WASHINGTON STATE PATROL - TOXICOLOGY LABORATORY DIVISION
2203 Airport Way S, Suite 360 SEATTLE, WA 98134

ANSI-ASCLD/LAB International ACCREDITED LABORATORY

QUALITY ASSURANCE PROCEDURE SOLUTION TEST REPORT

BATCH REPORT: D00001

CUSTOMER INFORMATION
Washington State Patrol – Breath Test Program
811 East Roanoke SEATTLE, WA 98102

TESTING PROCEDURE USED: TLD Technical Manual, Chapter 4.0 Certification of Simulator Solutions; Headspace-Gas Chromatography.

TESTING ITEM INFORMATION
TARGET VAPOR CONCENTRATION: 0.01 g/210L
DATE PREPARED: 08/06/2013
BATCH UNITS: g/100mL

IDENTITY: QAP Solution
PREPARED BY: Amanda Chandler

	AC	AG	KK
1	0.012	0.011	0.010
2	0.012	0.011	0.011
3	0.012	0.011	0.010
4	0.012	0.011	0.010
5	0.012	0.011	0.010
C	0.100	0.099	0.101

ETHANOL CONTROL INFORMATION
LOT NUMBER: A090924 EXPIRATION: 01/2017 CONCENTRATION: 0.10 g/100mL

RESULTS OF TESTING
AVERAGE SOLUTION CONCENTRATION: 0.0111 g/100mL
STANDARD DEVIATION: 0.00080
PRECISION CV (%): 7.22
NUMBER OF TESTS: 15

EQUIVALENT VAPOR CONCENTRATION: **0.0090 g/210L**
COMBINED STANDARD UNCERTAINTY: ± 0.0002 (k=1, 68% confidence interval)

WASHINGTON STATE PATROL – TOXICOLOGY LABORATORY DIVISION

Brianna Peterson
Brianna Peterson Laboratory Manager

9/10/13
DATE REPORT ISSUED

THIS TESTING WAS PERFORMED BY:

ANALYST	NAME	SIGNATURE	DATE TESTED
AC	Amanda Chandler	Amanda Chandler	08/06/2013
AG	Andrew Gingras	[illegible]	08/06/2013
KK	Katie Knorr	Katie Knorr	08/06/2013

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INTEROFFICE COMMUNICATION

WASHINGTON STATE PATROL

TO: Sgt. JoAnn Buetnner, Impaired Driving Section

FROM: Dr. Brianna Peterson, Toxicology Laboratory Division BP

SUBJECT: Draeger test solution

DATE: September 12, 2013

Draeger test solution D00001 for use in validation testing was prepared for a target concentration of 0.01 g/210 L. Results of our testing demonstrated an average solution concentration of 0.0111 g/100 mL. The precision for testing was 7.22%. The individual testing results are within ±17% of the target value (range 0.010 – 0.012 g/100mL). The results do not meet criteria for evidential QAP solutions.

BP:bp

WASHINGTON STATE PATROL - TOXICOLOGY LABORATORY DIVISION
2203 Airport Way S, Suite 360 SEATTLE, WA 98134

QUALITY ASSURANCE PROCEDURE SOLUTION TEST REPORT

BATCH REPORT: D00002

CUSTOMER INFORMATION
Washington State Patrol – Breath Test Program
811 East Roanoke SEATTLE, WA 98102

TESTING PROCEDURE USED: TLD Technical Manual, Chapter 4.0 Certification of Simulator Solutions; Headspace-Gas Chromatography.

TESTING ITEM INFORMATION
TARGET VAPOR CONCENTRATION: 0.015g/210L
DATE PREPARED: 08/07/2013
BATCH UNITS: g/100mL

IDENTITY: QAP Solution
PREPARED BY: Andrew Gingras

	AG	LL	AC
1	0.018	0.018	0.018
2	0.018	0.019	0.018
3	0.018	0.019	0.018
4	0.018	0.018	0.018
5	0.018	0.018	0.018
C	0.101	0.099	0.098

ETHANOL CONTROL INFORMATION
LOT NUMBER: A090924 EXPIRATION: 01/2017 CONCENTRATION: 0.10 g/100mL

RESULTS OF TESTING
AVERAGE SOLUTION CONCENTRATION: 0.0181 g/100mL
STANDARD DEVIATION: 0.00035
PRECISION CV (%): 1.94
NUMBER OF TESTS: 15

EQUIVALENT VAPOR CONCENTRATION: **0.0147 g/210L**
COMBINED STANDARD UNCERTAINTY: ± 0.0002 (k=1, 68% confidence interval)

WASHINGTON STATE PATROL – TOXICOLOGY LABORATORY DIVISION

Brianna Peterson
Brianna Peterson Laboratory Manager

9/10/13
DATE REPORT ISSUED

THIS TESTING WAS PERFORMED BY:

ANALYST	NAME	SIGNATURE	DATE TESTED
AG	Andrew Gingras		08/07/2013
LL	Lyndsey Lowe		08/07/2013
AC	Amanda Chandler	Amanda Chandler	08/07/2013

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WASHINGTON STATE PATROL - TOXICOLOGY LABORATORY DIVISION
2203 Airport Way S, Suite 360 SEATTLE, WA 98134

AHA ASCLD/LAB-International ACCREDITED LABORATORY
SINCE 11/16/2009

QUALITY ASSURANCE PROCEDURE SOLUTION TEST REPORT

BATCH REPORT: D00003

CUSTOMER INFORMATION
Washington State Patrol – Breath Test Program
811 East Roanoke SEATTLE, WA 98102

TESTING PROCEDURE USED: TLD Technical Manual, Chapter 4.0 Certification of Simulator Solutions; Headspace-Gas Chromatography.

TESTING ITEM INFORMATION
TARGET VAPOR CONCENTRATION: 0.02 g/210L
DATE PREPARED: 08/09/2013
BATCH UNITS: g/100mL

IDENTITY: QAP Solution
PREPARED BY: Lyndsey Lowe

	LL	KK	AG
1	0.025	0.025	0.025
2	0.025	0.025	0.025
3	0.025	0.026	0.025
4	0.025	0.025	0.025
5	0.025	0.026	0.025
C	0.101	0.102	0.099

ETHANOL CONTROL INFORMATION
LOT NUMBER: A090924 EXPIRATION: 01/2017 CONCENTRATION: 0.10 g/100mL

RESULTS OF TESTING
AVERAGE SOLUTION CONCENTRATION: 0.0251 g/100mL
STANDARD DEVIATION: 0.00035
PRECISION CV (%): 1.40
NUMBER OF TESTS: 15

EQUIVALENT VAPOR CONCENTRATION: **0.0204 g/210L**
COMBINED STANDARD UNCERTAINTY: ± 0.0003 (k=1, 68% confidence interval)

WASHINGTON STATE PATROL – TOXICOLOGY LABORATORY DIVISION

Brianna Peterson
Brianna Peterson Laboratory Manager

9/10/13
DATE REPORT ISSUED

THIS TESTING WAS PERFORMED BY:

ANALYST	NAME	SIGNATURE	DATE TESTED
LL	Lyndsey Lowe	Lyndsey Lowe	08/09/2013
KK	Katie Knorr	Katie Knorr	08/09/2013
AG	Andrew Gingras	Andrew Gingras	08/12/2013

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WASHINGTON STATE PATROL - TOXICOLOGY LABORATORY DIVISION
2203 Airport Way S, Suite 360 SEATTLE, WA 98134

QUALITY ASSURANCE PROCEDURE SOLUTION TEST REPORT

BATCH REPORT: D00004

CUSTOMER INFORMATION
Washington State Patrol – Breath Test Program
811 East Roanoke SEATTLE, WA 98102

TESTING PROCEDURE USED: TLD Technical Manual, Chapter 4.0 Certification of Simulator Solutions; Headspace-Gas Chromatography.

TESTING ITEM INFORMATION
TARGET VAPOR CONCENTRATION: 0.04 g/210L
DATE PREPARED: 08/13/2013
BATCH UNITS: g/100mL

IDENTITY: QAP Solution
PREPARED BY: Katie Knorr

	KK	AG	AC
1	0.051	0.050	0.050
2	0.051	0.050	0.050
3	0.050	0.050	0.049
4	0.051	0.050	0.050
5	0.051	0.050	0.050
C	0.100	0.100	0.101

ETHANOL CONTROL INFORMATION
LOT NUMBER: A090924 EXPIRATION: 01/2017 CONCENTRATION: 0.10 g/100mL

RESULTS OF TESTING
AVERAGE SOLUTION CONCENTRATION: 0.0502 g/100mL
STANDARD DEVIATION: 0.00056
PRECISION CV (%): 1.12
NUMBER OF TESTS: 15

EQUIVALENT VAPOR CONCENTRATION: **0.0408 g/210L**
COMBINED STANDARD UNCERTAINTY: ± 0.0005 (k=1, 68% confidence interval)

WASHINGTON STATE PATROL – TOXICOLOGY LABORATORY DIVISION

Brianna Peterson — Toxicology Manager
9/3/13 — DATE REPORT ISSUED

THIS TESTING WAS PERFORMED BY:

ANALYST	NAME	SIGNATURE	DATE TESTED
KK	Katie Knorr	Katie Knorr	08/13/2013
AG	Andrew Gingras	Andrew Gingras	08/13/2013
AC	Amanda Chandler	Amanda Chandler	08/13/2013

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WASHINGTON STATE PATROL - TOXICOLOGY LABORATORY DIVISION
2203 Airport Way S, Suite 360 SEATTLE, WA 98134

QUALITY ASSURANCE PROCEDURE SOLUTION TEST REPORT

BATCH REPORT: D00005

CUSTOMER INFORMATION
Washington State Patrol – Breath Test Program
811 East Roanoke SEATTLE, WA 98102

TESTING PROCEDURE USED: TLD Technical Manual, Chapter 4.0 Certification of Simulator Solutions; Headspace-Gas Chromatography.

TESTING ITEM INFORMATION
TARGET VAPOR CONCENTRATION: 0.08 g/210L
DATE PREPARED: 08/19/2013
BATCH UNITS: g/100mL

IDENTITY: QAP Solution
PREPARED BY: Amanda Chandler

	AC	LL	KK
1	0.099	0.098	0.102
2	0.101	0.097	0.100
3	0.101	0.099	0.099
4	0.099	0.098	0.099
5	0.097	0.097	0.098
C	0.100	0.098	0.100

ETHANOL CONTROL INFORMATION
LOT NUMBER: A090924 EXPIRATION: 01/2017 CONCENTRATION: 0.10 g/100mL

RESULTS OF TESTING
AVERAGE SOLUTION CONCENTRATION: 0.0989 g/100mL
STANDARD DEVIATION: 0.00153
PRECISION CV (%): 1.55
NUMBER OF TESTS: 15

EQUIVALENT VAPOR CONCENTRATION: **0.0804 g/210L**
COMBINED STANDARD UNCERTAINTY: ± 0.0011 (k=1, 68% confidence interval)

WASHINGTON STATE PATROL – TOXICOLOGY LABORATORY DIVISION

Brianna Peterson
Brianna Peterson Laboratory Manager

9/3/13
DATE REPORT ISSUED

THIS TESTING WAS PERFORMED BY:

ANALYST	NAME	SIGNATURE	DATE TESTED
AC	Amanda Chandler	Amanda Chandler	08/19/2013
LL	Lyndsey Lowe	[illegible]	08/20/2013
KK	Katie Knorr	Katie Knorr	08/20/2013

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WASHINGTON STATE PATROL - TOXICOLOGY LABORATORY DIVISION
2203 Airport Way S, Suite 360 SEATTLE, WA 98134

QUALITY ASSURANCE PROCEDURE SOLUTION TEST REPORT

BATCH REPORT: D00006

CUSTOMER INFORMATION
Washington State Patrol – Breath Test Program
811 East Roanoke SEATTLE, WA 98102

TESTING PROCEDURE USED: TLD Technical Manual, Chapter 4.0 Certification of Simulator Solutions; Headspace-Gas Chromatography.

TESTING ITEM INFORMATION
TARGET VAPOR CONCENTRATION: 0.15 g/210L
DATE PREPARED: 08/20/2013
BATCH UNITS: g/100mL

IDENTITY: QAP Solution
PREPARED BY: Katie Knorr

	KK	LL	AG
1	0.192	0.186	0.186
2	0.185	0.187	0.185
3	0.189	0.189	0.186
4	0.189	0.186	0.186
5	0.190	0.187	0.186
C	0.101	0.100	0.099

ETHANOL CONTROL INFORMATION
LOT NUMBER: A090924 EXPIRATION: 01/2017 CONCENTRATION: 0.10 g/100mL

RESULTS OF TESTING
AVERAGE SOLUTION CONCENTRATION: 0.1873 g/100mL
STANDARD DEVIATION: 0.00205
PRECISION CV (%): 1.10
NUMBER OF TESTS: 15

EQUIVALENT VAPOR CONCENTRATION: **0.1522 g/210L**
COMBINED STANDARD UNCERTAINTY: ± 0.0019 (k=1, 68% confidence interval)

WASHINGTON STATE PATROL – TOXICOLOGY LABORATORY DIVISION

Brianna Peterson
Brianna Peterson Laboratory Manager

9/3/13
DATE REPORT ISSUED

THIS TESTING WAS PERFORMED BY:

ANALYST	NAME	SIGNATURE	DATE TESTED
KK	Katie Knorr	Katie Knorr	08/20/2013
LL	Lyndsey Lowe	Lyndsey Lowe	08/20/2013
AG	Andrew Gingras	Andrew Gingras	08/22/2013

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WASHINGTON STATE PATROL - TOXICOLOGY LABORATORY DIVISION
2203 Airport Way S, Suite 360 SEATTLE, WA 98134

QUALITY ASSURANCE PROCEDURE SOLUTION TEST REPORT

BATCH REPORT: D00007

CUSTOMER INFORMATION
Washington State Patrol – Breath Test Program
811 East Roanoke SEATTLE, WA 98102

TESTING PROCEDURE USED: TLD Technical Manual, Chapter 4.0 Certification of Simulator Solutions; Headspace-Gas Chromatography.

TESTING ITEM INFORMATION
TARGET VAPOR CONCENTRATION: 0.20 g/210L
DATE PREPARED: 08/22/2013
BATCH UNITS: g/100mL

IDENTITY: QAP Solution
PREPARED BY: Lyndsey Lowe

	LL	AC	AG
1	0.248	0.249	0.247
2	0.251	0.247	0.247
3	0.254	0.245	0.249
4	0.249	0.252	0.247
5	0.255	0.247	0.247
C	0.101	0.100	0.100

ETHANOL CONTROL INFORMATION
LOT NUMBER: A090924 EXPIRATION: 01/2017 CONCENTRATION: 0.10 g/100mL
A095230 09/2017

RESULTS OF TESTING
AVERAGE SOLUTION CONCENTRATION: 0.2489 g/100mL
STANDARD DEVIATION: 0.00287
PRECISION CV (%): 1.15
NUMBER OF TESTS: 15

EQUIVALENT VAPOR CONCENTRATION: **0.2024 g/210L**
COMBINED STANDARD UNCERTAINTY: ± 0.0023 (k=1, 68% confidence interval)

WASHINGTON STATE PATROL – TOXICOLOGY LABORATORY DIVISION

Brianna Peterson — Laboratory Manager — 9/3/13 DATE REPORT ISSUED

THIS TESTING WAS PERFORMED BY:

ANALYST	NAME	SIGNATURE	DATE TESTED
LL	Lyndsey Lowe		08/22/2013
AC	Amanda Chandler		08/22/2013
AG	Andrew Gingras		08/23/2013

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WASHINGTON STATE PATROL - TOXICOLOGY LABORATORY DIVISION
2203 Airport Way S, Suite 360 SEATTLE, WA 98134

QUALITY ASSURANCE PROCEDURE SOLUTION TEST REPORT

BATCH REPORT: D00008

CUSTOMER INFORMATION
Washington State Patrol – Breath Test Program
811 East Roanoke SEATTLE, WA 98102

TESTING PROCEDURE USED: TLD Technical Manual, Chapter 4.0 Certification of Simulator Solutions; Headspace-Gas Chromatography.

TESTING ITEM INFORMATION
TARGET VAPOR CONCENTRATION: 0.30 g/210L
DATE PREPARED: 08/23/2013
BATCH UNITS: g/100mL
IDENTITY: QAP Solution
PREPARED BY: Andrew Gingras

	AG	AC	LL
1	0.374	0.372	0.376
2	0.374	0.383	0.377
3	0.374	0.366	0.375
4	0.375	0.375	0.374
5	0.375	0.371	0.375
C	0.101	0.098	0.099

ETHANOL CONTROL INFORMATION
LOT NUMBER: A095230 EXPIRATION: 09/2017 CONCENTRATION: 0.10 g/100mL

RESULTS OF TESTING
AVERAGE SOLUTION CONCENTRATION: 0.3744 g/100mL
STANDARD DEVIATION: 0.00352
PRECISION CV (%): 0.94
NUMBER OF TESTS: 15

EQUIVALENT VAPOR CONCENTRATION: **0.3044 g/210L**
COMBINED STANDARD UNCERTAINTY: ± 0.0042 (k=1, 68% confidence interval)

WASHINGTON STATE PATROL – TOXICOLOGY LABORATORY DIVISION

Brianna Peterson — Toxicology Manager
9/3/13 — DATE REPORT ISSUED

THIS TESTING WAS PERFORMED BY:

ANALYST	NAME	SIGNATURE	DATE TESTED
AG	Andrew Gingras		08/23/2013
AC	Amanda Chandler		08/26/2013
LL	Lyndsey Lowe		08/26/2013

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WASHINGTON STATE PATROL - TOXICOLOGY LABORATORY DIVISION
2203 Airport Way S, Suite 360 SEATTLE, WA 98134

QUALITY ASSURANCE PROCEDURE SOLUTION TEST REPORT

BATCH REPORT: D00009

CUSTOMER INFORMATION
Washington State Patrol – Breath Test Program
811 East Roanoke SEATTLE, WA 98102

TESTING PROCEDURE USED: TLD Technical Manual, Chapter 4.0 Certification of Simulator Solutions; Headspace-Gas Chromatography.

TESTING ITEM INFORMATION
TARGET VAPOR CONCENTRATION: 0.40 g/210L
DATE PREPARED: 08/26/2013
BATCH UNITS: g/100mL
IDENTITY: QAP Solution
PREPARED BY: Amanda Chandler

	AC	LL	KK
1	0.500	0.504	0.484
2	0.494	0.500	0.482
3	0.496	0.494	0.484
4	0.508	0.512	0.490
5	0.498	0.498	0.484
C	0.102	0.101	0.099

ETHANOL CONTROL INFORMATION
LOT NUMBER: A095230 EXPIRATION: 09/2017 CONCENTRATION: 0.10 g/100mL

RESULTS OF TESTING
AVERAGE SOLUTION CONCENTRATION: 0.4952 g/100mL
STANDARD DEVIATION: 0.00913
PRECISION CV (%): 1.84
NUMBER OF TESTS: 15

EQUIVALENT VAPOR CONCENTRATION: **0.4026 g/210L**
COMBINED STANDARD UNCERTAINTY: ± 0.0058 (k=1, 68% confidence interval)

WASHINGTON STATE PATROL – TOXICOLOGY LABORATORY DIVISION

Brianna Peterson
Brianna Peterson Toxicology Manager

9/3/13
DATE REPORT ISSUED

THIS TESTING WAS PERFORMED BY:

ANALYST	NAME	SIGNATURE	DATE TESTED
AC	Amanda Chandler	Amanda Chandler	08/26/2013
LL	Lyndsey Lowe	Lyndsey Lowe	08/26/2013
KK	Katie Knorr	Katie Knorr	08/26/2013

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