

Appendix 7: Explanation of different types of waste containers

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1. Grey roll container with orange lid

For the disposal of biological waste with negligible risk.

For a description of this type of waste see [appendix 1 Explanation of biological waste with negligible risk](#)



2. Sharps container



A sharps container must be used for the disposal of sharp objects (needles, broken glass etc.). The sharps container will not be disposed of separately, but is always part of waste in a WIVA container, stainless-steel container or DPTE container.

When using a stainless steel or DPTE container, the red label must state that there is a sharps container in it, so that following autoclaving, the sharps container will be further disposed of by the WIVA route.

[See appendix 4 Explanation of biological waste in combination with sharps](#)

3. WIVA container



A WIVA container is a blue container with a yellow lid, has a 30 or 60 litre capacity and a biohazard sign. Once closed this container can no longer be opened and is suitable for the disposal of waste with:

Biological Agents belonging to category 2 and GMOs of containment level I and II, with the exception of polio and vaccinia.

In the event of WIVA container defects, dispose of them immediately to prevent use by another employee. Make the defect known by stating the issue on a white label [See appendix 8 Reject waste container](#).

- When doing so pay attention to the production date (stated on the container). The WIVA container can be used as a waste container for up to 5 years after the production date (PSP Logistics centre supplies WIVA containers that may be used as waste containers for at least another 3 years).

3.1 Considerations when filling the WIVA container

- The total weight of the WIVA container must not exceed 23 kg and the contents must not exceed the filling line stated on the container! If necessary, check the total weight using scales in the laboratory/production area before the vat is closed, so that transfer of materials is still possible.
- In the event that a load is too heavy, PSP can refuse the container which may result in repackaging part of the load. It is very difficult to open and reload a closed WIVA container containing waste with risk in a safe manner.
- Ensure that no material gets in between the container and the lid.
- Liquid in the WIVA container:
 - The WIVA container should contain no more than 1 litre of unpacked liquids which can only be in bonded form (absorbed – see absorption materials below).
 - The WIVA container may otherwise contain packaged liquids as long as there is a maximum of 1 litre of liquid in each package and the WIVA container contains sufficient absorbent material to absorb the total amount of liquid.

Please note: one WIVA container may therefore contain no more than 20 x 1 litres in relation to the total weight.

3.2 Absorption materials

- Septodry -superabsorbent material for specific hospital waste, available from VE-systems (info@ve-systems.nl). The contents of one bag can absorb 3.5 litres of tap water and approximately 0.5 litres of blood. A WIVA container with the maximum quantity of liquid

therefore will contain at least 6 bags.

- Various types of absorbent sheet material are available from the company 3M (for placing on the bottom and as a covering layer).

3.3 Closing the WIVA container

- Check that there is no waste between the container and the lid.
- Press the yellow lid onto the container.
- Disinfect the exterior of the WIVA containers with a suitable disinfectant before they leave the laboratory-/production area. For more information about disinfectants see [KAM rule 13](#).
- Attach the organisation/building specific white label with barcode onto the narrow side of the WIVA container (see photo in point 3)
- Check that the label is legible (see example below)
- The barcode label is important, on the one hand, for the correct internal invoicing of the waste stream to various organisations, whilst on the other hand for identification of the "disposer" of the waste (see KAM rule 07 [Disposal of \(hazardous\) waste](#)) and during its transfer on the public highway (ADR label and UN code are already on the WIVA container, see example below).
- Collect full containers at the designated location in or near the building or laboratory/production area.

3.4 Identification/labelling of the WIVA container

Example of a label with barcode for a WIVA container:

<p>Barcode with Planonnummer</p> <p>Area where waste came from Costs centre /Project no. Type of waste (category)</p> <p>CMP text</p> <p>Customer number (Suez-Sita)</p> <p>Waste stream number</p> <p>UN number</p>	 <p>1 2 3 4 5 6</p> <p>W 0.05 801</p> <p><u>Biol afval-risico</u> (BA2/ GGO I/ GGO II)-<u>disp</u></p> <p>Afval uit microbiologisch laboratorium. Dit vat bevat afval met een biologisch risico tot maximaal BA niveau 2 of GGO niveau II. Dit vat bevat GEEN Polio of Vaccinia af dan niet gemodificeerd...</p> <p>1943841 MIN van VWS / PD-ALT 0823K0021512 RISICO HOUDEND MEDISCH AFVAL</p> <p>UN 3291, N.E.G., 6.2, II</p>
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Explanation of the codes

Label with identification data for
WIVA container (yellow lid)

Barcode labels can be created via the link in [SelfService](#) and for a WIVA container, a choice can be made from the following categories of biological waste:

- Biol. waste-negligible risk-disp
- Biol. waste- negligible risk sharps
- Biol. waste- risk (BA2/ GMO I/ GMO II)-disp
- Biol. waste- risk (BA/ GMO I/GMO II)-sharps
- Autoclaved hospital waste (for example WIVA with Sterilid)
- Mixed waste biological + chemical or in response to a incident (only on consultation with PSP Logistics centre)

Following collection of the WIVA containers by PSP, PSP scans the barcode and weighs the WIVA container. The data is stored electronically by PSP.

4. Autoclavable WIVA container with Sterilid

Please note: Disposal of BA3, GMO level III, polio, vaccinia via a WIVA container with Sterilid is only permitted after successful validation of the process (destruction by means of autoclaving, validated and specific loading of the WIVA container).

WIVA container with Sterilid (orange Snap-on lid + transparent ldpe centre lid + yellow pp centre lid)

The WIVA container with custom orange lid and melt cap (Sterilid) can, following successful validation of the load in the autoclave/destructor, be used to remove disposable waste from laboratories with containment level 3 /containment level ML-III. As such this will not need to be re-loaded following autoclaving/destruction and can be disposed of as autoclaved hospital waste to the incinerator.



Orange Snap-on lid + Ldpe centre lid

Molten inner lid following autoclaving

WIVA container with Sterilid ready for transport (molten centre lid replaced by yellow pp centre lid)

ldpe = low density polyethylene
pp = polypropylene

Labelling autoclavable WIVA containers with red and green labels as described for the stainless-steel containers (see point 5.5)

Exception:

Sharps containers from BSL3/ML-III/DM-III/MI-IV areas are not disposed of in these containers, but are transferred to a WIVA container with yellow lid following autoclaving in a stainless-steel container.

4.1 Closing, autoclaving and disposal of WIVA Sterilid container

- See point 3.1 for the rules that apply to the filling of a WIVA container, these also apply to the WIVA container with Sterilid.
- Ensure that no waste can get in-between the container and the lid
- Press the orange lid with the Ldpe centre lid on the container
- Label the autoclavable WIVA container with a red or green label as described for the stainless-steel containers (see point 5.5).
- Disinfect the outside of the WIVA container with a suitable disinfectant before it leaves the laboratory/production area. For more information about disinfectants see [KAM rule 13](#).
- This waste stream is taken to the local (in the building) autoclave room (so not at BBio/C&S) by an employee.
- The autoclave operator takes the autoclavable WIVA container, places it in the autoclave and starts the validated destruction process.
- Following demonstrated/documentated inactivation/destruction, place yellow pp centre lid.
- Attach the organisation/building specific white label with barcode on the narrow side of the WIVA container (see pictures above at point 3 and 3.4)
- Check the legibility of the label
- The barcode label is important for identification of the “disposer” of the waste (see [KAM rule 07](#) Disposal of (hazardous) waste) and during transport on public roads (ADR label and UN code are already on the WIVA container).
- Contact the PSP Logistics centre to dispose of autoclaved WIVA containers as autoclaved hospital waste (email: logistiekcentrum@poonawallasciencepark.nl).

**To dispose of autoclaved waste in this way:
Check and record every autoclave run where biological material with non-negligible risk is autoclaved/destroyed.**

5. Stainless-steel container



Stainless-steel container with barcode on lid and container



Top of stainless-steel container



Lid stainless-steel container underside (silicone rubber rim and red pop-up cap)

Stainless-steel containers are metal containers with a capacity of 40 litres. The stainless-steel container weighs approximately 11 kg when empty. The lid is clamped to the container with four clamps. Once the clamps have been folded back, use the special tools to open the container, available from the PSP Logistic centre. Do not use a screwdriver as this could damage the edge and render the container unusable! The silicone rubber rim ensures optimal closure during transport. The stainless-steel container is suitable for transporting waste with BA up to an including category 3 (including polio and vaccinia) and GMOs up to and including containment level III, to the autoclave/destroyer. For category 3 waste (including polio and vaccinia and GMOs with containment level III), the autoclave must be located in the building.

5.1 Check stainless-steel containers before use

When using the stainless-steel container, the laboratory employee must check:

- The integrity of the stainless-steel container;
- The presence of a barcode on the lid and container;
- The presence of an intact silicone rubber rim;
- The presence of a metal cap on the upper-side and a 'pop-up cap' (a red plastic cap) on the underside of the lid (see pictures);
- Whether the lid closes properly on the stainless-steel container;
- That the clamps are operational.

In the event of any defects of the stainless-steel container, transfer it immediately to the PSP Logistic centre to prevent use by another employee. Make the defect known by means of a white label/sticker stating the defect [see appendix 8 Reject waste container](#).

5.2 Considerations when filling the stainless-steel container

- The total weight of the stainless-steel container must not exceed 23 kg! Check the total weight using scales in the laboratory/production area. Rule of thumb: fill two-thirds of the stainless-steel container. Watch out for compact materials, the weight increases at a faster rate so load less!
- Place breakable materials in such a way that breakages are prevented as much as possible during transit.
- Don't stack material / glassware too high in the stainless-steel container, the pop-up cap on the underside of the lid must be able to 'fall' freely under the influence of the heat.
- Fill the stainless-steel container in such a way that the steam can gain access to the load during autoclaving/destruction. Avoid compact packages of materials (gloves, disposable coats), steam is unable to penetrate these well and insufficient heat activation occurs.
- If the stainless-steel container only contains disposable or textile coats, then add 2 litres of water.

Specifically, for vaccine production facilities BBio:

If material is presented to BBio/C&S for disposal

- Place a cap with rubber insert onto empty bottles (P1 program BBio/C&S).
- Place a cap with rubber insert onto filled bottles, tighten the cap loosely so that air can escape during vacuum and heating (P2 program BBio/C&S).
- Empty system bottles with complete system cap and arodisc filters on the hoses (P1 program).
- Filled system bottles: clamp long syphon with metal terry clamp, leave other hoses with arodisc filters open (P2 program).

Destruction in own department

- Present material such as is carried out in accordance with validation requirement and recorded in a BDI (Bedieningsinstructie).

5.3 Closing the stainless-steel container

- Check whether the metal outer cap and the pop-up cap are present and well positioned on the top and bottom of the lid respectively;
- Place the lid on the container and close the 4 clamps.
- Fill in the **red label**, clearly indicating whether the waste contains BA and/or GMOs and what containment level they belong to.
- If it contains a sharps container, write "**CONTAINS SHARPS CONTAINER**" on the label
- Attach the label using rope to 2 opposite clamps and a 'CONTAMINATED' lead seal, in such a way that the pliers number or another unique identification number is clearly legible.
- Disinfect the outside of the stainless-steel containers with a suitable disinfectant before they leave the laboratory/production area. For more information about disinfectants see [KAM rule 13](#).
- Collect full containers at the designated location in or near the building/laboratory/production area.

5.4 Stainless-steel container with BA3, GMO level III, polio or vaccinia contaminated material

Waste originating from laboratory/production areas where work is carried out with vaccinia, polio and/or BA belonging to category 3 and/or GMOs belonging to containment level III, is moved to the autoclave area by the laboratory- production employee. This waste stream is autoclaved locally in the building (i.e. not at BBio/C&S).

The autoclave operator takes over the stainless-steel waste container, places it in the autoclave and starts the destruction process. Upon delivery the stainless-steel waste container is immediately assessed and measures are taken immediately in the event of defects and/or the BSO is engaged for advice. There is no intermediate storage for this waste category at the autoclave.



Stainless-steel container with shrink bag and non-homogeneous content



Special tool for opening stainless-steel container

5.5 Labelling stainless-steel container (or autoclavable WIVA container with Sterilid)

Labels are available from PSP Logistics centre.

If a barcode label is used instead of the red label, then this must be attached **onto** the red label. Barcode labels can be created via the link in [SelfService](#).

Utrecht Science Park Bilthoven (USPB)

Biologisch afval niet verwaarloosbaar risico

Datum:	Identificatienummer:
Naam organisatie/afdeling/lab:	
Aard besmetting:	
<input type="radio"/> Biologisch Agentia 2, muv, polio, vaccinia <input type="radio"/> Biologisch Agentia 3, of polio, of vaccinia	<input type="radio"/> GGO ML-I <input type="radio"/> GGO ML-II <input type="radio"/> GGO ML-III
Aard materialen:	
<i>Regulier</i>	<i>Voor autoclaaf S-Kelder</i>
<input type="radio"/> Disposable	<input type="radio"/> SKD (disposables)
<input type="radio"/> Materiaal dat hergebruikt wordt	<input type="radio"/> Reusable, retour naar lab
<input type="radio"/> Wasgoed	<input type="radio"/> SKL (labjassen)
<input type="radio"/> Vloeistof	<input type="radio"/> SKV
<input type="radio"/> Open (poreus, zonder dop) <input type="radio"/> Gesloten (met dop)	
<input type="radio"/> Open (poreus, zonder dop) <input type="radio"/> Gesloten (met dop)	
<input type="radio"/> Vloeistof < 3 ltr <input type="radio"/> Vloeistof ≥ 3 ltr	

After autoclaving/destruction, materials in the stainless-steel containers are further treated/disposed of according to appendix 2 and 3 [Explanation and flow chart for biological waste with non negligible risk BA2 and BA3](#) (green label) and appendix 5 [Explanation and flow chart for reuse of protective clothing](#) (blue label).

If a barcode label is used instead of a green or blue label, then this must be attached **onto** the green or blue label. Barcode labels can be created via the link in [SelfService](#).

UTRECHT SCIENCE PARK BILTHOVEN (USPB)

Niet besmet afval

Biologisch afval met verwaarloosbaar risico

Geautoclaveerd materiaal	
Datum	
Gebouw/Afdeling	
Autoclaaf	
Protocolnummer	
Runnummer	
Naam operator	
Paraaf	

Utrecht Science Park Bilthoven (USPB)

WASGOED

6. Red roll container



Only intended for autoclaved waste, where it can be demonstrated through documentation that the inactivation/destruction was effective.

Red roll containers are marked at the USPB per organisation. The autoclaved waste is collected at the PSP Logistics centre in collection containers.

**For autoclaved waste to be disposed of via the red roll container:
Check and record every autoclave run where biological material is autoclaved/destroyed with non-negligible risk.**

NB:

Autoclaved waste that **cannot** be evidenced through documentation as to whether the autoclave-run was successful, must be further removed by the **WIVA route**.

7. Dump bottle (various versions)



90 L version

90 L version with head plate
(shown without air filters and
filling hose)

40 L version with head plate
(shown without air filters and
filling hose)

The dump bottle is suitable for removing large quantities (= more than 3 (three) litres) of contaminated liquids.

- Fill the bottle up to two thirds maximum (by monitoring the weight limit for example).
- Label the dump-bottle in the same way as the stainless-steel container (see point 5.5).
- Disinfect the outside of the dump bottle with a suitable disinfectant before it leaves the laboratory/production area. Disinfect the filling hose too. For more information about disinfectants see [KAM rule 13](#).
- After demonstrated/documentated inactivation/destruction of the liquid, it can be discharged into the sewer once cooled.

Contaminated liquids originating from laboratory/ production areas where vaccinia, polio and/or BA belonging to category 3 and/or GMOs belonging to containment level III are worked with
This waste stream is autoclaved locally (in the building) (i.e. not at BBio/C&S).

8. DPTE container



There are a number of special DPTE containers in use in some places. These can be connected to the bottom plate of a class III cabinet. Procedures (using, closing, transport) relating to these DPTE containers, are known and managed by the organisations that work with them.

- Label the DPTE container in the same way as a stainless-steel container (see point 5.5).
- Disinfect the outside of the DPTE containers with a suitable disinfectant before it leaves the laboratory area. For more information about disinfectants see [KAM rule 13](#).
- After demonstrated/documentated inactivation/destruction, the materials in the DPTE container are further treated/disposed of according to appendix 2 and 3 [Explanation and flow chart for biological waste with non negligible risk BA2 and BA3](#)

The DPTE containers are taken to the (local) autoclave area in building S by a laboratory employee.

The autoclave operator takes the DPTE containers, places them in the autoclave and starts the destruction process.

After autoclaving/destruction, lab employees take the DPTE container back, to empty and clean it for reuse. This is in relation to the vulnerability of the container.

The content of the autoclaved DPTE container can be removed using the red roll container route (see point 6).