

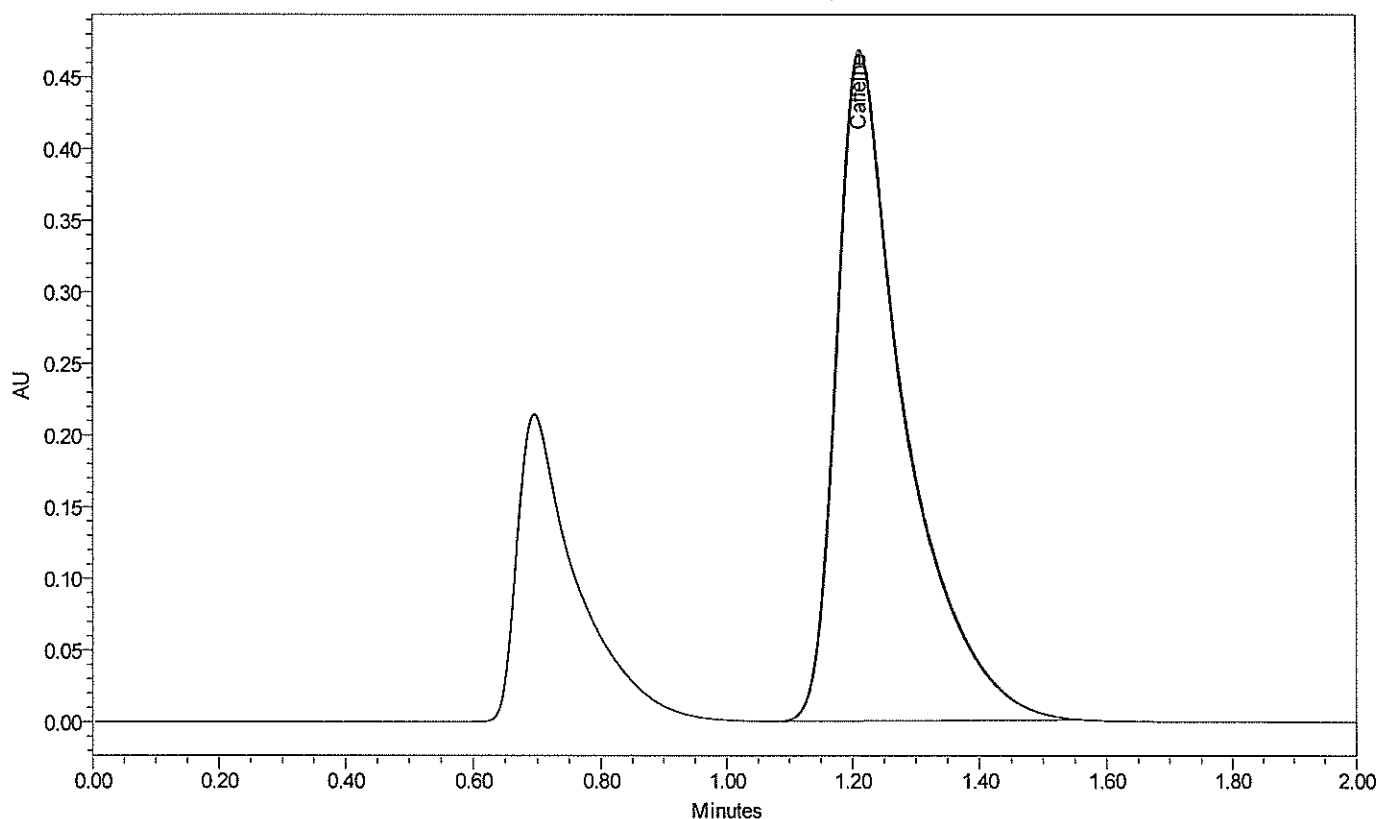
SYSTEM PRECISION REPORT

ACQUISITION INFORMATION

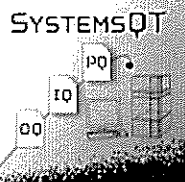
System Name: SQT_L16SM4371A full
Project Name: SQT_2695_2489_Rev G
Sample Set Method: 020 System Precision SSM
Processing Method Caffeine CF
Report Method Name: System Precision RM
User Name: System
Sample Set Name: 020 System Precision SSM

Acquired By: System
Column serial Number: 01473126213809
Sample Kit 1 Expiration date: 3/1/2020 12:00:00 AM
Sample Kit 1 Lot Number: W01031720
Build Version: Empower 3 Software Build 3471 SPs
Sample Set Id: 20285 Result Set Id 20291
Sample Set Start Date: 5/16/2018 4:37:07 PM

Chromatogram Overlay



— Sample Name: System Precision; Injection: 1
— Sample Name: System Precision; Injection: 2
— Sample Name: System Precision; Injection: 3
— Sample Name: System Precision; Injection: 4
— Sample Name: System Precision; Injection: 5
— Sample Name: System Precision; Injection: 6



SYSTEM PRECISION REPORT

Chromatographic Peak Results

	Injection	Name	Retention Time (min)	Area	Height (μV)	Peak Type	Result Id
1	1	Caffeine	1.212	3493902	468747	Found	20316
2	2	Caffeine	1.212	3492278	466016	Found	20318
3	3	Caffeine	1.215	3495386	465421	Found	20319
4	4	Caffeine	1.214	3500207	467131	Found	20320
5	5	Caffeine	1.213	3500092	469207	Found	20321
6	6	Caffeine	1.215	3498256	469557	Found	20322
Mean			1.213	3496687	467680		
Std. Dev.			0.002	3327	1742		
% RSD			0.14	0.10	0.37		

Area and Height Results

	System Precision Area Specification	System Precision Area % RSD	System Precision Area % RSD Pass Fail	System Precision Height Specification	System Precision Height % RSD	System Precision Height % RSD Pass Fail
1	Area %RSD < or = 1.0	0.10	PASS	Height %RSD < or = 1.5	0.37	PASS

Retention Time Results

	System Recision Retention Time Specification	System Recision Retention Time % RSD	System Recision Retention Time Pass Fail
1	RT %RSD < or = 1.0	0.14	PASS

Certification

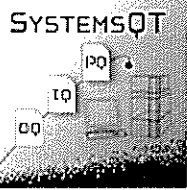
Comments

The undersigned performer attests that the values recorded and calculated above are accurate and complete.

Performer _____ Date _____
Signature

The undersigned reviewer accepts that the values recorded and calculated above are accurate and complete.

Reviewer _____ Date _____
Signature



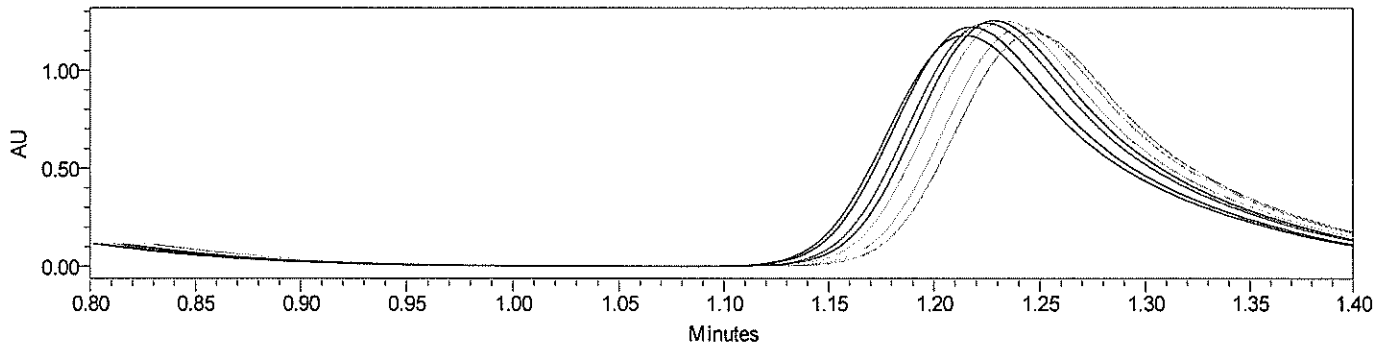
WAVELENGTH ACCURACY REPORT

ACQUISITION INFORMATION

System Name: SQT_L16SM4371A full
Project Name: SQT_2695_2489_Rev G
Sample Set Method: 030 Wavelength Accuracy SSM
Processing Method Caffeine CF
Report Method Name: Wavelength Accuracy RM
User Name: System
Sample Set Name: 030 Wavelength Accuracy SSM

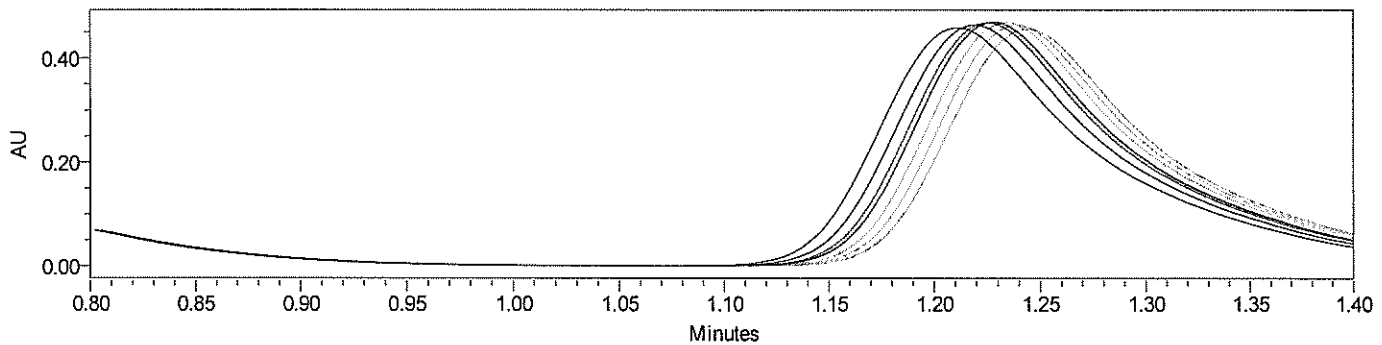
Acquired By: System
Column serial Number: 01473126213809
Sample Kit 1 Expiration date: 3/1/2020 12:00:00 AM
Sample Kit 1 Lot Number: W01031720
Build Version: Empower 3 Software Build 3471 SPs
Sample Set Id: 20313 Result Set Id 20326
Sample Set Start Date: 5/16/2018 4:54:37 PM

Wavelength Accuracy Chromatograms (205 nm)

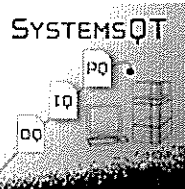


— Sample Name: WA202
— Sample Name: WA203
— Sample Name: WA204
— Sample Name: WA205
— Sample Name: WA206
- - - Sample Name: WA207
- - - Sample Name: WA208

Wavelength Accuracy Chromatograms (273 nm)



— Sample Name: WA270
— Sample Name: WA271
— Sample Name: WA272
— Sample Name: WA273
- - - Sample Name: WA274
- - - Sample Name: WA275
- - - Sample Name: WA276



WAVELENGTH ACCURACY REPORT

Chromatographic Peak Results

	SampleName	Height (μV)	Peak Type	Result Id
1	WA205	1252185	Found	20386
2	WA206	1249982	Found	20387
3	WA204	1238961	Found	20385
4	WA203	1219844	Found	20383
5	WA207	1218603	Found	20388
6	WA208	1189169	Found	20389
7	WA202	1177770	Found	20382

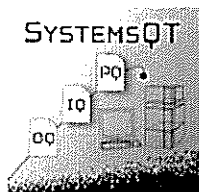
Chromatographic Peak Results

	SampleName	Height (μV)	Peak Type	Result Id
1	WA273	468020	Found	20393
2	WA274	467583	Found	20394
3	WA272	466972	Found	20392
4	WA275	462653	Found	20395
5	WA271	462388	Found	20391
6	WA270	457255	Found	20390
7	WA276	455067	Found	20396

Wavelength Accuracy Results

	Specification 1	Lambda Max	Lambda Max Pass Fail
1	203nm-207nm		

	Specification 2	Lambda Max	Lambda Max Pass Fail
1	271nm-275nm		



WAVELENGTH ACCURACY REPORT

Certification

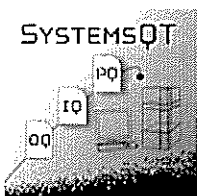
Comments

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Performer _____ Date _____
Signature

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Reviewer _____ Date _____
Signature



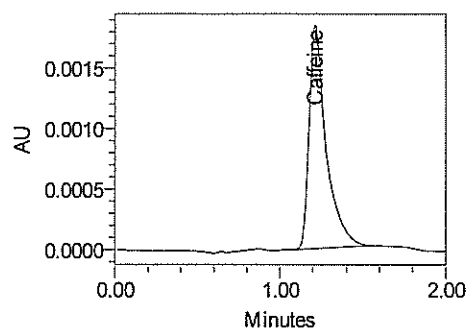
CARRYOVER REPORT

ACQUISITION INFORMATION

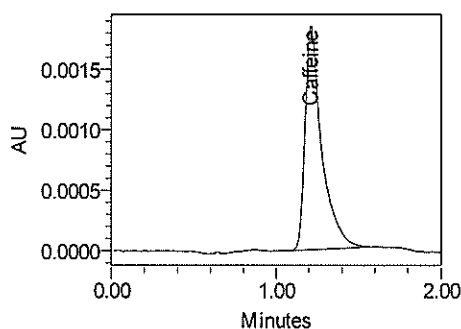
System Name: SQT_L16SM4371A full
Project Name: SQT_2695_2489_Rev G
Sample Set Method: 040 Carryover SSM
Processing Method Caffeine CF
Report Method Name: Carryover RM
User Name: System
Sample Set Name: 040 Carryover SSM

Acquired By: System
Column serial Number: 01473126213809
Sample Kit 1 Expiration date: 3/1/2020 12:00:00 AM
Sample Kit 1 Lot Number: W01031720
Build Version: Empower 3 Software Build 3471 SPs
Sample Set Id: 20381 Result Set Id 20400
Sample Set Start Date: 5/16/2018 5:34:44 PM

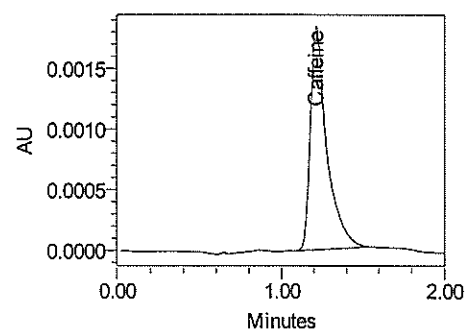
Carryover Chromatograms



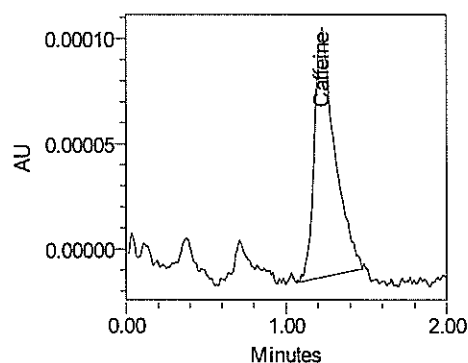
Sample Standard (0.01%);
Inj 1



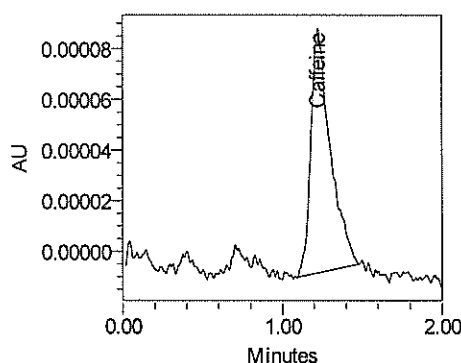
Sample Standard (0.01%);
Inj 2



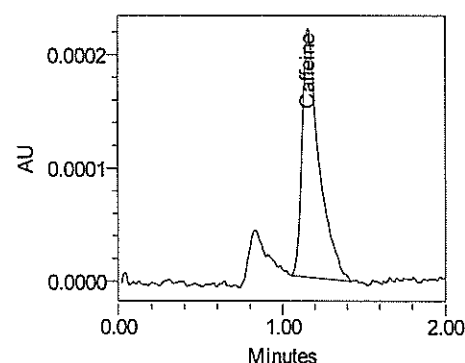
Sample Standard (0.01%);
Inj 3



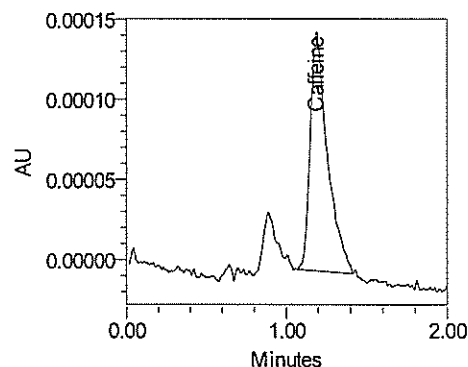
Sample PreBlank; Inj 1



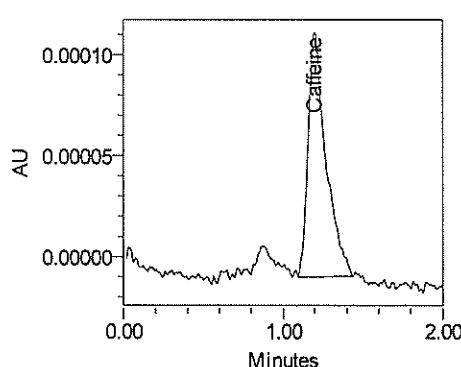
Sample PreBlank; Inj 2



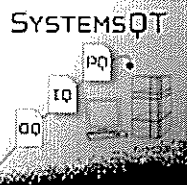
Sample Post Blank 1; Inj 1



Sample Post Blank 2; Inj 1



Sample Post Blank 3; Inj 1



CARRYOVER REPORT

Chromatographic Peak Results

	Sample Name	Sample Type	Vial	Name	RT	Area	Height (µV)	Amount	Peak Type	Result Id
1	PreBlank	Unknown	60	Caffeine	1.227	1042	119	0.001	Found	20437
2	PreBlank	Unknown	60	Caffeine	1.226	816	97	0.001	Found	20438
3	Standard (0.01%)	Standard	61	Caffeine	1.214	12887	1844	0.010	Found	20433
4	Standard (0.01%)	Standard	61	Caffeine	1.213	12966	1851	0.010	Found	20434
5	Standard (0.01%)	Standard	61	Caffeine	1.215	12878	1843	0.010	Found	20435
6	Post Blank 1	Unknown	63	Caffeine	1.158	1608	219	0.001	Found	20439
7	Post Blank 2	Unknown	63	Caffeine	1.190	1095	149	0.001	Found	20440
8	Post Blank 3	Unknown	63	Caffeine	1.201	936	121	0.001	Found	20441

Carryover Results

	SampleName	Carryover Specification	Peak Type	% Carryover	Carryover Pass Fail
1	Post Blank 1	< or = 0.01%	Found	0.0012	PASS

Certification

Comments

The undersigned performer attests that the values recorded and calculated above are accurate and complete.

Performer _____ Date _____
Signature

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Reviewer _____ Date _____
Signature

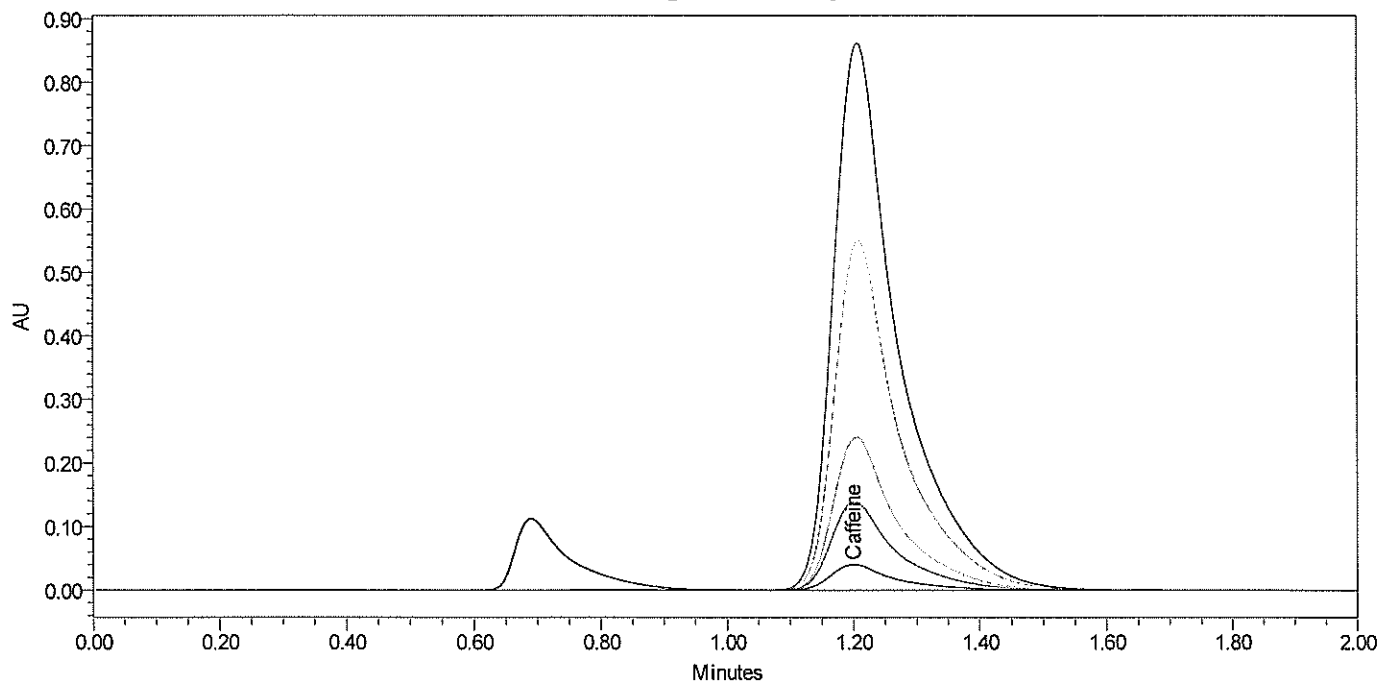
DETECTOR LINEARITY REPORT

ACQUISITION INFORMATION

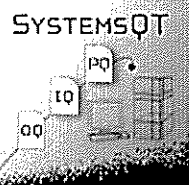
System Name: SQT_L16SM4371A full
Project Name: SQT_2695_2489_Rev G
Sample Set Method: 05b Detector Lin Sens SSM
Processing Method Detector Lin Sens Area PM,
Report Method Name: Detector Lin Sens RM
User Name: System
Sample Set Name: 05b Detector Lin Sens SSM

Acquired By: System
Column serial Number: 01473126213809
Sample Kit 1 Expiration date: 3/1/2020 12:00:00 AM
Sample Kit 1 Lot Number: W001031720
Build Version: Empower 3 Software Build 3471 SPs
Sample Set Id: 20432 Result Set Id 20445
Sample Set Start Date: 5/16/2018 6:13:43 PM

Chromatogram Overlay



— Sample Name: 0.01 mg/ml; Injection: 1
— Sample Name: 0.01 mg/ml; Injection: 1
— Sample Name: 0.035 mg/ml; Injection: 1
— Sample Name: 0.035 mg/ml; Injection: 1
— Sample Name: 0.06 mg/ml; Injection: 1
- - Sample Name: 0.06 mg/ml; Injection: 1
- - Sample Name: 0.14 mg/ml; Injection: 1
- - Sample Name: 0.14 mg/ml; Injection: 1
— Sample Name: 0.22 mg/ml; Injection: 1
— Sample Name: 0.22 mg/ml; Injection: 1

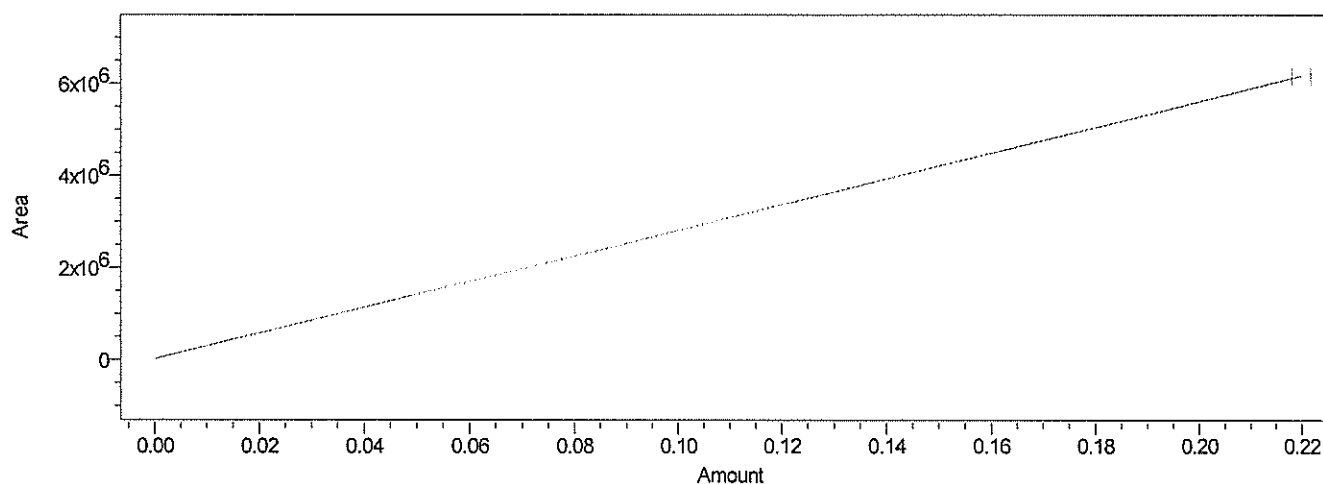


DETECTOR LINEARITY REPORT

Area Results

	Vial	Level	SampleName	Area	Amount	Area_Sensitivity	Peak Type	Result Id
1	26	1	0.01 mg/ml	285434	0.010	28543436.60	Found	20465
2	50	2	0.035 mg/ml	989616	0.035	28274736.48	Found	20466
3	75	3	0.06 mg/ml	1708992	0.060	28483206.63	Found	20467
4	98	4	0.14 mg/ml	3934433	0.140	28103090.37	Found	20469
5	100	5	0.22 mg/ml	6166571	0.220	28029869.05	Found	20470
Mean						28286867.83		
Std. Dev.						226023.31		
% RSD						0.80		

Area Calibration Plot



Area Calibration Summary

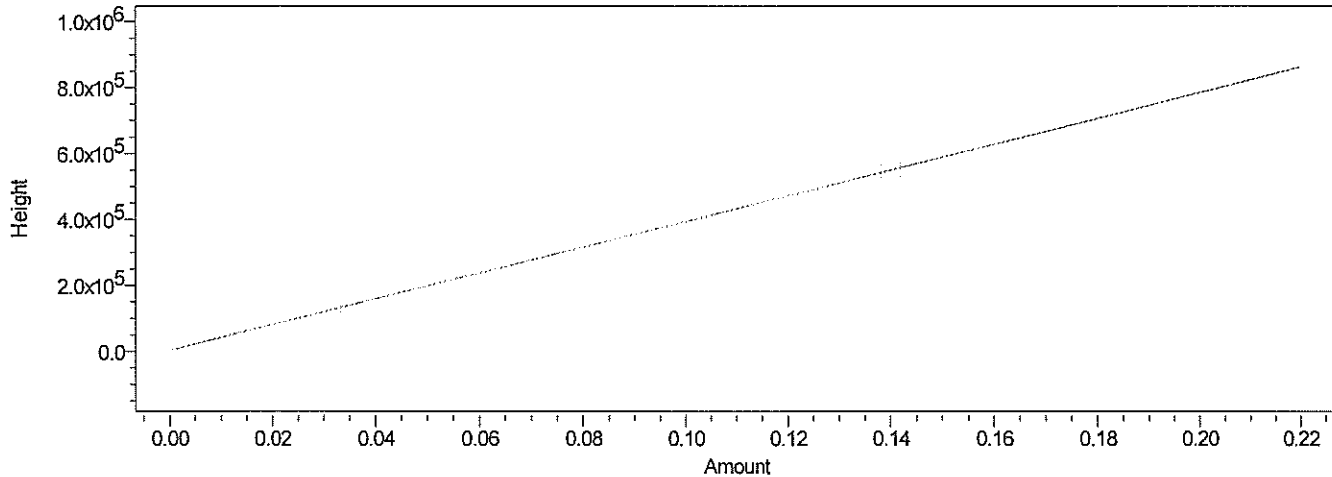
	Fit Type	Processing Method	Slope	Y-Intercept	R^2
1	Linear (1st Order)	Detector Lin Sens Area PM	2.80e+007	1.44e+004	0.99998

DETECTOR LINEARITY REPORT

Height Results

	Vial	Level	SampleName	Height (μV)	Amount	AHeight_Sensitivity	Peak Type	Result Id
1	26	1	0.01 mg/ml	40106	0.010	4010559.92	Found	20476
2	50	2	0.035 mg/ml	139041	0.035	3972595.67	Found	20477
3	75	3	0.06 mg/ml	240291	0.060	4004844.62	Found	20478
4	98	4	0.14 mg/ml	550648	0.140	3933202.92	Found	20479
5	100	5	0.22 mg/ml	861176	0.220	3914437.99	Found	20480
Mean						3967128.22		
Std. Dev.						42620.18		
% RSD						1.07		

Height Calibration Plot



Height Calibration Summary

	Fit Type	Processing Method	Slope	Y-Intercept	R ²
1	Linear (1st Order)	Detector Lin Sens Height PM	3.91e+006	3.00e+003	0.99997

DETECTOR LINEARITY REPORT

Detector Area Linearity and Sensitivity Results

	Area Linearity Curve R2 Specification	Area Linearity Curve R2	Area Linearity Curve R2 Pass Fail	Area Sensitivity % RSD Specification	Area Sensitivity % RSD	Area Sensitivity % RSD Pass Fail
1	$R^2 > \text{or} = 0.990$			%RSD < or = 4.5	0.80	PASS

Detector Height Linearity and Sensitivity

	Height Linearity Curve R2 Specification	Height Linearity Curve R2	Height Linearity Curve R2 Pass Fail	Height Sensitivity % RSD Specification	Height Sensitivity % RSD	Height Sensitivity % RSD Pass Fail
1	$R^2 > \text{or} = 0.990$			%RSD < or = 4.5	1.074	PASS

Certification

Comments _____

The undersigned performer attests that the values recorded and calculated above are accurate and complete.

Performer _____ Date _____
Signature

The undersigned reviewer accepts that the values recorded and calculated above are accurate and complete.

Reviewer _____ Date _____
Signature

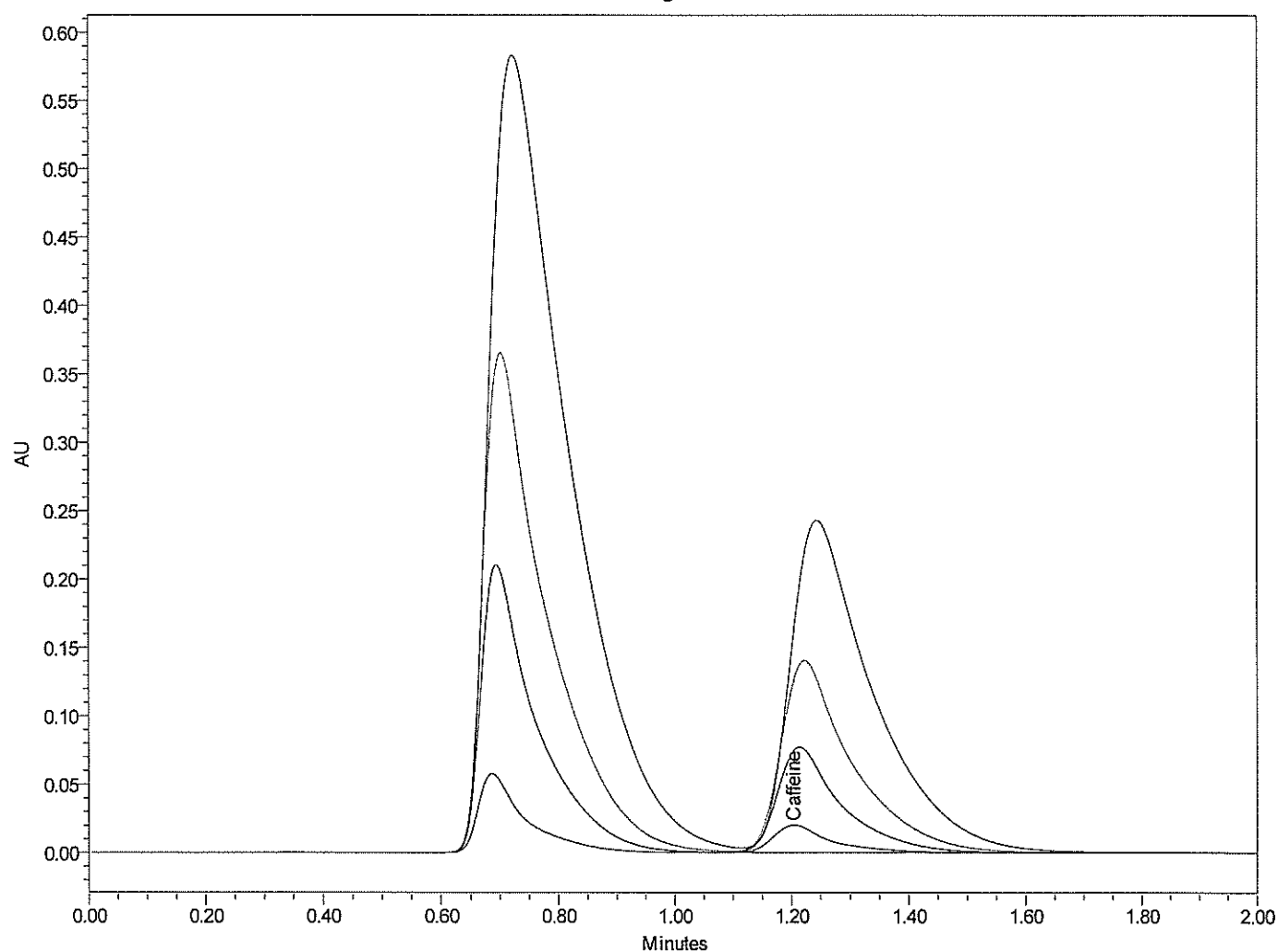
INJECTOR LINEARITY REPORT

ACQUISITION INFORMATION

System Name: SQT_L16SM4371A full
Project Name: SQT_2695_2489_Rev G
Sample Set Method: 060 Injector Lin Acc SSM
Processing Method Caffeine PM
Report Method Name: Injector Lin Acc RM
User Name: System
Sample Set Name: 060 Injector Lin Acc SSM

Acquired By: System
Column serial Number: 01473126213809
Sample Kit 1 Expiration date: 3/1/2020 12:00:00 AM
Sample Kit 1 Lot Number: W01031720
Build Version: Empower 3 Software Build 3471 SPs
Sample Set Id: 20464 Result Set Id 20481
Sample Set Start Date: 5/16/2018 6:29:03 PM

Chromatograms

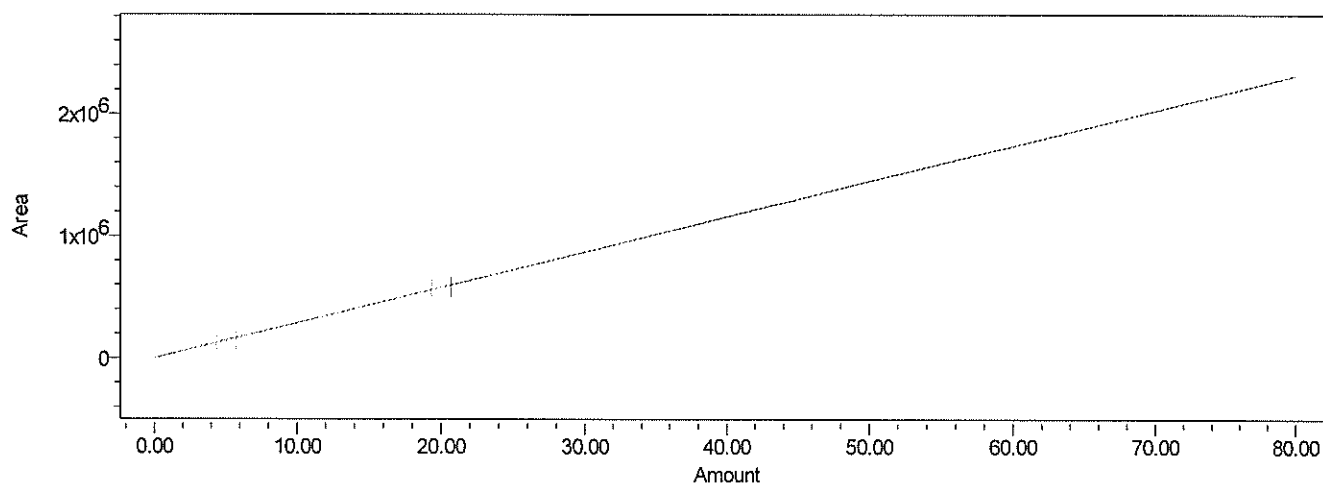


INJECTOR LINEARITY REPORT

Chromatographic Peak Results

	Sample Name	Retention Time (min)	Area	Height (μV)	Amount	Peak Type	Result Id
1	5 uL	1.205	138013	20123	5.0	Found	20497
2	80 uL	1.244	2312844	240158	80.0	Found	20500
3	40 uL	1.223	1165792	139715	40.0	Found	20499
4	20 uL	1.214	579896	76854	20.0	Found	20498

Area Calibration Plot



Area Calibration Summary

	Fit Type	Processing Method	Slope	Y-Intercept	R ²
1	Linear (1st Order)	Caffeine PM	2.90e+004	-1.30e+003	0.99996

Injector Linearity Results

	Linearity R ² Specification	Linearity R ²	Linearity R ² Pass/Fail	Injection Accuracy Specification	Injection Accuracy	Injection Accuracy Pass/Fail
1	R ² > or = 0.9990	0.99996	PASS	< or = 1.0 uL	1.0	Pass

Y-intercept / Slope
<1.0

INJECTOR LINEARITY REPORT

Certification

Comments

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Performer

Signature

Date

The undersigned reviewer accepts that the values recorded and calculated above are accurate and complete.

Reviewer

Signature

Date

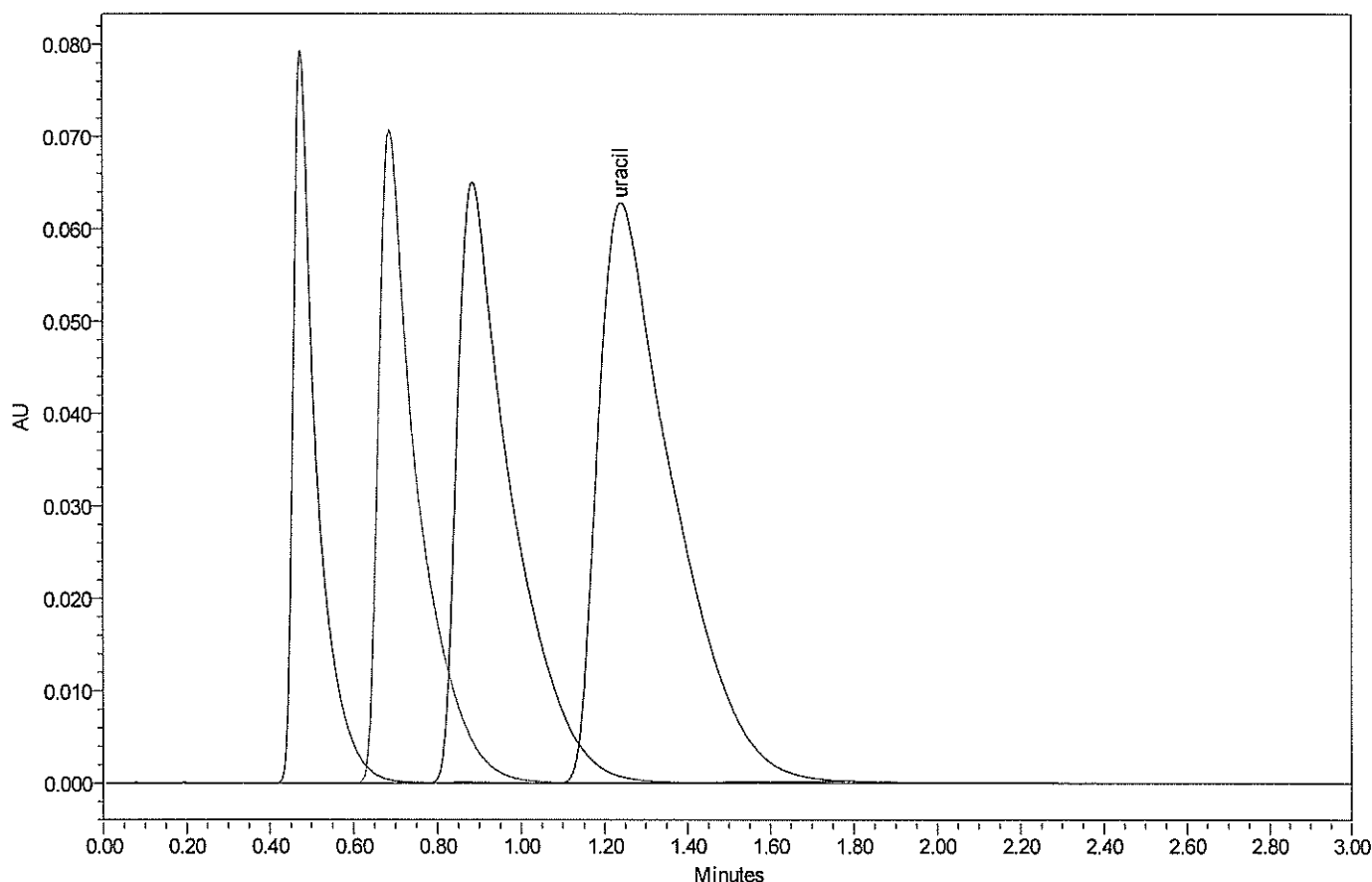
FLOW LINEARITY REPORT

ACQUISITION INFORMATION

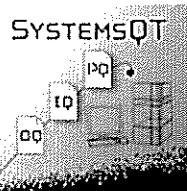
System Name: SQT_L16SM4371A full
Project Name: SQT_2695_2489_Rev G
Sample Set Method: 070 Flow Rate Lin Acc SSM
Processing Method Flow Rate Lin Acc PM
Report Method Name: Flow Rate Lin Acc RM
User Name: System
Sample Set Name: 070 Flow Rate Lin Acc SSM

Acquired By: System
Column serial Number: 01473126213809
Sample Kit 1 Expiration date: 3/1/2020 12:00:00 AM
Sample Kit 1 Lot Number: W01031720
Build Version: Empower 3 Software Build 3471 SPs
Sample Set Id: 20496 Result Set Id 20505
Sample Set Start Date: 5/16/2018 6:41:35 PM

Chromatogram Overlay



— Sample Name: Uracil 0.5 mL/min; Injection: 1
— Sample Name: Uracil 0.75 mL/min; Injection: 1
— Sample Name: Uracil 1.0 mL/min; Injection: 1
— Sample Name: Uracil 1.5 mL/min; Injection: 1

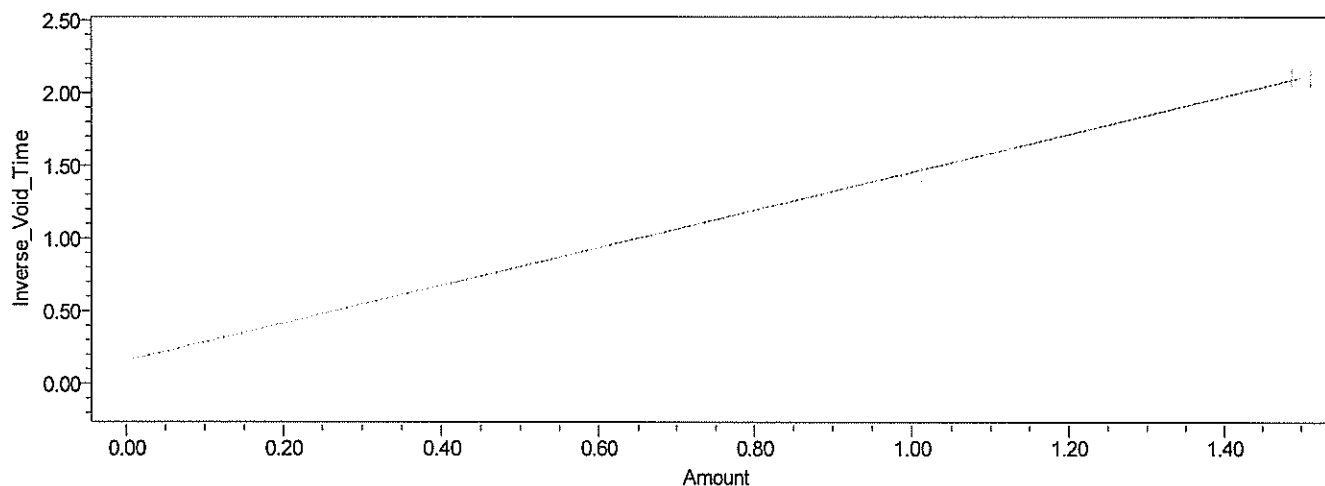


FLOW LINEARITY REPORT

Chromatographic Peak Results

	Injection	Name	Retention Time (min)	Area	Height (μV)	Peak Type	Result Id
1	1	uracil	1.241	792611	62802	Found	20521
2	1	uracil	0.475	307056	79564	Found	20524
3	1	uracil	0.687	456056	70674	Found	20523
4	1	uracil	0.885	586528	65009	Found	20522
Mean					69512		
Std. Dev.					7477		
% RSD					10.76		

Area Calibration Plot



Area Calibration Summary

	Fit Type	Processing Method	Slope	Y-Intercept	R ²
1	Linear (1st Order)	Flow Rate Lin Acc PM	1.30e+000	1.56e-001	1.00000

FLOW LINEARITY REPORT

Flow Linearity Results

	Flow Linearity R2 Specification	Flow Linearity R2	Flow Linearity R2 Pass Fail	Flow Accuracy Specification	Flow Accuracy	Flow Accuracy Pass Fail
1	$R^2 \geq 0.90$	1.00000	PASS	$\leq 100 \text{ ul}$		

same calculation --> 0.12ml = 120ul -->fail

Certification

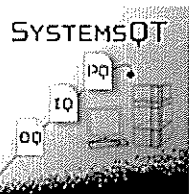
Comments _____

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Performer _____ Date _____
Signature

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Reviewer _____ Date _____
Signature



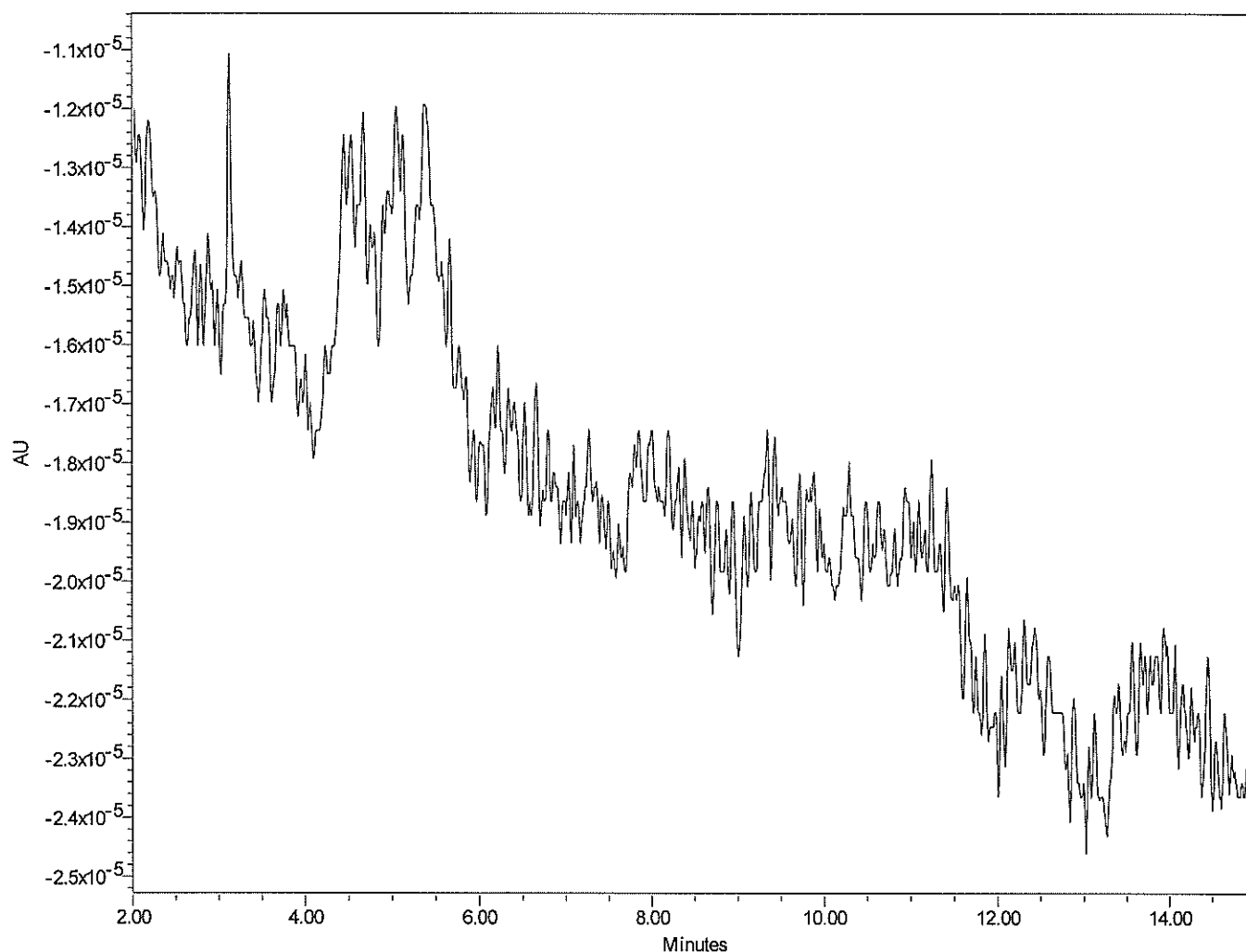
NOISE AND DRIFT REPORT

ACQUISITION INFORMATION

System Name: SQT_L16SM4371A full
Project Name: SQT_2695_2489_Rev G
Sample Set Method: 080 Noise and Drift SSM
Processing Method Noise PM
Report Method Name: Noise and Drift RM
User Name: System
Sample Set Name: 080 Noise and Drift SSM

Acquired By: System
Column serial Number: 01473126213809
Sample Kit 1 Expiration date: 3/1/2020 12:00:00 AM
Sample Kit 1 Lot Number: W01031720
Build Version: Empower 3 Software Build 3471 SPs
Sample Set Id: 20520 Result Set Id 20529
Sample Set Start Date: 5/16/2018 7:10:31 PM

Noise Chromatogram



NOISE AND DRIFT REPORT

Noise Result

	NoiseSpec	Average Peak-to-Peak Noise	Noise Pass Fail
1	< or = 60 uAU	14.055	PASS

Drift Results

	Detector Drift Specification	Detector Drift	Detector Drift Pass Fail
1	< or = 10.0 mAU/Hr	0.254	PASS

Certification

Comments

The undersigned performer attests that the values recorded and calculated above are accurate and complete.

Performer

Signature

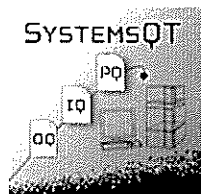
Date _____

The undersigned reviewer accepts that the values recorded and calculated above are accurate and complete.

Reviewer

Signature

Date _____



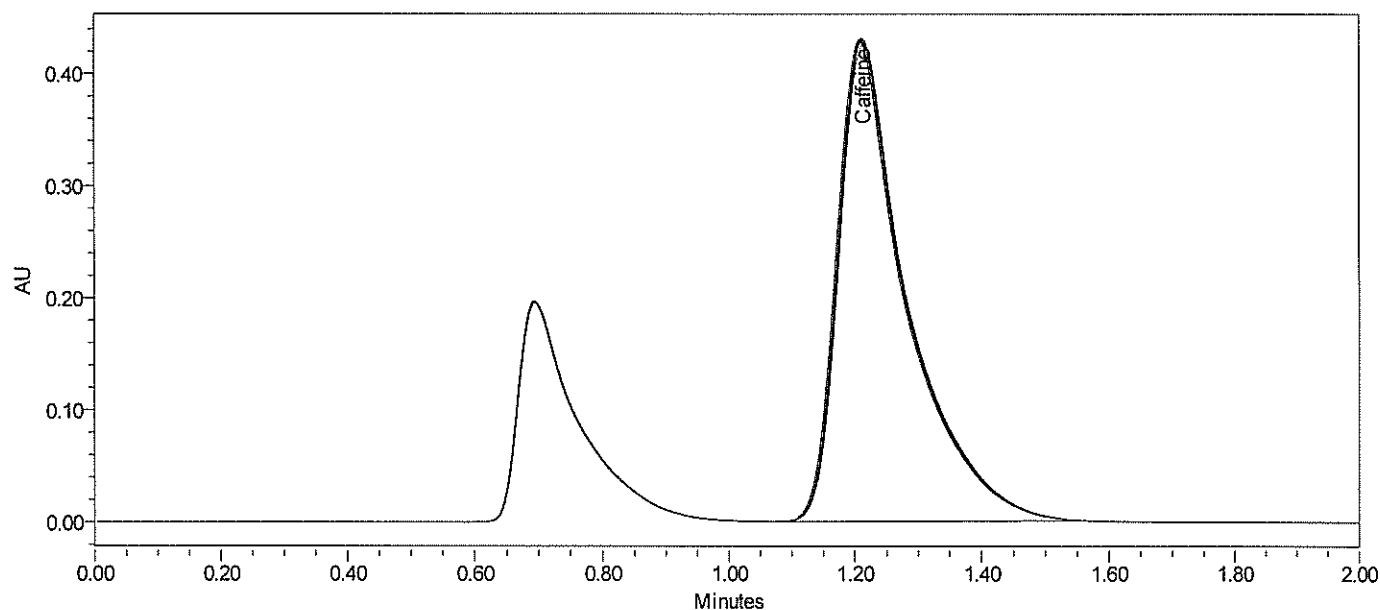
COMPOSITIONAL ACCURACY REPORT

ACQUISITION INFORMATION

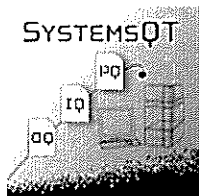
System Name: SQT_L16SM4371A full
Project Name: SQT_2695_2489_Rev G
Sample Set Method: 090 Compositional Accuracy SSM
Processing Method Caffeine CF
Report Method Name: Compositional Accuracy RM
User Name: System
Sample Set Name: 090 Compositional Accuracy SSM

Acquired By: System
Column serial Number: 01473126213809
Sample Kit 1 Expiration date: 3/1/2020 12:00:00 AM
Sample Kit 1 Lot Number: W01031720
Build Version: Empower 3 Software Build 3471 SPs
Sample Set Id: 20530 Result Set Id 20538
Sample Set Start Date: 5/16/2018 7:36:53 PM

Chromatogram Overlay



—— Sample Name: 70 / 30 AC; Injection: 1
—— Sample Name: 70 / 30 AC; Injection: 2
—— Sample Name: 70 / 30 AC; Injection: 3
—— Sample Name: 70 / 30 AD; Injection: 1
..... Sample Name: 70 / 30 AD; Injection: 2
..... Sample Name: 70 / 30 AD; Injection: 3
..... Sample Name: 70 / 30 BC; Injection: 1
..... Sample Name: 70 / 30 BC; Injection: 2
—— Sample Name: 70 / 30 BC; Injection: 3
—— Sample Name: 70 / 30 BD; Injection: 1
—— Sample Name: 70 / 30 BD; Injection: 2
—— Sample Name: 70 / 30 BD; Injection: 3



COMPOSITIONAL ACCURACY REPORT

Chromatographic Peak Results

	SampleName	Injection	Retention Time (min)	Area	Height (μV)	Peak Type	Result Id
1	70 / 30 AC	1	1.214	3228211	425808	Found	20578
2	70 / 30 AC	2	1.212	3231054	428237	Found	20579
3	70 / 30 AC	3	1.214	3231899	430179	Found	20580
4	70 / 30 AD	1	1.212	3233567	431153	Found	20581
5	70 / 30 AD	2	1.211	3232611	429813	Found	20582
6	70 / 30 AD	3	1.212	3234367	430274	Found	20583
7	70 / 30 BC	1	1.212	3235214	428145	Found	20584
8	70 / 30 BC	2	1.210	3232847	429853	Found	20585
9	70 / 30 BC	3	1.212	3230789	429499	Found	20586
10	70 / 30 BD	1	1.209	3230937	428262	Found	20587
11	70 / 30 BD	2	1.210	3231617	430046	Found	20588
12	70 / 30 BD	3	1.209	3229688	430053	Found	20589
Mean			1.211				
Std. Dev.			0.002				
% RSD			0.15				

Compositional Accuracy Results

	Compositional Accuracy Specification	Compositional Accuracy Retention Time %RSD	Compositional Accuracy Pass Fail
1	RT %RSD < or = 3.0	0.15	PASS

Certification

Comments

The undersigned performer attests that the values recorded and calculated above are accurate and complete.

Performer _____ Date _____
Signature

The undersigned reviewer accepts that the values recorded and calculated above are accurate and complete.

Reviewer _____ Date _____
Signature