

SV GUIDELINES

Liquid Biological Waste

1. Introduction

When producing chemical or biological waste, one needs to comply with a wide range of laws and ordinances regulating the elimination of potentially hazardous products: genetically-modified or infectious organisms must be inactivated, chemically-treated solution must be sorted out, antibiotics can't be released in the environment if they are not inactivated, etc. This complicates a lot the elimination of liquid biological waste, since bacterial or cell culture media can contain a complete mix of the above-mentioned products.

In order to eliminate liquid biological waste in a safe, legal and simple way, the Faculty and the DSPS (Domain for Safety, Prevention & Health) have prepared the process that is illustrated on the back of this document.

2. Liquid biological waste elimination process

Only two categories of biological liquid waste are considered:

- P1 (or biosafety level 1 – BSL1) biological liquid waste.
- P2 (or biosafety level 2 – BSL2) biological liquid waste.

The difference between those two categories is the way the waste will be collected and treated.

- 1) **In P1**, the liquid waste, containing or not antibiotics, genetically modified organisms, highly active compounds, drugs, cytostatic compounds, etc., will be collected in containers and treated with an inactivating chemical product. The treated liquid biological waste must then be transferred by the users in one of the 600 L container located in AI0235 or SV0515.
- 2) **In P2**, the liquid biological waste (again with or without antibiotics, treated or not with drugs, highly active compounds, or cytostatic products) will be this time collected in autoclave bottles (e.g. 4 L Nalgene PP bottles with Transfer cap PP 83B 2X or glass or PP containers with a screwing cap). Once $\frac{3}{4}$ full, those bottles will be tightly closed, decontaminated on the outside and labelled with the code-bar specific to the group. The autoclave bottles will then be collected by the SV-IN team and the content will be treated by autoclaving before being disposed in one of the 600 L containers. The empty autoclave bottles will then be washed, sterilized and returned to the users.

The liquid waste will then be eliminated as a chemical waste by CRIDEC under the OMOD code 18 01 02.

3. Decontamination solutions for liquid waste

a) For P1

- **USE:** Bleach, Virkon, Lysetol, Gigaseft AF, Trigen, Vesphene is tolerated for mycobacteria only).
- **DO NOT USE:** aldehyde-containing decontaminant (formaldehyde and glutaraldehyde) and any concentrated acid or basic products.

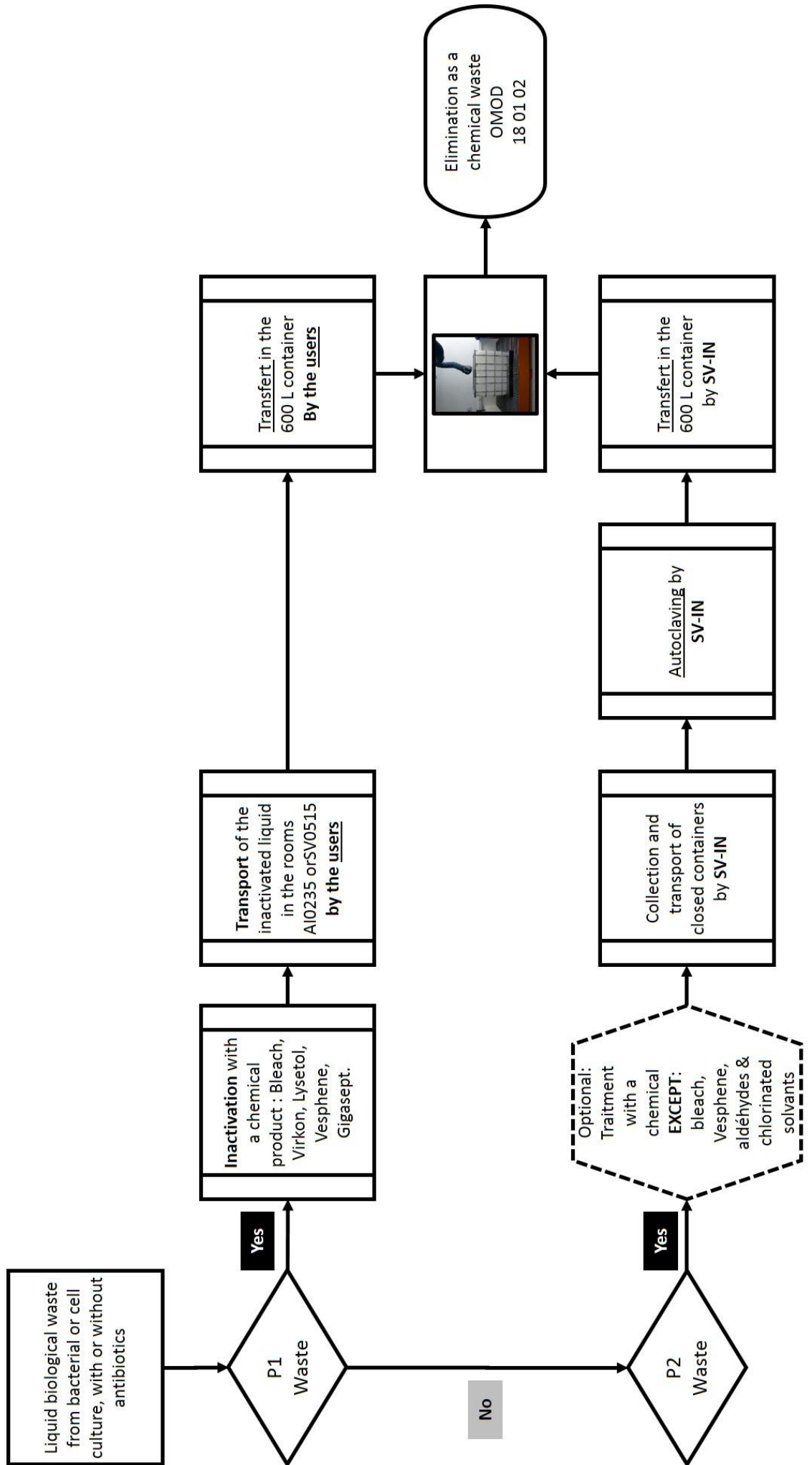
b) For P2 waste

Optional since P2 liquid waste will be ultimately autoclaved.

- **USE:** Virkon. Lysetol or Gigasept are alternatives. Vesphene is tolerated for mycobacteria only.
- **DO NOT USE:** bleach or chlorinated/halogenated solvents, aldehyde-containing decontaminant (formaldehyde and glutaraldehyde).

REM. Rules and explanations for the elimination of solid biological waste are edited in the document BIO_BSR_MB_Solid_Biological_Waste_[E].

Treatment and elimination of liquid biological waste



4. Versioning

20.01.2015	version 1.0	