Tox Tech
Above all else, safety

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Enterotoxin/Toxoid Storage, Rehydration and Safe Handling Instructions

A. Shelf life per storage temperature for 1 mg/ml lyophilized and rehydrated toxin/toxoid (Table 1)

Table 1: Length of enterotoxin/toxoid storage per storage temperatures (˚C) to retain highest activity level.

Temperature (˚C)		Lyophilized	Comment	Rehydrated	Comment
Room temperature	25	2-4 weeks.	If desiccant starts from blue to pink, the lyophilized product is absorbing moisture and activity will reduce. Place in 4 or -20 ˚C (or colder)	Do not store at room temperature	
Refrigeration	4	8 weeks		14 days	
Frozen	-20	10 years	Recommended	1 year	For the highest activity, do not expose to more than one freeze/thaw cycle. Aliquot into multiple single use vials.
Ultra frozen	-40	20 years	Recommended	5 years	

B. Rehydration of lyophilized enterotoxin/toxoid

Using deionized water, rehydrate to a 1 mg/ml concentration.

Note: There is residual phosphate and sodium chloride in the vial to provide a physiological phosphate buffered saline solution.

C.. Personal safety*

Perform all enterotoxin work in an annually certified biohood with sash at lowest comfortable level.

1. Don Personal Protective Equipment:

<u>Respiratory protection*</u> - N95 mask to avoid inhalation or ingestion

<u>Eye and face protection*</u> - Safety goggles and/or face shields to protect eyes and face from splashes, mists or airborne particles from contact with skin.

<u>Hand protection -</u> Chemical-resistant gloves to avoid exposure to hands

Body and clothing protection to avoid exposure on skin

- Do not wear shorts, skirts, dresses that expose skin on thighs, knees or legs.
- Do not wear open toed shoes
- Wear pants and socks that cover the ankles
- Wear disposable chemical resistant lab coat that reaches below the knees

* Optional when working under biosafety hood

2. Doffing

The doffing procedure is to be performed in sequence to avoid re-contamination.

Step 1: Spritz gloves with 5% hypochlorite solution** and remove N-95 mask, if worn. Spritz mask with 5% hypochlorite solution. Discard mask in plastic lined waste container

Step 2: Use sani-wipes soaked with 5% hypochlorite solution to wipe down face shield and goggles, if used, dispose.

Step 3: Spritz disposable lab coat and gloves with 5% hypochlorite. Remove lab coat then gloves and dispose.

Step 4: Waste container. Wearing PPE, spritz top with 5% hypochlorite, seal well prior to autoclaving and/or removal from laboratory. Remove from laboratory a minimum of daily.

**Enterotoxins are proteins and can be inactivated by a 5% hypochlorite solution within 15 minutes. Standard (off-shelf) household bleach can be made into a 1 : 20 solution for use. Enterotoxins are also inactivated by autoclaving.

3. Enterotoxin/toxoid inactivation

- Autoclave conditions: 121˚C/1 hour/liquid cycle or conditions determined during autoclave validation/thermal mapping

4. Emergency Response Equipment

- Train employees on use of emergency eye wash.
- Train all lab employees on emergency exit locations and protocols

Note: These are recommendations. Always defer to individual laboratory PPE and emergency response procedures.