Idaho State Police
Forensic Services

Approval for Quality System Controlled Documents

Discipline/Name of Document: Toxicology – BAC Calculation Excel Spreadsheet (casefile, calibrators and controls tabs)

Revision Number: 0

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APPROVED BY: Corinna C Owsley
Quality Manager

6/5/07
Date Signed

VOLATILES DETERMINATION CASEFILE WORKSHEET

Laboratory No.: **Analysis Date(s):**

Sample Type: ☐ **Blood** ☐ **Vitreous Humor** ☐ **Urine**

	Column 1 Channel A	Column 2 Channel B	Column Precision	Mean Value	Over-all Mean	Reported Result
Sample Results	0.0000	0.0000	0.0000	0.0000	0.0000	0.00
(g/100cc)	0.0000	0.0000	0.0000	0.0000		

Analysis Method

Refer to Toxicology Analytical Method 4.1.

Instrument Information

Perkin Elmer HS-40 Automatic Headspace Sampler
AutoSystem XL Gas Chromatograph equipped with dual FID detectors.

Columns

Vendor	Column	Channel	Film thickness	Length	ID	
Restek	Rtx®-BAC1	A	1.80mm	30M	0.32mm	
Restek	Rtx®-BAC2	B	1.20mm	30M	0.32mm	

Gas Chromatograph Instrumental Temperature Conditions

Initial Oven	Ramp Rate	Final Oven	Hold	Injection Port	Detector A	Detector B
35°C	8°C/min	100°C	None	200°C	150°C	150°C

Headspace Analyzer Instrumental Conditions

Needle Temperature	90°C		Sample Oven	60°C
Transfer Line	90°C		Cycle Time	10 minutes
Thermostating Time	12 minutes		Pressurization Time	0.5 minute
Injection Time	0.08 minutes		Withdrawal Time	0.2 minutes

Calibration and control data are stored centrally. **Analyst:** _________ **Page** ____ **of** _____

Quantitative Analysis for Ethanol

Ethanol Calibration Standards **Run Date(s):**

	0.05g/100cc		0.08g/100cc		0.10g/100cc	
Source of Standard	Cerilliant		Cerilliant		Cerilliant	
Lot Number	FN072105-01		FN082905-01		FN041204-01	
Results for Column 1 Channel (A)	0.0494		0.0796		0.0979	
Results for Column 2 Channel (B)	0.0494		0.0804		0.0982	
Column Precision	0.0000		-0.0008		-0.0003	
Mean	0.0494		0.0800		0.0980	

	0.20g/100cc		0.30g/100cc		0.40g/100cc	
Source of Standard	Cerilliant		Cerilliant		Cerilliant	
Lot Number	FN012204-01		FN031204-01		FN033006-02	
Results for Column 1 Channel (A)	0.1999		0.2994		0.4012	
Results for Column 2 Channel (B)	0.1996		0.2994		0.4011	
Column Precision	0.0003		0.0000		0.0001	
Mean	0.1997		0.2994		0.4011	

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Quantitative Analysis for Ethanol & Qualitative Analysis for Other Volatiles

Volatiles Quality Assurance Controls **Run Date(s):**

Control Type	Whole blood				Whole blood			
Mean Value	Level 1: 0.0565g/100cc				Level 2: 0.1396 g/100cc			
Acceptable Range	0.0508 - 0.0621				0.1256 - 0.1535			
Source of Control	BIORAD				BIORAD			
Lot Number	44591				44592			
Results for Column 1 Channel (A)	0.0551	0.0551			0.1415	0.1408		
Results for Column 2 Channel (B)	0.0545	0.0544			0.1401	0.1400		
Column Precision	0.0006	0.0007	0.0000	0.0000	0.0014	0.0008	0.0000	0.0000
Sample Mean	0.0548	0.0547	#DIV/0!	#DIV/0!	0.1408	0.1404	#DIV/0!	#DIV/0!

Control Type	Multi-Component Aqueous						Water Blank	ISTD Blank
Mean Value	0.40g/100cc							
Acceptable Range								
Source of Control	Cerilliant							
Lot Number	FN082905-01							
Results for Column 1 Channel (A)	0.4415	0.4233					No peaks	0.0000
Results for Column 2 Channel (B)	0.4162	0.4245					No peaks	0.0000
Column Precision	0.0253	-0.0012	0.0000	0.0000	0.0000	0.0000		
Sample Mean	0.4288	0.4239	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		

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