



TENNESSEE BUREAU OF INVESTIGATION

Forensic Services Division

Forensic Chemistry Standard Operating Procedure Manual Reporting and Case Reviews

13.0 REPORTING AND CASE REVIEWS

13.1 Application

13.1.1 Reports issued by the TBI FCU will conform to the standards outlined in the TBI Quality Assurance Manual.

13.1.2 The reporting guidelines illustrated in this chapter may not encompass every possible evidence submission. The examples listed below may be changed to clarify results or to fit the customer's unique needs. The analyst should also consider the scenarios presented in Section 11.3 during the reporting process.

13.1.3 The testing methods used on each exhibit will be indicated on the report. This requirement does not apply to presumptively identified pharmaceuticals since the testing method is indicated in the remarks.

❖ Example:

| <u>RESULTS:</u> | <u>Controlled Substance</u> | <u>Schedule</u> | <u>Amount</u> |
|-----------------|---|-----------------|---------------|
| 001-a | Methamphetamine <i>Testing method: Color Test</i> <i>Testing method: FTIR</i> | II | 17.40 Gram(s) |
| 002-a | Heroin Fentanyl <i>Testing method: GC/MS</i> <i>Testing method: GC</i> | I II | 8.62 Gram(s) |

Please note that the reporting examples illustrated in other FCU standard operation documents may not include the above statement(s) for ease of readability.

13.1.4 The remarks above and used in the following examples have been standardized and integrated in to the Laboratory Information Management System (LIMS.) Please refer to the LIMS auto-text code sheet found in Ensur for a complete list of remarks.

13.1.5 Reporting requirements for cannabis plant materials and other cannabis products are discussed in the Cannabis Analysis chapter and/or the THC Quantitation chapters.

13.1.6 Reporting requirements for death investigations, overdoses, and other violent crimes are discussed in the Death Investigation chapter.



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13.2 Administrative Reporting

13.2.1 Single unit populations

Single unit populations will be reported with the identified compound and the quantity determined.

- ❖ Example: The analyst had a single plastic bag of crystalline substance determined to be methamphetamine (net weight = 25.07 grams.)

| <u>RESULTS:</u> | <u>Controlled Substance</u> | <u>Schedule</u> | <u>Amount</u> |
|-----------------|-----------------------------|-----------------|---------------|
| 001-a | Methamphetamine | II | 25.07 Gram(s) |

- ❖ Example: The analyst had a single tablet visually identified as hydrocodone.

| <u>RESULTS:</u> | <u>Controlled Substance</u> | <u>Schedule</u> | <u>Amount</u> |
|--|-----------------------------|-----------------|---------------|
| 001-a | Hydrocodone | II | 1 Tablet(s) |
| <i>Presumptive identification was obtained by comparing item's markings to pharmaceutical references. No instrumental analyses were performed.</i> | | | |

13.2.2 Multi-unit visually consistent pharmaceutical populations

These populations will be reported using the proper result within the LIMS system. The complete unit count or net weight will be reported.

- ❖ Example: The analyst had 400 tablets (Net weight = 220.62 grams) visually identified as hydrocodone.

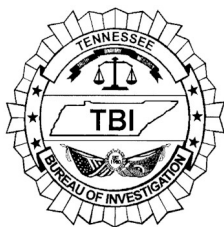
| <u>RESULTS:</u> | <u>Controlled Substance</u> | <u>Schedule</u> | <u>Amount</u> |
|--|-----------------------------|-----------------|---------------|
| 001-a | Hydrocodone | II | 400 Tablet(s) |
| <i>Presumptive identification was obtained by comparing item's markings to pharmaceutical references. No instrumental analyses were performed.</i> | | | |

OR

| <u>RESULTS:</u> | <u>Controlled Substance</u> | <u>Schedule</u> | <u>Amount</u> |
|--|-----------------------------|-----------------|----------------|
| 001-a | Hydrocodone | II | 220.62 gram(s) |
| <i>Presumptive identification was obtained by comparing item's markings to pharmaceutical references. No instrumental analyses were performed.</i> | | | |

13.2.3 Multi-unit visually consistent populations

The number of units **fully analyzed** will be reported. The remaining units will be accounted for with the remark *No chemical analyses were performed on (#) additional (unit types). These (unit types) were all consistent in appearance with exhibit _____.*



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- ❖ Example: The analyst had a single bag of 10 visually consistent clandestine tablets. They analyzed one tablet and determined it to be methamphetamine. The single tablet weighed 0.55 grams.

| <u>RESULTS:</u> | <u>Controlled Substance</u> | <u>Schedule</u> | <u>Amount</u> |
|--|-----------------------------|-----------------|---------------|
| 001-a | Methamphetamine | II | 1 Tablet(s) |
| <i>No chemical analyses were performed on nine additional tablets. These tablets were all consistent in appearance with exhibit 001-a.</i> | | | |

OR

| <u>RESULTS:</u> | <u>Controlled Substance</u> | <u>Schedule</u> | <u>Amount</u> |
|--|-----------------------------|-----------------|---------------|
| 001-a | Methamphetamine | II | 0.55 grams |
| <i>No chemical analyses were performed on nine additional tablets. These tablets were all consistent in appearance with exhibit 001-a.</i> | | | |

- ❖ Example: The analyst had three visually consistent vials suspected to contain testosterone. They analyzed one vial and confirmed testosterone was present.

| <u>RESULTS:</u> | <u>Controlled Substance</u> | <u>Schedule</u> | <u>Amount</u> |
|---|-----------------------------|-----------------|---------------|
| 001-a | Testosterone | III | 1 Vial(s) |
| <i>No chemical analyses were performed on two additional vials. These tablets were all consistent in appearance with exhibit 001-a.</i> | | | |

13.2.4 Liquids

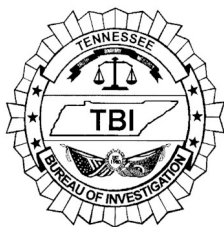
13.2.4.1 If the volume of liquid is more than five (5) milliliters, the analyst will include the weight and approximate volume.

- ❖ Example: The analyst had a brown bottle containing a dark purple viscous liquid that weighed 42.07 grams.

| <u>EXHIBIT(S):</u> | | | |
|--------------------|------------------------------|-----------------|---------------|
| 001-a | Liquid (approximately 30 mL) | | |
| <u>RESULTS:</u> | <u>Controlled Substance</u> | <u>Schedule</u> | <u>Amount</u> |
| 001-a | Codeine | V | 42.07 gram(s) |

13.2.4.2 No weight is required for volumes of liquid that are less than five milliliters.

- ❖ Example 2: The analyst had a small dropper bottle containing a clear liquid that weighed 0.73 grams. They were unable to determine the approximate volume contained in the bottle since it was considerably less than five milliliters.



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EXHIBIT(S):

001-a Liquid (less than five mL)

RESULTS:

Controlled Substance

Schedule

Amount

001-a Lysergic acid diethylamide (LSD)

I

-

13.2.4.3 Reporting requirements for clandestine lab liquids are covered in the Clandestine Laboratory chapter.

13.3 Weight Threshold Reporting

When utilizing weight threshold sample selections, the analyst must account for the weight (net or gross) of any additional unworked units present in a visually consistent population. This account can be indicated on the report using the following guidelines.

13.3.1 Reporting unanalyzed items in same external packaging

- ❖ Example: The analyst had two bags of suspected methamphetamine powder that would exceed 26 grams. Bag 1 (001-a) was determined to be methamphetamine with a net weight of 28.45 grams. The remaining bag's gross weight was 35.35 grams.

RESULTS:

Controlled Substance

Schedule

Amount

001-a

Methamphetamine

II

28.45 grams

No analysis was performed on additional powder. The gross weight of this additional powder is 35.35 grams. The total weight for all the powder would not exceed 300 grams.

13.3.2 Reporting unanalyzed items in different external packaging

- ❖ Example: The analyst had two itemized external evidence bags labeled 001-a and 002-a. Each bag consisted of a single plastic bag containing visually consistent rock-like substance. The analyst determined that the 001-a was cocaine base and had a net weight of 32.76 grams. Package 002-a had a gross weight of 40.27 grams.

RESULTS:

Controlled Substance

Schedule

Amount

001-a

Cocaine base

II

32.76 grams

002-a

No analysis performed

-

-

No analysis was performed on additional rock-like substance. The gross weight of this additional rock-like substance is 40.27 grams. The total weight for all the rock-like substance would not exceed 300 grams.



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13.3.3 The following remark should be used if the analyst has exceeded the maximum weight threshold and has remaining unanalyzed units.

- No analysis was performed on additional (substance type). The gross weight of this additional (substance type) is (weight). The total weight for all the (substance type) has already exceeded (maximum threshold weight).

13.4 Hypergeometric Reporting

The analyst will report the entire net weight (if possible) of the units in the population. The report must also state the confidence level that applies to the whole population. The analyst may also indicate the unit count in the evidence description.

- Example: The analyst had a single bag of 1000 visually consistent pharmaceutical tablets. The product identification indicated possible hydromorphone. The net weight (90.91 grams) of all the tablets would exceed the highest weight threshold. The analyst sampled the exhibit according to the hypergeometric sampling plan and all tested units were identified as hydromorphone.

Table with columns: EXHIBIT(S), RESULTS, Controlled Substance, Schedule, Amount. Includes a note: A hypergeometric distribution sampling plan was applied to exhibit 001-a. Based on this statistical sampling plan, there is a 95% probability that 90% of the tablets contain hydromorphone.

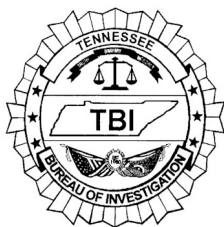
13.5 Reporting Measurement of Uncertainty

While all weights obtained in the lab have a measurement of uncertainty associated with their values, the TBI FCU will only report the measurement of uncertainty for exhibits that have thresholds and the weight including the uncertainty range is close to that threshold. Refer to the Balances and Measurement of Uncertainty chapter for more information on determining uncertainty.

13.5.1 Reporting uncertainty for a single measurement

- Example: The analyst had a single plastic bag of crystalline substance determined to be methamphetamine (net weight = 26.02 grams.) The analyst used a static weighing process.

Table with columns: RESULTS, Controlled Substance, Schedule, Amount. Includes a note: The measurement has an uncertainty of 0.04 grams with a 99.7% confidence level, 26.02 ± 0.04 grams.



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13.5.2 Reporting uncertainty for multiple measurements

- ❖ Example: The analyst had two plastic bags (001-a and 002-a) of crystalline substance determined to be methamphetamine. The net weights of 001-a and 002-a were 17.40 grams and 8.62 grams, respectively (total net weight = 26.02 grams.) The analyst calculated the combined uncertainty to be ± 0.04 grams using a dynamic weighing process.

| <u>RESULTS:</u> | <u>Controlled Substance</u> | <u>Schedule</u> | <u>Amount</u> |
|---|-----------------------------|-----------------|---------------|
| 001-a | Methamphetamine | II | 17.40 Gram(s) |
| 002-a | Methamphetamine | II | 8.62 Gram(s) |
| <i>These measurements have a combined uncertainty of 0.04 grams with a 99.7% confidence level, 26.02 \pm 0.04 grams.</i> | | | |

13.5.3 Residues and paper exhibits that are below the measurement of uncertainty

13.5.3.1 Residues will be reported in the same manner as a single unit population with residue in the exhibit description and a (-) for the amount.

13.5.3.2 Any paper exhibits whose weights are below the measurement of uncertainty will be reported as the number of squares, strips, or units fully analyzed. Refer to 13.9.4 for additional paper exhibit reporting requirements.

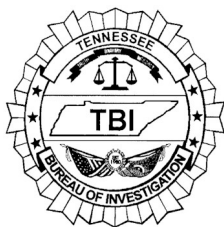
13.6 Reporting for Unanalyzed Exhibits without Weight Threshold Considerations

13.6.1 Exhibits that are insufficient for analysis

These exhibits will be reported using the following format as the example below

- ❖ Example: The analyst received a brown residue and would not be able to conduct analyses as outlined in section 12.3.1 without consuming the entire exhibit. This exhibit was not involved in a death investigation.

| <u>EXHIBIT(S):</u> | | <u>Schedule</u> | <u>Amount</u> |
|--------------------|-----------------------------------|-----------------|---------------|
| 001-a | Brown residue | | |
| <u>RESULTS:</u> | <u>Controlled Substance</u> | <u>Schedule</u> | <u>Amount</u> |
| 001-a | Insufficient exhibit for analysis | - | - |



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13.6.2 Remaining items in the same external package

After the analyst has completed the maximum number of exhibits outlined in the Examination chapter, any remaining exhibits that are present in the same external packaging can be reported with the remark *Other submitted items were not analyzed* attached to the last exhibit result.

- ❖ Example: The analyst had a crystalline substance, a yellow tablet, a blue tablet, and plant material all in the same yellow envelope.

| RESULTS: | Controlled Substance | Schedule | Amount |
|----------|---|----------|---------------|
| 001-a | Methamphetamine | II | 25.07 Gram(s) |
| | <i>Other submitted items were not analyzed.</i> | | |

13.6.3 Combinations of unanalyzed items in different external packaging

If the analyst does not perform testing on any items found in different external packaging, these exhibits must be reported with *No analysis performed* to account for the total number of external packages submitted by the customer.

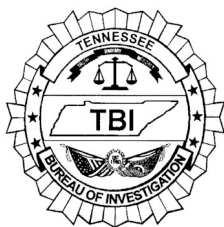
- ❖ Example: The analyst had the same type of exhibits as listed in the previous examples, but the blue tablet and plant material were contained in separate yellow envelopes.

| RESULTS: | Controlled Substance | Schedule | Amount |
|----------|---|----------|---------------|
| 001-a | Methamphetamine | II | 25.07 Gram(s) |
| | <i>Other submitted items were not analyzed.</i> | | |
| 002-a | No analysis performed | - | - |
| 003-a | No analysis performed | - | - |

If remaining external packages contain **excessive** items that will not be analyzed, the analyst may choose to describe these items as *Miscellaneous evidence items* in the description instead of itemizing each individually in LIMS. The **result** for this exhibit will be reported as *No items present in this exhibit were analyzed*. No additional remarks are required.

The analyst must still inventory the items in their case notes as required in Section 10.1.

- ❖ Example: The analyst receives three separate external packages containing various items. These packages were recovered from a single individual and did not conform to any special circumstances outlined in Section 11.3.3.
 - Exhibit 001 contained a bag of crystalline substance.
 - Exhibit 002 contained three tablets.
 - Exhibit 003 contained numerous cigarette butts, over-the-counter tablets, a small bag of plant material (GWT = 7.05g), and numerous vials of suspected THC oil. None of these items would exceed a weight threshold.



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EXHIBIT(S):

001-a Crystalline substance
002-a Tablets
003-a Miscellaneous evidence items

| <u>RESULTS:</u> | <u>Controlled Substance</u> | <u>Schedule</u> | <u>Amount</u> |
|-----------------|---|-----------------|---------------|
| 001-a | Methamphetamine | II | 25.07 Gram(s) |
| 002-a | No analysis performed | - | - |
| 003-a | No items present in this exhibit were analyzed. | - | - |

13.6.4 Visually consistent unanalyzed units in different external packaging

Often the analyst may find visually consistent units in different external packaging. If the analyst does not test these units, they should be accounted for on the report using the same remark in Section 13.2.3 if they are the **only** item in that external packaging. This itemization will provide the customer with a better understanding as to why the external packages were not analyzed.

- ❖ Example: The analyst had two separate external envelopes (itemized as 001-a and 002-a) that contained visually consistent tablets. One tablet was confirmed to be ketamine.

| <u>RESULTS:</u> | <u>Controlled Substance</u> | <u>Schedule</u> | <u>Amount</u> |
|-----------------|--|-----------------|---------------|
| 001-a | Ketamine <i>No chemical analyses were performed on nine additional tablets. These tablets were all consistent in appearance with exhibit 001-a.</i> | III | 1 Tablet(s) |
| 002-a | No analysis performed <i>No chemical analyses were performed on three additional tablets. These tablets were all consistent in appearance with exhibit 001-a.</i> | - | - |



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13.7 Reporting for syringes (not related to a death investigation or other violent crimes)

13.7.1 Syringe exhibits present with other types of exhibits

These exhibits will be reported according to sections 13.6.2 through 13.6.4.

- ❖ Example: The analyst had a box containing crystalline substance identified as methamphetamine and a syringe containing a liquid (less than 5 mL present) that was not processed.

| | | | |
|---|-----------------------------|-----------------|---------------|
| <u>EXHIBIT(S):</u> | | | |
| 001-a | Crystalline substance | | |
| <u>RESULTS:</u> | <u>Controlled Substance</u> | <u>Schedule</u> | <u>Amount</u> |
| 001-a | Methamphetamine | II | 25.07 grams |
| <i>Other submitted items were not analyzed.</i> | | | |

13.7.2 Syringe exhibits containing liquid with no other types of exhibits present

These exhibits will be reported according to section 13.2.4.

- ❖ Example: The analyst had a syringe containing a liquid (less than 5 mL present) that was identified as heroin.

| | | | |
|--------------------|---|-----------------|---------------|
| <u>EXHIBIT(S):</u> | | | |
| 001-a | Syringe with liquid (less than five mL) | | |
| <u>RESULTS:</u> | <u>Controlled Substance</u> | <u>Schedule</u> | <u>Amount</u> |
| 001-a | Heroin | I | - |

13.7.3 Syringe exhibits that are empty or do not contain enough liquid for analysis without consuming the entire exhibit

- ❖ Example: The analyst had only an empty syringe that was not processed because the entire exhibit would be consumed in analysis. The remark used below may be included on the report.

| | | | |
|--|-----------------------------|-----------------|---------------|
| <u>EXHIBIT(S):</u> | | | |
| 001-a | Empty syringe | | |
| <u>RESULTS:</u> | <u>Controlled Substance</u> | <u>Schedule</u> | <u>Amount</u> |
| 001-a | Insufficient for Analysis | - | - |
| <i>Analysis would require consumption of the entire exhibit. Please contact the crime lab if testing is necessary.</i> | | | |



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13.8 Amended and Supplemental Reporting Requirements

Amended and supplemental reports are discussed in Section 7.8 of the Quality Assurance Manual. The following remarks will be included on the report for the customer's clarification

13.8.1 Amended Reports

13.8.1.1 The remark *Information in this report has been corrected or changed at the request of (agency, if applicable) to reflect (changed information). This report amends the original report issued on (date).* must be included on all amended reports.

13.8.2 Supplemental Reports – Additional Analysis and Resubmitted Evidence

13.8.2.1 The remarks *Additional analysis was requested by the District Attorney's office (or other agency if applicable) on the exhibits in this case. This report supplements the original report issued on (date).* must be included on all reports generated for items requiring additional analysis that are still located at the TBI Crime Laboratory.

13.8.2.2 The remarks *Exhibits in this case were resubmitted for analysis at the request of the District Attorney's office (or other agency if applicable). This report supplements the original report issued on (date).* must be included on all reports generated for resubmitted items.

13.8.3 Supplemental Reports – Additional Evidence

13.8.3.1 The report will be issued detailing the results of the additional evidence only. The remark *The report for this additional evidence supplements the original report issued on (date).* must be included on all reports generated for additional items.

❖ Example: The analyst had processed a case that contained methamphetamine. Additional powder evidence was received by the laboratory three months later. The analyst processed the new evidence and generated the following report.

| | | | |
|---|-----------------------------|-----------------|---------------|
| <u>EXHIBIT(S):</u> | | | |
| 002-a | Powder | | |
| <u>RESULTS:</u> | <u>Controlled Substance</u> | <u>Schedule</u> | <u>Amount</u> |
| 002-a | Cocaine | II | 0.76 grams |
| <i>The report for this additional evidence supplements the original report issued 2/1/19.</i> | | | |

13.8.3.2 This provision only applies to cases in which an original report for the FCU has been already been generated. Additional evidence submitted for multi-section cases in which there is no original FCU report will be reported in the same manner as a regular case.

❖ Example: Evidence was submitted to the toxicology unit for a drug screen. Additional powder evidence was received and FCU analysis was requested three months later. The analyst processed the new evidence and generated the following report.



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Table with 4 columns: EXHIBIT(S), RESULTS, Schedule, Amount. Row 1: 002-a Powder, Controlled Substance, Schedule II, Amount 0.76 grams.

13.9 Other Reporting Considerations

- 13.9.1 Cocaine base must be reported as such if the exhibit(s) will exceed 28.00 grams.
13.9.2 All exhibits with gross weights that are not clearly indicated on the report must include the remark Weight includes packaging.
13.9.3 Unit counts for visually identified non-controlled pharmaceutical preparations will be listed in the results under the amount heading.
13.9.4 Weights will be reported for paper exhibits unless the exhibit(s) meet the criteria outlined in 13.5.3.2
13.9.5 The remark An approximate unit count was calculated using the average weight of representative units must be reported for any exhibits that conform to Section 10.5.10.
13.9.6 For tablet mixtures outlined in Sections 11.7.3 and 11.7.4, any remaining unworked material will be reported as Other submitted items were not analyzed or made into a separate exhibit and reported as No analysis performed.
13.9.7 TCA § 39-16-201 outlines enhanced penalties for contraband (including legend drugs) in penal facilities. The remark Pharmaceutical references (or labeling) indicate the exhibit contains (specify active ingredient) will be included on the official report for visually identified non-controlled pharmaceutical exhibits in these cases.

13.10 Technical and administrative review of cases

- 13.10.1 All case files must be technically (except for withdrawn or resolved cases) and administratively reviewed before a final report can be generated. The results of testing may not be given to law enforcement officials or court officials prior to a technical review unless in circumstances outlined in section 13.11.
13.10.2 Another qualified analyst must conduct the technical review. Technical reviewers will ensure that all analytical data is present to support the examining scientist's conclusions. If a technical reviewer rejects the analyst's conclusions based on data and/or observations and determines that additional analyses are required, they must document the reason for additional examination on the Technical Review worksheet and return the case to the analyst.
13.10.3 Any conflicts regarding technical reviews and subsequent re-analyses will be resolved in accordance with the Conflict Resolution Policy in the TBI Quality Assurance Manual.
13.10.4 Administrative reviewers will ensure the report is complete and contains no typographical errors. The same qualified technical reviewer can also complete the administrative review. All reviews will be electronically documented in LIMS.

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- 13.10.5 Any typographical errors that are found in the analyst's notes or raw data after the case file has been submitted to a reviewer for final approval must be initialed and dated as part of the correction.
- 13.10.6 The chain of custody will be examined by the reviewer either in print or electronically in LIMS. This electronic record will serve as the official chain of custody and must be printed before any judicial proceeding.

13.11 Release of preliminary results

- 13.11.1 Preliminary analytical results may be verbally released to a law enforcement agency without completed case notes and technical review under the special circumstances outlined below.

13.11.1.1 Potentially hazardous evidence exposure

Since these types of cases are typically expedited by lab management, preliminary data may be released without lab management approval when members of law enforcement or the general public may have been exposed to hazardous evidence.

13.11.1.2 Necessary disclosure of results for clear communication with the customer

In event that communication with the customer would require disclosure of preliminary data, the analyst must obtain prior approval from their supervisor, a member of lab management, or the Technical Leader before any type of communication takes place. This approval will be documented in the case file.

- 13.11.2 Any data that is verbally released **must** be verified against a primary standard by another qualified scientist prior to contacting the agencies involved. The data verification will be documented in the case notes with the wording "Verified by (initials)" and the date of verification.
- 13.11.3 The analyst will communicate that the results are preliminary and will not be considered official until a technical review has been completed. This communication shall be documented and retained in the case file.