



# **TENNESSEE BUREAU OF INVESTIGATION**

## *Forensic Services Division*

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### Forensic Chemistry Standard Operating Procedure Manual

### Chapter 34 - Death Investigations, Other Violent Crimes, and Multi-Section Cases

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#### **34.0 DEATH INVESTIGATIONS AND MULTI-SECTION CASES**

##### **34.1 Application**

Cases involving a suspicious death or other violent crime against a person are given highest priority within the TBI FCU. This chapter will give guidance for analysis and reporting of exhibits involved in these cases.

Multi-section cases will also be discussed given the various disciplines involved and preservation of evidence for those disciplines.

##### **34.2 Statement of Facts**

The analyst must pay particular attention to the statement of facts listed on the submittal form. This information is vital because it will help determine exhibit priority, the analysis scheme, and reporting requirements for the case.

Death investigations may potentially contain items that an FCU analyst would not encounter in conventional casework. Consulting these statements can give the analyst relevant information on where and how to sample these items.

If no information is present, the analyst or unit supervisor will contact the agency for specific details.

##### **34.3 General Examination Guidelines**

34.3.1 Prior to analysis, the analyst will need to evaluate exhibits to determine if an adequate amount of exhibit is present for testing to commence.

34.3.2 If there is any possibility that analysis will require consumption of the entire exhibit, the analyst must contact the District Attorney (DA)'s office to notify them of the situation and obtain written authorization from the DA to use the entirety of the exhibit in question.

##### **34.3.3 Prioritization of Exhibits**

Exhibits are prioritized for analysis as follows:

1. Any exhibits that have been specifically identified for analysis by the DA
2. Any exhibit that has been directly identified in the statement of facts as a potential cause of bodily harm or death to the victim
3. Any exhibit that displays evident tampering (e.g. injection vials) or appears to be counterfeit
4. Conventional exhibits (e.g. plant material, tablets, or powders) that are not identified as the direct cause of bodily harm or death to the victim **but** have relevance to the investigation
5. Other conventional exhibits present but may not have any relevance to the investigation

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34.3.4 Depending on the circumstances, different combinations of these exhibits may require analysis. The analyst shall consult their supervisor and/or the customer if there are any questions or concerns about exhibit priorities.

#### **34.4 Quality Assurance**

34.4.1 Multiple instrument washes or a liner change may be required prior to analysis of these exhibits to ensure a suitable instrument response due to possible low concentrations of legally significant substances.

34.4.2 The analyst will also ensure their work area and sampling equipment are clean prior to opening these exhibits to eliminate possible contamination.

#### **34.5 Analysis and reporting of syringes, paraphernalia, their contents, and other residues**

34.5.1 Syringe contents will be transferred to an appropriately labeled container and extracted.

34.5.2 Empty syringes and other paraphernalia will be rinsed with an appropriate solvent. These extractions may be dried down in order to concentrate any possible substances present.

34.5.3 It is highly recommended that small aliquots of methanol or reagent alcohols are used for these extractions due to unknown chemical nature of the possible analyte. This extraction can also be dried down and reconstituted for a basic extraction if necessary.

34.5.4 The same extraction may be used for multiple instrumental techniques when dealing with these types of exhibits if insufficient material is present for a minimum of two separate samplings.

34.5.5 Syringes containing liquids will be reported according to section 13.7.2.

34.5.6 Empty syringes or paraphernalia residues will be reported in the same manner as a residue.

34.5.7 Any remaining extract will be preserved in accordance with section 11.8.3.

34.5.8 Processed syringes will be handled according to section 5.3.2

#### **34.6 Analysis and reporting of conventional exhibits**

34.6.1 Conventional exhibits will be tested and reported in accordance with the Sampling, Analytical Schemes, and Reporting chapters unless the District Attorney or unit supervisor states otherwise.



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34.6.2 Plant material exhibits will be analyzed using GC/MS to determine if other legally significant substances are present. These exhibits will be reported as below.

<u>EXHIBIT(S):</u>			
001-a	Plant material		
<u>RESULTS:</u>	<u>Controlled Substance</u>	<u>Schedule</u>	<u>Amount</u>
001-a	Cannabis	-	26.75 grams
	<i>Presumptive testing indicates the exhibit is marijuana.</i>		
	delta-9-tetrahydrocannabinol		
	Cannabidiol		
	Cocaine		
	<i>Testing Method: Macroscopic</i>		
	<i>Testing Method: Microscopic</i>		
	<i>Testing Method: Color test</i>		
	<i>Testing Method: GC/MS</i>		

34.6.3 If instrumental analysis of a pharmaceutical preparation is required, then analysis of a single unit will suffice.

34.6.4 The unit will be reported using the proper remark listed in the LIMS auto-text code. No inference will be made about the remaining untested units.

34.6.5 Factory sealed crimped injection vials will be considered “tampered with” if the manufacturer’s seal is broken or missing or if the label appears to be counterfeit or altered in any manner.

34.6.6 The unit supervisor and/or Technical Leader may reserve the right for further testing if deemed necessary.

### **34.7 Analysis and reporting of non-controlled pharmaceutical preparations**

34.7.1 If the statement of facts or visual examination indicates possible counterfeits or tampering, the analyst will treat these pharmaceuticals as a clandestine preparation.

34.7.2 If none of the above conditions are apparent, the analyst may report these exhibits as *Exhibit was visually identified as a non-controlled substance*. The remark *Pharmaceutical references (or labeling) indicate the exhibit contains* (specify active ingredient) will also be included on the official report.

### **34.8 Considerations for Multi-section Cases**

34.8.1 The analyst must review the submittal form to determine if the exhibit has requests for analyses with other disciplines in the TBI Crime Laboratory. Items that have “drugs” listed as the only request for analysis can be retrieved from Evidence Receiving as part of the analyst’s normal case work.

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- 34.8.2 The analyst will coordinate examination for exhibits containing combined evidence with the other involved sections prior to conducting any FCU analyses. Failure to do so may compromise the integrity of the evidence for the other section's analyses.
- 34.8.3 All evidence transfers between analysts will be documented accordingly in LIMS.
- 34.8.4 Any exhibits involved in multi-section Toxicology cases that are visually identified as non-controlled substances will include the remark *Pharmaceutical references (or labeling) indicate the exhibit contains (specify active ingredient)* on the official report.