009 07:06:36

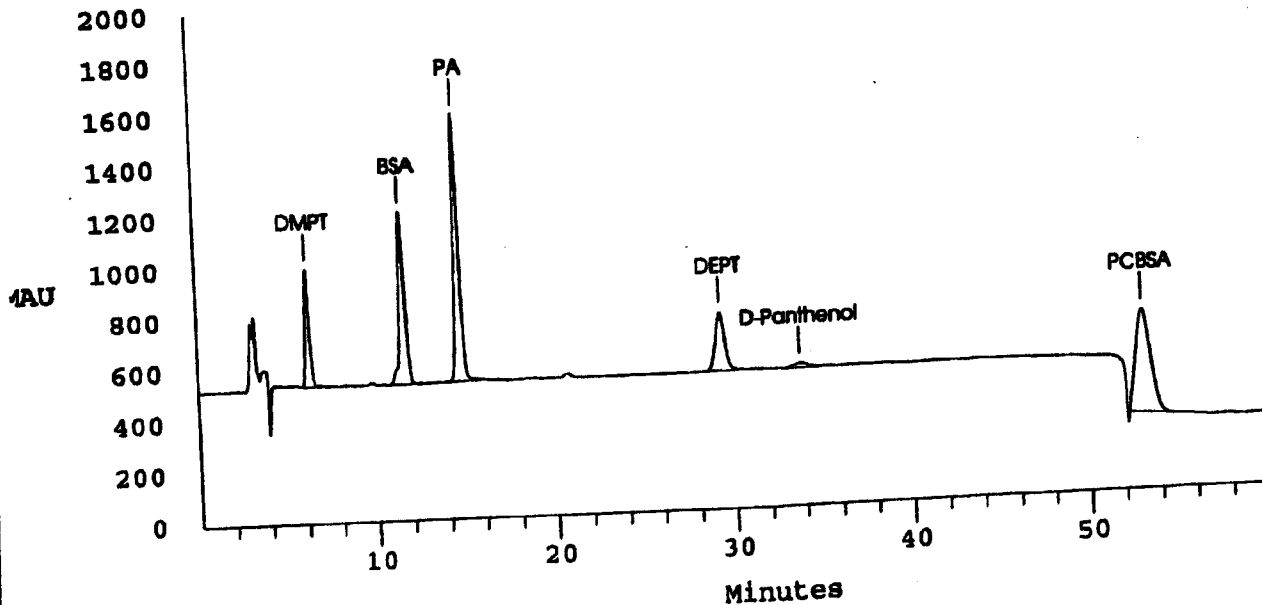
 Sample Name: 1.0/0.5 ug/m ICV LC090531-11 Date: 06/03/2009 02:33:11
 Data File : C:\DX\DATA\060209\B4419001.D16
 Method : C:\DX\METHOD\ACID.MET
 ACI Address: 1 System: 2 Inject#: 16 Vial: Detector: OTHER
 Analyst : Column: -----

 Calibration Volume Dilution Points Rate Start Stop Area Reject
 External 1 1 18000 5Hz 0.00 60.00 1000

***** Component Report: Components Found *****

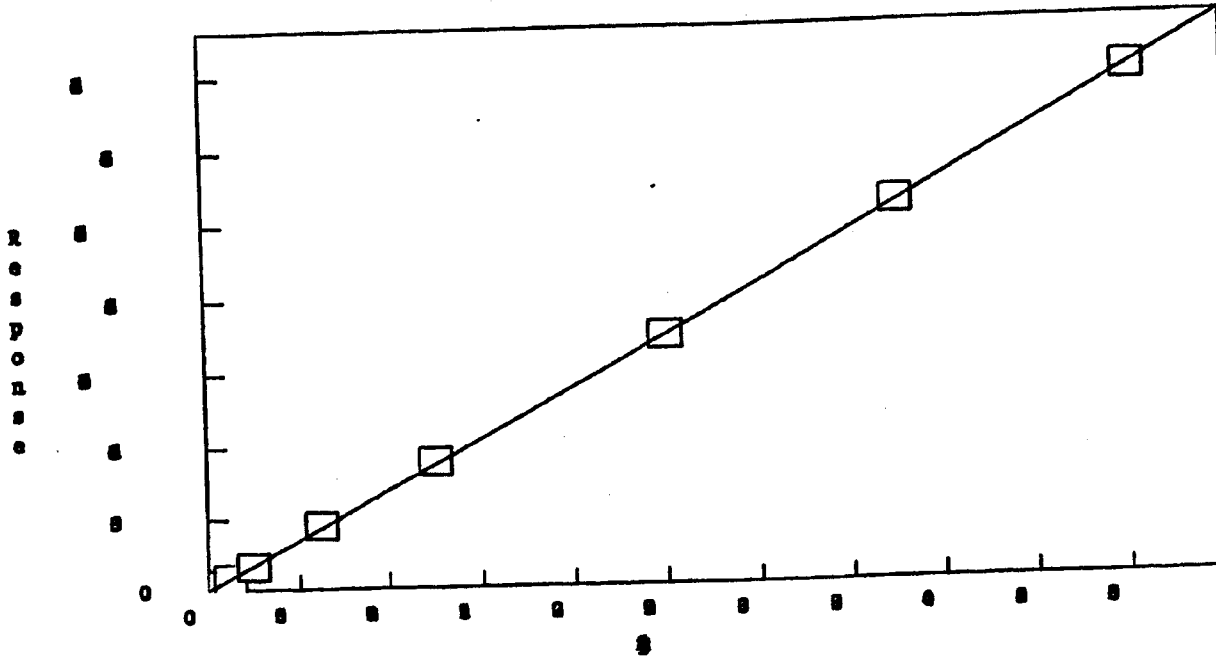
Ret Time	Response Factor Name	Area	Concentration mg/L
6.13	1.446e-006 DMPT	777622	1.114
11.57	3.287e-007 BSA	1478334	0.486
14.63	2.720e-007 PA	2101892	0.553
29.20	6.615e-007 DEPT	820385	0.542
33.70	6.430e-006 D-Panthenol	96669	0.449
52.97	2.254e-007 PCBSA	2305943	0.516
Totals		7580846	3.659

File: B4419001.D16 Sample: 1.0/0.5 ug/m ICV LC090531-11



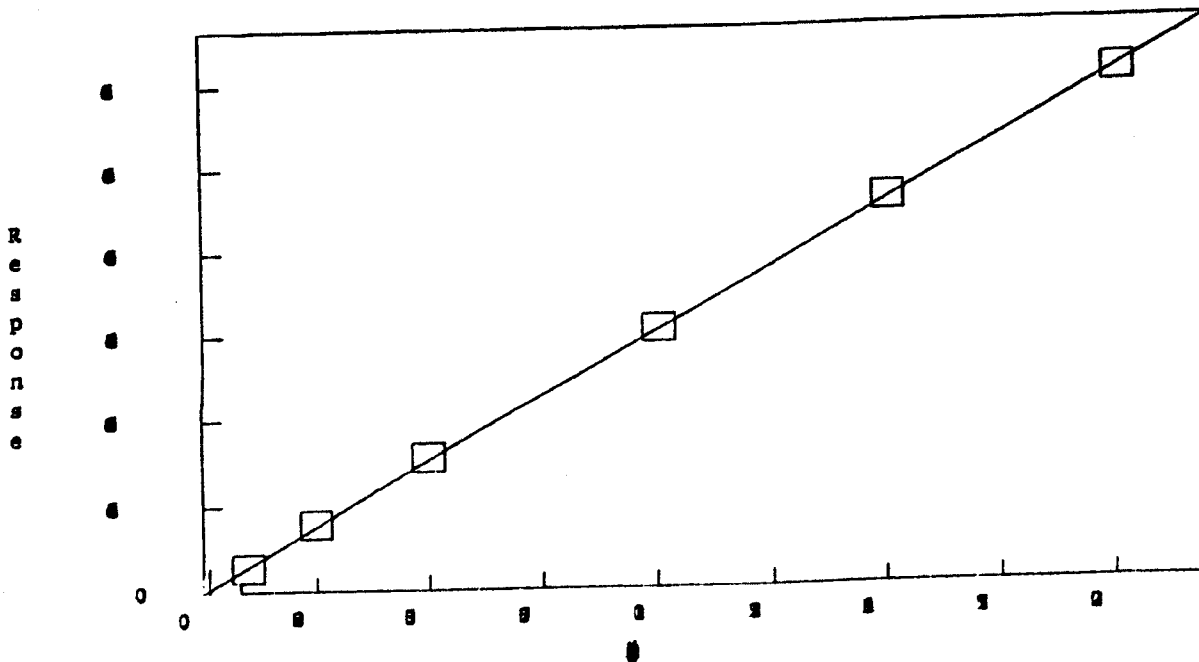
-Method Updated: 06:48 on Wed, 03 Jun 2009

Component: DMPT
Fit Type: Linear
 $r^2 = 0.999934$
 $\text{Amt} = \text{Resp} * 1.446e-006 + -0.01042$
 $\text{Resp} = \text{Amt} * 6.917e+005 + 7209$
Standardization: External
Calibration: Area



Method: C:\DX\METHOD\ACID.MET

Component: BSA
Fit Type: Linear
 $r^2 = 0.999906$
 $\text{Amt} = \text{Resp} * 3.287e-007 + -0.0003636$
 $\text{Resp} = \text{Amt} * 3.042e+006 + 1106$
Standardization: External
Calibration: Area



Method: C:\DX\METHOD\ACID.MET

Component: PA

Fit Type: Linear

$r^2 = 0.999743$

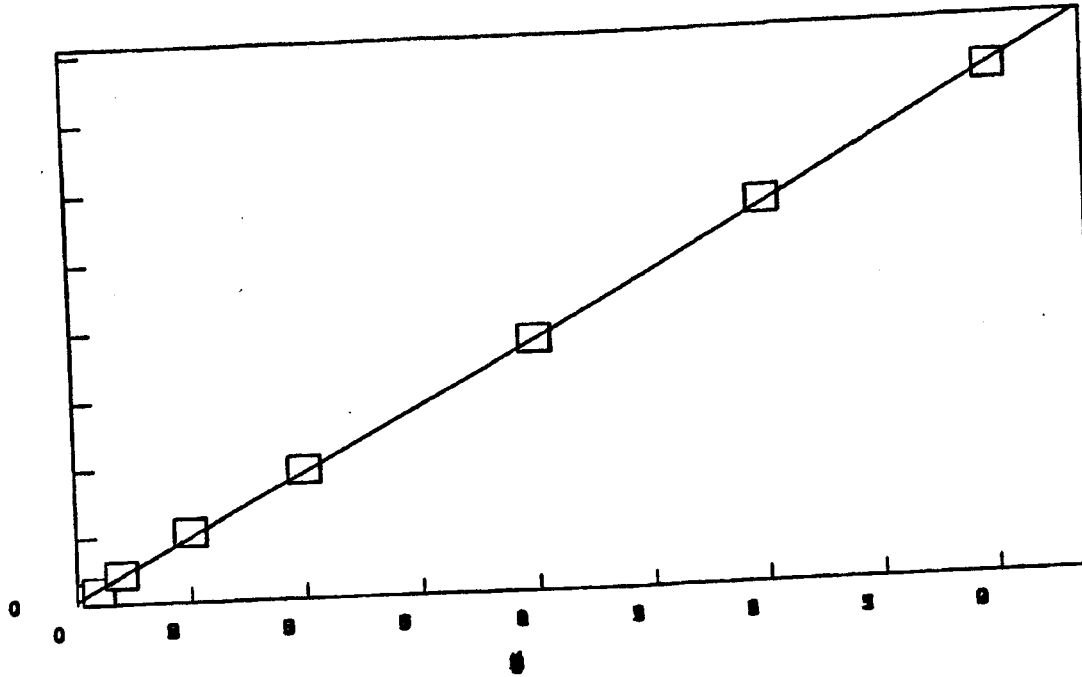
$\text{Amt} = \text{Resp} * 2.72e-007 + -0.01874$

$\text{Resp} = \text{Amt} * 3.676e+006 + 6.887e+004$

Standardization: External

Calibration: Area

R
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Method: C:\DX\METHOD\ACID.MET

Component: DEPT

Fit Type: Linear

$r^2 = 0.999815$

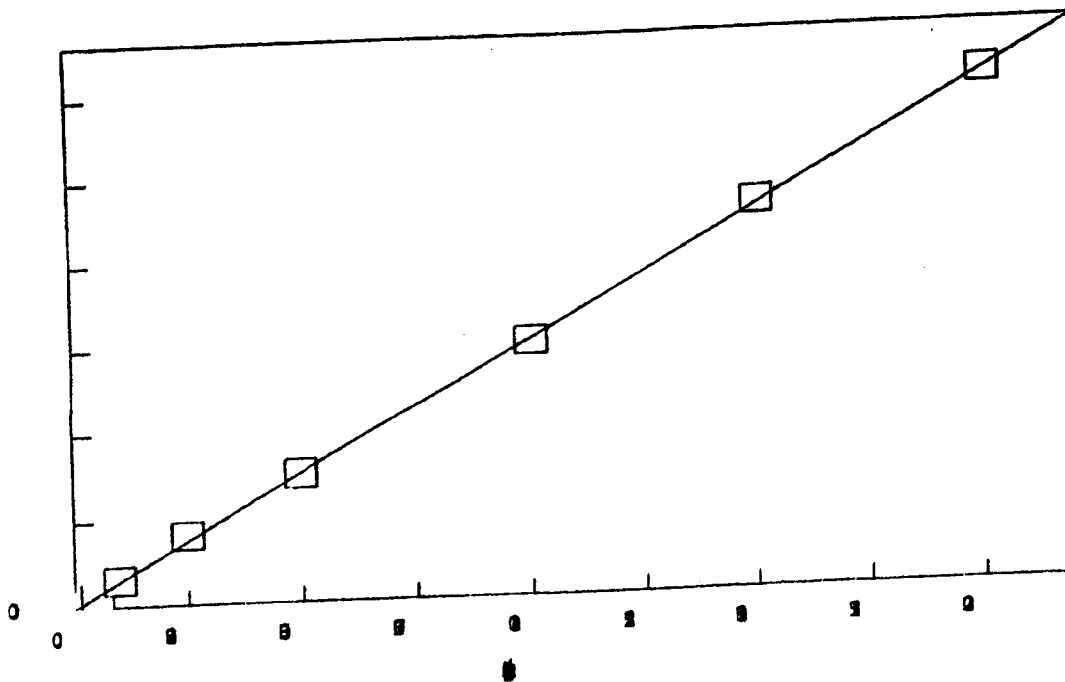
$\text{Amt} = \text{Resp} * 6.615e-007 + -0.0004692$

$\text{Resp} = \text{Amt} * 1.512e+006 + 709.3$

Standardization: External

Calibration: Area

R
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Method: C:\DX\METHOD\ACID.MET

Component: D-Panthenol

Fit Type: Linear

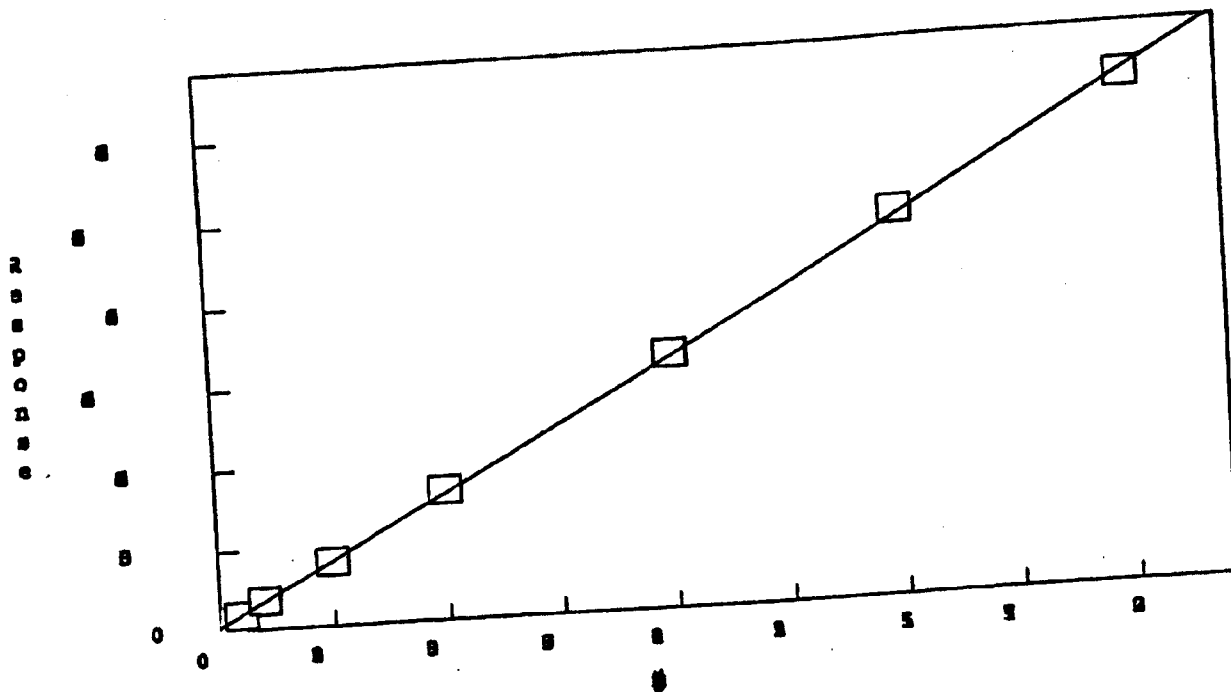
$r^2 = 0.999773$

$\text{Amt} = \text{Resp} * 6.43\text{e-}006 + -0.1725$

$\text{Resp} = \text{Amt} * 1.555\text{e+}005 + 2.682\text{e+}004$

Standardization: External

Calibration: Area



Method: C:\DX\METHOD\ACID.MET

Component: FCBSA

Fit Type: Linear

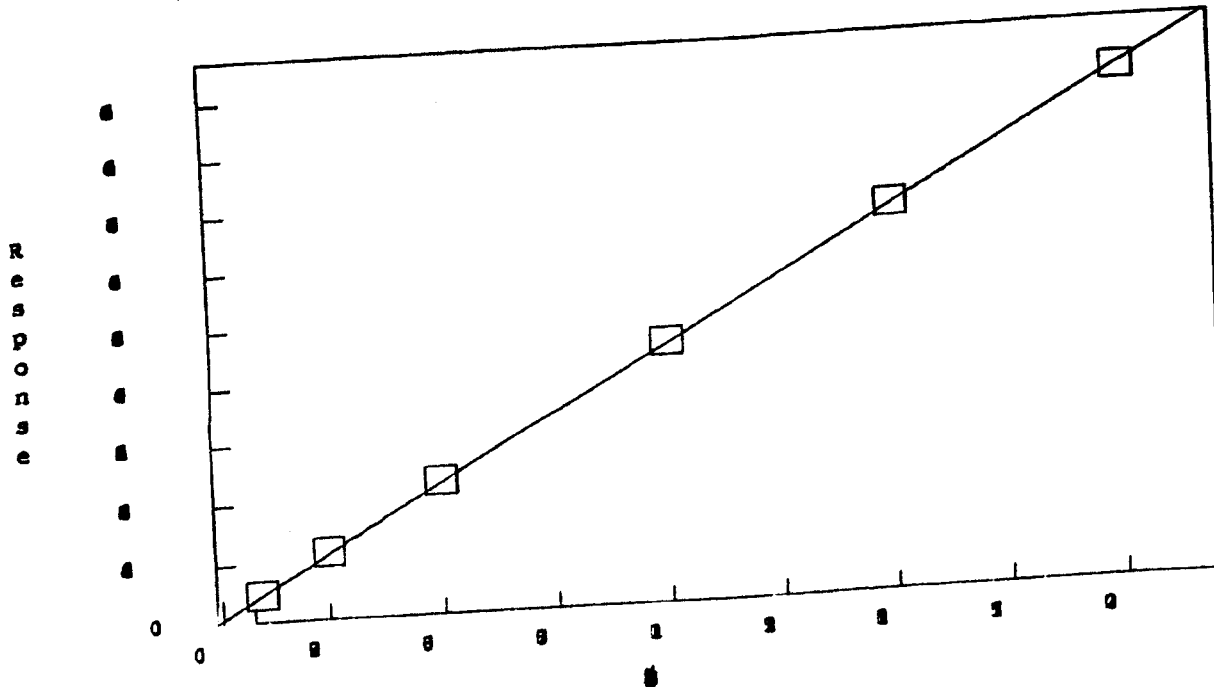
$r^2 = 0.999917$

$\text{Amt} = \text{Resp} * 2.254\text{e-}007 + -0.004194$

$\text{Resp} = \text{Amt} * 4.437\text{e+}006 + 1.861\text{e+}004$

Standardization: External

Calibration: Area



**Continuing Calibration
Summary Data
Organic Acids by HPLC**

Organic Acids Calibration Verification (CV)
Summary Table
Proprietary in-house Procedure

Lab Name: Alpha Analytical, Inc.
Instrument ID: HPLC #3
Analyst Initials: JV
QC Rev Initials: WH

Batch: 22368
Date: 7/20/2009

ICV						
Date Analyzed	Concentration (mg/L)	Recovered Amount (mg/L)	Recovered Amount (%)	IPC Evaluation	Range of Acceptability	Data Flags
7/5/2009						
Time Analyzed						
3:05:57 PM						
DMPT	1.000	1.282	128.2	Acceptable	70-130%	
BSA	0.500	0.499	99.9	Acceptable	70-130%	
PA	0.500	0.489	97.7	Acceptable	70-130%	
DEPT	0.500	0.484	96.8	Acceptable	70-130%	
pCBSA	0.500	0.491	98.2	Acceptable	70-130%	

IPC						
Date Analyzed	Concentration (mg/L)	Recovered Amount (mg/L)	Recovered Amount (%)	IPC Evaluation	Range of Acceptability	Data Flags
7/20/2009						
Time Analyzed						
11:34:00 AM						
DMPT	1.250	1.328	106.2	Acceptable	80-120%	
BSA	0.500	0.517	103.3	Acceptable	80-120%	
PA	0.500	0.491	98.2	Acceptable	80-120%	
DEPT	0.500	0.504	100.8	Acceptable	80-120%	
pCBSA	0.500	0.499	99.7	Acceptable	80-120%	

CV-1 10/2.5/1.0 UG/M LC090720-03				CV-2 10/2.5/1.0 UG/M LC090720-03						
Date Analyzed	Concentration (mg/L)	Recovered Amount (mg/L)	Recovered Amount (%)	CV-1 Evaluation	Concentration (mg/L)	Recovered Amount (mg/L)	Recovered Amount (%)	CV-2 Evaluation	Range of Acceptability	Data Flags
7/20/2009										
Time Analyzed										
10:03:02 PM										
DMPT	2.500	2.556	102.2	Acceptable	2.500	2.527	101.1	Acceptable	80-120%	
BSA	1.000	1.022	102.2	Acceptable	1.000	1.018	101.8	Acceptable	80-120%	
PA	1.000	1.012	101.2	Acceptable	1.000	1.005	100.5	Acceptable	80-120%	
DEPT	1.000	1.009	100.9	Acceptable	1.000	0.991	99.1	Acceptable	80-120%	
pCBSA	1.000	1.016	101.6	Acceptable	1.000	1.023	102.3	Acceptable	80-120%	

CV-3 5.0/1.25/0.5 UG/ML LC090720-02				CV-4 5.0/1.25/0.5 UG/ML LC090720-02						
Date Analyzed	Concentration (mg/L)	Recovered Amount (mg/L)	Recovered Amount (%)	CV-3 Evaluation	Concentration (mg/L)	Recovered Amount (mg/L)	Recovered Amount (%)	CV-4 Evaluation	Range of Acceptability	Data Flags
7/21/2009										
Time Analyzed										
7:27:28 AM										
DMPT	1.250	1.296	103.7	Acceptable	1.250	1.282	102.6	Acceptable	80-120%	
BSA	0.500	0.511	102.3	Acceptable	0.500	0.512	102.5	Acceptable	80-120%	
PA	0.500	0.518	103.5	Acceptable	0.500	0.510	101.9	Acceptable	80-120%	
DEPT	0.500	0.495	99.0	Acceptable	0.500	0.505	101.1	Acceptable	80-120%	
pCBSA	0.500	0.496	99.1	Acceptable	0.500	0.516	103.2	Acceptable	80-120%	

CV-5 10/2.5/1.0 UG/M LC090720-03				CV-6 10/2.5/1.0 UG/M LC090720-03						
Date Analyzed	Concentration (mg/L)	Recovered Amount (mg/L)	Recovered Amount (%)	CV-5 Evaluation	Concentration (mg/L)	Recovered Amount (mg/L)	Recovered Amount (%)	CV-6 Evaluation	Range of Acceptability	Data Flags
7/21/2009										
Time Analyzed										
4:52:08 PM										
DMPT	2.500	2.534	101.4	Acceptable	2.500	2.518	100.7	Acceptable	80-120%	
BSA	1.000	1.018	101.8	Acceptable	1.000	0.999	99.9	Acceptable	80-120%	
PA	1.000	0.987	98.7	Acceptable	1.000	0.981	98.1	Acceptable	80-120%	
DEPT	1.000	0.997	99.7	Acceptable	1.000	0.997	99.7	Acceptable	80-120%	
pCBSA	1.000	0.992	99.2	Acceptable	1.000	0.985	98.5	Acceptable	80-120%	

SOP Criteria:

- 1) The IPC and CV is acceptable if the response is within 20% of its true value.
- 2) If the standard analyzed after a group of samples exhibits a response for an analyte that is >20%, and the analyte was not detected in any of the previous samples during the analytical shift, then the samples do not need to be re-analyzed, as the standard has demonstrated that the analyte would have been detected were it present.
- 3) If the calibration cannot be verified after the analysis of a single standard, analyze a second verification standard. If the CV is acceptable on the second CV, then the data is acceptable. If not recalibrate.

Organic Acids Calibration Verification (CV)
Summary Table
Proprietary in-house Procedure

Lab Name: Alpha Analytical, Inc.
Instrument ID: HPLC #3
Analyst Initials: JV
QC Rev Initials: WH

Batch: 22368
Date: 7/20/2009

ICV						
Date Analyzed	Concentration (mg/L)	Recovered Amount (mg/L)	Recovered Amount (%)	IPC Evaluation	Range of Acceptability	Data Flags
7/5/2009						
Time Analyzed						
3:05:57 PM						
DMPT	1.000	1.282	128.2	Acceptable	70-130%	
BSA	0.500	0.499	99.9	Acceptable	70-130%	
PA	0.500	0.489	97.7	Acceptable	70-130%	
DEPT	0.500	0.484	96.8	Acceptable	70-130%	
pCBSA	0.500	0.491	98.2	Acceptable	70-130%	

IPC						
Date Analyzed	Concentration (mg/L)	Recovered Amount (mg/L)	Recovered Amount (%)	IPC Evaluation	Range of Acceptability	Data Flags
Time Analyzed						
DMPT	1.250		#VALUE!	#VALUE!	80-120%	#VALUE!
BSA	0.500		#VALUE!	#VALUE!	80-120%	#VALUE!
PA	0.500		#VALUE!	#VALUE!	80-120%	#VALUE!
DEPT	0.500		#VALUE!	#VALUE!	80-120%	#VALUE!
pCBSA	0.500		#VALUE!	#VALUE!	80-120%	#VALUE!

CV-1 10/2.5/1.0 UG/M LC090720-03				CV-2 10/2.5/1.0 UG/M LC090720-03				CV-2 Evaluation	Range of Acceptability	Data Flags
Date Analyzed	Concentration (mg/L)	Recovered Amount (mg/L)	Recovered Amount (%)	CV-1 Evaluation	Concentration (mg/L)	Recovered Amount (mg/L)	Recovered Amount (%)			
7/22/2009										
Time Analyzed										
3:19:01 AM										
DMPT	2.500	2.517	100.7	Acceptable	2.500	2.537	101.5	Acceptable	80-120%	
BSA	1.000	1.008	100.8	Acceptable	1.000	1.008	100.8	Acceptable	80-120%	
PA	1.000	0.981	98.1	Acceptable	1.000	0.986	98.6	Acceptable	80-120%	
DEPT	1.000	0.994	99.4	Acceptable	1.000	0.994	99.4	Acceptable	80-120%	
pCBSA	1.000	0.980	98.0	Acceptable	1.000	1.013	101.3	Acceptable	80-120%	

CV-3				CV-4				CV-4 Evaluation	Range of Acceptability	Data Flags
Date Analyzed	Concentration (mg/L)	Recovered Amount (mg/L)	Recovered Amount (%)	CV-3 Evaluation	Concentration (mg/L)	Recovered Amount (mg/L)	Recovered Amount (%)			
Time Analyzed										
DMPT	1.250				1.250				80-120%	
BSA	0.500				0.500				80-120%	
PA	0.500				0.500				80-120%	
DEPT	0.500				0.500				80-120%	
pCBSA	0.500				0.500				80-120%	

CV-5				CV-6				CV-6 Evaluation	Range of Acceptability	Data Flags
Date Analyzed	Concentration (mg/L)	Recovered Amount (mg/L)	Recovered Amount (%)	CV-5 Evaluation	Concentration (mg/L)	Recovered Amount (mg/L)	Recovered Amount (%)			
Time Analyzed										
DMPT	2.500				2.500				80-120%	
BSA	1.000				1.000				80-120%	
PA	1.000				1.000				80-120%	
DEPT	1.000				1.000				80-120%	
pCBSA	1.000				1.000				80-120%	

SOP Criteria:

- 1) The IPC and CV is acceptable if the response is within 20% of its true value.
- 2) If the standard analyzed after a group of samples exhibits a response for an analyte that is >20%, and the analyte was not detected in any of the previous samples during the analytical shift, then the samples do not need to be re-analyzed, as the standard has demonstrated that the analyte would have been detected were it present.
- 3) If the calibration cannot be verified after the analysis of a single standard, analyze a second verification standard. If the CV is acceptable on the second CV, then the data is acceptable. If not recalibrate.

**Continuing Calibration
Raw Data
Organic Acids by HPLC**

METHOD HPLC ACIDS
HPLC #3 UV DETECTOR
Test Code: XXX_XX

Result *7/24/09*
Peer/QC
Report _____ Final _____

Data Reprocessed On 07/22/2009 10:16:49

=====
Sample Name: 5.0/1.25/0.5 IPC LC090720-02 Date: 07/20/2009 11:34:00
Data File : C:\DX\DATA\072009\B4660001.D01
Method : C:\DX\METHOD\ACID.MET
ACI Address: 1 System: 2 Inject#: 1 Vial: Detector: OTHER
Analyst : Column:
=====

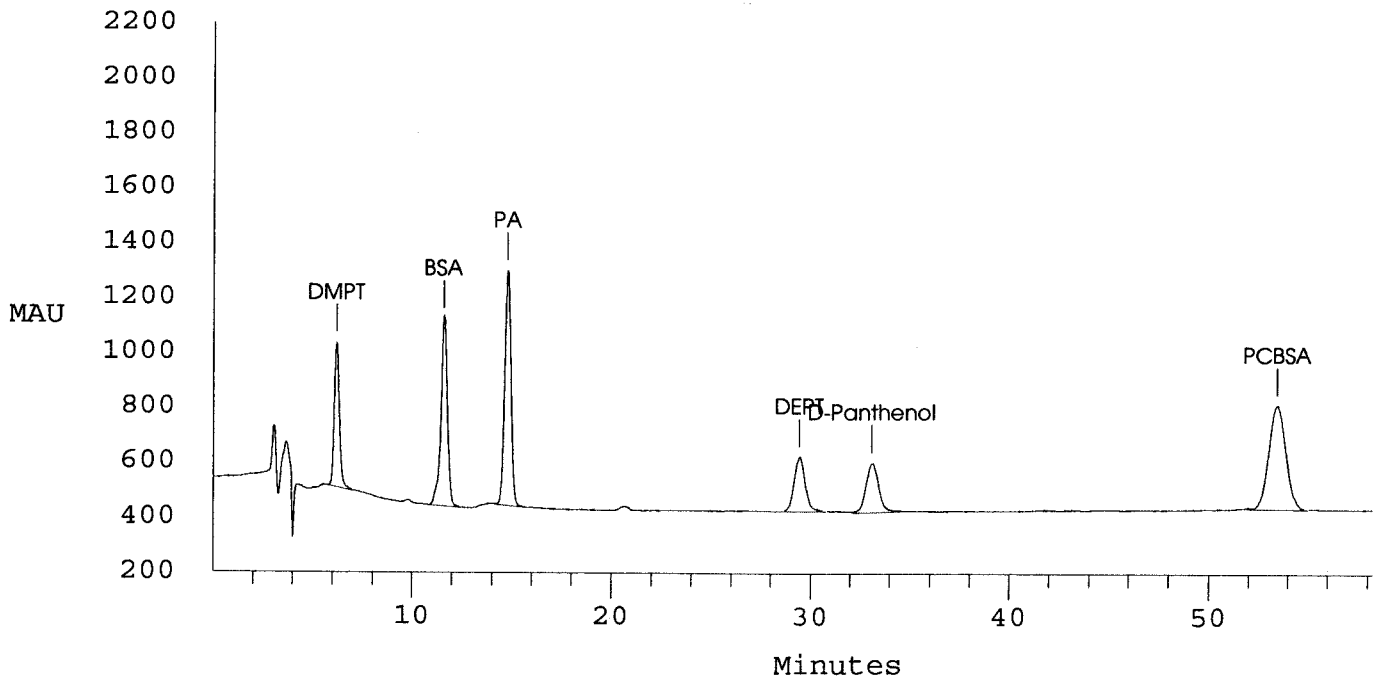
Calibration Volume Dilution Points Rate Start Stop Area Reject

External 1 1 17468 5Hz 0.00 58.22 1000

***** Component Report: Components Found *****

Ret Time	Response Factor	Component Name	Area	Concentration mg/L
6.17	1.446e-006	DMPT	925531	1.328
11.57	3.287e-007	BSA	1572949	0.517
14.77	2.720e-007	PA	1873608	0.491
29.40	6.615e-007	DEPT	762935	0.504
33.07	6.430e-006	D-Panthenol	754572	4.679
53.40	2.254e-007	PCBSA	2231079	0.499
Totals			8120674	8.017

File: B4660001.D01 Sample: 5.0/1.25/0.5 IPC LC090720-02



METHOD HPLC ACIDS
HPLC #3 UV DETECTOR
Test Code: XXX_XX

Result *None*
Peer/QC
Report _____ Final _____

Data Reprocessed On 07/22/2009 10:17:27

=====
Sample Name: 10/2.5/1.0 UG/M LC090720-03 Date: 07/20/2009 22:03:02
Data File : C:\DX\DATA\072009\B4670001.D11
Method : C:\DX\METHOD\ACID.MET
ACI Address: 1 System: 2 Inject#: 11 Vial: Detector: OTHER
Analyst : Column:
=====

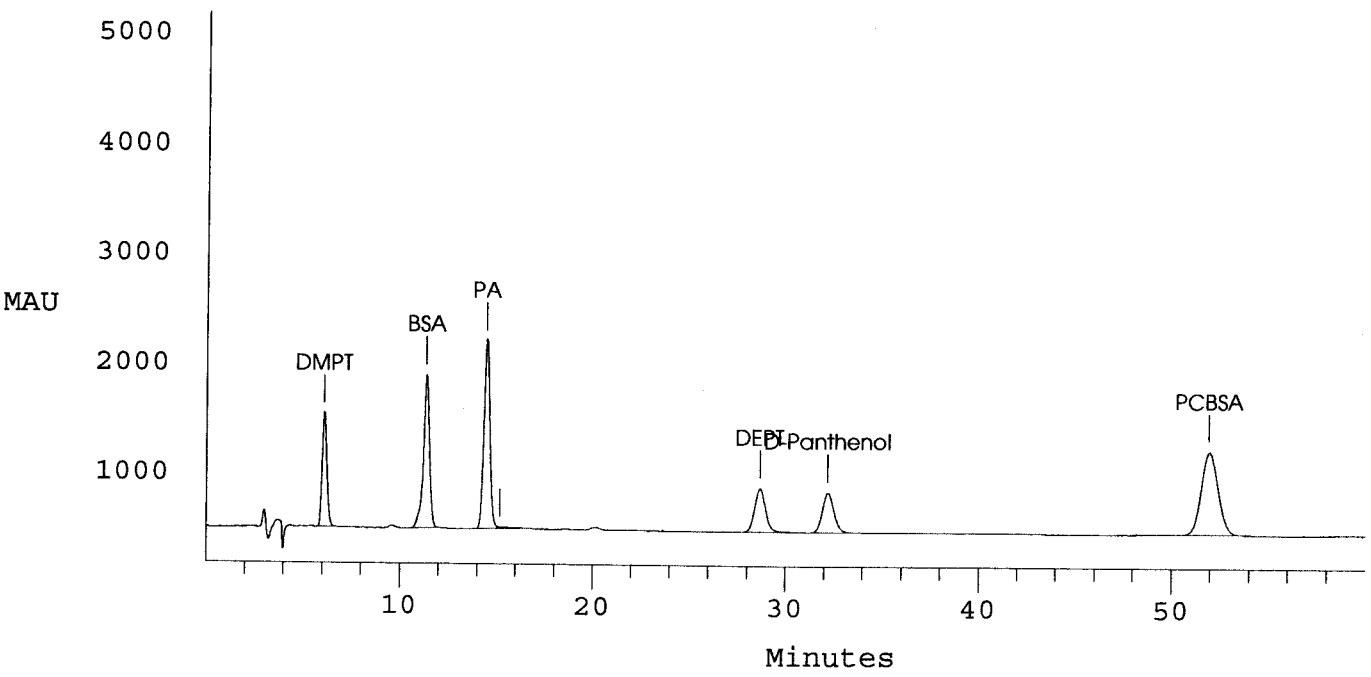
=====
Calibration Volume Dilution Points Rate Start Stop Area Reject

External 1 1 18000 5Hz 0.00 60.00 1000
=====

***** Component Report: Components Found *****

Ret Time	Response Factor	Component Name	Area	Concentration mg/L
6.07	1.446e-006	DMPT	1775387	2.556
11.33	3.287e-007	BSA	3108841	1.022
14.43	2.720e-007	PA	3789997	1.012
28.67	6.615e-007	DEPT	1525723	1.009
32.17	6.430e-006	D-Panthenol	1508568	9.527
51.90	2.254e-007	PCBSA	4525268	1.016
Totals			16233783	16.142

File: B4670001.D11 Sample: 10/2.5/1.0 UG/M LC090720-03



METHOD HPLC ACIDS
 HPLC #3 UV DETECTOR
 Test Code: XXX_XX

Result *7/22/09*
 Peer/QC
 Report _____ Final _____

Data Reprocessed On 07/22/2009 10:17:29

```

=====
Sample Name: 10/2.5/1.0 UG/M LC090720-03   Date: 07/20/2009 23:05:45
Data File  : C:\DX\DATA\072009\B4671001.D12
Method     : C:\DX\METHOD\ACID.MET
ACI Address: 1 System: 2 Inject#: 12 Vial:      Detector:OTHER
Analyst    :                               Column:
=====
  
```

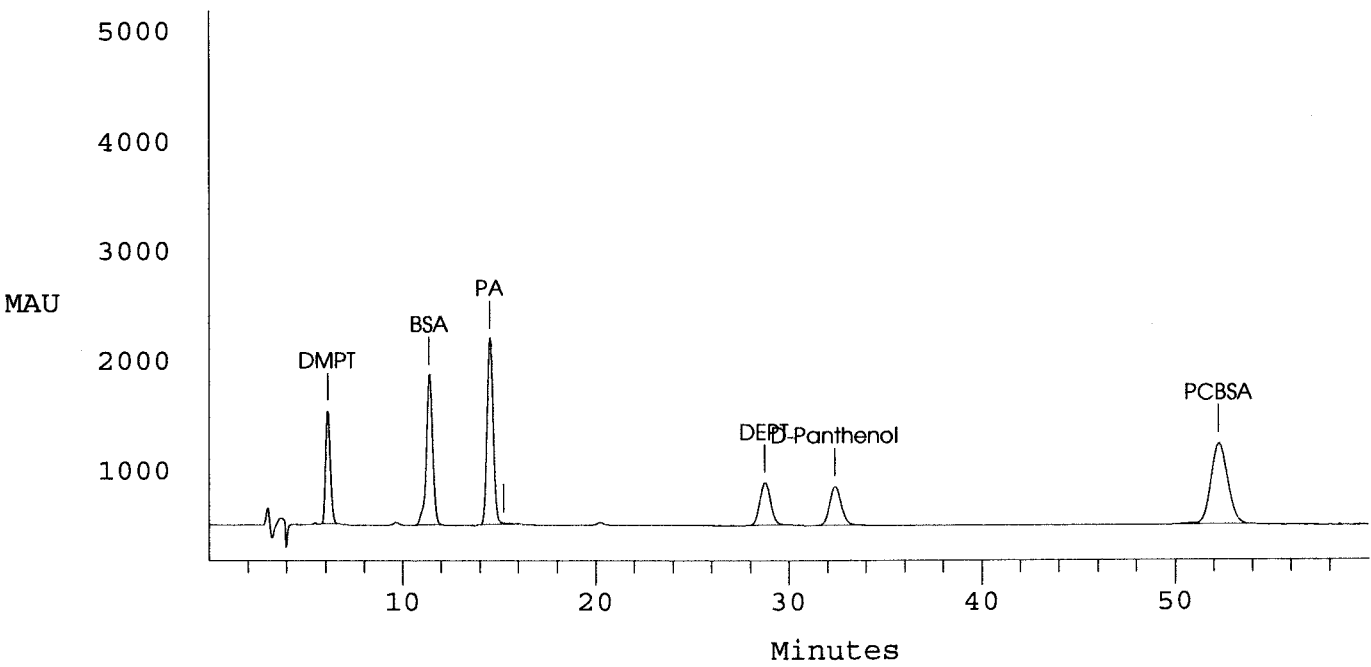
```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External           1           1 18000 5Hz  0.00 60.00      1000
  
```

***** Component Report: Components Found *****

Ret Time	Response Factor	Component Name	Area	Concentration mg/L
6.10	1.446e-006	DMPT	1755283	2.527
11.37	3.287e-007	BSA	3097544	1.018
14.50	2.720e-007	PA	3763539	1.005
28.73	6.615e-007	DEPT	1499066	0.991
32.37	6.430e-006	D-Panthenol	1467764	9.265
52.23	2.254e-007	PCBSA	4558170	1.023
Totals			16141367	15.829

File: B4671001.D12 Sample: 10/2.5/1.0 UG/M LC090720-03



METHOD HPLC ACIDS
 HPLC #3 UV DETECTOR
 Test Code: XXX_XX

Result *7/22/09 ✓*
 Peer/QC
 Report _____ Final _____

Data Reprocessed On 07/22/2009 10:18:10

```

=====
Sample Name: 5.0/1.25/0.5 UG/ML LC090720-02 Date: 07/21/2009 07:27:28
Data File : C:\DX\DATA\072009\B4679001.D20
Method : C:\DX\METHOD\ACID.MET
ACI Address: 1 System: 2 Inject#: 20 Vial: Detector: OTHER
Analyst : Column:
=====
  
```

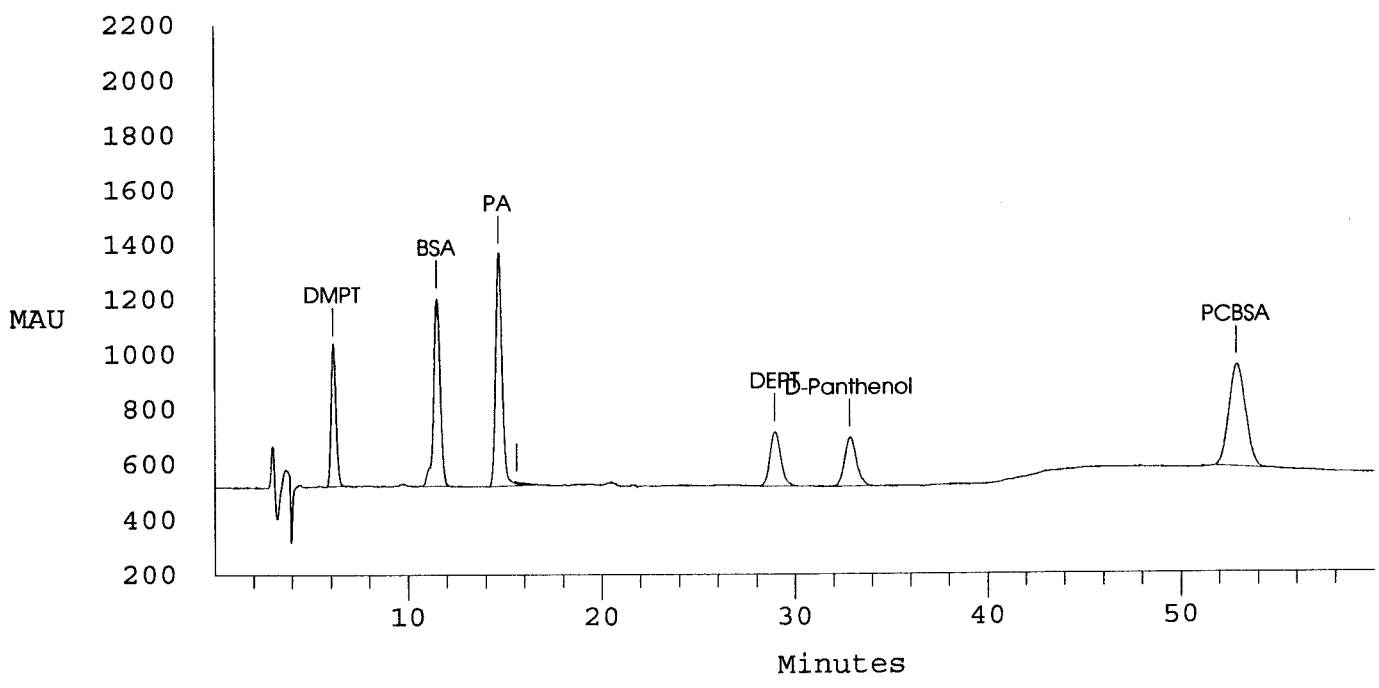
```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External 1 1 18000 5Hz 0.00 60.00 1000
-----
  
```

***** Component Report: Components Found *****

Ret Time	Response Factor Name	Component	Area	Concentration mg/L
6.10	1.446e-006	DMPT	903637	1.296
11.50	3.287e-007	BSA	1556437	0.511
14.67	2.720e-007	PA	1971193	0.518
28.93	6.615e-007	DEPT	748685	0.495
32.83	6.430e-006	D-Panthenol	754590	4.679
52.87	2.254e-007	PCBSA	2217512	0.496
Totals			8152054	7.994

File: B4679001.D20 Sample: 5.0/1.25/0.5 UG/ML LC090720-02



METHOD HPLC ACIDS
 HPLC #3 UV DETECTOR
 Test Code: XXX_XX

Result *7/22/09 ✓*
 Peer/QC
 Report _____ Final _____

Data Reprocessed On 07/22/2009 10:18:12

```

=====
Sample Name: 5.0/1.25/0.5 UG/ML LC090720-02 Date: 07/21/2009 08:30:10
Data File : C:\DX\DATA\072009\B4680001.D21
Method : C:\DX\METHOD\ACID.MET
ACI Address: 1 System: 2 Inject#: 21 Vial: Detector: OTHER
Analyst : Column:
=====
  
```

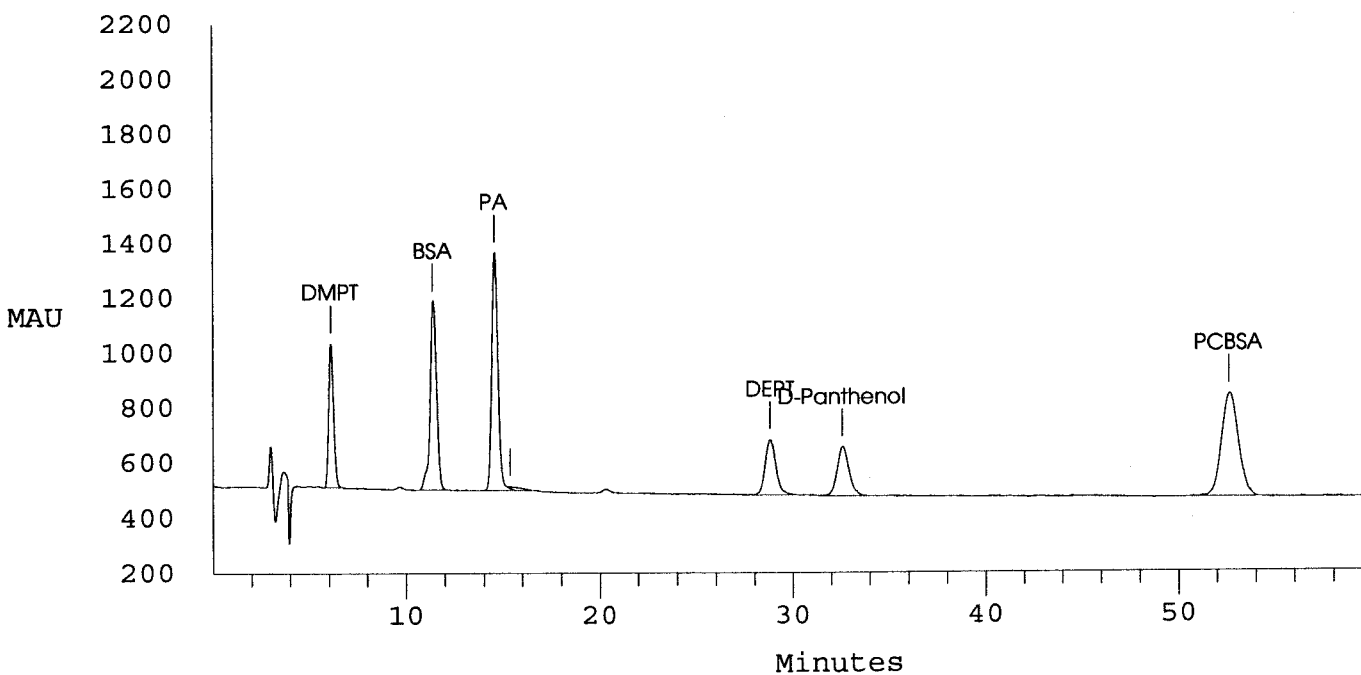
```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External 1 1 18000 5Hz 0.00 60.00 1000
-----
  
```

***** Component Report: Components Found *****

Ret Time	Response Factor Name	Component	Area	Concentration mg/L
6.10	1.446e-006	DMPT	894093	1.282
11.40	3.287e-007	BSA	1559628	0.512
14.57	2.720e-007	PA	1942378	0.510
28.80	6.615e-007	DEPT	764526	0.505
32.57	6.430e-006	D-Panthenol	767605	4.763
52.60	2.254e-007	PCBSA	2307654	0.516
Totals			8235885	8.088

File: B4680001.D21 Sample: 5.0/1.25/0.5 UG/ML LC090720-02



METHOD HPLC ACIDS
 HPLC #3 UV DETECTOR
 Test Code: XXX_XX

Result *7/22/09 ✓*
 Peer/QC
 Report _____ Final _____

Data Reprocessed On 07/22/2009 10:18:51

```

=====
Sample Name: 10/2.5/1.0 UG/M LC090720-03   Date: 07/21/2009 16:52:08
Data File  : C:\DX\DATA\072009\B4689001.D29
Method     : C:\DX\METHOD\ACID.MET
ACI Address: 1 System: 2 Inject#: 29 Vial:      Detector:OTHER
Analyst    :                               Column:
=====
  
```

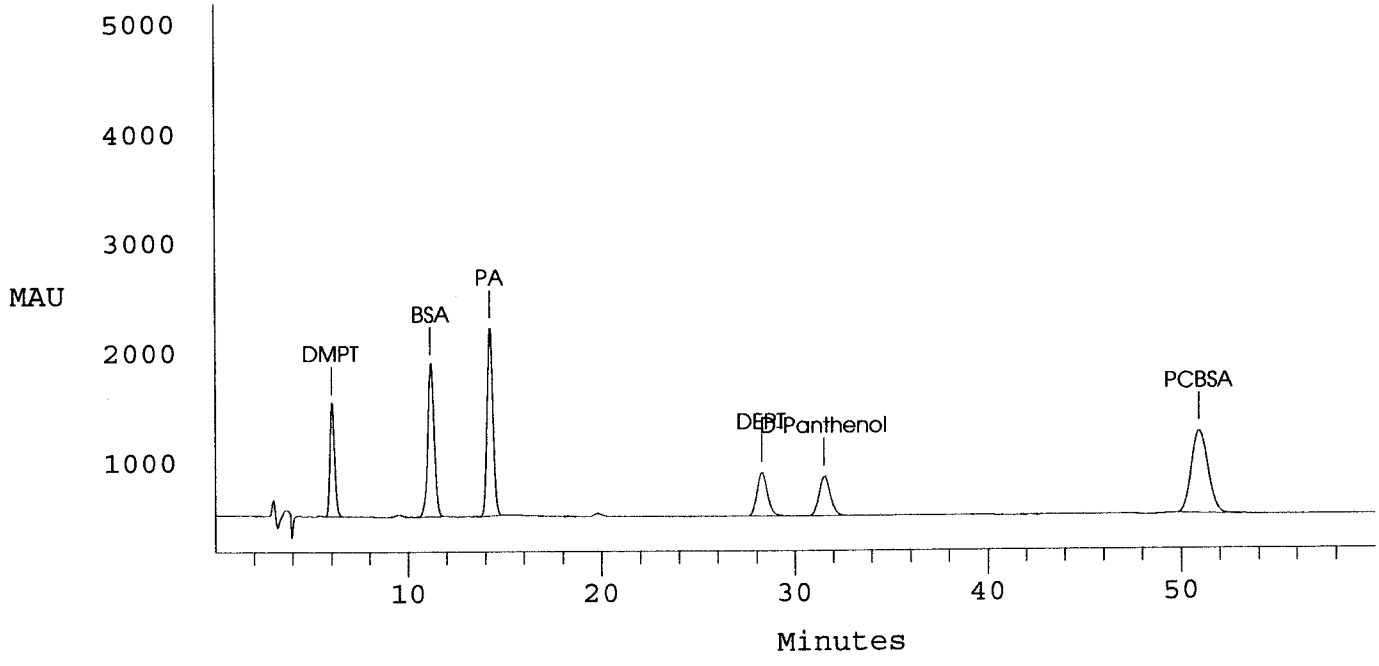
```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External           1           1 18000 5Hz  0.00 60.00      1000
  
```

***** Component Report: Components Found *****

Ret Time	Response Factor	Component Name	Area	Concentration mg/L
6.00	1.446e-006	DMPT	1760001	2.534
11.17	3.287e-007	BSA	3096604	1.018
14.23	2.720e-007	PA	3697210	0.987
28.27	6.615e-007	DEPT	1507957	0.997
31.50	6.430e-006	D-Panthenol	1442774	9.104
50.90	2.254e-007	PCBSA	4421280	0.992
Totals			15925826	15.632

File: B4689001.D29 Sample: 10/2.5/1.0 UG/M LC090720-03



METHOD HPLC ACIDS
 HPLC #3 UV DETECTOR
 Test Code: XXX_XX

Result *7/22/09*
 Peer/QC
 Report _____ Final _____

Data Reprocessed On 07/22/2009 10:18:53

```

=====
Sample Name: 10/2.5/1.0 UG/M LC090720-03   Date: 07/21/2009 17:54:49
Data File  : C:\DX\DATA\072009\B4690001.D30
Method     : C:\DX\METHOD\ACID.MET
ACI Address: 1 System: 2 Inject#: 30 Vial:      Detector:OTHER
Analyst    :                               Column:
=====
  
```

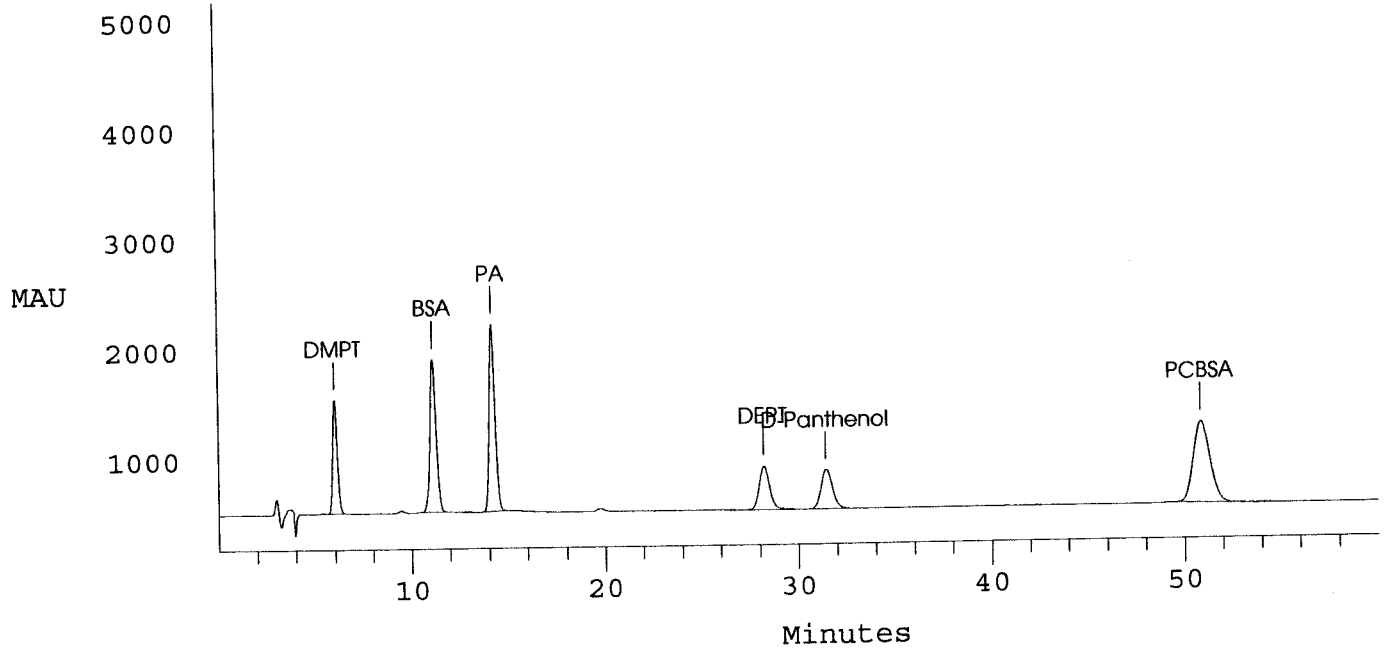
```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1           1 18000 5Hz  0.00 60.00      1000
  
```

***** Component Report: Components Found *****

Ret Time	Response Factor	Component Name	Area	Concentration mg/L
6.00	1.446e-006	DMPT	1748862	2.518
11.13	3.287e-007	BSA	3040402	0.999
14.17	2.720e-007	PA	3676749	0.981
28.20	6.615e-007	DEPT	1507361	0.997
31.40	6.430e-006	D-Panthenol	1481932	9.356
50.83	2.254e-007	PCBSA	4389734	0.985
Totals			15845040	15.836

File: B4690001.D30 Sample: 10/2.5/1.0 UG/M LC090720-03



METHOD HPLC ACIDS
 HPLC #3 UV DETECTOR
 Test Code: XXX_XX

Result *7/22/09 ✓*
 Peer/QC
 Report _____ Final _____

Data Reprocessed On 07/22/2009 10:19:38

```

=====
Sample Name: 10/2.5/1.0 UG/M LC090720-03   Date: 07/22/2009 03:19:01
Data File  : C:\DX\DATA\072009\B4699001.D39
Method     : C:\DX\METHOD\ACID.MET
ACI Address: 1 System: 2 Inject#: 39 Vial:      Detector: OTHER
Analyst    :                               Column:
=====
  
```

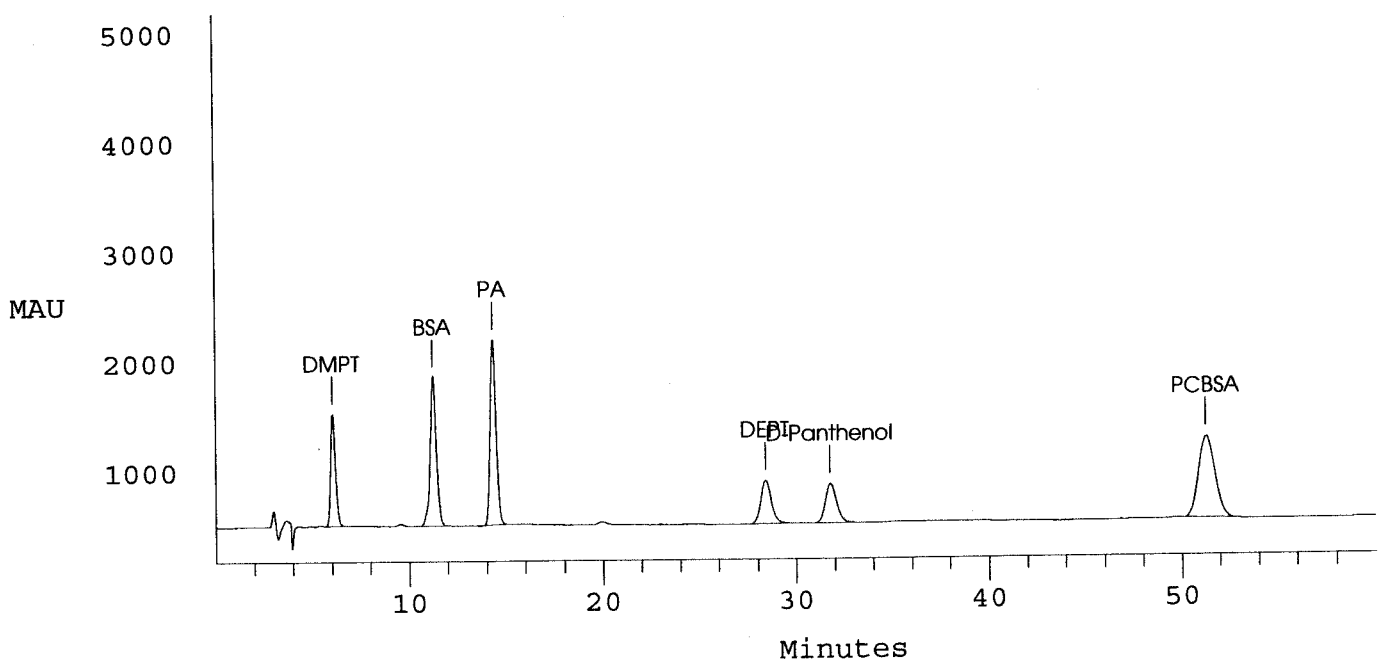
```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1           1 18000 5Hz  0.00 60.00      1000
  
```

***** Component Report: Components Found *****

Ret Time	Response Factor	Component Name	Area	Concentration mg/L
6.03	1.446e-006	DMPT	1748084	2.517
11.23	3.287e-007	BSA	3066202	1.008
14.33	2.720e-007	PA	3675197	0.981
28.40	6.615e-007	DEPT	1503001	0.994
31.73	6.430e-006	D-Panthenol	1452122	9.164
51.23	2.254e-007	PCBSA	4367860	0.980
Totals			15812466	15.643

File: B4699001.D39 Sample: 10/2.5/1.0 UG/M LC090720-03



METHOD HPLC ACIDS
 HPLC #3 UV DETECTOR
 Test Code: XXX_XX

Result *7/22/09 ✓*
 Peer/QC
 Report _____ Final _____

Data Reprocessed On 07/22/2009 10:19:40

```

=====
Sample Name: 10/2.5/1.0 UG/M LC090720-03   Date: 07/22/2009 04:21:42
Data File  : C:\DX\DATA\072009\B4700001.D40
Method     : C:\DX\METHOD\ACID.MET
ACI Address: 1 System: 2 Inject#: 40 Vial:      Detector: OTHER
Analyst    :                               Column:
=====
  
```

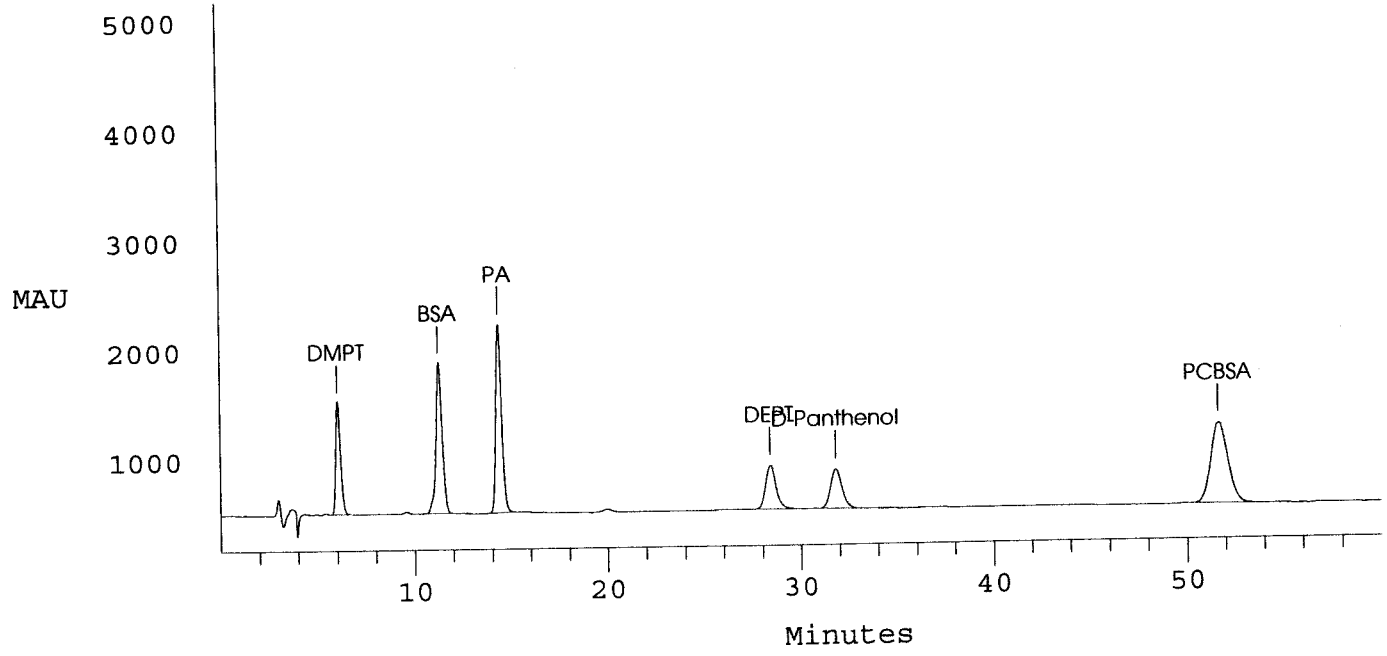
```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1           1 18000 5Hz  0.00 60.00      1000
  
```

***** Component Report: Components Found *****

Ret Time	Response Factor	Component Name	Area	Concentration mg/L
6.03	1.446e-006	DMPT	1762076	2.537
11.27	3.287e-007	BSA	3068200	1.008
14.37	2.720e-007	PA	3693543	0.986
28.40	6.615e-007	DEPT	1503396	0.994
31.80	6.430e-006	D-Panthenol	1472489	9.295
51.63	2.254e-007	PCBSA	4512811	1.013
Totals			16012515	15.833

File: B4700001.D40 Sample: 10/2.5/1.0 UG/M LC090720-03



Instrument Sequence Logs
Organic Acids by HPLC

DIONEX SCHEDULE - C:\DX\SCHEDULE\B072009.SCH

Inj#	Sample Name	Method	Data File	Vol.	Dil.	Int.Std.
1	5.0/1.25/0.5 IPC LC0907	..\ACID.MET	..\B4660001	1	1	1
2	MBLK ...MBLK-22368	..\ACID.MET	..\B4661001	1	1	1
3	LCS ...LCS-22368	..\ACID.MET	..\B4662001	1	1	1
4	LCSD ...LCSD-22368	..\ACID.MET	..\B4663001	1	1	1
5	SAMP TRX09072041-01A 2	..\ACID.MET	..\B4664001	1	2	1
6	MS TRX09072041-01AMS	..\ACID.MET	..\B4665001	1	2	1
7	MSD TRX09072041-01AMSD	..\ACID.MET	..\B4666001	1	2	1
8	SAMP TRX09072041-02A 2X	..\ACID.MET	..\B4667001	1	2	1
9	SAMP TRX09072041-02A 2X	..\ACID.MET	..\B4668001	1	2	1
10	BLANK	..\ACID.MET	..\B4669001	1	1	1
11	10/2.5/1.0 ug/m LC09072	..\ACID.MET	..\B4670001	1	1	1
12	10/2.5/1.0 ug/m LC09072	..\ACID.MET	..\B4671001	1	1	1
13	SAMP TRX09072041-03A 2X	..\ACID.MET	..\B4672001	1	2	1
14	SAMP TRX09072041-03A 2X	..\ACID.MET	..\B4673001	1	2	1
15	SAMP TRX09072041-04A 2X	..\ACID.MET	..\B4674001	1	2	1
16	SAMP TRX09072041-04A 2X	..\ACID.MET	..\B4675001	1	2	1
17	SAMP TRX09072041-05A 2X	..\ACID.MET	..\B4676001	1	2	1
18	SAMP TRX09072041-05A 2X	..\ACID.MET	..\B4677001	1	2	1
19	BLANK	..\ACID.MET	..\B4678001	1	1	1
20	5.0/1.25/0.5 ug/mL LC09	..\ACID.MET	..\B4679001	1	1	1
21	5.0/1.25/0.5 ug/mL LC09	..\ACID.MET	..\B4680001	1	1	1
22	SAMP TAC09072040-01A 2X	..\ACID.MET	..\B4681001	1	2	1
23	SAMP TAC09072040-01A 2X	..\ACID.MET	..\B4682001	1	2	1
24	SAMP TAC09072040-01A 2X	..\ACID.MET	..\B4683001	1	2	1
25	SAMP TAC09072040-02A 2X	..\ACID.MET	..\B4684001	1	2	1
26	SAMP TAC09072040-02A 2X	..\ACID.MET	..\B4685001	1	2	1
27	SAMP TAC09072040-03A 2X	..\ACID.MET	..\B4686001	1	2	1
28	SAMP TAC09072040-03A 2X	..\ACID.MET	..\B4687	1	2	1
29	10/2.5/1.0 ug/m LC09072	..\ACID.MET	..\B4689	1	1	1
30	10/2.5/1.0 ug/m LC09072	..\ACID.MET	..\B4690	1	1	1
31	SAMP TAC09072040-03A 2X	..\ACID.MET	..\B4691	1	2	1
32	SAMP TAC09072040-03A 2X	..\ACID.MET	..\B4692	1	2	1
33	SAMP TAC09072040-02A 20	..\ACID.MET	..\B4693	1	200	1
34	SAMP TAC09072040-02A 20	..\ACID.MET	..\B4694	1	200	1
35	SAMP TAC09072040-02A 2X	..\ACID.MET	..\B4695	1	2	1
36	BLANK	..\ACID.MET	..\B4696	1	1	1
37	SAMP TAC09072040-02A 2X	..\ACID.MET	..\B4697	1	2	1
38	BLANK	..\ACID.MET	..\B4698	1	1	1
39	10/2.5/1.0 ug/m LC09072	..\ACID.MET	..\B4699	1	1	1
40	10/2.5/1.0 ug/m LC09072	..\ACID.MET	..\B4700	1	1	1

did not use from test and blank.

Comment :

7/22/09

**Extraction /Preparation Logs
Organic Acids by HPLC**

Technician: **John Vasquez**
 Prep Batch **22368** Prep Code: **ACIDS_HPLC**

Prep Start Date: **7/20/2009 9:32:03 AM**
 Prep End Date: **7/20/2009 1:20:08 PM**

#	Laboratory Sample ID	Bottle #	Client Sample ID	Matrix	Initial pH	Final pH	Base pH	Acid pH	Int wt (g)	Int vol (mL)	Spike Added (mL)	Fin Vol (mL)	factor
1	MBLK-22368	1							0.1	1	0.1		1.0
2	LCS-22368	1							0.1	1.2	0.1		1.0
3	LCSD-22368	1							0.1	1.2	0.1		1.0
4	TRX09072041-01A	1	EB071009-SO	Aqueous					0.1	1	0.1		1.0
5	TRX09072041-01AMS	1	EB071009-SO	Aqueous					0.1	1.2	0.1		1.0
6	TRX09072041-01AMSD	1	EB071009-SO	Aqueous					0.1	1.2	0.1		1.0
7	TRX09072041-02A	1	TR-8B	Aqueous					0.1	1	0.1		1.0
8	TRX09072041-03A	1	M-97B	Aqueous					0.1	1	0.1		1.0
9	TRX09072041-04A	1	TR-6B	Aqueous					0.1	1	0.1		1.0
10	TRX09072041-05A	1	EB-071709-GW	Aqueous					0.1	1	0.1		1.0
11	TAC09072040-01A	1	ISG1409-01	Aqueous					0.1	1	0.1		1.0
12	TAC09072040-02A	1	ISG1409-02	Aqueous					0.1	1	0.1		1.0
13	TAC09072040-03A	1	ISG1409-03	Aqueous					0.1	1	0.1		1.0

#	Reagent ID	Reagent Name
1	NanoPure	NanoPure Water

#	Spike ID	Spike Name and Concentration	AmfAdd (uL)
1	HPLC_SPIKE	OA Surr. Spike LC090529-06 (1000ug/ml)	10
2	HPLC_SPIKE	OA QC Spike LC090529-15 (200/100ug/ml)	5