

# Tool for Waste Management Considerations for Viral Load and Early Infant Diagnosis (EID) Testing Laboratories and Associated Healthcare Facilities

---

**Katrina Sleeman, Ph.D.**

**Viral Load & Early Infant Diagnosis Team, International Laboratory Branch,  
CDC Atlanta**

# Overview

---

- Purpose and intended use of the waste management tool
- How to complete the waste management tool
- The five sections of the waste management tool
- Summary

# Purpose of the Waste Management Tool

---

- The purpose of this tool is to assist in **creating awareness** of best practices and **identifying gaps** for waste management processes in HIV molecular testing laboratories and associated healthcare facilities.

# Completing the Tool

---

- This tool is for completion by **Site Managers** or **Safety Officers** for making decisions on how the assessed site can develop and implement best practices for their location.
- 1. Fill in a copy of the tool for **each** testing laboratory or testing facility (for point-of-care and/or near-point-of-care).
- 2. List and fill data for all HIV viral load and early infant diagnosis (EID) testing laboratories and associated healthcare facilities in your country, including all PEPFAR-supported and non-PEPFAR-supported sites.
- 3. The tool is divided into the following **five** sub-sections:
  - **i. WASTE MANAGEMENT SOPS, POLICIES & PRCATICES**
  - **ii. TRAINING**
  - **iii. SAFETY**
  - **iv. HIV MOLECULAR TESTING INSTRUMENTS**
  - **v. HIV MOLECULAR TESTING INSTRUMENT WASTE**

# Completing the Tool

---

- 4. Select **YES**, if the entire question is fulfilled at the site.
- 5. Select **NO**, if none of the question is fulfilled at the site.
- 6. Select **PARTIAL**, if part of the practices are in place, if practices are in place but not documented, or if practices are not followed, despite procedures being in place.
- 7. **Add** notes explaining any responses or additional useful information in the comments section at the end of each question.
- 8. Use the summary section to **summarize** findings from each the five sub-sections of this tool.

# 1. Waste Management SOPs, Policies & Practices

1. WASTE MANAGEMENT SOPS, POLICIES & PRACTICES		YES	PARTIAL	NO	COMMENTS
1	Is a Facility health care waste management policy in place and enforced?				
2	If a waste management procedure is in place, is it followed and enforced?				
3	Is there an SOP for the disposal of infectious waste?				
4	Is there an SOP for the disposal of non-infectious waste?				
5	Is there an SOP for the disposal of chemical waste?				
6	Is there an SOP for the use of an on-site incinerator (where an incinerator exists)?				
7	Is there an SOP for the use of an on-site autoclave (where an autoclave exists)?				
8	Is there an SOP for the tracking of the amount of waste accumulated, disposed of and destroyed at the facility?				
<b>SUMMARY:</b>					

# 2. Training

2. TRAINING		YES	PARTIAL	NO	COMMENTS
9	Have all personnel performing HIV molecular testing at the facilities received blood borne pathogen and/or sharps management safety training?				
10	Have all personnel performing HIV molecular testing at the facilities received training on managing healthcare-associated and chemical wastes?				
11	<p>Did this training include:</p> <ul style="list-style-type: none"> <li>a. Types of healthcare-associated waste and how to properly identify and segregate waste for disposal?</li> <li>b. Hazards associated with Healthcare-associated waste?</li> <li>c. What is infectious and non-infectious waste?</li> <li>d. The segregation of infectious and non-infectious waste?</li> <li>e. How and where different waste types are accumulated and stored at the facility?</li> <li>f. Chemical waste disposal procedures?               <ul style="list-style-type: none"> <li>i. What is considered chemical waste?</li> <li>ii. Compatibility of different chemical waste streams generated at the site?</li> <li>iii. Handling and disposing of solid waste versus liquid waste?</li> </ul> </li> <li>g. Appropriate waste containers for accumulation and storage of waste?</li> <li>h. Labeling of waste containers to list the contents of the waste?</li> <li>i. Ensuring waste containers are leak-proof and kept closed?</li> <li>j. Location and use of chemical spill kit?</li> <li>k. Location of Chemical Hygiene Plan and laboratory waste guidance?</li> </ul>				
12	Are janitorial staff that collect healthcare-associated and chemical waste from the facilities trained in biosafety and the use of appropriate PPE?				
13	Is all training documented and are records maintained in the employee folder/binder?				
14	Is an annual safety refresher training provided and documented for each employee?				

**SUMMARY:**

# 3. Safety

3. SAFETY		YES	PARTIAL	NO	COMMENTS
15	Is liquid waste and solid waste segregated in laboratories/testing facilities?				
16	Is there a biological spill kit and associated SOP?				
17	Is there a chemical spill kit and associated SOP?				
18	Is there a chemical hygiene plan?				
19	Is there a chemical inventory?				
20	Are current Safety Data Sheets (SDS) available for the chemicals and reagents used at the site?				
21	Is liquid waste stored and collected in labelled puncture-proof, sealed leak proof containers?				
22	Are waste containers labeled correctly to facilitate appropriate waste segregation?				
23	Once the solid and liquid waste containers are full, are those containers brought to a secure central location for transport or off-site destruction?				
24	Is accumulated waste transported to a separate facility, on-site or off-site?				
25	Are areas where liquid and solid waste is generated and stored: a. Organized? b. Non-porous and durable for disinfection practices in case of a spill?				
26	Are liquid waste containers stored in a secondary container to prevent leakage due to primary container damage or accidental overfilling?				
27	Are accident or incidence reports maintained?				

**SUMMARY:**



# 4. HIV Molecular Testing Instruments

---

4. HIV MOLECULAR TESTING INSTRUMENTS		RESPONSE	COMMENTS
28	What conventional high-throughput testing platforms are used at this facility, if any?		
29	What point-of-care, or near-point-of-care HIV molecular testing instruments are used at this facility, if any?		
30	What is the volume of testing on each platform, or instrument per <u>month</u> at each of the testing facilities? <i>(From this we can estimate the amount of liquid and solid waste generated by each testing platform and laboratory on a monthly and annual basis.)</i>		
<b>SUMMARY:</b>			

# 5. HIV Molecular Testing Instrument Waste

---

5. HIV MOLECULAR TESTING INSTRUMENT WASTE		YES	PARTIAL	NO	COMMENTS
31	Is biohazardous/infectious waste separated from non-infectious waste in laboratories/testing facilities (at the point of generation)?				
32	What method of <b>solid</b> biohazardous/health care associated waste disposal is currently in use at each testing laboratory? <ul style="list-style-type: none"> <li>a. Transportation for disposal off-site?               <ul style="list-style-type: none"> <li>i. Off-site incineration?                   <ul style="list-style-type: none"> <li>ii. Off-site autoclaving?</li> <li>iii. Off-site open burning?</li> <li>iv. Off-site landfill?</li> <li>v. Off-site encapsulation?</li> </ul> </li> <li>b. On-site open incineration?</li> <li>c. On-site autoclaving?</li> <li>d. On-site open burning?</li> </ul> </li> </ul>				
33	Are autoclaves/incinerators: <ul style="list-style-type: none"> <li>a. Regularly serviced and documents maintained?</li> <li>b. Is preventative maintenance performed and documented?</li> <li>c. Under service contracts?</li> <li>d. Operated by trained staff?</li> <li>e. Operated by staff trained in proper biosafety procedures?</li> </ul>				

# 5. HIV Molecular Testing Instrument Waste

---

5. HIV MOLECULAR TESTING INSTRUMENT WASTE		YES	PARTIAL	NO	COMMENTS
34	<p>How is <b>liquid</b> chemical waste currently disposed in laboratories using conventional viral load/EID testing platforms?</p> <ul style="list-style-type: none"> <li>a. Transportation for disposal off-site?               <ul style="list-style-type: none"> <li>i. Off-site incineration?</li> <li>ii. Off-site autoclaving?</li> <li>iii. Off-site open burning?</li> <li>iv. Off-site landfill?</li> <li>v. Off-site encapsulation?</li> </ul> </li> <li>a. On-site open incineration?</li> <li>b. On-site autoclaving?</li> <li>d. On-site open burning?</li> </ul>				
35	Is liquid waste combined from multiple instruments or other waste streams/processes at the testing laboratory/facility?				

# 5. HIV Molecular Testing Instrument Waste

5. HIV MOLECULAR TESTING INSTRUMENT WASTE		YES	PARTIAL	NO	COMMENTS
35	Is liquid waste combined from multiple instruments or other waste streams/processes at the testing laboratory/facility?				
36	If liquid waste is being poured down a sink is there an SOP that is followed?				
37	Does the run-off from the sink go directly into the sewer system?				
38	Does the waste from the sink accumulate with other waste streams from the same testing facility (e.g. if the laboratory shares waste water systems with a large hospital?)				
39	Is bleach mixed with all liquid waste?				
40	Are there any waste management companies currently operating in your country?				
41	Are there any waste management companies outside of your country that are currently contracted to transport and dispose of waste, either within your country or outside of your country?				
42	Are there managed landfill sites? If so, are the landfill sites owned and operated by the government or private businesses?				
43	Are there incinerators in country?				
44	Are there any in-country partners that can help with waste management or that may be already focusing efforts on addressing country needs?				
<b>SUMMARY:</b>					

# Summary

---

- This waste management tool is still in **DRAFT** format
- Global Fund is providing feedback
- Most importantly we would like to hear your thoughts, comments and suggestions on the functionality of this tool.....

THANK YOU!