

 **EN Clean-Trace<sup>®</sup> Luminometer**



# Clean-Trace® Luminometer

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## INTENDED USE

The Neogen Clean-Trace Luminometer is a battery operated Luminometer utilized primarily for objective and sensitive determination of the end result of Adenosine Tri-Phosphate (ATP) tests. The Neogen Clean-Trace Luminometer power supply is provided to charge the battery. The Neogen® Clean-Trace® Hygiene Management Software is designed for the transfer, organization, and storage of data generated from the Neogen® Clean-Trace® ATP Tests.

Neogen has not designed nor documented the Neogen Clean-Trace Luminometer, and its power supply, or Neogen Clean-Trace Hygiene Management Software for use with other manufacturers' products, use with other manufacturers' designs, or use in any other application that has not been evaluated or documented by Neogen and may lead to an unsafe condition. The Neogen Clean-Trace Luminometer is not intended to be used in potentially flammable or explosive environments. Although the Neogen Clean-Trace Hygiene Monitoring and Management System is very sensitive, surfaces or solutions should not be considered sterile based on results. The Neogen Clean-Trace Hygiene Monitoring and Management System is not intended to be used in the diagnosis of conditions in humans or animals. The user is responsible to know and follow applicable workplace regulations.

Neogen anticipates that the Neogen Clean-Trace ATP Tests, equipment, and software will be utilized by technicians that have been properly trained on the Neogen Clean-Trace ATP Test methods.

If this product is used in a manner not specified, the protection provided by the product may be impaired.

## USER RESPONSIBILITY









Users are responsible for familiarizing themselves with product instructions and information. Visit our website at [www.neogen.com](http://www.neogen.com), or contact your local Neogen representative or distributor for more information.

When selecting a test method, it is important to recognize that external factors such as sampling methods, testing protocols, sample preparation, handling, and laboratory technique may influence results.

It is the user's responsibility in selecting any test method or product to evaluate a sufficient number of samples with the appropriate matrices and microbial challenges to satisfy the user that the chosen test method meets the user's criteria.

It is also the user's responsibility to determine that any test methods and results meet its customers' and suppliers' requirements.

As with any test method, results obtained from use of any Neogen Food Safety product do not constitute a guarantee of the quality of the matrices or processes tested.

Explanation of Safety Related Symbols	
	Attention: Read Accompanying Documentation
	CAUTION: Recycle Neogen Clean-Trace Luminometer to avoid environmental contamination. This product contains recyclable parts. For information on recycling - please contact your nearest Neogen Service Center for advice.
	WEEE mark - This product contains electrical and electronic components and must not be disposed of using standard refuse collection. Please consult local directives for disposal of electrical and electronic equipment.
	UL NRTL mark (US and Canada electrical safety)
	CE mark (conforms to applicable requirements for European Economic Area).
	RCM mark (Australia electrical safety and EMC)
	The Neogen Clean-Trace Luminometer model number, which is LM1.
	The Neogen Clean-Trace Luminometer serial number

## ENVIRONMENTAL OPERATING CONDITIONS

Environmental Condition	Operating Condition	Units
Indoor Use only	<ul style="list-style-type: none"> <li>- only connect the data connections to a computer that conforms to IEC/EN/UL/CSA 60950-1</li> <li>- keep Neogen Clean-Trace Luminometer away from liquids and high humidity when connected to the computer</li> </ul>	
Altitude	3000 maximum	meters
Operating Temperature Range	+5 to +40 (+41 to +104)	°C (°F)
Relative Humidity	10 - 90 Non-condensing	%
Storage Temperature Range	-40 to +70 (-40 to +158)	°C (°F)
AC Voltage for power supply Mains Supply voltage fluctuations up to + 10% of nominal voltage Temporary overvoltages occurring on the mains supply	100 -240	Volts
Frequency	50-60	Hertz
AC Current for power supply	300	mA
Power supply output voltage	5	Volts DC
Power supply output current	1.2	Amps
Luminometer input current	850	mAmps
Overvoltage	Category II	
Pollution Degree	2	

## INSTRUMENT SPECIFICATIONS

	Specification	Units
Length	59.27 (2.33)	mm (in)
Width	88.47 (3.48)	mm (in)
Height	268.17 (10.56)	mm (in)
Weight	517.83 (18.26)	g (oz.)
External Connectors	USB 2.0 type mini-AB receptacle	

## LIMITED WARRANTY

Neogen Food Safety Hardware (“Hardware”) includes the Neogen Clean-Trace Luminometer and any associated Software and other components supplied by Neogen which are described in the applicable Installation and Use Guides (“User Documentation”).

## LIMITED WARRANTY AND DISCLAIMER

Neogen warrants that for one year from the date of shipment that the Hardware will substantially perform in accordance with the User Documentation. THIS WARRANTY IS VOID IF: (A) THE HARDWARE HAS BEEN REPAIRED BY PERSONS NOT AUTHORIZED BY NEOGEN; OR (B) THE HARDWARE HAS BEEN ALTERED, MODIFIED, OR MISUSED; OR (C) THE HARDWARE IS USED WITH PRODUCTS, SUPPLIES, COMPONENTS OR SOFTWARE NOT SUPPLIED BY Neogen FOR USE WITH THE HARDWARE; OR (D) THE HARDWARE OR A COMPONENT IS USED FOR OTHER USES (FOR EXAMPLE USE WITH OTHER CIRCUIT BOARDS OR SOFTWARE) OR (E) THE HARDWARE HAS NOT BEEN MAINTAINED OR USED IN ACCORDANCE WITH THE USER DOCUMENTATION. UNLESS PROHIBITED BY LAW, THIS WARRANTY IS MADE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, THE IMPLIED WARRANTY OF MERCHANTABILITY, OR ANY IMPLIED WARRANTY ARISING OUT OF A COURSE OF DEALING OR OF PERFORMANCE, CUSTOM OR USAGE OF TRADE. Neogen DOES NOT WARRANT THAT THE SOFTWARE WILL FUNCTION ERROR FREE.

If within one year after shipment, the Hardware does not conform to the express warranty set forth above, Neogen’s sole obligation and User’s sole remedy shall be, at Neogen’s option: 1) to repair or replace the non-conforming component; or, 2) refund the purchase price.

## LIMITATION OF LIABILITY

UNLESS PROHIBITED BY LAW, NEOGEN WILL NOT BE LIABLE TO USER OR OTHERS FOR ANY OTHER DIRECT, INDIRECT, CONSEQUENTIAL, INCIDENTAL OR SPECIAL DAMAGES INCLUDING, FOR EXAMPLE, LOST PROFITS, BUSINESS, INVESTMENTS, OR OPPORTUNITIES EVEN IF Neogen HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. The parties agree that Neogen's total cumulative liability to User for direct damages for all causes shall not exceed One Hundred Dollars, or the price paid for the Hardware, whichever is higher. Some states or countries may have laws which require liability rights different from those stated above. In such state or countries, the minimum required liability terms shall apply.

Please contact your Neogen representative or authorized Neogen distributor for any further questions.

## PRODUCT DESCRIPTION

### *Using ATP Detection for Hygiene Monitoring and Management*


The Neogen Clean-Trace Hygiene Monitoring and Management System consists of the following: Neogen Clean-Trace Luminometer, Neogen® Clean-Trace® Tests, and Neogen Clean-Trace Hygiene Management Software. This system is used to detect ATP on surfaces or in water samples to measure levels of contamination for the purpose of hygiene monitoring and management.

The detection technology used is Adenosine Triphosphate (ATP) bioluminescence. ATP is present in all animal and vegetable material, including most food debris, living and dead bacteria, fungi and other microorganisms. The Neogen Clean-Trace Tests use Luciferin/Luciferase enzyme to produce light that is proportional to the amount of ATP present. The Neogen Clean-Trace Luminometer measures the intensity of the light emitted from a sample, and it displays the test result in Relative Light Units (RLU). Users do a validation study on their surface or water samples to determine the RLU test result pass, caution and fail thresholds.

The rapid test results provided by the Neogen Clean-Trace Luminometer allow users to take immediate remedial action in response to a fail test result. The Test Point with a fail test result can be re-cleaned and retested before production, ensuring that hygiene management goals are achieved. The results provide data that can be used in part to make the decision to begin food or beverage production.

Read the Instructions for Use documents for Neogen Clean-Trace Tests before using them along with a Neogen Clean-Trace Luminometer.

## USING THIS MANUAL

1. The Neogen Clean-Trace Luminometer User Manual is provided in electronic format only. There are two ways to access it:
  - Click Help  on the menu bar in the Neogen Clean-Trace Hygiene Management Software, then click **[User Manual]**.
  - Go to [www.Neogen.com/CleanTraceLM1manual](http://www.Neogen.com/CleanTraceLM1manual)
2. Click any heading in the Table of Contents to immediately go to that section, or scroll or page through the User Manual to the desired section.
3. Neogen Clean-Trace Software updates will include updates to this User Manual, which will automatically be installed along with the software updates.
4. This User Manual describes the operation and behavior of the Neogen Clean-Trace Luminometer. It is organized so that you can search the Table of Contents for a specific task and follow step-by-step instructions.
5. In the step-by-step instructions for using the software, the following style guidelines were used:
  - a. *Italic type* is the name of a section in this User Manual.
  - b. **Bold type** is the exact text for a term that appears on a screen.
  - c. **[Bold type with brackets]** is the name of a button that you can tap or select using the cursor control button on a screen.

## OPERATING THE NEOGEN CLEAN-TRACE LUMINOMETER

### Battery usage and maintenance

- A Neogen Clean-Trace Luminometer has an internal rechargeable lithium ion battery that must be charged to use a Neogen Clean-Trace Luminometer.

### Charging the battery

- Select the charger adapter that is appropriate for power in your country.
- Connect the charger to a Neogen Clean-Trace Luminometer.
- Connect the charger to a power outlet.
- The battery becomes fully charged in approximately 2 hours.
- To monitor the charge status, turn on the Neogen Clean-Trace Luminometer. A lightning bolt icon appears in the battery charge level.

### When the battery is charged

- Disconnect the charger from the power outlet.
- Unplug the charger from the Neogen Clean-Trace Luminometer.

### Using the battery level indicator

- The battery level indicator is located in the upper right corner of the screen.
- When a Neogen Clean-Trace Luminometer is on, the indicator shows the remaining battery level.
- In Figure 1, the indicator shows the battery is fully charged
- As the battery charge decreases, the blue segment of the indicator becomes smaller.
- When the battery level is less than 10%, the indicator becomes red, showing the battery should be recharged.
- When the battery level is less than 5%, the Neogen Clean-Trace Luminometer automatically shuts down.




Figure 1

### Managing the battery



- In normal usage, the battery provides up to eight hours of charge capacity.
- As the battery ages, it will provide less than eight hours of charge capacity.
- The battery must be charged when the indicator is red, indicating less than 10% charge capacity.
- The battery does not need to be fully discharged before recharging.
- When storing a Neogen Clean-Trace Luminometer for more than a month, the battery level should be at 50% charge. Do not store a Neogen Clean-Trace Luminometer with a fully discharged battery because the battery may lose the ability to be recharged. Do not store a Neogen Clean-Trace Luminometer with a fully charged battery because it may lose the ability to recharge to full power.
- Battery replacement is recommended after two years of normal use. For battery replacement, the Neogen Clean-Trace Luminometer must be sent to a Neogen Service Center.

### Switching the Power on

Before switching on the Neogen Clean-Trace Luminometer, check the chamber to ensure it is empty.







1. Press and hold the gray on/off button  located below the cursor control buttons. The red Neogen logo appears to confirm the power on process has started, then the Neogen logo Lockup appears and repeats several times.
2. The **Welcome** screen displays instructions for installing the Neogen Clean-Trace Hygiene Management Software on your computer using the software installation wizard provided on the segment of memory in the Neogen Clean-Trace Luminometer that appears on your computer as a flash drive.
  - To prevent this display from appearing in the future, tap the **Do not display again** checkbox.
3. The screen goes black for a few seconds, then the **Diagnostic Check** screen appears. During the diagnostic check, a progress bar is visible. Tap **[Continue]** when it's no longer grayed out.
4. The Neogen Clean-Trace Luminometer attempts to synchronize with a computer.
  - Refer to the *Synchronizing the Neogen Clean-Trace Luminometer with the Computer Database* section in this User Manual for more information.
  - To skip the synchronize, tap **[Skip Sync]**.
5. The log in screen appears. Refer to the *Logging in on the Neogen Clean-Trace Luminometer* section of this User Manual for instructions.

### Switching the Power off

1. Press the on/off button  for 3 seconds.
2.  [Power off] appears to confirm the power off process has started.
3. Tap [Power off].
4. A confirmation message **Your luminometer will shut down** appears.
5. Tap [OK]. The display screen goes black to confirm the power off process has completed.
6. Or, tap [Cancel] to cancel the power off process.

### Controlling the Software

To control the Neogen Clean-Trace Luminometer software, use either the touch screen or the cursor control pad.

- To use the touch screen, use common gestures such as tap and swipe.
- Or, you can use the cursor control pad  on the front of the Neogen Clean-Trace Luminometer. Simply press the arrows on the cursor control pad to move the cursor to the option on the screen you want to select:
  - o Press the up arrow  to move the cursor up
  - o Press the down arrow  to move the cursor down
  - o Press the left arrow  to move the cursor left
  - o Press the right arrow  to move the cursor right
- Press the select button  on the cursor control pad to select the option on the screen to which you have moved the cursor.

### Operating Controls of the Neogen Clean-Trace Luminometer

Figure 2 shows the operating controls on the Neogen Clean-Trace Luminometer.

1. On/Off Switch - For instructions see *Switching the Power On*.
2. Cursor Control Buttons - For instructions see *Controlling the Software*.
3. Display/Touch Screen - For instructions see *Controlling the Software*.
4. USB/Power Port - For instructions see *Charging the battery and Setting Up Synchronization with a USB Connection*.
5. Rocker Cap - For instructions see Figure 3.

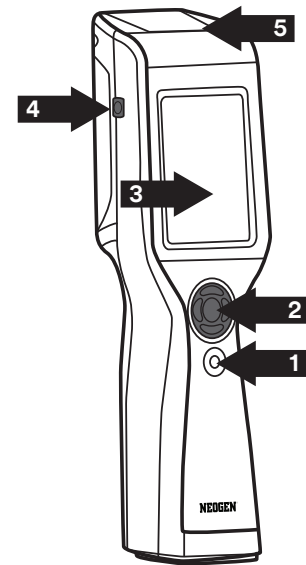


Figure 2

Figure 3 shows the step-by-step procedure for inserting a Neogen Clean-Trace Test into a Neogen Clean-Trace Luminometer for testing, and removing it after testing is completed.

1. Open the Neogen Clean-Trace Luminometer by pressing the rocker cap.
2. Insert an activated Neogen Clean-Trace Test into the chamber, making sure the cuvette is at the bottom of the chamber.
3. The Neogen Clean-Trace Test handle should be visible at the top of the chamber.
4. Release the rocker cap. Now you can do an ATP test with the Neogen Clean-Trace Test that's inside the chamber.
5. After the ATP test is completed, open the chamber by pressing the rocker cap.
6. To remove the Neogen Clean-Trace Test, grasp the top of the test and pull upwards. Follow the instructions for disposal in the Neogen Clean-Trace Test Instructions for Use. Consult with local regulations for any additional regulations regarding disposal.

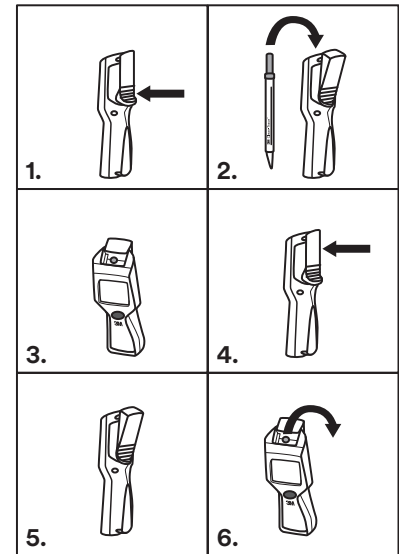


Figure 3

**Using the Base**

For extra stability and convenience, the Neogen Clean-Trace Luminometer can be placed on the Neogen® Clean-Trace® Base. The Neogen Clean-Trace Base also holds the Neogen Clean-Trace Luminometer at an optimum working and viewing angle. (See Figure 4).



Figure 4



The Neogen Clean-Trace Luminometer also has a fold-out stand built into the bottom of the instrument. (See Figure 5).



Figure 5

**Logging in on the Neogen Clean-Trace Luminometer**






When the Neogen Clean-Trace Luminometer is turned on, it automatically does a diagnostic check. If the diagnostic check is within the required limits, the login screen appears.

1. The Default User is automatically logged in. Tap **[Login]**.
  - Or, if you set up Users using Neogen Clean-Trace Hygiene Management Software, to select your User name, tap select User  and tap your User name. Tap **[Login]**.
2. **Unplanned Test** automatically appears. Sample Plans appear if you have created and synchronized them using the Neogen Clean-Trace Hygiene Management Software. You can start a new run of a sample plan or start new unplanned testing. To return to this screen at any time, tap Home  .
  - For more information, refer to the *Performing Unplanned Testing* or the *Performing Tests on Test Points in Sample Plans* sections in this User Manual for more information.





### Logging in on the Neogen Clean-Trace Luminometer with a PIN

When the Neogen Clean-Trace Luminometer is turned on, it automatically does a diagnostic check. If the diagnostic check is within the required limits, the login screen appears.

1. The Default User is automatically logged in. Tap **[Login]**.
  - Or, if you set up Users using Neogen Clean-Trace Hygiene Management Software, to select your User name, tap select User  and tap your User name. Tap **[Login]**.
  - Use the number pad to enter your 4 digit PIN. As you enter each number, an asterisk (\*) appears on the screen. Then tap Enter .
  - If you enter a number incorrectly, tap Delete  to remove the number, and then enter a correct number.
  - If you fail to enter your PIN correctly, you can make two more attempts. After three failed attempts, your user name and PIN are locked out. Wait 5 minutes for your user name and PIN to clear automatically.
  - If your user name does not appear or your PIN does not work, contact your supervisor.
  - When you have correctly entered your user name and PIN, tap Enter .
2. The New Testing screen displays **Unplanned Test** and the Sample Plans. You can start a new run of a sample plan or start new unplanned testing. To return to this screen at any time, tap Home .
- For more information, refer to the *Performing Unplanned Testing* or the *Performing Tests on Test Points in Sample Plans* sections in this User Manual for more information.


### Waking the Neogen Clean-Trace Luminometer from Sleep Mode

The Neogen Clean-Trace Luminometer conserves battery power if the touch screen or the cursor control buttons are inactive. After 5 minutes of inactivity, the Neogen Clean-Trace Luminometer goes into Sleep mode and the screen darkens. After 2 additional hours of inactivity, the Neogen Clean-Trace Luminometer automatically shuts down and must be powered on again before use. Refer to the *Switching the Power* on section of this User manual for more information.


1. To wake the Neogen Clean-Trace Luminometer from Sleep mode, press and hold the up arrow  button on the cursor control pad for 3 seconds.
2. The screen displays the information that appeared before the Sleep mode began so you can continue working.
  - If the Neogen Clean-Trace Luminometer does not wake from the Sleep mode:
    - The Neogen Clean-Trace Luminometer might be turned off. Press and hold the on/off  button for 3 seconds to turn it on. Refer to the *Switching the Power* on section in this User Manual for more information.
    - The battery might be completely discharged. Refer to the *Charging the Battery* section in this User Manual for more information.
    - The Neogen Clean-Trace Luminometer might need repair. Contact your Neogen Representative for more information.

### Using the Swab Sensor and Vertical Position Sensor

As soon as measurement of a Neogen Clean-Trace Test is complete, remove the Neogen Clean-Trace Test from the Luminometer chamber. If a test remains in the Neogen Clean-Trace Luminometer chamber for more than 30 seconds, the Swab Sensor notifies you to remove it.

- Keep the Neogen Clean-Trace Luminometer upright whenever a test is in the chamber to ensure accurate results and avoid spillage of reagents, which could damage the sensitive components of the instrument. If the Neogen Clean-Trace Luminometer is held at greater than 68 degrees from vertical when a test is in the chamber, a tilt symbol  notifies you the test measurement was cancelled. Tap **[OK]**, then hold the Neogen Clean-Trace Luminometer in a vertical position and measure the test again.



### Logging out from the Neogen Clean-Trace Luminometer

1. Tap Settings .
2. Tap **[Log Out]**. The Login screen appears. Refer to the *Logging in on the Neogen Clean-Trace Luminometer* section in this User Manual for more information.



## PERFORMING TESTS ON TEST POINTS WITHIN SAMPLE PLANS

### Performing an ATP Test on a Test Point within a Sample Plan

















1. To start a new run, tap the Sample Plan, then tap **[New Test Run...]**.

- If a Sample Plan does not appear, tap scroll up  or scroll down  or swipe the list up or down to display additional Sample Plans.







Or, if you are restarting a Sample Plan that you did not complete, tap the Sample Plan, then tap the starting date and time you want to restart.

- If a starting date and time does not appear, tap scroll up  or scroll down  or swipe the list up or down.
- The List View appears, showing a list of the Test Points in the Sample Plan, and the number of Test Points in each result category:

Total number of Test Points	Number in Pass category	Number in Caution category	Number in Fail category
-----------------------------	-------------------------	----------------------------	-------------------------



- To select a Test Type, tap **[Test types...]** then tap the Test Type to be performed.
2. To select a Test Point to be tested, tap the Test Point.
- You can test the Test Points in sequence or in any order.
  - If a Test Point does not appear, tap scroll up  or scroll down  or swipe the list up or down to display additional Test Points.
  - To display a different Test Point, tap Next Test Point Name  or Previous Test Point  until the Test Point you want appears.
  - To display a picture and a description of the test point, tap information  next to the Test Point name. Tap Back  to return to the previous screen.
3. Follow the Instructions for Use for the Neogen Clean-Trace Tests. Collect a sample, activate the test and shake it for at least 5 seconds.
- a. Open the Neogen Clean-Trace Luminometer by pressing the rocker cap. Then insert the activated test into the chamber. Keep the Neogen Clean-Trace Luminometer upright whenever a test is in the chamber to ensure accurate results and avoid spillage of reagents, which could damage the sensitive components of the instrument.
  - b. Tap **[Start]**  to begin measuring. A progress bar  appears and moves from left to right.
  - c. The test result appears and is stored in the memory so it can be synchronized with the Neogen Clean-Trace Hygiene Management Software. The result is also interpreted using your established pass/fail limits and is displayed on the screen as **PASS** , **CAUTION** , or **FAIL** .
  - d. To remove the Neogen Clean-Trace Test from the Neogen Clean-Trace Luminometer, press the rocker cap, grasp the top of the test and pull upwards. Follow the instructions for disposal in the Neogen Clean-Trace Test Instructions for Use.
4. To test another Test Point, tap Next Test Point  or Previous Test Point  until the Test Point you want appears.
- Or, to do a retest, tap **[Retest]**  then tap **[Start]** .
  - Or, to display the list of Test Points, tap **[List View]** .










### Performing a Retest on an ATP Test Point with a Caution or a Fail Test Status before Moving to a Different Test Point

1. Before moving to a different Test Point, follow the Instructions for Use for the Neogen Clean-Trace Test to collect a sample, activate the test, and shake it for at least 5 seconds.
2. Open the Neogen Clean-Trace Luminometer by pressing the rocker cap. Then insert the activated test into the chamber. Keep the Neogen Clean-Trace Luminometer upright whenever a test is in the chamber, to ensure accurate results and avoid spillage of reagents, which could damage the sensitive components of the instrument.
3. Tap **[Retest]**  then tap **[Start]**  to begin measuring. A progress bar  appears and moves from left to right.
4. The test result appears and is stored in the memory so it can be synchronized with the Neogen Clean-Trace Hygiene Management Software. The result is also interpreted using your established pass/fail limits and is displayed on the screen as **PASS** , **CAUTION**  or **FAIL** .



- To remove the test from the Neogen Clean-Trace Luminometer, press the rocker cap, grasp the top of the test and pull upwards. Follow the instructions for disposal in the Neogen Clean-Trace Test Instructions for Use.

**Performing a Retest on an ATP Test Point with a Caution or a Fail Test Status after Moving to a Different Test Point**



To select the Test Point you want to retest while in the same Sample Plan, tap Next  or Previous .

- Or, to use a different Sample Plan, tap Home , then tap the Sample Plan, then tap the date and time of the run.
  - Or, tap Scroll down  or Scroll up  then tap the Test Point you want to retest.
- Follow the Instructions for Use for the Neogen Clean-Trace Test to collect a sample, activate the test and shake it for at least 5 seconds.
  - Open the Neogen Clean-Trace Luminometer by pressing the rocker cap. Then insert the activated test into the chamber. Keep the Neogen Clean-Trace Luminometer upright whenever a test is in the chamber, to ensure accurate results and avoid spillage of reagents, which could damage the sensitive components of the instrument.
  - Tap **[Retest]**  then tap **[Start]**  to begin measuring. A progress bar  appears and moves from left to right.
  - The test result appears on the screen and is stored in the memory so it can be synchronized with the Neogen Clean-Trace Hygiene Management Software. The result is also interpreted using your established pass/fail limits and is displayed on the screen as **PASS** , **CAUTION**  or **FAIL** .
  - To remove the test from the Neogen Clean-Trace Luminometer, press the rocker cap, grasp the top of the test and pull upwards. Follow the instructions for disposal in the Neogen Clean-Trace Test Instructions for Use.











**Performing a Visual Inspection Test on a Test Point within a Sample Plan**








- To start a new run, tap the Sample Plan, then tap **[New Test Run...]**.
  - If a Sample Plan does not appear, tap scroll up  or scroll down  or swipe the list up or down to display additional Sample Plans.

Or, if you are restarting a Sample Plan that you did not complete, tap the Sample Plan, then tap the starting date and time you want to restart.





  - If a Sample Plan does not appear, tap scroll up  or scroll down  or swipe the list up or down to display additional Sample Plans.
  - The List View appears, showing a list of the Test Points in the Sample Plan, and the number of Test Points in each result category:

Total number of Test Points	Number in Pass category	Number in Caution category	Number in Fail category
-----------------------------	-------------------------	----------------------------	-------------------------














- To select a Test Type, tap **[Test types...]** then tap the Test Type to be performed.
- To select a Test Point to be tested, tap the Test Point.
    - If a Test Point includes an ATP test and a Visual Inspection test, the Visual Inspection test appears immediately after the ATP test.
    - You can test the Test Points in sequence or in any order.
    - If a Test Point does not appear, tap scroll up  or scroll down  or swipe the list up or down to display additional Test Points.
    - To display a different Test Point, tap Next Test Point Name  or Previous Test Point  until the Test Point you want appears.
    - To display a picture and a description of the test point, tap information  next to the Test Point name. Tap **[Back]**  to return to the previous screen.
    - Tap **[Pass]** for a Pass result or tap **[Fail]** for a Fail result.
    - If you selected Pass, the Pass display  appears. If you entered Fail, the Fail display  appears.
    - To redo a test, tap **[Retest]**  then tap **[Start]** .

- To add a comment to the result, tap Add Comment + . The Add Comments screen and any previously added comments appears. Tap **[Add Comments]** then tap comment to add. Tap **[OK]**. Tap **[Back]**. If you decide not to add a comment, tap **[Back]**  to return to the previous screen.
3. To test another Test Point, tap Next Test Point  or Previous Test Point  until the Test Point you want appears.
    - Or, to do a retest, tap **[Retest]**  then tap **[Start]** .
    - Or, to display the list of Test Points, tap List View .



### Recording Temperature or pH for a Test Point within a Sample Plan

1. To start a new run, tap the Sample Plan, then tap **[New Test Run...]**.
  - If a Sample Plan does not appear, tap scroll up  or scroll down  or swipe the list up or down to display additional Sample Plans.
  - If you are restarting a Sample Plan that you did not complete, tap the Sample Plan with the starting date and time you want. If that Sample Plan does not appear, tap scroll up  or scroll down  to display additional Sample Plan names.
  - The List View appears, showing a list of the Test Points in the Sample Plan, and the number of Test Points in each result category:










Total number of Test Points	Number in Pass category	Number in Caution category	Number in Fail category
-----------------------------	-------------------------	----------------------------	-------------------------

- To select a Test Type, tap **[Test types...]** then tap the Test Type to be performed. Tap **[Done]**.
2. To select a Test Point to be tested, tap the Test Point.
    - If a Test Point includes an ATP test and a Temperature or pH recording, the Temperature or pH recording appears immediately after the ATP test.
    - You can test points in the Sample Plan in sequence or in any order. The first Test Point in the Sample Plan appears on the screen. If you want to test a different Test Point, tap Next Test Point  until the test point you want appears. You can display a previous test point by tapping Previous Test Point .
    - To display an image and a description of the Test Point, tap information  next to the Test Point name. Tap **[Back]**  to return to the previous screen.
  3. Tap the field. Use the number pad to enter the Temperature test result or pH test result.
  4. The test result appears and is stored in the memory so it can be synchronized with the Neogen Clean-Trace Hygiene Management Software. The result is also interpreted using your established pass/fail limits and is displayed on the screen as PASS , or FAIL .
    - To add a comment to the result, tap the Add Comment +  symbol. The Add Comments screen and any previously-selected comments will appear. Tap **[Add Comments]**, and then tap the comment to add. Tap **[OK]**. Tap **[Back]**.
    - If you decide not to add a comment, tap Back  to go to the previous screen.
  5. To test another Test Point, tap Next Test Point  or Previous Test Point  until the Test Point you want appears.
    - Or, to do a retest, tap **[Retest]**  then tap **[Start]** .
    - Or, to display the list of Test Points, tap List View .





### Adding Optional Comments to a Caution or Fail ATP Test Result

1. To view or add comments for a displayed test result, tap Add Comment + . The Add Comments screen and any previously-selected comments appear.
2. Tap **[Add Comments]**, and then tap the comment to add. Tap **[OK]**. Tap **[Back]**.
3. If you decide not to add a comment, tap **[Back]**  to go to the previous screen.








### Changing Temperature or pH Recording for a Test Point within a Sample Plan

1. To select the Test Point you want to retest if you are still in the same Sample Plan, tap Next  or Previous .
2. To use a different Sample Plan, tap Home , then tap the Sample Plan, then tap the date and time of the run.
3. Tap Scroll down  or Scroll up  then tap the Test Point you want to retest.
4. Use the number pad to enter the Temperature test result or pH test result.
  - The test result appears and is stored in the memory so it can be synchronized with the Neogen Clean-Trace Hygiene Management Software. The result is also interpreted using your established pass/fail limits and is displayed on the screen as **PASS** , **CAUTION**  or **FAIL** .
  - To add a comment to the result, tap the Add Comment +  symbol. Any previously-selected comments appear.
  - Tap **[Add Comments]**.
  - Tap the comment. Tap **[OK]**. Tap **[Back]**.




### Moving to a Different Test Point in the Same Sample Plan

1. To move to the next Test Point in a Sample Plan, tap Next . The name of the next Test Point in the Sample Plan displays. Tap Next  again to move to the following Test Point in the Sample Plan until you reach the last Test Point in the Sample Plan.
2. To move to a previous Test Point in a Sample Plan, tap Previous . The name of the previous Test Point in the Sample Plan displays. Tap Previous  again to move to the preceding Test Point in the Sample Plan until you reach the first Test Point in the Sample Plan.
3. When the Test Point you want is displayed, follow the instructions in this manual for *Performing an ATP Test on a Test Point within a Sample Plan*, starting with step 5.



### Moving to a Different Test Point in a Different Sample Plan



1. Tap Home  to move to the Sample Plan screen.
2. To do an ATP test on a Test Point in a Sample Plan you already started, tap the Sample Plan with the starting date and time you want. If that Sample Plan does not appear, tap scroll up  or scroll down  or swipe the list up or down to display additional Sample Plans.
3. To move to the next Test Point in a Sample Plan, tap Next . The name of the next Test Point in the Sample Plan displays. Tap Next  again to move to the following Test Point in the Sample Plan until you reach the last Test Point in the Sample Plan.
4. To move to a previous Test Point in a Sample Plan, tap Previous . The name of the previous Test Point in the Sample Plan displays. Tap Previous  again to move to the preceding Test Point in the Sample Plan until you reach the first Test Point in the Sample Plan.
5. When the Test Point you want is displayed, follow the instructions in this manual for *Performing an ATP Test on a Test Point within a Sample Plan*, starting with step 5.

### Viewing Test Results









1. To move to the Sample Plan screen, tap Results .
2. To display results with a fail Test Status, tap **[Failed Tests]**. To display the most recent results, tap **[Last Test]**. To display results for the selected Sample Plan, tap **[Sample Plan]**.
3. Test results are displayed using color coding: red for fail test results, yellow for caution test results and green for pass test results. The display also includes the Sample Plan name, the Test Point name, the date and time of the test, and the name of the person who did the testing.
4. To display additional test results, tap Scroll down  or Scroll up . You can also scroll up and down using a swiping motion on the touch screen.

**Setting Up a Custom Test Type on a Test Point within a Sample Plan**












If a Sample Plan does not appear, tap scroll up  or scroll down  or swipe the list up or down to display additional Sample Plans.

- If you are restarting a Sample Plan that you did not complete, tap the Sample Plan with the starting date and time you want. If that Sample Plan does not appear, tap scroll up  or scroll down  to display additional Sample Plan names.
- The List View appears, showing a list of the Test Points in the Sample Plan, and the number of Test Points in each result category:

Total number of Test Points	Number in <b>Pass</b> category	Number in <b>Caution</b> category	Number in <b>Fail</b> category
-----------------------------	--------------------------------	-----------------------------------	--------------------------------







- To select a Test Type, tap [**Test types...**] then tap the Test Type to be performed. Tap [**Done**].
- To select a Test Point to be tested, tap the Test Point
    - If a Test Point includes an ATP test and a Custom Test Type, the Custom Test Type appears immediately after the ATP test.
    - You can test points in the Sample Plan in sequence or in any order. The first Test Point in the Sample Plan appears on the screen. If you want to test a different Test Point, tap Next Test Point  until the test point you want appears. You can display a previous test point by tapping Previous Test Point .
    - To display an image and a description of the Test Point, tap information  next to the Test Point name. Tap [**Back**]  to return to the previous screen.
  - Tap the gray bar that appears below the test type. Tap [**Enter value**]. Use the number pad to enter the test result. To remove a number you entered incorrectly, tap backspace , then enter the correct number. Tap [**Done**].
  - The test result appears on the screen and is stored in the memory so it can later be synchronized with the Neogen Clean-Trace Hygiene Management Software. The test result is also interpreted using the pass/fail limits and the test result status is displayed on the screen as **PASS** , **CAUTION** , or **FAIL** .
  - The next Test Point in the Sample Plan you selected appears on the screen. You can repeat the process starting with step 5 to enter a test result for the Test Point that's displayed on the screen.

**Performing a Retest on a Custom Test Type**











- To select the Test Point you want to retest, tap Next  or Previous . To use a different Sample Plan, tap Home , then tap Next  or Previous  to move to the Test Point you want to retest.
  - To display a picture and a description of the Test Point, tap information  next to the Test Point name. Tap back  to return to the previous screen.
- Tap the field. Use the number pad to enter the test result. To remove a number you entered incorrectly, tap backspace , then enter the correct number. Tap [**Done**].
- The test result appears on the screen and is stored in the memory so it can be synchronized with the Neogen Clean-Trace Hygiene Management Software. The result is also interpreted using your established pass/fail limits and is displayed on the screen as **PASS** , **CAUTION** , or **FAIL** .

## PERFORMING TESTING ON UNPLANNED TEST POINTS

### *Performing an Unplanned ATP Test*

1. Tap **[Unplanned Test]** .
  - To start a new run, tap **[New Test Run...]**.
    - Or, if you are restarting a run of unplanned tests that you did not complete, tap the starting date and time you want to restart.
2. Tap Select Test Type  then tap the test type:
  - UXL100(Surface ATP)
  - AQF100
  - AQT200(water total)
3. Tap **[OK]**.
4. Follow the Instructions for Use for the Neogen Clean-Trace Test to collect a sample, activate the test and shake it for at least 5 seconds.
5. Open the Neogen Clean-Trace Luminometer by pressing the rocker cap. Then insert the activated test into the chamber. Keep the Neogen Clean-Trace Luminometer upright whenever a test is in the chamber, to ensure accurate results and avoid spillage of reagents, which could damage the sensitive components of the instrument.
6. Tap **[Start]**  to begin measuring. A progress bar  appears and moves from left to right. The test result appears and is stored in the memory so it can be synchronized with the Neogen Clean-Trace Hygiene Management Software.
7. To remove the test from the Neogen Clean-Trace Luminometer, press the rocker cap, grasp the top of the test and pull upwards. Follow the instructions for disposal in the Neogen Clean-Trace Test Instructions for Use.
8. To do another unplanned ATP test, tap **[New]** and repeat this process.
  - Or, to do a retest, tap **[Retest]**  then tap **[Start]** .

### *Performing an Unplanned Visual Inspection Test*

1. Tap **[Unplanned Test]** .
2. To start a new run, tap **[New Test Run...]**.
  - Or, if you are restarting a run of unplanned tests that you did not complete, tap the starting date and time you want to restart.
    - If a starting date and time does not appear, tap scroll up  or scroll down  or swipe the list up or down to display additional Sample Plans.
3. Tap Select Test Type  then tap **[Visual Inspection]**.
4. Tap **[OK]**.
5. Tap **[PASS]** for a Pass result or tap **[FAIL]** for a Fail result.
6. If you selected Pass, the Pass  display appears. If you entered Fail, the Fail  display appears, and the add comment +  symbol appears and **[Retest]**  appears.
7. To do another Visual Inspection test, tap **[New]**.
  - To add a comment, tap Add Comment + . The Add Comments screen and any previously added comments appear. Tap **[Add Comments]**, then tap the comment to add. Tap **[OK]**. Tap **[Back]**.
  - If you decide not to add a comment, tap **[Back]**  to return to the previous screen.


## SYNCHRONIZING THE NEOGEN CLEAN-TRACE LUMINOMETER WITH THE COMPUTER DATABASE

Use the Sync Manager software to initiate a synchronization between the Neogen Clean-Trace Luminometer and your computer. Refer to the *Using the Sync Manager* section of the Neogen Clean-Trace Hygiene Management Software User Manual for more information.

- You must synchronize the first time using the USB connection.
- A Diagnostic Check is automatically done when a synchronization is initiated.
- If you start a synchronization less than two minutes after completing the last previous synchronization, a warning message appears. Wait at least two minutes, then start a synchronization again.
- If you synchronize a Neogen Clean-Trace Luminometer that already contains Sample Plans that are different than the Sample Plans on the computer you are currently synchronizing with, a warning message appears.
  - o Tap Settings. Tap [**Synchronize**]. The progress bar shows when the synchronization is complete.
  - o To cancel the synchronization, tap [**Skip Sync**]
  - o To continue the synchronization, tap [**Continue**]. This option removes the Sample Plans and test results from the Neogen Clean-Trace Luminometer and replaces the Sample Plans with the Sample Plans on the computer with which you are currently synchronizing.
- Synchronizing the Neogen Clean-Trace Luminometer with the computer sends information in both directions:
  - o Sent from Computer to Neogen Clean-Trace Luminometer:
    - User names and PINs
    - Sample Plans and Test Points including pass/fail limits and images of the Test Points if available
    - Organization configurations such as number of days to retain synchronized test results
  - o Sent from Neogen Clean-Trace Luminometer to Computer:
    - Test Results including date and time of test, User who did the test and comments if available
    - The Neogen Clean-Trace Luminometer provides three modes of communication: USB cable, Wi-Fi connection and Bluetooth connection

### Setting Up Synchronization with a USB Connection



To use a USB cable connection: connect one end of the Neogen provided USB cable to the USB/Power port and connect the other end of the USB cable to a USB port on your computer.

- To register a Neogen Clean-Trace Luminometer the first time you synchronize it, log in to the Sync Manager. Refer to the *Logging in Your User Name on the Sync Manager* section of the Neogen Clean-Trace Hygiene Management Software User Manual.
  - 1. Tap [**Settings**] . Tap [**Preferred Connection – (connection type)**]. Tap [**USB**]. Tap [**Select**].




### Setting Up Synchronization with a Bluetooth Connection

- You must synchronize the first time using the USB connection to register the Neogen Clean-Trace Luminometer.
- To use a Bluetooth connection: set up the Bluetooth connection for the Neogen Clean-Trace Luminometer. This procedure requires simultaneous use of both a Neogen Clean-Trace Luminometer and the Sync Manager software, which is installed on your computer by the software installation wizard for the Neogen Clean-Trace Hygiene Management Software. For instructions on pairing a Bluetooth connection, refer to the *Setting Up a Bluetooth Connection* section of the Neogen Clean-Trace Hygiene Management Software User Manual.


### Setting Up Synchronization with a WiFi Connection

- You must synchronize the first time using the USB connection to register the Neogen Clean-Trace Luminometer.
  - To use a Wi-Fi connection: set up Web Service on the Neogen Clean-Trace Luminometer, which then sends the web service information you set up to the computer the first time you synchronize using the Sync Manager software.
1. Touch the top of the screen for 1 second, then swipe down.
  2. Tap Connections .
  3. Tap WiFi .




4. Turn WiFi on, and select your WiFi network. If it's a secure WiFi, enter your security credential. Obtain this information from your IT support.
5. Tap Return .
6. Tap Settings .
7. Tap [**Preferred Connection - (connection type)**]
8. Tap [**WiFi**]
9. Tap [**Web Service Setup**].
10. Confirm the **Host Name**, **Common Services Port Number**, **Device Services Port Number** are correct. Obtain this information from your IT support. If this information is correct, tap **OK**. If not, use the following instructions to update this information.
  - Tap [**Enter Host Name**] and use the keyboard to enter the name of your webserver. Obtain this information from your IT support.
    - Or, to find the name of your webserver for this computer:
      - a. Click the Windows Start button on the computer.
      - b. Select **Computer**
      - c. Select **System Properties**
      - d. The name of your webserver is listed on the screen as **Full Computer Name**.
      - e. Tap [**Done**]
    - Tap [**Common Services Port Number**] and use the keyboard to enter the IIS port number for Common Service Port No. To find the **Common Services Port No.** for the computer that has the Sync Manager Software:
      - a. Click the Windows Start button on the computer.
      - b. Click **Run....**
      - c. Type inetmgr into the **Open:** field then click **OK**.
      - d. Expand the computer name in the **Connections** column.
      - e. Expand **Sites**.
      - f. Click **Clean-TraceCommonServices**. The Common Services Port No. is the 4 digit number that appears in the **Browse Web Site** area in the **Actions** column. For example, 9003.
      - g. Tap [**Done**]
    - Tap [**Device Services Port Number**] and use the keyboard to enter the IIS port number for Device Service Port No. To find the Device Services Port No. for the computer that has the Sync Manager Software:
      - a. Click the Windows Start button on the computer.
      - b. Click **Run....**
      - c. Type inetmgr into the **Open:** field then click **OK**.
      - d. Expand the computer name in the **Connections** column.
      - e. Expand **Sites**.
      - f. Click **Clean-TraceDeviceServices**. The Device Services Port No. is the 4 digit number that appears in the **Browse Web Site** area in the **Actions** column. For example, 9004.
      - g. Tap [**Done**].
      - h. Tap [**OK**].
  - To display the current Web Service information on the Neogen Clean-Trace Luminometer without changing it, tap [**Settings**] , then tap [**Web Service Setup**]. To return to Settings, tap [**OK**].
  - To change the Connection Type to WiFi, refer to the *Changing the Connection Type* section in this User Manual.
  - The Neogen Clean-Trace Luminometer WiFi software uses the following ports by default on your computer: 9002, 9003, 9004, 9005. Ensure that these ports are enabled by your antivirus software or firewall.

### **Changing the Connection Type**


1. Tap Settings .
2. Tap [**Preferred Connection - (connection type)**]
3. Tap the connection type you prefer:
  - **USB**
  - **WiFi**
  - **Bluetooth**
  - **Skip Sync – This selection disables the sync process**
4. Tap [**Select**].

### **Setting Synchronization Time**


1. Tap Settings .
2. Tap [**Synchronization Time**].
3. Rotate the hour and minute wheels until the time you want is highlighted.
4. Tap [**Done**].

## **PERFORMING ADMINISTRATIVE TASKS**


### **Setting the Date and Time on the Neogen Clean-Trace Luminometer**

1. Touch the top of the screen for 1 second, then swipe down.
2. Tap the date and time that's displayed.
3. To enable [**Set date**] and [**Set time**], tap [**Automatic date & time**]
4. To set the date, tap [**Set date**] then rotate the month, day, and year wheels until the correct date is displayed. Tap [**Done**].
5. To set the time, tap [**Set time**] then rotate the hour, minute, and AM/PM wheels until the correct time is displayed. Tap [**Done**].
6. Tap Return .


### **Performing a Diagnostic Check**

1. Tap Settings .
2. Tap [**Diagnostic Check**] to do the same diagnostic check the Neogen Clean-Trace Luminometer does automatically when the power is switched on. For more information, refer to the *Switching the Power on* section in this User Manual


### **Changing the Screen Brightness**

1. Tap Settings .
2. Tap [**Screen Brightness**].
3. To increase the screen brightness, drag the slider to the right. To decrease the screen brightness drag the slider to the left.


### **Restarting the Neogen Clean-Trace Luminometer**

1. Tap Settings .
2. Tap [**Restart Device**].

### **Exporting a Log File**

1. Tap Settings .
2. To generate a log file, tap [**Export Log File**]
  - To view the log file:
    - a. Connect the Neogen Clean-Trace Luminometer to your computer by USB cable.
    - b. Browse to Neogen Clean-Trace\Luminometer Main Storage\Logs
    - c. To open the log file, use Microsoft® Notepad®.

**Displaying Software Versions**

1. Tap Settings .
2. Tap [About].
3. Swipe the list of software versions up to display the complete list.
4. Tap [Continue].

**Troubleshooting**

This section is intended to help you solve problems that you might encounter when using the Neogen Clean-Trace Luminometer. Contact Neogen or your local Neogen distributor for more information.

Problem	Probable Cause	Solution
Battery Low message	Battery needs to be charged	Turn the Neogen Clean-Trace Luminometer off. DO NOT do testing if a BATTERY LOW warning is displayed. Connect the charging cable to the Neogen Clean-Trace Luminometer and to the power mains.
Diagnostic Check Failed Message		Tap [Try Again] to repeat the Diagnostic Check. If the Diagnostic Check fails again, contact Neogen or your local distributor.
Incorrect Swab Detected		Insert a Neogen Clean-Trace Test.
No Display	a. Instrument in Sleep mode b. Battery fully discharged c. Instrument malfunction	a. Press the up arrow button on the control panel for 3 seconds b. Recharge the battery. c. Contact Neogen or your local distributor.
No Swab Detected		Insert a Neogen Clean-Trace Test.
Results Lower than Expected	a. Sample / reagent problem b. Instrument malfunction	a. Check with a new Neogen Clean-Trace Test and known positive samples such as a Neogen® Clean-Trace® Surface Positive Control or Neogen® Clean-Trace® Water Positive Control. b. Contact Neogen or your local distributor.
Rocker Cap Open message	Rocker cap was open while you attempted to start the reading process	Close the rocker cap after you insert a Neogen Clean-Trace Test and before you start the reading process.
Swab Left in Chamber		To prevent leakage into the chamber, if a Neogen Clean-Trace Test is left in the chamber for more than 30 seconds following the completion of a measurement, this message along with an audible tone reminds you to remove the test from the chamber after the measurement is complete.
Swab Not Recognized		Insert a Neogen Clean-Trace Test.
The Luminometer was dropped		Turn power off and wait for 5 minutes. Restart the Luminometer. If there is no error message, the Luminometer is OK to use.
The Luminometer might have experienced a mechanical shock		Turn power off and wait for 5 minutes. Restart the Luminometer. If there is no error message, the Luminometer is OK to use.
Test Cancelled	Luminometer tilted during test measurement	The test was cancelled. Please hold the Luminometer firmly and pointed at most 68 degrees from vertical.

Synchronization Failure	Instrument not registered	To register an instrument the first time you synchronize it, log in to the Sync Manager on your computer, then synchronize the instrument. Refer to the Using the Sync Manager section of the Neogen Clean-Trace Hygiene Management Software User Manual for more information.
Instrument becomes unresponsive	Temporary software malfunction	To do a hard reset, press the on/off button for 15 seconds. To start the instrument again, press the on/off button for 3 seconds.
Unexpectedly high test results	Instrument was dropped or subjected to a physical shock	Switch off the power for 5 minutes, then switch the power on again.
Error: 7	Firmware upgrade problem	<ol style="list-style-type: none"> <li>1. Turn off the Neogen Clean-Trace Luminometer, and turn it on again.</li> <li>2. Repeat the firmware upgrade.</li> <li>3. If the problem persists, contact Neogen or your local distributor.</li> </ol>
Error: 9	Cap was open while reading a test	<ol style="list-style-type: none"> <li>1. Close the cap.</li> <li>2. Repeat reading the test.</li> <li>3. If the problem persists, contact Neogen or your local distributor.</li> </ol>
Error: 11 Error: 15	Instrument temperature is >40°C	<ol style="list-style-type: none"> <li>1. Use the Neogen Clean-Trace Luminometer at ambient temperature less than or equal to 40°C.</li> <li>2. If the problem persists, contact Neogen or your local distributor.</li> </ol>
Error: 12 Error: 16	Instrument temperature is <5°C	<ol style="list-style-type: none"> <li>1. Use the Neogen Clean-Trace Luminometer at ambient temperatures greater than or equal to 5°C.</li> <li>2. If the problem persists, contact Neogen or your local distributor.</li> </ol>
Error: 1 Error: 2 Error: 4 Error: 6 Error: 8 Error: 10 Error: 13 Error: 14 Error: 28 Error: 17 Error: 31 Error: 18 - 30 Error: 33 - 123		<ol style="list-style-type: none"> <li>1. Turn off the Neogen Clean-Trace Luminometer, and turn it on again.</li> <li>2. Repeat the task using the Neogen Clean-Trace Luminometer.</li> <li>3. If the problem persists, contact Neogen or your local distributor.</li> </ol>

## APPENDIX

The Neogen Clean-Trace Luminometer display screen is laminated, bonded and shatter-resistant. It is designed to hold together in the event of breakage.

The Neogen Clean-Trace Luminometer allows for gloved operation. Gloves need to be 4 mil thick or less and cannot be woven with metallic substances.

### ***Cleaning and Decontaminating the Neogen Clean-Trace Luminometer***

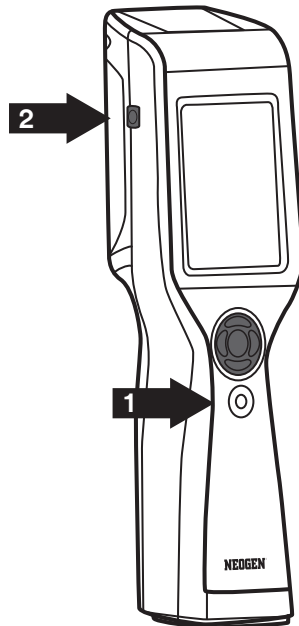
**WARNING:** To reduce the risks associated with hazardous voltage, always turn the instrument off and disconnect from outlet before cleaning the instrument.

Clean and decontaminate the instrument immediately if any spills occur.

Clean the external surfaces of the instrument regularly once per month.

Cleaning and Decontaminating the External surfaces:

1. Turn off the power by pressing and holding the on/off button for 3 seconds (1, see figure below), and then disconnect the USB cable (2, see figure below) on the side of the instrument.
2. Use a disposable towel lightly dampened with a solution of mild, non-staining disinfectant/cleaner such as mild dishwashing soap to gently wipe the outer surfaces of the instrument. Wring out the disposable towel thoroughly so it is damp, but not dripping. Avoid the USB cable connection on the side of the instrument when cleaning the exterior surfaces.
3. Use another disposable towel to repeat the procedure with DI water (distilled water or deionized water).
4. Allow the exterior surfaces of the instrument to air dry for at least 1 hour. Do not reconnect the power cable and the USB cable until you have allowed the instrument to air dry for at least 1 hour.
5. Connect the USB cable (2), and turn on the power by pressing and holding the on/off button for 3 seconds (1).



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