

WATERS CORPORATION - TEST RECORD

Part Number:	186269506	Product:	eAlliance
Operator:	Syed I Jemal	Start Date/Time:	21 MAR 2018 / 0845
Serial Number:	C183M4618A	End Date/Time:	22 MAR 2018 / 1620
Test System:	5/4	Order:	N/A
Test Software:	Empower 2	Location:	5th Floor Flex

TMD: 010472

Firmware: 3.03

Test Name	LSL	Measurement	USL	Unit	Outcome		
Electrical Safety Tests					PASS ☒	FAIL ☐	See Event Log ☐
System Initialization					PASS ☒	FAIL ☐	See Event Log ☐
Power Supply Fan Test					PASS ☒	FAIL ☐	See Event Log ☐
Unit Fan Test					PASS ☒	FAIL ☐	See Event Log ☐
Keypad Test					PASS ☒	FAIL ☐	See Event Log ☐
Display Test					PASS ☒	FAIL ☐	See Event Log ☐
Rear Panel Tests					PASS ☒	FAIL ☐	See Event Log ☐
Degasser Test (if equipped)		0.5	1.3	PSIA	PASS ☒	FAIL ☐	See Event Log ☐
Spurge Valve Test (if equipped)					PASS ☐	FAIL ☐	See Event Log ☐ N/A
Heater/Cooler Test (if equipped)					PASS ☒	FAIL ☐	See Event Log ☐
Solvent Inlet Plumbing Verification					PASS ☒	FAIL ☐	See Event Log ☐
Sealwash Test (if equipped)					PASS ☒	FAIL ☐	See Event Log ☐
Needle Wash Test					PASS ☒	FAIL ☐	See Event Log ☐
System Leak Test		23.90	160	PSI	PASS ☒	FAIL ☐	See Event Log ☐
Injector Adjustment Test					PASS ☒	FAIL ☐	See Event Log ☐
Top	38	48	50	Steps			
Width	60	75	90	Steps			
Compression Test		20.9	50	PSIA	PASS ☒	FAIL ☐	See Event Log ☐
Z-Ram Height Test					PASS ☒	FAIL ☐	See Event Log ☐

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Carrier Alignment/RV Injection Test	—	—	—	—	PASS ☒	FAIL ☐	See Event Log ☐
Carryover Test	—	0.0016	0.01	%	PASS ☒	FAIL ☐	See Event Log ☐
Linearity – [X-Intercept]	—	0.287	1.0	—	PASS ☒	FAIL ☐	See Event Log ☐
Linearity – R-Squared	0.999	1.0000	—	—	PASS ☒	FAIL ☐	See Event Log ☐
AC Precision Test	—	—	—	—	PASS ☒	FAIL ☐	See Event Log ☐
RT Precision	—	0.0015	0.0090	Min.			
Area Precision	—	0.061	0.5	% RSD			
PSI Ripple	—	12.31	65	PSI			
BD Precision Test	—	—	—	—	PASS ☒	FAIL ☐	See Event Log ☐
RT Precision	—	0.0007	0.0090	Min.			
Area Precision	—	0.041	0.5	% RSD			

Note: Fill in 'N/A' if not applicable.

Instrument Final Test Overall Result -

PASS ☒ FAIL ☐

Signed:

JERNAIL 836410

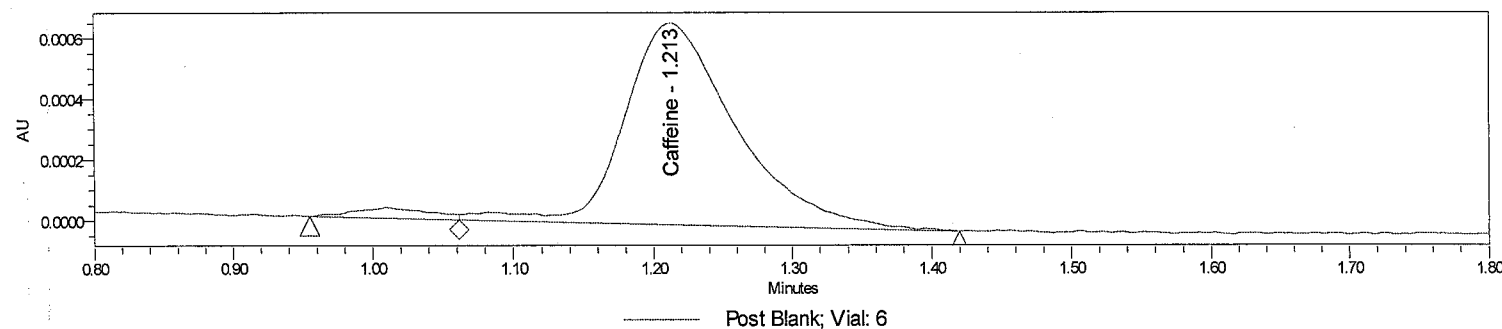
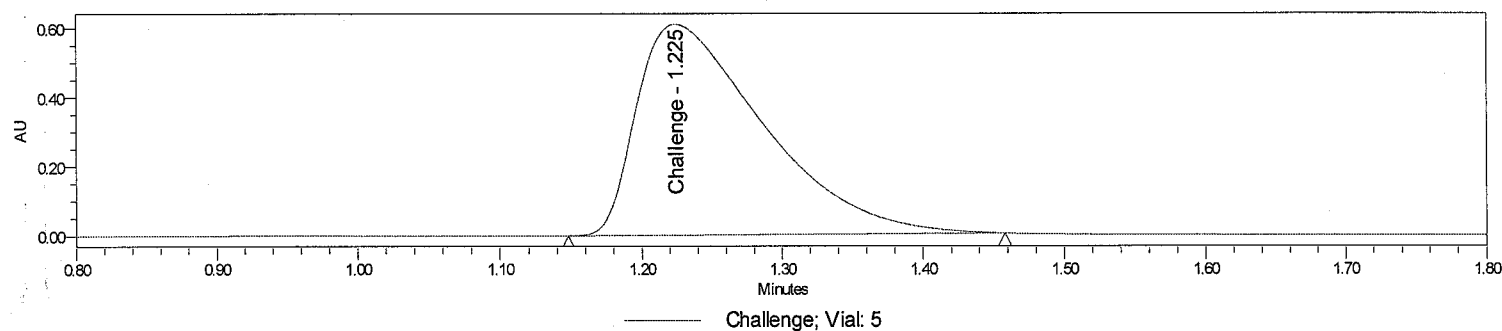
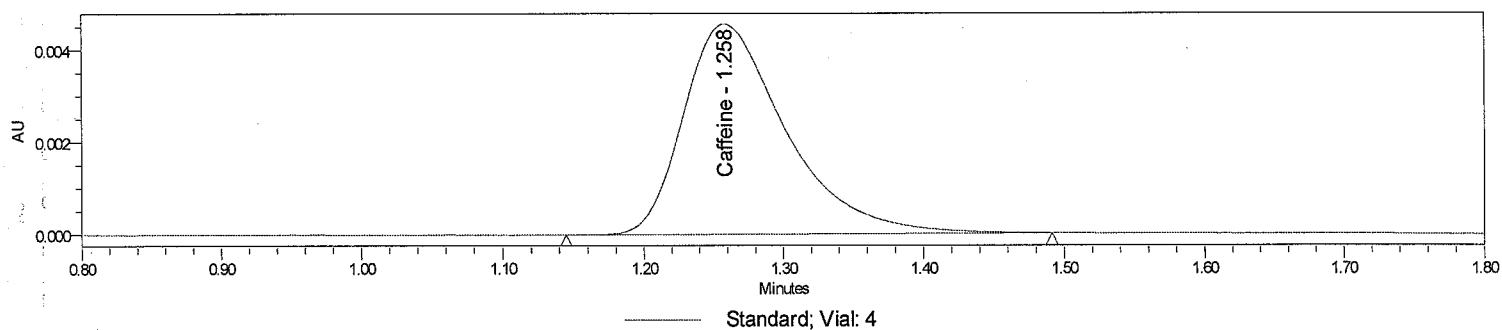
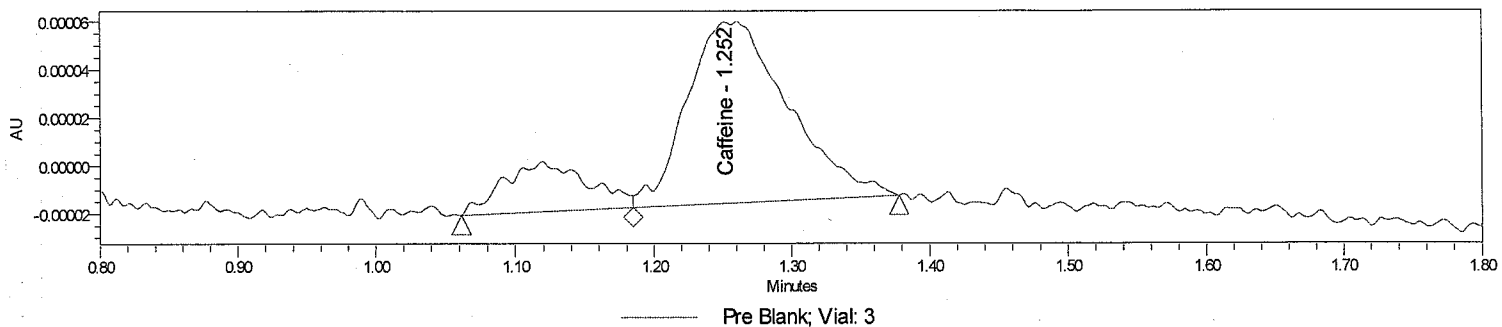
Date:

22 MAR 2018

END OF DATA

Part Number: 186269506
 Tested By: JERNAIL
 Serial Number: C18SM4818A
 UUT Firmware: 3.03

Description: 2695 Separations Module
 Test Template Revision: 1.8.24
 Test Station: Final-test-5
 System: 2695_4



	Date Acquired	SampleName	Name	Area	Percent
1	3/22/2018 2:25:58 PM SGT	Pre Blank	Caffeine	387	0.0002
2	3/22/2018 2:28:43 PM SGT	Standard	Caffeine	23236	0.0100
3	3/22/2018 2:31:28 PM SGT	Challenge	Challenge	3826176	
4	3/22/2018 2:42:28 PM SGT	Post Blank	Caffeine	3704	0.0016

Carryover Test:
 PreBlank injection (to establish system cleanliness)
 Standard (0.4 PPM) Caffeine injection
 Challenge injection (10,000 X Standard = 4,000 PPM)
 PostBlank injection
 $\text{Carryover (\%)} = \frac{\text{Carryover Area}}{\text{Standard Area}} \times 0.010$

Specification: Post Blank < 0.010%

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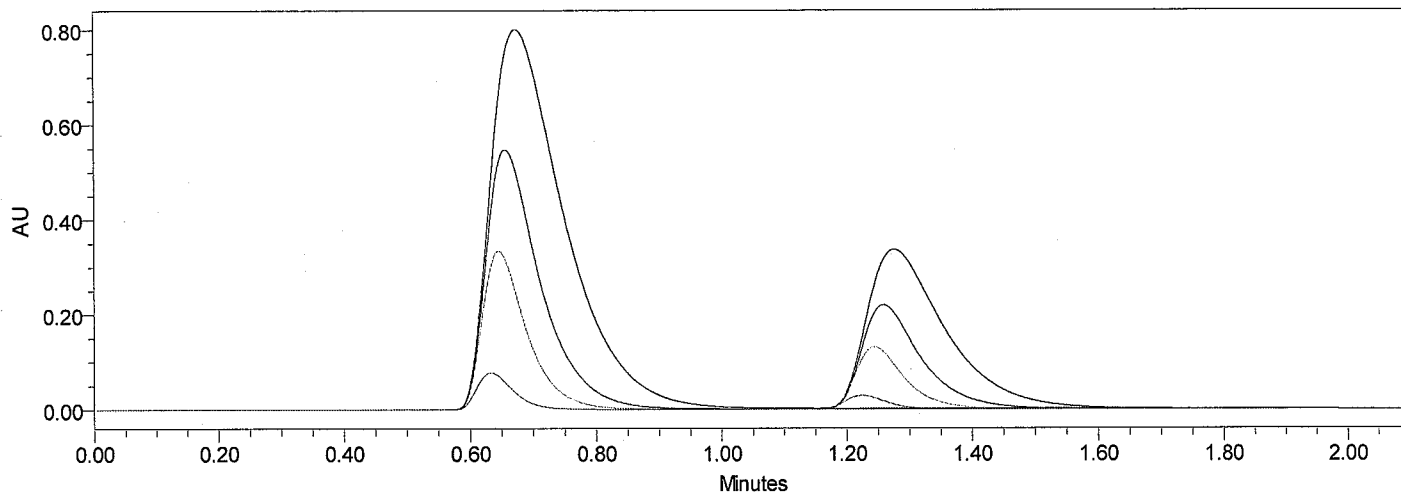
Description: 2695 Separations Module

Test Template Revision: 1.8.24

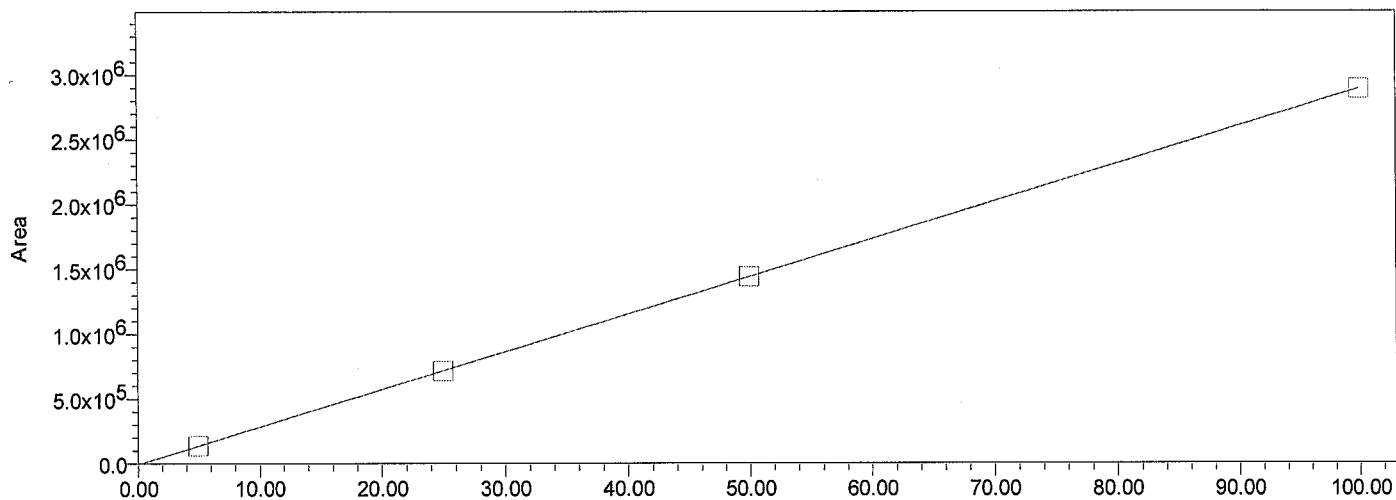
Test Station: Final-test-5

System: 2695_4

Overlaid Caffeine Peak Chromatograms



Calibration Plot



Injection Linearity and Accuracy

Fit Type Linear (1st Order)

A -8331.108542

Equation $Y = 2.90e+004 X - 8.33e+003$

B 28983.867516

X_Intercept 0.287

R² 1.0000

$1-(A/B) = X \text{ Intercept (ul)}$
Specs: R² >= 0.999, |X-Intercept| <= 1.0 ul

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System: 2695_4

Component Summary For Retention Time

	Sample	Vo	Caffeine
1	Precision AC	0.6416	1.2455
2	Precision AC	0.6435	1.2483
3	Precision AC	0.6413	1.2457
4	Precision AC	0.6441	1.2489
5	Precision AC	0.6429	1.2481
6	Precision AC	0.6435	1.2488
Std. Dev.		0.0011	0.0015

Component Summary For Area

	Sample	Caffeine
1	Precision AC	3435712
2	Precision AC	3433525
3	Precision AC	3434265
4	Precision AC	3431165
5	Precision AC	3431864
6	Precision AC	3430054
% RSD		0.061

Component Summary For Pressure_Ripple

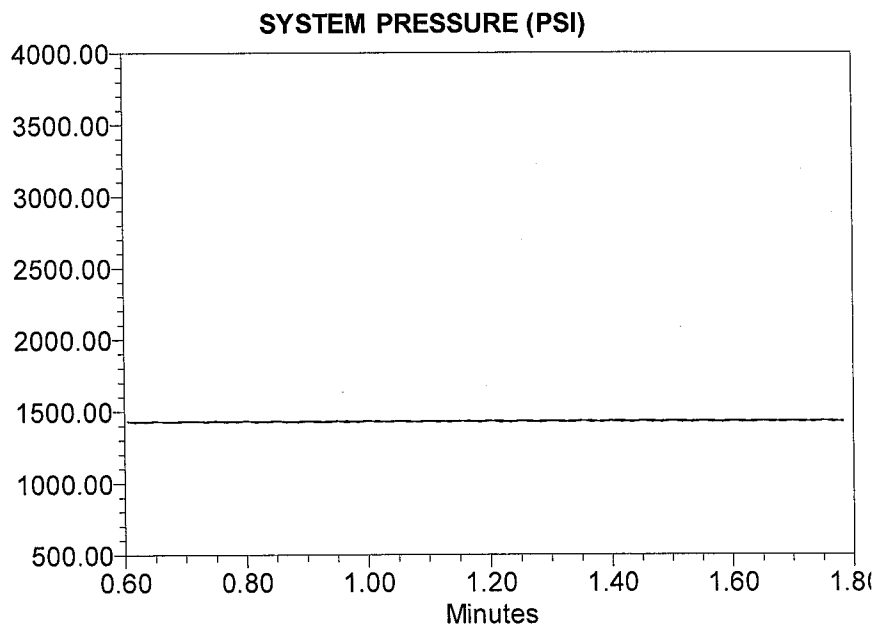
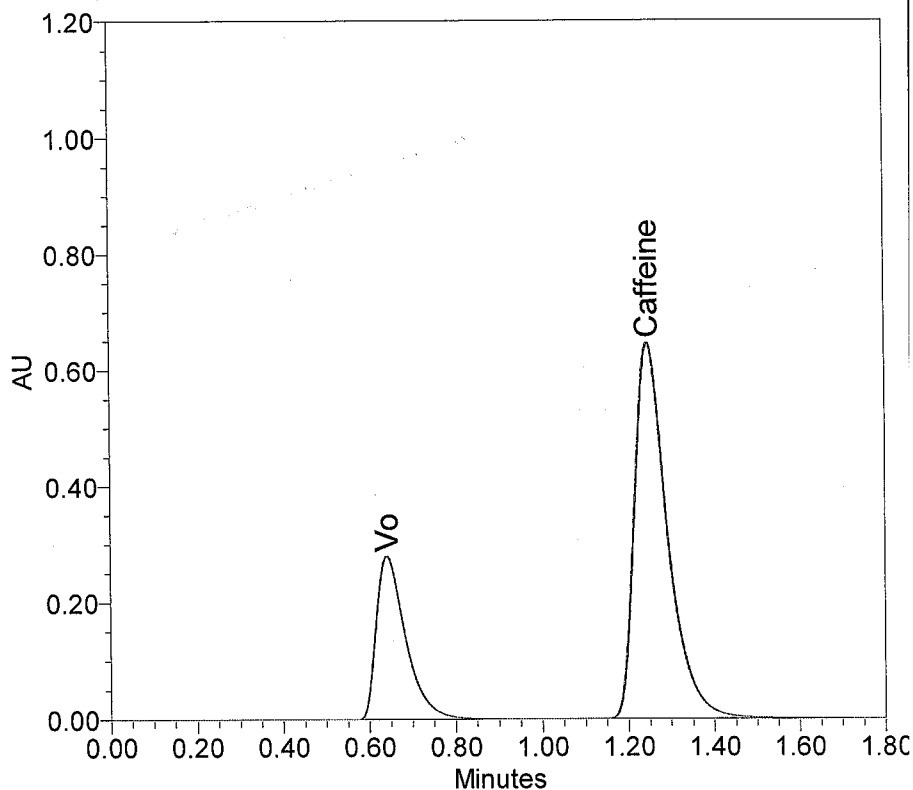
	Date Acquired	
1	3/22/2018 3:01:33 PM SGT	11.46
2	3/22/2018 3:04:15 PM SGT	12.62
3	3/22/2018 3:06:57 PM SGT	11.68
4	3/22/2018 3:09:41 PM SGT	12.06
5	3/22/2018 3:12:23 PM SGT	12.89
6	3/22/2018 3:15:05 PM SGT	13.14
Mean		12.31

Specifications:

Retention Time Standard Deviation: ≤ 0.0090 min

Area % RSD: ≤ 0.500

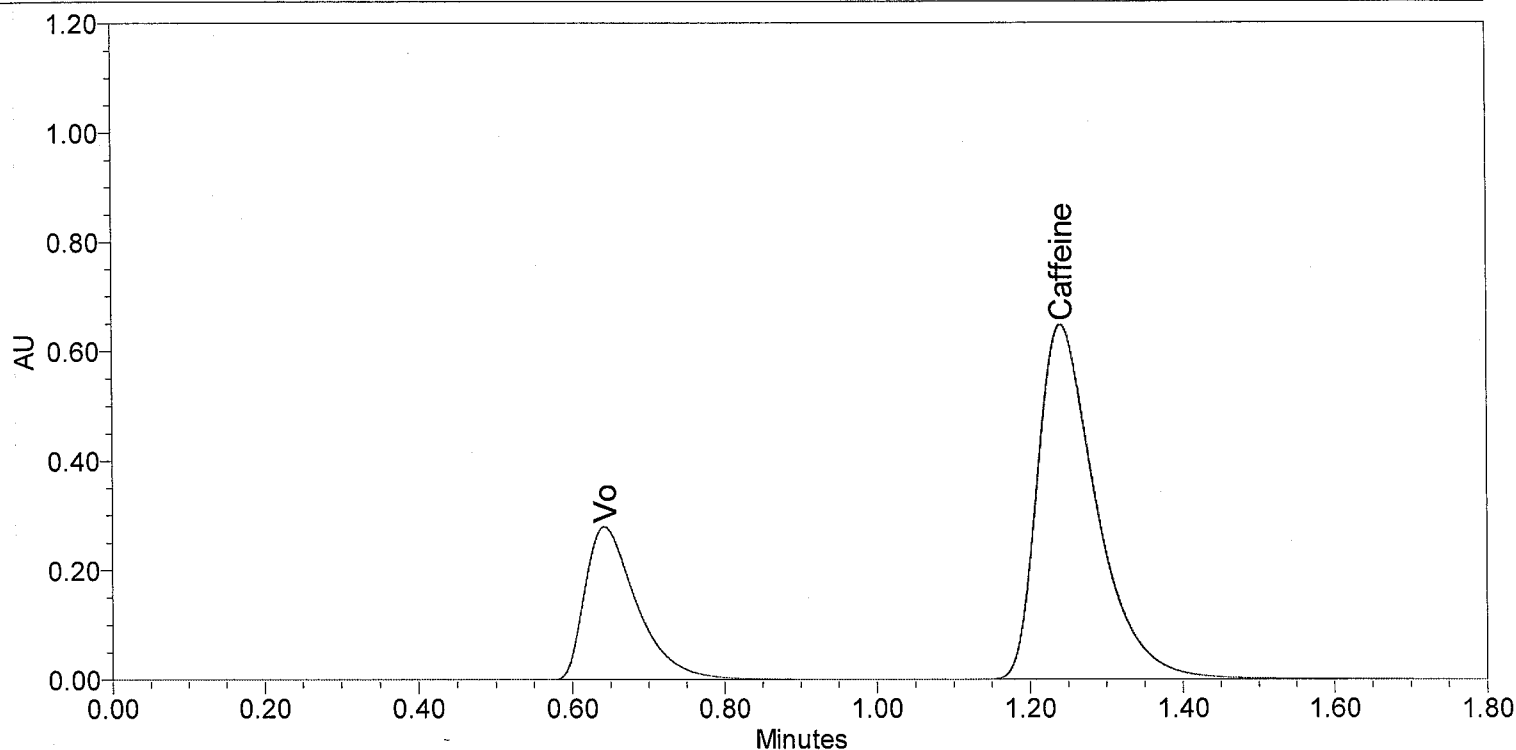
Mean Pressure Ripple < 65 PSI



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Component Summary For Retention Time

	Sample	Date	Vo	Caffeine
1	Precision BD	3/22/2018 3:28:49 PM SGT	0.6430	1.2417
2	Precision BD	3/22/2018 3:31:32 PM SGT	0.6437	1.2422
3	Precision BD	3/22/2018 3:34:13 PM SGT	0.6427	1.2410
4	Precision BD	3/22/2018 3:36:54 PM SGT	0.6427	1.2412
5	Precision BD	3/22/2018 3:39:37 PM SGT	0.6423	1.2423
6	Precision BD	3/22/2018 3:42:20 PM SGT	0.6436	1.2429
Std. Dev.			0.0006	0.0007

Component Summary For Area

	Sample	Date	Caffeine
1	Precision BD	3/22/2018 3:28:49 PM SGT	3433093.71
2	Precision BD	3/22/2018 3:31:32 PM SGT	3431992.98
3	Precision BD	3/22/2018 3:34:13 PM SGT	3430536.86
4	Precision BD	3/22/2018 3:36:54 PM SGT	3431935.68
5	Precision BD	3/22/2018 3:39:37 PM SGT	3432532.90
6	Precision BD	3/22/2018 3:42:20 PM SGT	3434736.55
% RSD			0.041

Specifications:
Retention Time Standard Deviation: ≤ 0.0090 minutes
Area % RSD: ≤ 0.500

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