



衛生防護中心 Centre for Health Protection

Preventing COVID-19 Vaccine-strain Environmental Contamination

I. Background

The CoronaVac vaccine contains high concentration of inactivated COVID-19 virus which is **not infectious** and will not cause COVID-19 infection. Despite its non-infectious nature, the process of vaccine administration and handling may result in environmental contamination which may impact on COVID-19 PCR test.

2. All healthcare personnel should observe relevant infection control advice for COVID-19 vaccination in all settings.¹ To minimize vaccine-strain environmental contamination, it should be noted that the **RNA component of the vaccine, despite being non-infectious, can only be destroyed using diluted bleach but not alcohol**. As such, additional measures including but not limited to the following should be taken:

- (a) proper environmental cleaning with diluted bleach to areas of vaccine administration and handling,
- (b) technique on vaccination preparation procedure,
- (c) wash hands thoroughly with liquid detergent and water after handling of vaccines such as after each session of inoculation or whenever changing from inoculation to other tasks,
- (d) where applicable and feasible, arrange separate session and/or different staff for vaccine handling and PCR testing with proper infection control measures.



¹ Centre for Health Protection, Department of Health. Infection Control Advice in Community Vaccination Centres for COVID-19 Vaccination. Available at https://www.chp.gov.hk/files/pdf/infection_control_advice_in_cvc.pdf

II. Specific measures – Infection control measures in vaccination booths or during vaccine handling

3. No personal belongings, such as water bottles, should be placed inside the vaccination booth or on working table for vaccine handling.
4. It is necessary to wash hands thoroughly with liquid detergent and water after handling of vaccines, such as after each session of inoculation or whenever changing from inoculation to other tasks.
5. Use of gloves is optional during inoculation (e.g. anticipated exposure to blood and body fluid). Where gloves are used, proper hand hygiene should be observed before wearing of gloves and the gloves should be removed immediately after use for each client with proper hand hygiene. After each session of vaccine handling, it is necessary to wash hands thoroughly with liquid detergent and water.
6. Where applicable and feasible, arrange separate session and/or different staff for vaccine handling and PCR testing with proper infection control measures.

III. Specific measures – Vaccination preparation procedure

7. To minimize spillage of vaccine component to environment, the needle should remain inside the vial throughout the whole withdrawal procedure. Please refer to the details of the procedure at **Annex**.

IV. Specific measures – Environmental cleaning and disinfection

8. The RNA component of the inactivated COVID-19 vaccine can only be destroyed using diluted bleach but not alcohol. The vaccine component is nonetheless not infectious.

9. To prevent environmental contamination, regular cleaning and disinfection, including the working areas, should be arranged at least twice daily, after each session of inoculation or when changing from inoculation to other tasks, or when visibly soiled. A video on Infection Control Training for COVID-19 Vaccination Settings has been prepared to demonstrate the key points (<https://youtu.be/9KfZnMF7CEI>).

10. Cleaning and disinfection should be done using 1 in 99 diluted household bleach (mixing 1 part of household bleach containing 5.25% sodium hypochlorite with 99 parts of water), left for 15-30 minutes, and then rinsed with water and wiped dry.

11. Do **not** use alcohol/ alcohol wipe for regular cleaning and disinfection, unless for metallic surface.

12. Increase frequency of cleaning and disinfection for commonly used items such as working table, computer, keyboard, printer, ice box and kidney dish.

13. Reusable/non-reusable cloth soaked with 1 in 99 diluted bleach is recommended for general cleaning and disinfection. Use cold water instead of hot water for dilution of bleach. Separate cleansing cloths should be used for vaccination area and PCR testing area.

14. Used vaccine vials are suggested to be placed inside a plastic container with lid to minimize the risk of contamination. The container containing the used vials needed to be cleaned and disinfected properly.

15. Equipment that would come into contact with used vial e.g. trolley for transferring used vials, locker for clinical waste, should be cleaned and disinfected after each use.

16. Designated waste collection area should be cleaned and disinfected with 1 in 49 diluted bleach after waste disposal.

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Vaccination preparation procedure

To minimize spillage of vaccine component to environment, the needle should remain inside the vial throughout the whole withdrawal procedure

Step-by-step demonstration on vaccination preparation procedure can be accessed via <https://youtu.be/Q8I8jFMUJBk>

1. Withdraw 0.5ml CoronaVac from vial



2. Hold vial and syringe with one hand to keep the syringe tip in the vial



3. Tap on the side of the syringe using another hand to bring the air bubbles to top



4. Push the plunger to remove air bubbles on top of syringe



5. Remove the syringe from the vial and inject immediately

