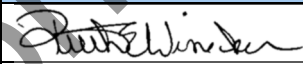
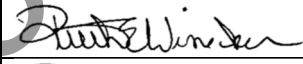
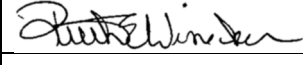


# SOP 009 – Introduction to Toxlog



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## SOP 009 – Introduction to Toxlog

SOP Name: <b>Introduction to Toxlog</b>		SOP #: <b>009</b>
North Carolina Office of the Chief Medical Examiner Toxicology Laboratory	<b>Revision:</b>	<b>Revision Date/Initials:</b>
<b>Approving Authority Name</b>	<b>Approving Authority Signature</b>	<b>Approval Date</b>
Ruth E. Winecker, Ph.D.		04/07/2015
Ruth E. Winecker, Ph.D.		06/10/2016
Ruth E. Winecker, Ph.D.		08/29/2017

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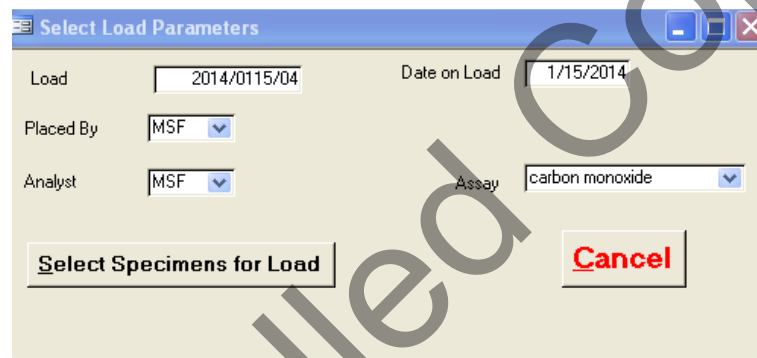
- 1.1. Principle
- 1.2. **Toxlog is the name of the Microsoft Access based Laboratory Information Management System (LIMS) used in the NC OCME Toxicology Laboratory. Toxlog is linked to the Medical Examiner Information System (MEIS), which transfers accessioning information, creating records to which toxicology tests can be added and the results stored. This information is then transferred back to MEIS for the creation of final Toxicology reports which are sent out to Medical Examiners, Pathologists, and other requestors as part of the death investigation report.**
- 1.3. This document is designed to allow a new user to navigate Toxlog and to become familiar with some of its main functions.
- 1.4. Specimens
- 1.5. N/A
- 1.6. Reagents and Materials
- 1.7. N/A
- 1.8. Instrumentation and Equipment
- 1.9. Networked PC Configured for Toxlog.
- 1.10. Procedure
  - 1.10.1. Open Toxlog using the shortcut:  

  - 1.10.2. 
  - 1.10.3. If no shortcut is available, the program can be found here:  
<S:\toxicology\analyst\access\toxlog>
- 1.11. **Display Pending List**
  - 1.11.1. From the “Main Switchboard” screen, select “Miscellaneous Reports – Pending Cases”
  - 1.11.2. The report displays the available assays listed alphabetically (headings) and a list of specimens requiring that test under each.

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- 1.11.3. Navigate through the report using the small arrows located in the lower left of the page or print the report using the printer icon.
- 1.11.4. Select “Close” to close the report.
- 1.11.5. Select “Exit” to go back to the “Main Switchboard”.

### 1.12. Create a Load (Batch)

- 1.12.1. From the “Main Switchboard” screen, select “Worklists – New Worklist”.



1.12.1.1.

- 1.12.2. Populate each blank field with appropriate information

1.12.2.1. Load: Software generated – YYYYMMDD##

1.12.2.1.1. YYYY = current year

1.12.2.1.2. MM = current month

1.12.2.1.3. DD = current day

1.12.2.1.4. ## = load number (starts at 01 and increases by one with each subsequent load) – resulting in a unique load identifier

- a. If creating the first load on a given day, change the day and ## to reflect the date and the 1<sup>st</sup> load of the day (e.g. 2014/0115/04 changed to 2014/0116/01 for the first load of Jan. 16<sup>th</sup>, 2014).

1.12.2.2. Placed by: Initials of person creating the load

1.12.2.3. Analyst: Initials of person performing analysis (often the same as “Placed by”)

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- 1.12.2.4. Date on Load: Software generated
- 1.12.2.5. Assay: Test to be performed (Dropdown list).
- 1.12.3. Choose “Select Specimens for Load”.
- 1.12.4. A list of available specimens will appear.
- 1.12.5. To place a specimen on load, click the adjacent cell in the “On/Off Load” column. Click the same cell again to remove the specimen from the load.

tox_folder_id	specimen_id	specimen	On/Off Load	test_id
T2014-00193	S14-00-00547	Blood	2014011504	309713
T2014-00220	S14-00-00591	Blood	2014011504	309715
T2014-00221	S14-00-00571	Blood	0	309714
T2014-00231	S14-00-00604	Blood	0	309696
T2014-00253	S14-00-00680	Blood	0	309716
T2014-00256	S14-00-00693	Blood	0	309724

- 1.12.5.1. To place all of the available specimens on load, select the “Select All Records” button.
- 1.12.6. To place all of the available specimens on load, select the “Select All Records” button.
- 1.12.7. Select “Build Worklist”

tox_folder_id	specimen_id	Suffix	specimen	amt	units	dilution	test_id
T201400193	S140000547		Blood			1	309713 M
T201400220	S140000591		Blood			1	309715 M

- 1.12.7.1.

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- 1.12.8. To Print the storage locations of the specimens on this load, select “Locate Specimens”
- 1.12.9. From the dropdown menu (below “Choose Worklist from List :”), select the load type (typically Generic for chromatographic assays, color tests have worklists with the same name as the assay E.G. Chromotropic acid, salicylates, and Palladium Chloride).
- 1.12.10. Select “Print Worklist”
  - 1.12.10.1. If performing a Volatiles Load, click the “BAC New” button – this will create a sequence for the headspace instrument (see [SOP 101](#)).
  - 1.12.10.2. If performing a quantitation, click the “OB Quant” button - this will create a report displaying which analytes correspond with which cases on the load ([SOP 202](#)).
- 1.12.11. Select “Close/Cancel” to exit.

### 1.13. Edit a Load

- 1.13.1. From the “Main Switchboard” screen, select “Worklists – Previous Load”.
- 1.13.2. From the Load dropdown menu, select the load to be edited.
- 1.13.3. To remove specimen(s) from the load, click on the adjacent cell in the “On/Off Load” column to remove the load number.
  - 1.13.3.1. **NOTE: Be careful not to remove the “0” from the load number field.**
- 1.13.4. To add a specimen to the load, select “Add Specimens to Worklist”.

tox_folder_id	specimen_id	specimen	test_id	load
T201400201	S140000524	Blood	309588	0
T201400202	S140000538	Blood	309611	0
T201400192	S140000543	Blood	309603	0
T201400194	S140000551	Blood	309600	0
T201400195	S140000555	Blood	309598	0

Record: 1 of 43 (Filtered)

1.13.4.1.

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1.13.4.2. Click in the “load” column adjacent to the specimen(s) to be added. Click “Close Form” when done.

1.13.5. Select “Build Worklist”

1.13.6. To Print the storage locations of the specimens on this load, select “Locate Specimens”

1.13.7. From the dropdown menu (below “Choose Worklist from List:”), select the load type (typically Generic).

1.13.8. Select “Print Worklist”

1.13.9. Select “Close/Cancel” to exit.

### 1.14. Chain of Custody (COC)

1.14.1. After aliquoting and replacing specimens into storage, the electronic COC must be completed.

1.14.2. Record Specimens used and aliquot amounts.

1.14.2.1. From the “Main Switchboard”, select “Chain of Custody – Retrieve Specimens by Load”.

1.14.2.2. Enter load number and select “OK”.

1.14.2.3. A load specimen table is displayed

specimen_id	hd	dilution	Released By	Received By	Purpose	amount	units
S130024764			T10F T122713				
S130024893			T10F T122713				
S130024915			T11B T123013				
S130024933			T11B T123013				
S130024938			T11B T123013				
S130024953			T11B T123013				
S140000048			T11C T123113				
S140000378			T11D T010314				
S140000499			T11E T010814				
S140000586			T11E T010814				
S140000755			T11F T011014				
S140000761			T11F T011014				

1.14.2.3.1.

1.14.2.4. Entering Tissue Homogenates ([SOP 005](#)) (If Applicable):

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- 1.14.2.4.1. Select the specimen from which the homogenate was prepared (click on the appropriate row) and click the “Enter Homogenate Dilution” button.

The screenshot shows a web form titled 'frmtox\_hd'. At the top left is a 'Delete current record' button with a red 'X' icon. Below this are input fields for 'specimen\_id' (containing 'S140000586'), 'hd' (containing 'hd1'), and 'dilution' (containing '4'). To the right of the 'specimen\_id' field is an 'Add Homogenate to COC' button. Below the 'dilution' field is a 'notes' text area containing the text: 'Weighed 4 grams liver qs with DI water to 16 grams. Homogenized. Dilution is 1:4.' At the bottom of the form is a record navigation bar with the text 'Record: 1 of 1 (Filtered)'. A callout box labeled 'Next Record Button' has an arrow pointing to the right arrow in the navigation bar.

- a.
- 1.14.2.4.2. Fill in the hd, dilution and notes fields as appropriate (see above - recording the actual details of the prepared homogenate) and select “Add Homogenate to COC”.
- 1.14.2.4.3. Alternatively, if the tissue homogenate had been prepared on a previous date, the homogenate specimen will already appear on the COC.
  - a. Select the associated non-homogenate specimen and press the delete key on the keyboard. (The recorded aliquot will come from the homogenate not the tissue).
- 1.14.2.4.4. Alternatively, if another tissue homogenate is to be made, click the next record button at the bottom of the screen until you get a blank form. Fill in the hd field and increase the number by 1 (e.g. hd2, hd3, etc). Fill in the remaining fields as above. Select “Add Homogenate to COC”.
  - a. Select the previously prepared HD specimens that you are not using for the assay and press the delete key on the keyboard
- 1.14.2.4.5. **Note: Do not EVER select the “Delete Current Record” button on the form. It will cause problems with the COC downstream.**
- 1.14.2.5. Choose “Apply Defaults” – user initials will populate the “Received By” column.



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- 1.14.2.6. Choose the appropriate assay in the “Purpose” dropdown menu and select “Update Purpose from List”. This will populate the “Purpose Column”.
  - 1.14.2.6.1. If the desired assay cannot be found on the drop down list, a custom purpose can be entered in the “Update Purpose” field. See a senior chemist for advice.
- 1.14.2.7. Enter a default amount of aliquot in the “Amount” field (the aliquot amount in the table can be changed later). Select “Amount” to fill the “amount” column.
- 1.14.2.8. From the dropdown menu, select the default units (the units in the table can be changed later). Select “Units” to fill the “unit” column.
- 1.14.2.9. Go through the COC table and make corrections to aliquot amounts and units to reflect what actually occurred at the bench.
- 1.14.2.10. For each specimen row, add comments in the “Notes” field to describe the aliquot amounts, if necessary. (Duplicate aliquots, tissue homogenate, etc – see senior chemist). – Copy and paste from [comments.txt](#)

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frmRetrievalLoad : Form

T201400217    load: 2014011403    Update Chain of Custody    Notes

Urine    [Amount] 0.1

Update Purpose    Apply Defaults    Units mL

Update Purpose from list    Enter Homogenate/Dilution

Update Purpose from list: aliq. volatile screen, aliq. Upiates/opioids

specimen_id	hd	dilution	Released By	Received By	Purpose	amount	units
S130024953			111B T123013	mfeaster	aliqu. volatile screen	0.1	mL
S140000048			111C T123113	mfeaster	aliqu. volatile screen	0.1	mL
S140000378			111D T010314	mfeaster	aliqu. volatile screen	0.1	mL
S140000499			111E T010814	mfeaster	aliqu. volatile screen	0.1	mL
S140000586			111E T010814	mfeaster	aliqu. volatile screen	0.1	mL
S140000755			111F T011014	mfeaster	aliqu. volatile screen	0.1	mL
S140000761			111F T011014	mfeaster	aliqu. volatile screen	0.1	mL
S140000767			111F T011014	mfeaster	aliqu. volatile screen	0.1	mL
S140000771			111F T011014	mfeaster	aliqu. volatile screen	0.1	mL
S140000772			111F T011014	mfeaster	aliqu. volatile screen	0.1	mL
S140000776			111F T011014	mfeaster	aliqu. volatile screen	0.1	mL
S140000780			111F T011014	mfeaster	aliqu. volatile screen	0.1	mL
S140000784			111F T011014	mfeaster	aliqu. volatile screen	0.1	mL
S140000788			111F T011014	mfeaster	aliqu. volatile screen	0.1	mL
S140000792			111F T011014	mfeaster	aliqu. volatile screen	0.1	mL
S140000796			111F T011014	mfeaster	aliqu. volatile screen	0.1	mL
S140000800			111F T011014	mfeaster	aliqu. volatile screen	0.1	mL
S140000805			111F T011014	mfeaster	aliqu. volatile screen	0.1	mL
S140000808			111F T011014	mfeaster	aliqu. volatile screen	0.1	mL
S140000811			111F T011014	mfeaster	aliqu. volatile screen	0.1	mL
S140000813			111F T011014	mfeaster	aliqu. volatile screen	0.1	mL
S140000814			111F T011014	mfeaster	aliqu. volatile screen	0.1	mL
S140000816			111F T011014	mfeaster	aliqu. volatile screen	0.1	mL
S140000818			111F T011014	mfeaster	aliqu. volatile screen	0.1	mL
S140000821			111F T011014	mfeaster	aliqu. volatile screen	0.1	mL
S140000823			111F T011014	mfeaster	aliqu. volatile screen	0.1	mL
S140000824			111F T011014	mfeaster	aliqu. volatile screen	0.1	mL
S140000827			111F T011014	mfeaster	aliqu. volatile screen	0.1	mL
S140000829			111F T011014	mfeaster	aliqu. volatile screen	0.1	mL
S140000831			111F T011014	mfeaster	aliqu. volatile screen	0.1	mL

Record: 14 of 40

1.14.2.11.

1.14.2.12. Check to make sure all information is correct and select “Update Chain of Custody”.

1.14.2.13. If an error message appears during this process, **do not re-attempt**, consult with a senior chemist.

1.14.3. Record replacement of specimens to storage.

1.14.3.1. From the “Chain of Custody” screen select “Replace Specimens by Load”.

1.14.3.2. Enter Load number and select “OK”.

1.14.3.3. Select “Apply Defaults” – the “Released By” and “Received By” columns will be populated.

1.14.3.4. Check to make sure all information is correct and select “Update Chain of Custody”.

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1.14.3.4.1. If an error message appears during this process, do not re-attempt, consult with a senior chemist.

1.14.4. Volatiles Confirmations - Record Specimens used and aliquot amounts.

1.14.4.1. From the “Chain of Custody” screen select “Alcohol Confirmations”.

1.14.4.2. Enter load number and select “OK”.

specimen_id	hd	tox_folder_id	confirmation
S140000048		T201309649	<input checked="" type="checkbox"/>
S130024764		T201309710	<input type="checkbox"/>
S130024893		T201309750	<input type="checkbox"/>
S130024915		T201309760	<input type="checkbox"/>
S130024933		T201309769	<input checked="" type="checkbox"/>
S130024938		T201309772	<input checked="" type="checkbox"/>
S130024953		T201309780	<input type="checkbox"/>
S140000499		T201400180	<input checked="" type="checkbox"/>
S140000776		T201400183	<input type="checkbox"/>
S140000586		T201400217	<input checked="" type="checkbox"/>
S140000378		T201400270	<input type="checkbox"/>

1.14.4.2.1. Record: 4 of 40

1.14.4.3. In the “Load” field, delete the second to last digit of the load number (e.g. 2014011403 becomes 201401143).

1.14.4.4. Under the “confirmation” column, select the specimens that are being confirmed by checking the adjacent boxes.

1.14.4.5. Select “Chain of Custody”

1.14.4.6. Follow steps outlined in 1.14.2.4– 1.14.3.4

1.14.5. Print COCs

1.14.5.1. From the “Chain of Custody” screen select “Print Chain of Custody by Load”.

1.14.5.2. Enter load number and select “OK”.

1.14.5.3. View the COC to check for errors, navigating between pages using the arrows in the lower left.

1.14.5.4. Print the COC using the printer icon, then select “Close”.

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1.14.5.5. From the “Chain of Custody” screen select “Exit” to return to the “Main Switchboard”.

### 1.15. Data Entry

1.15.1. From the “Main Switchboard” screen, select “Results – Enter Results by Load”.

1.15.1.1. Enter load number and select “OK”.

tox_folder_id	specimen_id	specimen
T201307299	S130018541	Liver
T201308308	S130021136	Blood
T201306729	S130021376	Serum
T201309616	S130024569	Blood
T201309616	S130024570	Liver
T201309658	S130024638	Blood
T201309658	S130024700	Liver
T201309782	S130024957	Blood
T201309782	S130024958	Liver

analyte	rpt_prefix	amount	units	suffix	remarks
Methadone		2.3	mg/kg		

1.15.1.1.1.

1.15.1.2. Click to select a specimen number from the list.

1.15.1.3. Enter the following specimen results in the table - see assay specific SOPs for instructions:

1.15.1.3.1. Analyte – one per row

1.15.1.3.2. rpt\_prefix – if needed, dropdown menu (E.G. Present, Less Than, Greater than)

1.15.1.3.3. amount – if needed - numerical concentration of analyte

1.15.1.3.4. units – select the appropriate units for result

1.15.1.3.5. suffix – if needed - assay specific

1.15.1.3.6. remarks – if needed – denotes a non-reportable result

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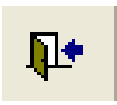
### 1.15.1.4. Print Load Summary

1.15.1.4.1. Select “Load Summary”

1.15.1.4.2. Review the load summary report and check for errors, navigating between pages using the arrows in the lower left.

- a. If errors are found, close report and make the necessary changes in the results table

1.15.1.4.3. Print the load summary report using the printer icon, then select “Close”.



1.15.1.5. Select  to exit.

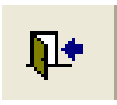
1.15.2. Add test – often during data entry, it will be necessary to add additional test(s) to a specimen (repeat, screen result needing confirmation).

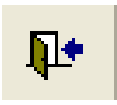
1.15.2.1. From the “Enter Results by Load” screen select “Add Tests”.

1.15.2.2. In the upper right, choose the specimen to which the test is to be added.

1.15.2.3. In a blank row under the “assay” column, enter the assay name.

1.15.2.4. To add a specific analyte to be tested (not always applicable), select the “Analytes” tab and enter the analyte name in the “analyte” column.



1.15.2.5. Select  to close and return to the previous screen.

1.16. References

1.17. N/A