

**CHARLOTTE-MECKLENBURG
POLICE DEPARTMENT
CRIME LAB
CHEMISTRY SECTION**

STANDARD OPERATING PROCEDURES

Controlled Substance Analysis Standard Operating Procedures

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Fire Debris Analysis Standard Operating Procedures

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Section 2 Appendices

- Appendix A: Abbreviations Commonly Used
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Blood Analysis for Ethyl Alcohol by Headspace Gas Chromatography

1. Principle
2. Analytes Detected
3. Materials
 - 3.1. Control and Calibrators
4. Procedure
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6. Headspace/Agilent 7890 GC/FID
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Chemistry Training Program
Fire Debris Training Program
Blood Alcohol Analysis Training Manual

Official Abbreviations

Document History

Version #	Issue Date	History
1.	03/01/00	Original Issue
2.	08/14/00	Change of GC calibration and addition of Ethylene Glycol method
3.	02/05/01	Validation of 5973 of MSD, UV, and balance cal., re-org. of document, expansion safety forms, addition of GCMS library SOP, val of 5970 MSD cal. , val of confirmatory GC idents., val of methods for 5973 MSD
4.	02/23/01	changes in GHB method and LSD method
5.	09/05/01	changes in UV calibration procedure
6.	11/26/01	changes in FTIR and MS calibration procedures
7.	02/21/02	changes in MS calibration, Thermometer cal., Records keeping, UV classification (ancillary), BA evidence storage, typo corrections, GC calibration forms
8.	11-26-02	BA reporting, safety checks assignments, weighing issues, rep sample issues.
9.	12-03-03	BA process, Mass Spec calib, GC calib., evidence maint log elimination, BA prof test, rept/lab file
10.	11-23-04	change MS calibration procedure.
11.	02-25-05	method for sulfates, carbonates, posphates.
12.	08-19-05	new FTIR calibrations, Rt window changes, BA std change, admin changes
13.	04-12-06	delete in house arson prof test
14.	09/07/06	fixed table that was cut off in last update - no method changes
15.	05/31/07	changes to Analysis functions (blood alcohol) and operational functions (instrument analysis and testing format and controlled substance analysis), updated abbreviations page
16.	04/10/08	Changed technical review requirements for BA and Fire Debris Analysis
17.	12/09/08	* Major Revision of the entire SOP
18.	05/07/09	Delete Monthly Balance Calibrations and Thermometer Calibrations
19.	02/08/10	*Major Revision of the entire SOP and the addition of Fire Debris Analysis
20.	04/07/10	Updated abbreviations page, deleted outdated sections of GC-FID, Changes to peer review in quality section.
21.	07/20/11	*Major Revision of the entire SOP
22.	09/08/11	Fire Debris SOP:changes to Evidence Acceptance and Quality Assurance, Abbreviations List removed and made separate document Controlled Substance SOP: changes to Evidence Acceptance, Sampling, Reports, Quality Assurance General, QA Color Tests, QA Balances,QA GC/MS, QA FT-IR, Abbreviations List removed and made separate Document Alcohol Analysis SOP: changes Evidence Receiving and Handling, Sample Treatment, Evaluation of Quality Control Data, Documentation, Recording and Reporting
23.	12/15/11	No substantive changes made. However, References were added and the spacing, margins and font styles were fixed and made more uniform.
24.	2/6/12	5.13 removed from the ISO Drug SOP.
25.	2/27/12	Alcohol Analysis by Direct Inject had "should" changed to "may" for Calibration #2 and Fire Debris SOP had 6.9.3 changed to 10% technical review.
26.	2/29/12	Blood Analysis for Ethyl Alcohol by Headspace Gas Chromatography SOP added and a Fire Debris Training Program was added.

27	3/22/12	Added headspace Load list form, added Multivolatile standard and control. Changed "lid" to "cap"; added "Standby" on sequence run table.
28	3/30/12	Added the Blood Alcohol Training Program.
29	6/04/12	Drug Chemistry - Added Liebermans test (color tests), changed Marquis expiration to six months, removed 3.1.11; BAC- added sample treatment, minimum standards used for calibration, chromatography acceptance criteria - to Direct Inject and Headspace methods; and Fire debris had major or complete changes to 1, 3, 4, 5, 6 and 7.
30	8/29/12	Fire Debris – changes in 4.2.6, 5.3 (added a table), 7.7.2, Appendix B; Appendix D –added Fire Debris Macros
31	12/11/12	Measurement practices (3.1.3 – 3.2.17), Secondary Standards (5.3.7); MS tunes (5.8.4.8); added Simon's test – color reagents (Appendix B); Added steroid method- appendix F; added new inst. Galileo GC/MS (appendix H).
32	02/01/13	Took off 5.8.4.7; FTIR val-Q day of use or after maintenance (5.9.3); run caffeine weekly and mixed standard monthly (5.8.4).
33	12/09/13	Drug analysis UoM calculated, Balance performance/validation changed 5.6
34	01/08/14	Added transportation and handling of weights. (5.6.1)
35	04/07/14	Drug ID (Fire Debris)- Added PLIMS electronic Request 1.1.0(1.2.1); Evidence transfer using PLIMS 1.2.1(1.3); Lab number 1.2.4(1.3); Electronic case Reports/records 4.1 (6.2); Peer Review 5.11 (7.10) Fire Debris – CMPDF-(D1.MAC, D2.MAC, and D3.MAC) changed SAMPLE to Sample Name BAC – PLIMS electronic request/transfer; instrument batch creation and Data processing.
36	01/06/14	Removed Direct Inject from TOC; Changed FTIR Val-Q to Val-Pro per new software 5.9; added PLIMS to BAC, Fire debris and Drug analyst training manuals.
37	04/14/15	BAC headspace SOP: Added a new control (0.08mg/dl), moved to a 4-point calibration, serum/plasma – whole blood calculation.

Approval

Director _____ Date:
Matthew C. Mathis

Issuance

Section Administrator _____ Date:
Lillian Ngong

Criminalist _____ Date:
Ann M. Charlesworth

Criminalist _____ Date:
Andrew P. Oprysko