

## Element DC5X™ Periodic Maintenance

**NOTE:** For access to the full user manual for this product, please visit [www.heska.com/productmanuals](http://www.heska.com/productmanuals).

In order to keep the Element DC5X Analyzer performance at its best, periodic user maintenance and specific Heska service maintenance must be followed.

 **IMPORTANT**

If the periodic maintenance in this manual is not followed, the analyzer's performance and specifications may degrade, and adverse effects on test results may occur.

 **IMPORTANT**

Be sure to reassemble the parts removed for maintenance and tighten thumbscrew.

 **CAUTION**

Refer to each section for information about usable solvents for cleaning. For questions or further information, please contact Heska's Technical Support Services for assistance at 800.464.3752, option 3.

 **CAUTION**

Do not use alcohol for cleaning the sampler cover (translucent), or surface damage may occur.

The following table lists the periodic user maintenance.

Check Points	Cleaning Interval
Air filter	Once per month.
Incubator	Once every 3 months or if inaccurate test results occur.
ISE unit	Once every 3 months or if inaccurate test results occur.
Spotting part	Once every 3 months along with the incubator and ISE unit or if slide transfer error or contamination with sample occurs.
Slide reader	Once every 3 months or if frequent reading errors occur.
Recording paper	Replace the recording paper when red lines appear.
Light source lamp	Replace when a lamp replacement error occurs or the lamp's cumulative illumination time exceeds 1,000 hours.
Reference fluid cap	Clean as needed; replace if cracked.

## Monthly Maintenance

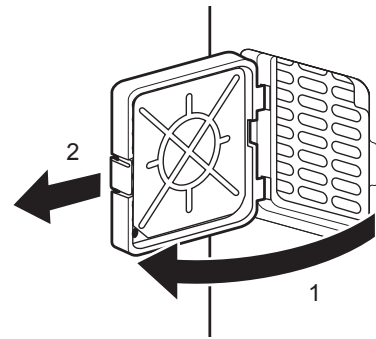
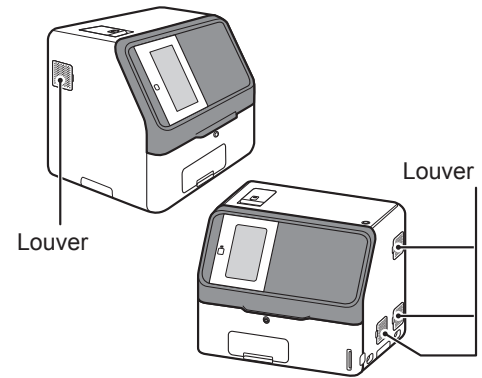
### Cleaning the Air Filter

The air filters should be checked and cleaned once a month.

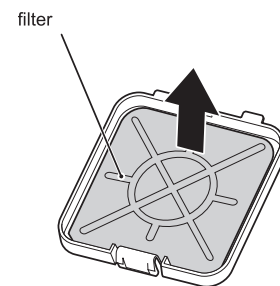
**NOTE:** Perform cleaning for all (4) filters.

### Cleaning Procedures

1. Turn off the analyzer power switch.
2. Remove all four louvers and pull out the air filter located inside of the louver. Push louver towards the back of the analyzer and then pull forward to remove.



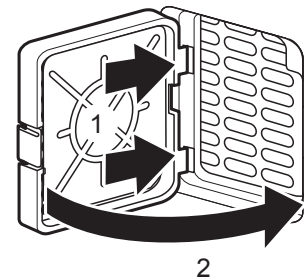
3. Remove dust adhering to the filter with a vacuum cleaner or running water.  
**NOTE:** If washing the filter with running water, make sure the filter is dried well before placing back into the analyzer.



4. Insert the filter into the louver and put the louver back on the analyzer. Insert the back side of the louver first, then snap the front side in place.

#### **i** IMPORTANT

If the analyzer is used without the filter, adverse effects on test results may occur.



## Quarterly Maintenance

Cleaning the Incubator, Spotting Part and ISE Unit.

Test results are affected by stains (e.g., dried blood, serum or plasma), inside of the incubator and ISE unit. These parts should be checked and cleaned at least once every three months.

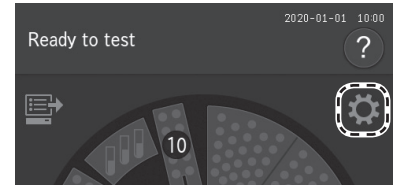
When a slide transfer error or a tip ejecting error occurs, clean the spotting part.

### IMPORTANT

If the incubator, spotting part and ISE unit are dirty with specimens such as blood, adverse effects on test results may occur.

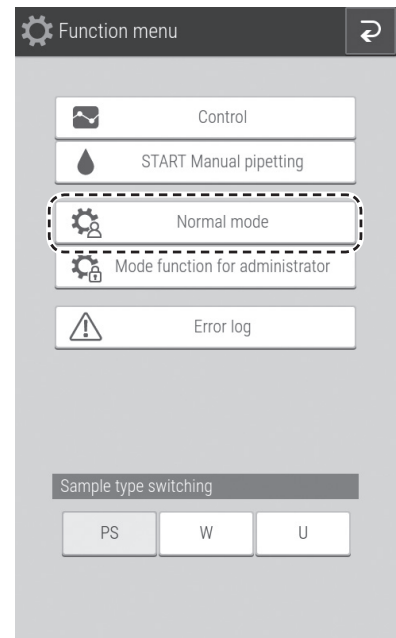
1. Perform reference plate level check before cleaning.

a. Touch 

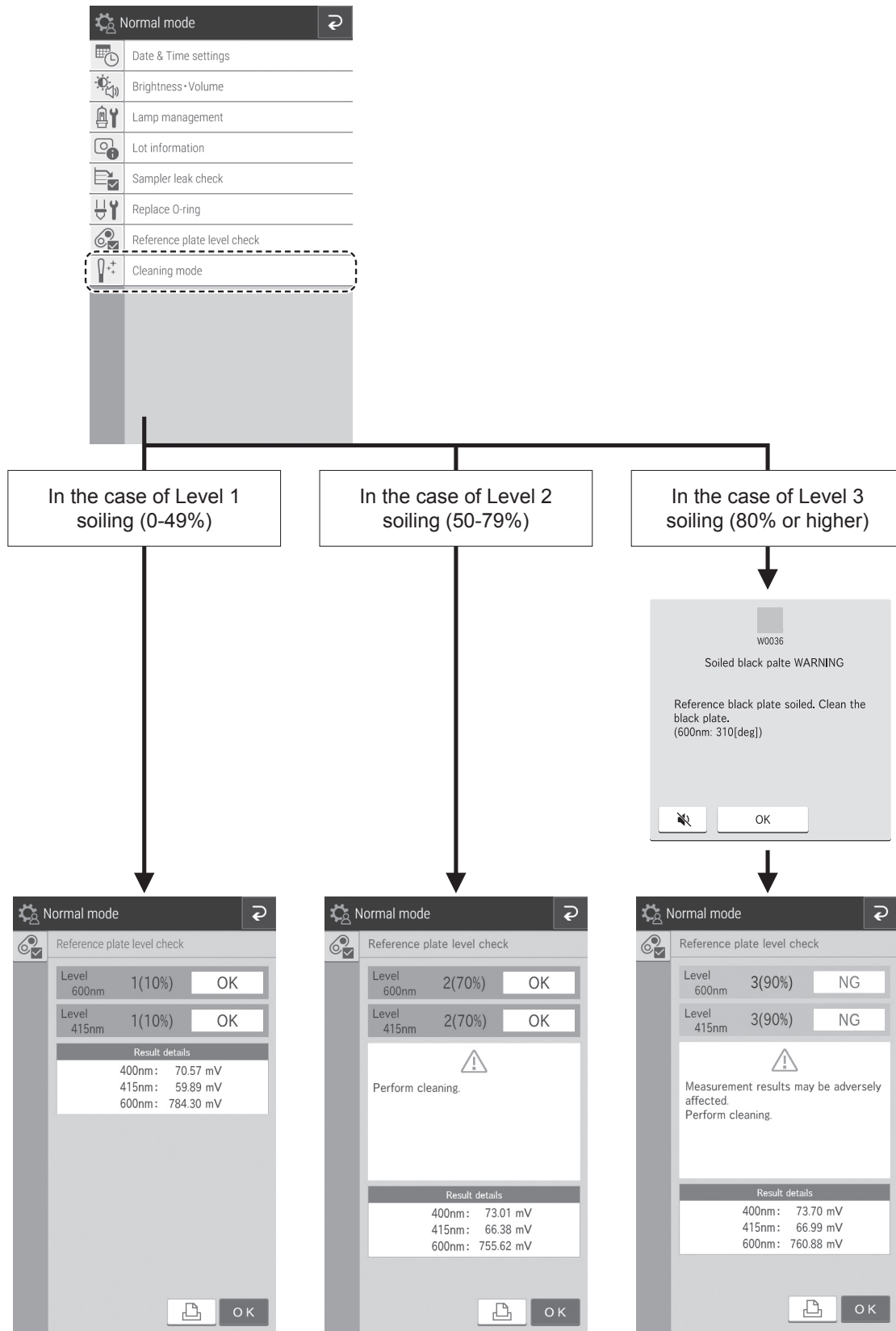


b. Touch **Normal mode**.

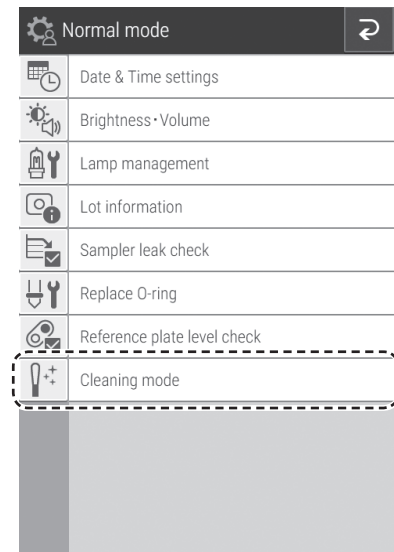
c. Touch **Reference plate level check**.



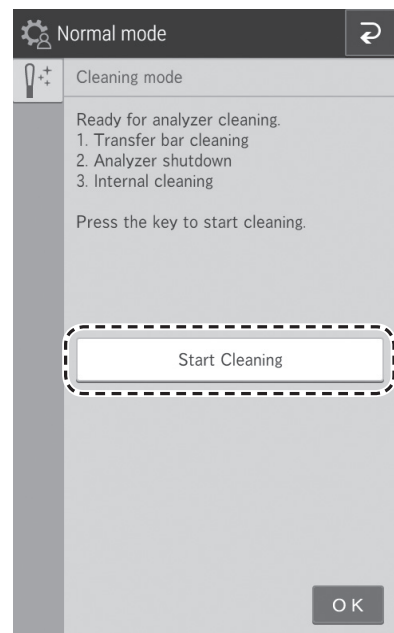
2. Check the results of the [Reference plate level check].
    - a. If the result is [1 (x%) OK], cleaning is not needed.
    - b. If the result is [2 (x%) OK] or [3 (x%) NG], cleaning is needed. Touch **OK** to return to Normal mode.
- Using the procedure on the following pages, clean the transfer bar, incubator, spotting part and ISE unit.



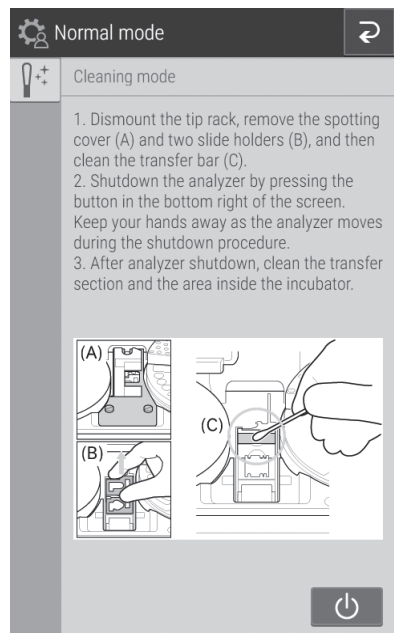
3. Cleaning the Transfer bar.
  - a. Touch **Cleaning mode** in Normal mode.



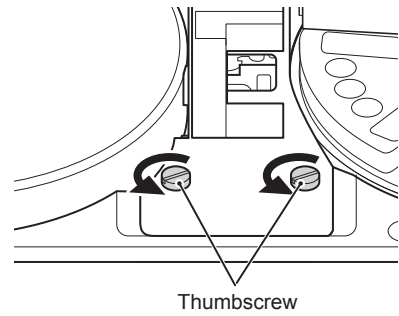
- b. Touch **Start Cleaning**, then open the sample cover.  
**NOTE:** Keep your fingers clear as the sample disk moves.



- c. The screen to the right appears.  
**NOTE:** Although step 2 on the screen prompts to power off the analyzer, don't power off until step 3h.

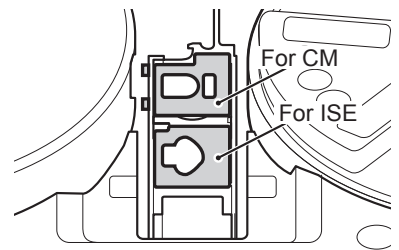
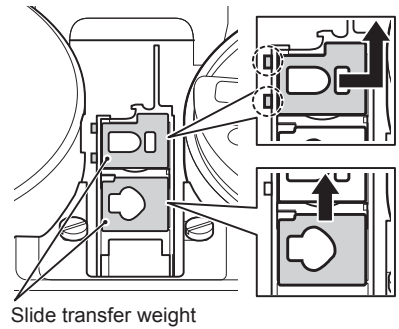


- d. Loosen the 2 thumbscrews and pull the sample application unit cover forward to remove it.

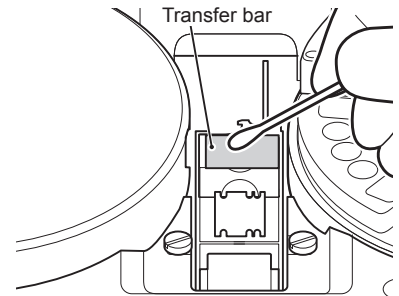


- e. Remove the two slide transfer weights.

**NOTE:** There are 2 types of slide transfer weights, one each for CM tests and ISE tests. The slide transfer weight for CM tests has hooks on the left, so lift up from the right before removing it. When installing it, insert the hooks on the left first.



- f. Use gauze or a cotton swab moistened with water or isopropyl alcohol to wipe the upper surface of the transfer bar visible in the spotting part.



- g. Cleaning the ISE probes.

- Press on the black plastic piece to make probes accessible.
- Make sure there is no dust on the six ISE probes. When cleaning ISE probes, wipe off the dust with a dry cotton swab.

**NOTE:** Do not use solvents, such as methyl or isopropyl alcohol.



**CAUTION**

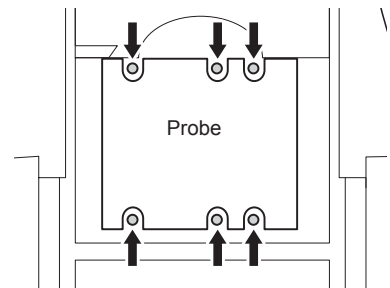
ISE probes are needle shaped parts. Do not touch directly with hands. Be careful not to bend probes.

- h. Power off the analyzer by touching the icon in the bottom right of the screen.



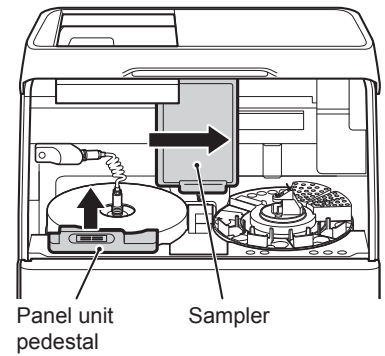
**CAUTION**

Keep your fingers clear as the sample disk moves.

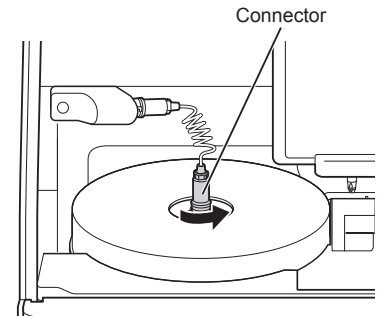


4. Cleaning the incubator.
  - a. Lift the panel unit. Move the sampler unit to the right, and then remove the panel unit pedestal by pulling it forward.

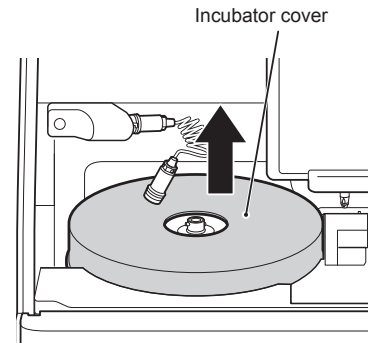
**NOTE:** Be careful not to open the reference fluid cap.



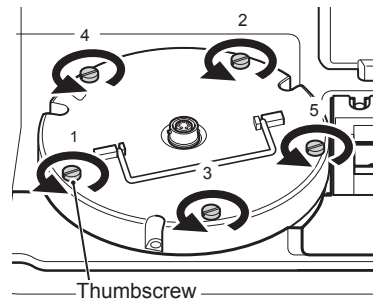
- b. Unplug the connector cable from the incubator by turning it to the left.



- c. Remove the incubator cover.



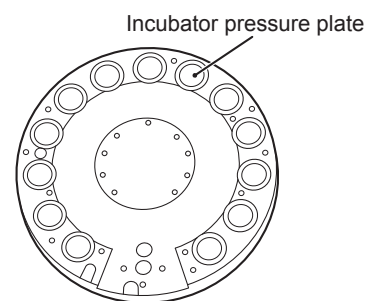
- d. Loosen the 5 screws on the upper surface of the incubator, and then remove the incubator.



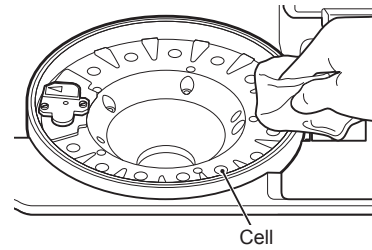
- e. Wipe off the 13 pressure plates on the backside of the incubator with a soft cloth or cotton swab moistened with isopropyl alcohol.
  - f. Dry the pressure plates by facing the incubator backside (pressure plate surface) up.

**i IMPORTANT**

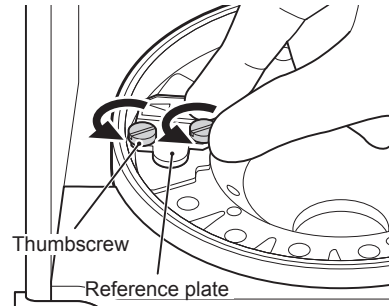
Do not touch the surface of the pressure plates with bare hands. Otherwise adverse effects on test results may occur.



g. Clean the incubator cells the same way.



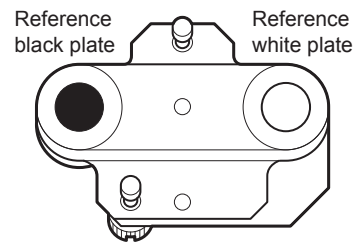
h. Loosen the 2 screws on the reference plate and remove the plate from the analyzer.



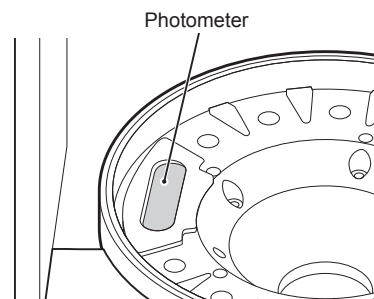
i. Turn over the reference plate and clean the white plate and black plate with a dry cotton swab or using a swab moistened with isopropyl alcohol and then dry with a new cotton swab.

**i** IMPORTANT

Do not touch the surface of the black plate and the white plate with bare hands. Otherwise, adverse effects on test results may occur.



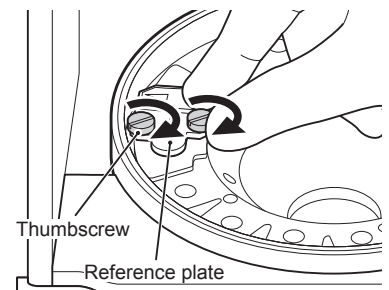
j. Clean the photometer head with a dry cotton swab or using a swab moistened with isopropyl alcohol and then dry with a new cotton swab.



k. Replace the reference plate. Tighten the 2 thumbscrews evenly.

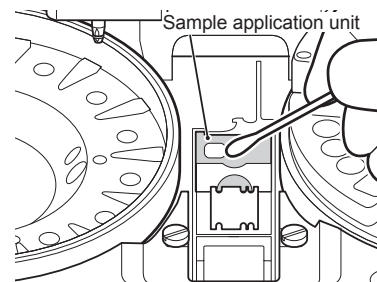
**i** IMPORTANT

Tighten the two thumbscrews securely. Otherwise, adverse effects on test results may occur.



5. Cleaning the spotting part.

- a. Make sure the spotting part cover and two slide transfer weights were removed for cleaning of the transfer bar.
- b. Wipe the spotting part with a soft cloth or a cotton swab moistened with water or isopropyl alcohol and then dry with a new cotton swab.





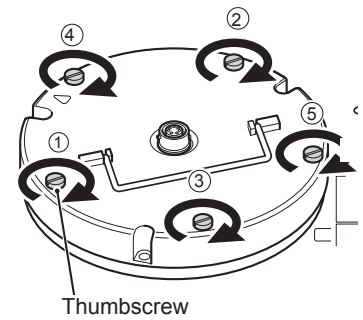
6. Reassembly

- a. Reassemble the upper incubator.

Align the arrow marks on the incubator and the reference plate, and then tighten the 5 thumbscrews evenly in order (1 to 5).

**i** IMPORTANT

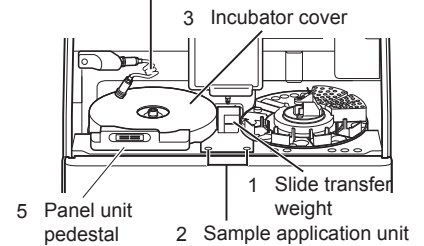
Tighten the five thumbscrews securely. Otherwise, the measurement results may be negatively affected.



- b. Reassemble each part as shown in the illustration on the right.

1. Set the slide transfer weights.
2. Set the spotting part cover and tighten the thumbscrews.
3. Set the incubator cover.
4. While aligned with the groove, plug the connector of the incubator cable into the incubator and then lock it by turning it to the right.
5. Set the panel unit pedestal.
6. Close the panel unit display.

- 4 Incubator cable

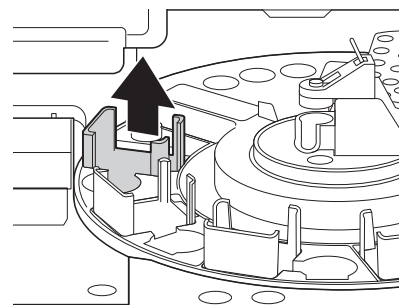
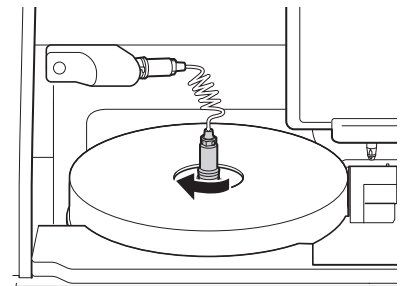
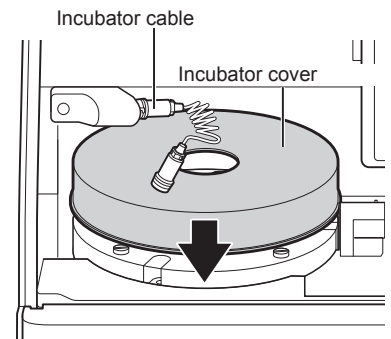


**i** IMPORTANT

Tighten the thumbscrews securely. Otherwise, the measurement results may be negatively affected.

**i** IMPORTANT

Be sure to set the incubator cover. Otherwise, the measurement results may be negatively affected.

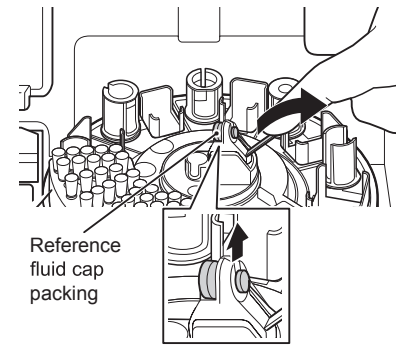


7. Cleaning the slide reader.

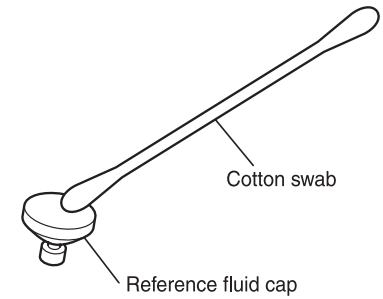
When the slide reader is dirty, reading errors may occur frequently. Perform cleaning to avoid these errors.

- a. Slide the sampler unit all the way to the left.
- b. Remove the slide cartridge of sample A and the sample rack in position A.
- c. Turn the sample disk by hand so sample A is in the aspiration position (between 9 o'clock and 10 o'clock).
- d. A light source should be used to locate the slide reader lens.
- e. Through the opening of the slide cartridge area of Sample A, use canned air to blow away any dust on the glass plate of the reading section.

8. Cleaning and replacing the reference fluid cap.  
Clean the reference fluid cap each time the reference fluid is replaced.  
Replace the reference fluid cap if it becomes cracked.
  - a. Before cleaning, remove reference fluid tube and discard it.
  - b. Remove the reference fluid cap as shown.



- c. Wipe off the reference fluid cap using a cotton swab or soft cloth moistened with distilled water. Dry it after cleaning.



- d. Replace the reference fluid cap properly.  
**NOTE:** Do not touch the bottom (reference fluid side) of the reference fluid cap.

9. Power on.
10. Run [Reference plate level check] again, and then check the results.  
Refer to steps 1 and 2 under Quarterly Maintenance on page 3.

