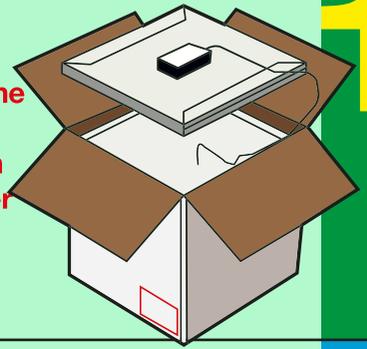


# Key steps for storage, distribution, and handling of vaccines at ultra low temperature

## Reception

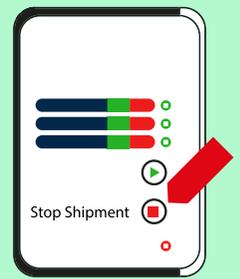
Before starting the process of opening the thermal shipper container:

- Wear proper personal protective equipment (**goggles, cryogenic gloves, and apron**).
- Make sure the ultra-low temperature (ULT) freezer is at  $-80^{\circ}\text{C}$
- **Open shipping containers one at a time**
- **Do not open vial boxes except when vials need to be removed for transfer to ULT Freezer, thawing, or use.**



1

- **Open the vaccine thermal shipper container and immediately press the STOP button of the temperature monitoring device.**
- Check **if there is a red alert light:** It could be, there is temperature excursion, or wi-fi failure or battery failure, immediately inform the provider who will indicate the steps to follow.
- Inspect the integrity of the thermal shipper container
- Check the batch number, expiration date, and quantities in the thermal shipper container.



2

- Transfer the vaccine to the ULT freezer ( $-80^{\circ}\text{C}$ ). **This process should not take more than three minutes.**



3

- Discard dry ice in open spaces away from other people if the thermal shipper container will not be reused.



4

- If the thermal shipper container will be reused, follow the manufacturer's instructions.

5

- Return thermal shipper containers and temperature monitoring devices according to the manufacturer's instructions. See: <https://www.cvdvaccine-us.com/product-storage-and-dry-ice>

6

- **Store the diluent in its original packaging at room temperature no higher than  $+25^{\circ}\text{C}$ , or between  $+2^{\circ}\text{C}$  to  $+8^{\circ}\text{C}$ , if possible**

7



- Record the entry of vaccines and supplies in the inventory system (quantity, batch number, presentation, expiration date, and storage temperature).

8

Note: Constantly check for updated information on COVID-19 vaccines. See the following WHO webpage:

<https://www.who.int/es/emergencies/diseases/novel-coronavirus-2019/covid-19-vaccines>

# Key steps for storage, distribution, and handling of vaccines at ultra low temperature

## Storage

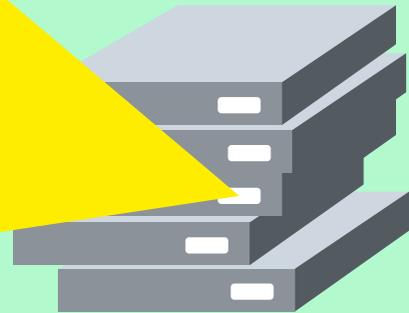


Monitor and record the temperature of ULT freezers at least three times a day. Use the temperature control format.

1

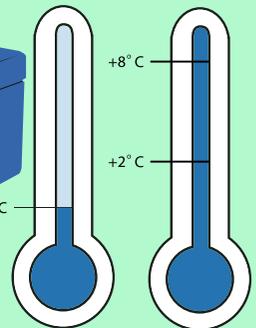
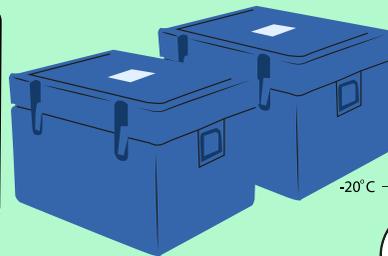
2

Label the secondary packaging of the vaccine with the date and time, when temperature storage has been changed (from  $-80^{\circ}\text{C}$  to  $-20^{\circ}\text{C}$ , or between  $+2^{\circ}$  to  $+8^{\circ}\text{C}$ ) and record the new expiration date in the inventory system.



## Distribution

Prepare cold boxes and packs according to the shipping temperature ( $-20^{\circ}\text{C}$  or between  $+2^{\circ}\text{C}$  to  $+8^{\circ}\text{C}$ ). Include the temperature monitoring device.



1

2



Make sure the secondary packaging or individual vaccine vials have the new date and time of each temperature change.

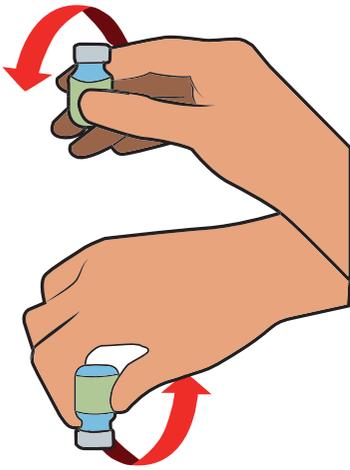
Note: Constantly check for updated information on COVID-19 vaccines. See the following WHO webpage:

<https://www.who.int/es/emergencies/diseases/novel-coronavirus-2019/covid-19-vaccines>

# Key steps for storage, distribution, and handling of vaccines at ultra low temperature

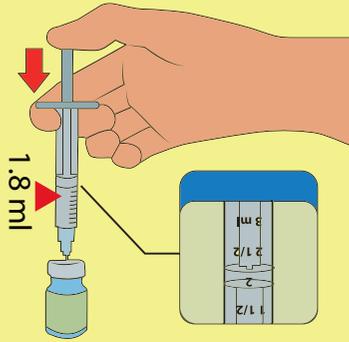
## Preparation

Gently invert the vaccine vial 10 times. **Do not shake it before dilution.**



# 1

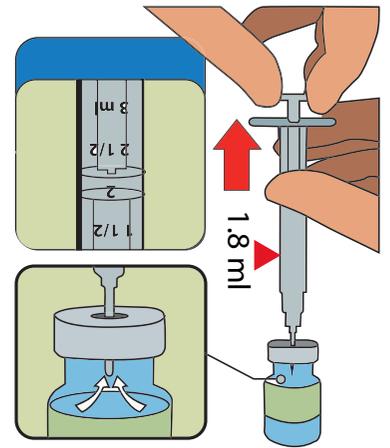
**Withdraw 1.8 ml from the diluent vial** with one dilution syringe. Use only one dilution syringe per vial.



**NOTE: Before diluting the vaccine, the diluent should be at a temperature between +2°C to +8°C.**

# 2

Add 1.8 ml of diluent to the vaccine vial; **equalize vial pressure before removing the needle by withdrawing 1.8 ml of air from the vial into the empty mixing syringe.**

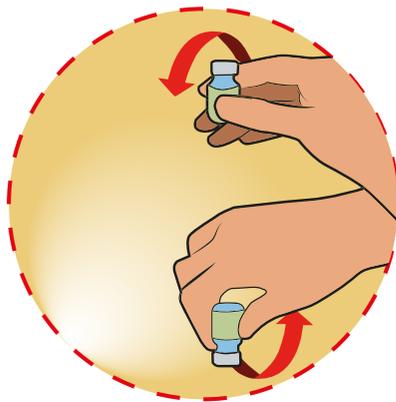


# 3

Discard the dilution syringe in a safety box (Do not reuse the dilution syringe. **Diluent vials are single use only. Discard the vial with any remaining diluent.**)



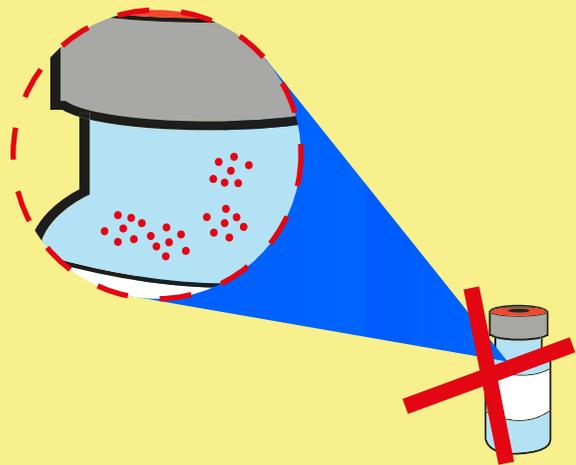
# 4



Gently invert the vial with the diluted vaccine 10 times to mix; **do not shake.**

# 5

Inspect to make sure the vaccine is a uniform suspension whitish in color; **do not use if it is discolored or contains particles.**

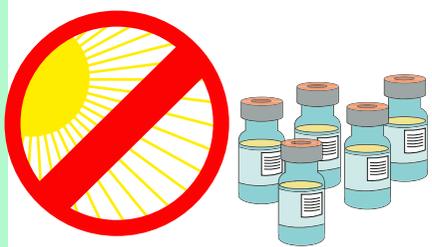


# 6

# 7

**Record the date and time of dilution on the vaccine vial label.**

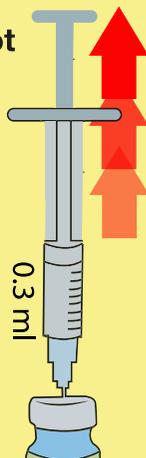
Store the vaccine at a temperature between +2°C to +8°C. **Avoid exposure to sunlight and ultraviolet light during the vaccination session.**



# 8

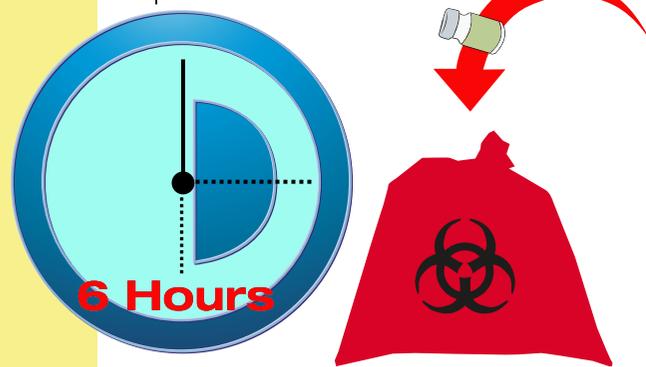
**Withdraw a 0.3 ml dose** of the vaccine at the time of administration. **It is not recommended to preload the vaccine in the syringes.**

**Use the entire vaccine within 6 hours after dilution.**



# 9

**Discard any unused diluted vaccine after 6 hours,** as it does not contain preservatives.



# 10

Note: Constantly check for updated information on COVID-19 vaccines. See the following WHO webpage:

<https://www.who.int/es/emergencies/diseases/novel-coronavirus-2019/covid-19-vaccines>