Validation Summary Toxicology Cannabinoids Screen in Blood and Urine by Q-TOF Using SLE+ Extraction Plates

The runs were completed on the following instruments: Agilent 1290 Infinity II HPLCs equipped with an Agilent 6545B Q-TOFs. The property number for the Pocatello instrument is 070060 and the property number for the Coeur d'Alene instrument is 070044.

Extractions were performed by Amy Patton (a contractor from Pinpoint Testing) on 8/5/19, 8/6/19, 8/9/19, and 8/12/19, by Sarah Pickle on 8/7/19, by Celena Shrum on 8/8/19, by Tamara Salazar on 8/15/19, by Anne Nord on 11/21/19, and Britany Wylie on 11/25/19.

For the extractions, AM #26 was followed.

Based on our current methods, and suggestions from PinPoint, the initial criteria for evaluation was set as:

-Retention time criterion for peak identification must be +/- 0.1 minutes of the retention time of the calibrator

-Mass accuracy less than 5

-Signal to noise at greater than 5

With the initial evaluation criteria, some of the calibrators and controls would not be evaluated as positive while some of the negative samples would be evaluated as positive, so this evaluation criteria was re-examined. The criteria was updated so that when it was applied, the calibrators and controls would be evaluated as positive and the negative samples would be evaluated as negative.

The criteria for evaluation was updated to:

-Retention time for peak at +/- 0.1 minutes of the retention time of the calibrator **and**

-Mass accuracy +/- 10 **and/or**

-Mass abundance of 40 or greater

-Samples can also be evaluated as positive or negative at analyst's discretion (this is typically based on peak presence and shape). A sample can be moved forward for confirmation with a retention time that is outside the window if it is due to the sample being at high concentration (which is causing peak widening/shifting).

These compounds passed the evaluation criteria for this method and will be included in the method at the following LOD's :

Carboxy-THC- 10ng/mL
THC- 3ng/mL
THC-OH- 3ng/mL

A spreadsheet of the overall evaluation for all of the compounds is included in this folder: I:\Toxicology\Validations_Studies_Projects\QTOF Screening

A report with the evaluation for each compound is included in this folder.

An evaluation of samples run using our current methods and samples run using this method is also included in this folder. All results were consistent and there were no false positives or negatives.

The method is approved for implementation by the Idaho State Police Forensic Services toxicology section. Limitations for reporting will be included in the method to clarify that the results are indicative of the drug being present, but it is not a confirmation of that drug. Both QTOF instruments are approved for casework and since the analysts that participated in the study demonstrated competence in performing the method, they are approved to perform the method.

Approved By:

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Date: 06/05/2020

Cynthia Hall

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Date: 6/5/2020