

INJECTOR LINEARITY & ACCURACY REPORT

ACQUISITION INFORMATION

System Name: Column Manager
Project Name: SQT_ACQUITY_TUV_12
Sample Set Method: 050 Injector Lin Acc
Processing Method Injector Lin Acc PM
Report Method Name: Injector Lin Acc Report
User Name: Tester Account (Tester)
Sample Set Name: Injector Lin Acc

Acquired By: Tester
Column serial Number: 03833034215140
Sample Kit 1 Expiration date: 10/6/2022 12:00:00 AM
Sample Kit 1 Lot Number: W06102013
Build Version: Empower 2 Software Build 2154 SPs
Sample Set Id: 14579 Result Set Id 14604
Sample Set Start Date: 4/12/2021 5:13:27 PM

The Injector Linearity and Accuracy qualification makes injections at varying volumes and creates a calibration curve of Peak Area vs. Injection Volume.

The qualification passes if the Linearity R^2 value is ≥ 0.9990 and the Accuracy absolute value of the X-intercept is $\leq 0.2\mu\text{L}$.

Calculation

The Injector Accuracy is calculated using the following formula: $|Y \text{ intercept}/\text{Slope}|$

Caffeine Injector Linearity & Accuracy Results Table

	Linearity R^2 Specification	Linearity R^2	Linearity R^2 Pass Fail	Injection Accuracy Specification	Injection Accuracy	Injection Accuracy Pass Fail
1	$R^2 \geq 0.9990$	1.0000	PASS	$\leq 0.2 \mu\text{L}$	0.0	PASS

Certification

Comments

No comments.

NA

13 Apr 2021

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

Performer

Signature

Date

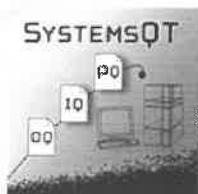
13 Apr 2021

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

Reviewer

Signature

Date



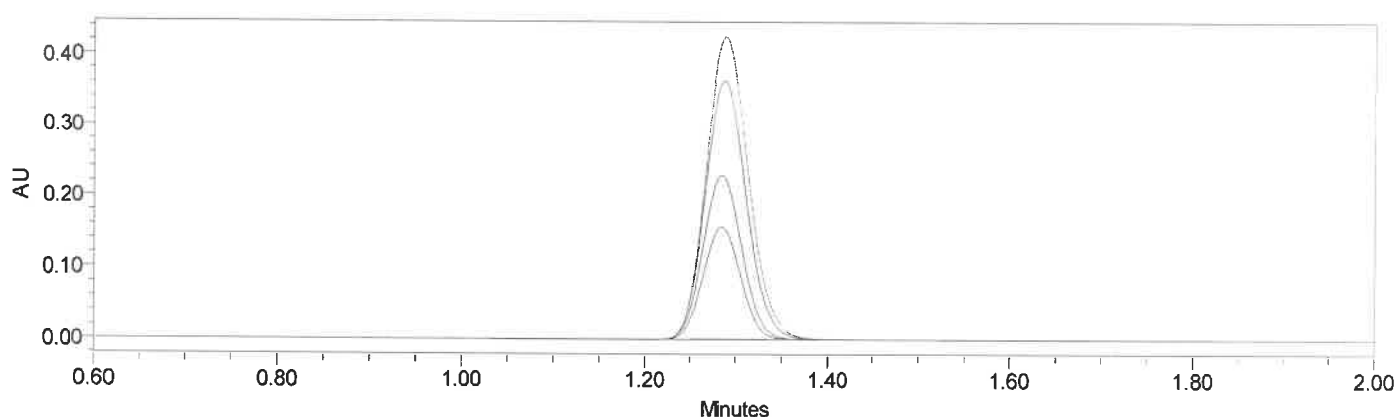
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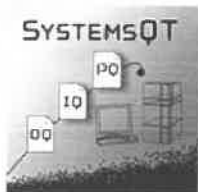
Overlay of Caffeine Peak Chromatograms



Injector Linearity Results Table

Peak: Caffeine

	Vial	SampleName	X Value	Area ($\mu\text{V}\cdot\text{sec}$)	Level	Channel Id	Result Id
1	2:E,2	Caffeine	2.0	453028	1	14603	14632
2	2:E,2	Caffeine	3.0	682267	2	14612	14633
3	2:E,2	Caffeine	5.0	1141293	3	14620	14634
4	2:E,2	Caffeine	6.0	1366953	4	14628	14635



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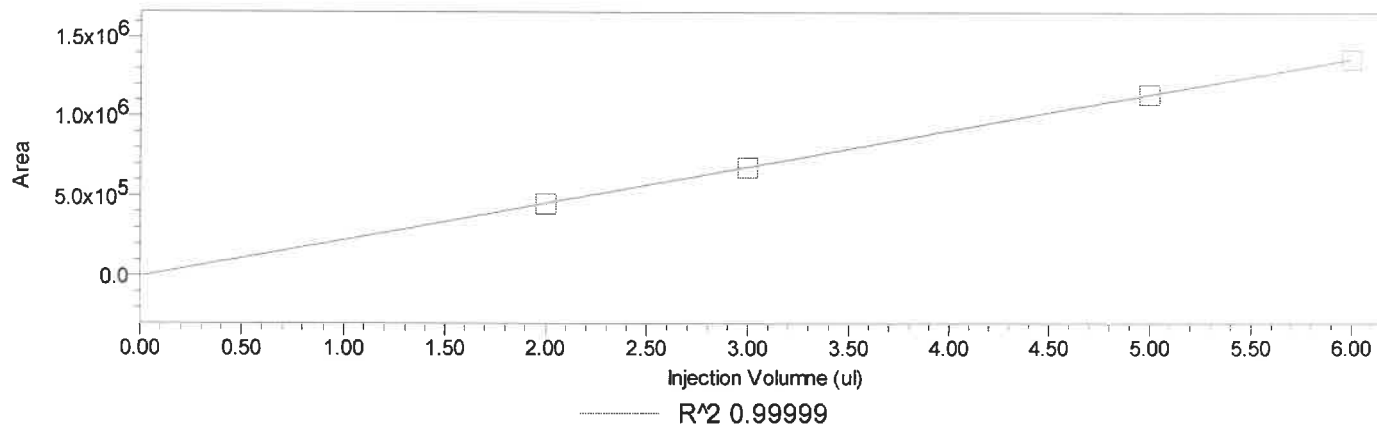
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Injection Linearity Results

Calibration Id	14629	Y Intercept	-3864.969621
Equation	$Y = 2.29e+005 X - 3.86e+003$	Slope	228687.544446
Fit Type	Linear (1st Order)	R ²	0.99999

Caffeine Injector Linearity Calibration Plot



Accuracy Calculation: Injection Accuracy = $|Y \text{ intercept} / \text{Slope}|$

Y intercept = -3865 Slope = 228688

Injection Accuracy: $| -3865 / 228688 | = 0.02$