SCAN FOR MORE RESOURCES

SENTIA™

USER GUIDE

Chemical Analysis Instrument

Original Instructions

Any software screens, hardware details or test results shown in this manual are for illustrative purposes only. The information shown on your analyzer may differ.

The contents of this manual, including all graphics and photographs, are the property of Universal Biosensors. No part of this document may be reproduced or transmitted in any form or by any means, electronic or mechanical, for any purpose, without the express written permission of Universal Biosensors. Universal Biosensors has made every reasonable effort to ensure that all the information contained in this manual is correct at the time of printing. However, Universal Biosensors reserves the right to make any changes necessary without notice as part of ongoing product development.

Any correspondence relating to this manual should be addressed to:
Universal Biosensors Pty Ltd
1 Corporate Avenue
Rowville, 3178, Victoria Australia

Sentia™ and the Sentia logo are trademarks of Universal Biosensors. All rights reserved. All other trademarks are property of their respective owners.

Patented Technology
Purchase of Sentia™ provides the purchaser with a limited license to use the purchased Sentia™ Analyser and associated test strips and buffers covered by European Patent No EP4042150 in accordance with the User Guide set forth herein.

© 2025 Universal Biosensors Pty Ltd

Table of Contents

1. Introducing Sentia™

General warnings and precautions

- When you use a new vial of strips, you may need to establish a Wi-Fi connection to the Internet so that the latest test strip calibration data can be downloaded (see page 15). You will need to download calibration data every 3 months or so to stay up to date with the test strips we produce.
- Always follow the safety procedures and precautions listed here and throughout this user guide.
- When connecting the analyzer to external devices (such as USB power sources), ensure those devices are in compliance with local safety regulations.
- The power supply that comes with your analyzer is for indoor use only.
- Only use Sentia™ test strips and buffers.
- **Always store Sentia™ test strips according to the symbol on the vial label.** Some of our strips require refrigeration – i.e. between 2 °C and 8 °C (35.6 °F and 46.4 °F).
- **Always close the vial lid after a strip has been taken out.**
- The Sentia™ analyzer contains a lithium-ion rechargeable battery which must be treated with care:
- Do not attempt to access the battery; if your battery is not performing adequately, contact Customer Support (see page 52);
- Do not place the analyzer near a heat source or in a hot environment (e.g. an automobile parked in the sun); and
- If you suspect the battery may have been punctured, crushed or damaged, contact Customer Support (see page 52).
- Failure to follow the above battery care instructions could result in serious injury or death due to a battery catching fire, exploding or leaking.

Your Sentia™ kit

Your Sentia™ kit contains the following items:

1. 

Analyzer

2. 

This User Guide

3. 
Power Supply/ USB Cable

4. 
Spare Cap

5. 

Quick Start Guide

Intended use of the Sentia™ system

The Sentia™ system can be used to determine the concentration of various chemicals in wine. It is portable and fast, allowing concentrations to be determined within minutes of sample application.

Key features of the Sentia™ system

- hand-held and portable
- able to measure acetic acid, free sulfur dioxide, fructose, glucose, malic acid and titratable acidity.
- easy sample application with small sample volume
- fast result
- strip ejection mechanism
- rich user interface
- internal battery with power monitoring
- memory feature (for displaying past test results and errors)
- can export past test results to an external device

How Sentia™ works

The Sentia™ system analyzes a sample applied to a Sentia™ test strip*. The sample is applied after the test strip has been inserted into the Sentia™ analyzer's strip port. The sample mixes with dried reagents inside the strip and the analyzer detects the level of a particular analyte. The result is then displayed on the analyzer screen.

Up to one thousand records can be stored in the analyzer memory. You can list the records and download them to an external device for external review and analysis.

Quality control

The Sentia™ analyzer has several integrated quality control functions:

- A check of components and functions is performed every time the analyzer is turned on.
- During the test, the strip's integrity is monitored. The strip temperature is also controlled to ensure test results are reproducible.

An error is reported if the analyzer fails any of the above checks. Warning and error messages are described in section 8 on page 43.

* Sentia™ test strips are sold separately. See "Ordering Details on page 51.

This page is intentionally blank.

2. Getting started

Powering the analyzer

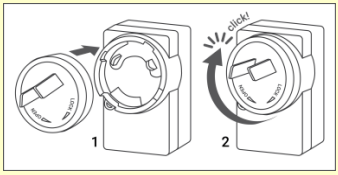
The Sentia™ analyzer is charged via a micro USB cable and AC power supply (included). It can also be charged using a micro USB cable connected to another suitable power source (such as a USB port on a computer).

It is best to make sure that the analyzer is fully charged before first use.

AC power supply
and cable

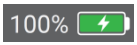
To charge analyzer, plug in
AC power supply and connect the USB cable

Your AC power supply comes with a range of plugs. Find the right plug for your region, then align the plug's rear three plastic tabs with the power supply's main body and gently turn the plug in the "Lock" direction until you hear a click.

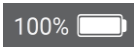


Power indicators

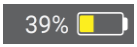
A battery icon is at the top right corner of the screen with colour coding as follows:



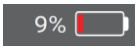
Green: power supply plugged in, battery charging.



White: analyzer has sufficient battery charge.



Yellow: moderately-low battery; charge soon.

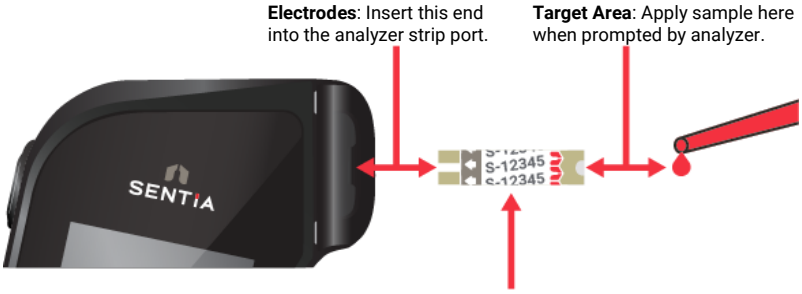


Red: critical battery; charge before running a test on battery power

Parts of the Sentia™ analyzer

1. Power button
2. Touch screen display
3. Test strip eject button
4. Test strip port and protective cap
5. USB charge port

Sentia™ test strips



You must enter the correct strip index number to get accurate results: the analyzer uses this number to determine the strip calibration.
Note: index number is different to lot number.

First time use

Turning the analyzer on and off

To turn the analyzer on, touch the power button briefly.

You can turn the analyzer off by touching the power button for several seconds and answering yes when prompted for confirmation.

If the power button or touch screen are not responding, you can force the analyzer to shut down by disconnecting the external power supply and holding your finger on the power button for around 15 seconds until the screen goes black.

Registration

The very first time you power up your device, you will be guided through a registration workflow in which you will need to connect to a wireless network (that is connected to the internet). Once connected, it is important to ensure that the date and time listed at the top of the screen is correct. If it is not, allow the device to sit turned on and connected to charge and Wi-Fi until the time displays correctly.

Then proceed by entering in your e-mail address, and type in the activation code that is e-mailed to you. You must complete these steps to unlock your device.

Once the device is registered, it is recommended that you stay connected to the wireless network and check for available software updates (see Customer Support on page 52).

Setting the date and time (by setting the time zone)

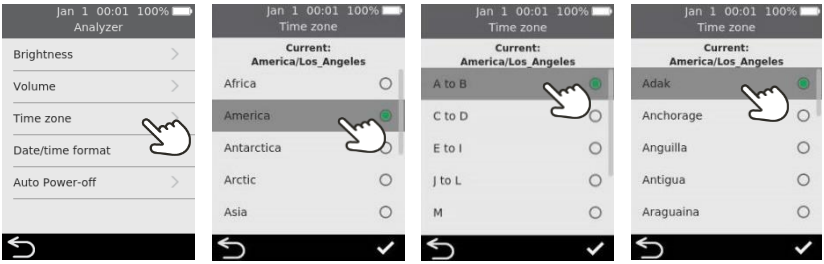
Before you run any tests you should check the date and time (displayed at the top of the screen). The analyzer uses the internet and your time zone to set the date and time.

If the date and time are not correct, you will need to set the time zone. Set the time zone as follows:

1. From the **Home** screen, touch the *SETTINGS* button to navigate to the **Settings** screen, then select *Analyzer* and then *Time zone*

2. Select your region, touch ✔, then select your sub-region. Some sub-regions may first be categorised by a starting letter of the sub-region (see below). You may need to swipe your finger up and down on the screen to scroll to your selection

3. Touch ✔ to confirm your selection

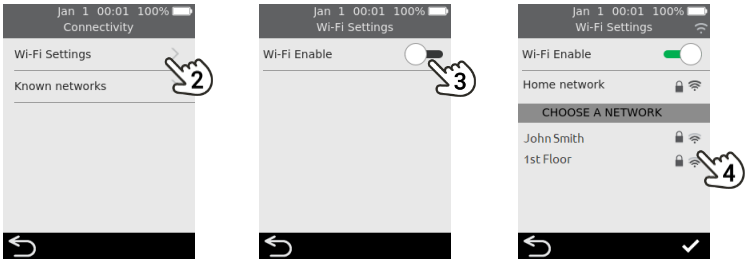


Connecting to a wireless network

If it has been more than three months since you ran a test and you are using a new vial of test strips, a wireless (Wi-Fi) network connection with Internet access may be required for the analyzer to download the necessary calibration information for the strips.

If not already connected, follow these steps to connect to a wireless network:

1. From the **Home** screen, touch the *SETTINGS* button, then touch *Connectivity* to navigate to the **Connectivity** screen
2. Touch *Wi-Fi Settings* to get to the **Wi-Fi Settings** screen
3. Turn on Wi-Fi
4. Select a network from the *CHOOSE A NETWORK* panel and enter the Wi-Fi password (if prompted)
5. After the connection is established, press ✔ to confirm your selection



To stop the analyzer trying to connect to a previously connected network, select *Known networks* on the **Connectivity** screen, then select the network by name and touch the rubbish bin icon.

The analyzer only supports 2.4 GHz Wi-Fi (channels 1 to 11).

Routers using 5 GHz or 2.4 GHz channel 12 are not compatible with Sentia™ analyzers.

Downloading strip calibration data from the Internet

The analyzer will download strip calibration data automatically when a stable Internet connection is established.

If you plan to use the analyzer away from a reliable Internet connection for extended periods, you should make a point of connecting to a wireless network at least every three months or so.

Guidance on wine types

The Sentia™ system has been designed for red and white table wines. The following guidance is provided for other wine types. Check the Technical specifications on page 56 for more details.

Rosé

For Rosé wines, winemaker discretion is advised when selecting the 'Red' or 'White' sample type (see page 20). The best selection may depend on skin contact the wine received during processing. In most instances selecting 'White' will generate acceptable results but there may be some cases where the 'Red' option yields better results. Validation of results via an alternate method for your wine is highly recommended.

Other Styles and Non-Table Wine

Compounds in fortified, sweet and sparkling wines may impact test accuracy and should be validated using a secondary test method.

3. Running a test

Preparing to run a test

Items necessary to conduct a test

1. Sentia™ analyzer
2. A vial of Sentia™ test strips
3. The sample of wine to be tested
4. Buffer solution (for some assays)
    - For fructose and malic acid assays, a **test specific** Sentia buffer solution is required.
    - For the acetic acid assay, reagent grade deionized (or distilled water) is required.

A sample dilution is only required for some test types. Check the Technical specifications on page 56 for details.

Tap water **should not** be used in replacement of deionized or distilled water

A calibrated micropipette with pipette tips is also required for these tests

Note: materials 2 - 4 listed below are not included in your Sentia kit. Please purchase separately.

1. 

2. 

3. 

4. 

Sample Preparation

Sample preparation prior to testing is required for some assays. This will be prompted by your device through the test workflow.

For further information regarding sample preparations, see the *Guide to sample preparation for analysis on Sentia* on the Sentia website, or contact your supplier.

Dilutions of samples

Acetic Acid, fructose and **malic acid** assays require a sample dilution. It is important that the recommended dilution ratios of sample to diluent are always followed.

Do not use expired Sentia buffer solutions.

Alternative dilution solutions other than those recommended should not be used

Degassing of samples

For **titratable acidity** measurements on wine, it is recommended to degas the wine before analysis.

For all other methods, it is important that samples with visible effervescence are degassed to allow sufficient electrode coverage, except for those undergoing free sulfur dioxide analysis.

Warnings

Do:

- Always follow the safety procedures and precautions listed here and throughout the user guide, and those adopted by your production facility.
- Keep the analyzer as still and level as possible during the test.
- Only use the system when the room temperature is between 10 °C and 30 °C (50 °F to 86 °F) (Check the Technical Specifications on page 56 for Transport and Storage conditions).
- Always store test strips in their original vial with the cap firmly snap closed. **Close the strip vial securely (until you hear a “click”) as**

soon as you have removed your test strip. This will protect the remaining strips in the vial.

- **Always store test strips between the temperatures on the vial label.**
- **Use a strip within 10 minutes of removing it from the vial.**
- Use each test strip only once and discard after use.
- Minimize the time between collecting the sample and applying it to the test strip.

Do not:

- Do not insert a test strip into the strip port more than once. A test strip that is inserted twice might fail to make a proper electrical contact with the analyzer.
- Do not bump the test strip or analyzer after you apply the sample or while the test is in progress.
- Do not use a vial of test strips if the expiration date recorded on the label has passed. An error will be displayed if an expired strip is used.
- Do not handle a test strip with wet hands as moisture can damage the strip.
- Do not use a strip that has been dropped or which may have been contaminated.
- Do not use a strip if it appears damaged in any way.
- Do not shake, stir, aerate, or heat a sample prior to testing unless explicitly instructed, as these can all change the measurable analyte levels.
- Do not bubble the sample onto the test strip. Over-aeration can cause sample displacement on the strip.
- Do not dilute the sample unless instructed to on the analyzer screen.
- Do not apply the sample to the test strip until you are prompted to do so by the “apply sample” message on the analyzer screen.
- Never add more sample to the test strip after the analysis has begun.

How to perform a test

1. Touch and hold the power button until the analyzer turns on

When the analyzer boot process is complete, the home screen will appear.

2. From the *Home* screen, tap on the *TEST* button

You can exit a test at any time by touching the button on the bottom left of the screen.

3. Select the test type

Select the test type to match the test strip.

You will need to scroll to see all test types.

Composite assays (e.g. Total residual sugars) will guide you through two tests and present a combined result, plus the individual analyte results.

4. Select the sample type

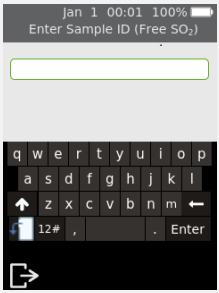
Select the sample type corresponding to your sample and then press .

For guidance on testing other wine types, see page 16.

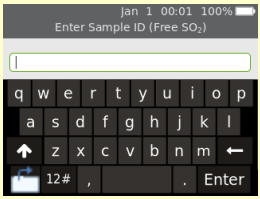
5. Enter the Sample ID

If the analyzer is configured for Sample ID (see page 38), you will be presented with the Enter Sample ID screen.

Enter the ID and touch Enter.

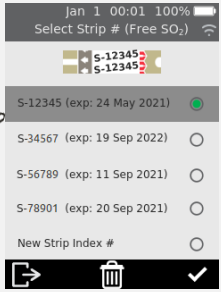


To switch the keyboard from portrait to landscape, touch the button on the bottom left of the keyboard.



6. Enter strip index number

Check the number on the strip vial and match it to one of the numbers on the screen. Select the number and press ✔.



If the number does not appear on the screen, tap "New Strip Index #", press ✔, then enter the number on the on-screen number pad.

If you have finished a vial of strips, you can remove its number from the list by selecting the item and touching 🗑.

Strips indexes with less than one month of shelf life left will appear red

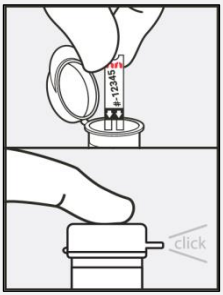
When you are using a vial of strips for the first time, there is a chance that the analyzer will require a wireless Internet connection to download new calibration data. See page 15 for more information.

7. Remove a test strip from its vial

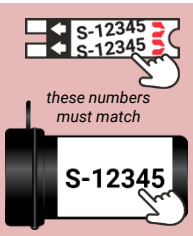
Firmly close the vial immediately.

Ensure that your hands are clean and dry to avoid contaminating or damaging the test strips.

Once you have removed the test strip from a vial, you should conduct the test within 10 minutes

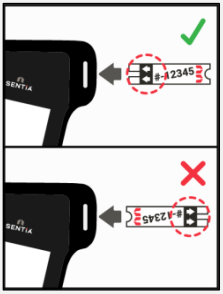


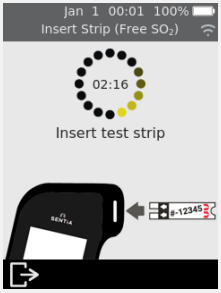
Always check that the number on the strip matches the number on the vial.
To avoid a potentially inaccurate test result, you must use the strip within 10 minutes of removing it from the vial.
Do not use test strips that are past their expiration date (printed on the label of the vial)



8. Insert the strip

Following the on-screen instructions and with the strip's print-side facing upward, follow the direction of the arrows and gently but firmly insert the test strip into the test strip port.



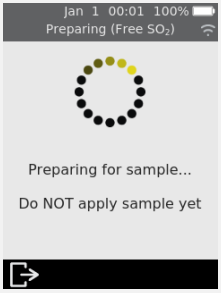


9. Analyzer prepares

Wait for the analyzer to prepare.

When the analyzer is ready, the **Apply sample now** screen will appear.

DO NOT apply the sample until prompted.

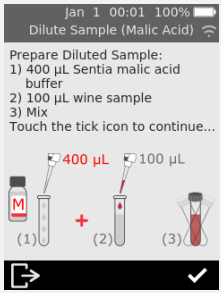


10. Dilute the sample (if required)

For some test types, you will need to dilute the sample. For these test types, you will be prompted to prepare your sample.

Prepare your sample as indicated on the screen.

Touch the tick icon to continue.

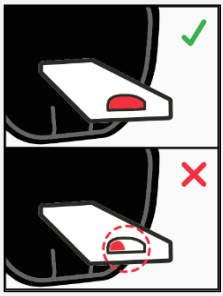


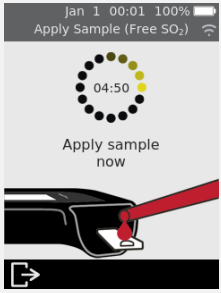
Check the Technical Specifications on page 56 for details.
It is normal for the solution to turn blue/grey after red wine is added.

11. Apply the sample

When prompted, apply a single drop of sample so that it fills the test strip semi-circular white notch.

The analyzer will then move to the **Analyzing** screen.

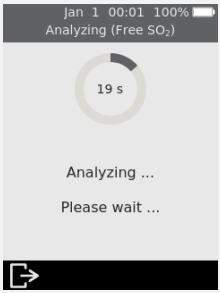




The sample must not be heated, shaken, stirred or aerated.
Never dilute the sample unless instructed to on the analyzer screen. Check the Technical Specifications on page 56 or contact your supplier for further guidance.
After the sample is applied, do not bump the analyzer or strip until the final result is displayed.
Do not tilt the analyzer at extreme angles while running a test. If the analyzer is tilted in any direction by more than 65° before sample application, a warning screen will prompt you to hold it level. If the analyzer is tilted during sample application, an error will occur and the test will abort.
Ensure enough sample is applied to fill the small white semi-circle notch target area on the strip.
If you spill sample into the analyzer's strip port while applying the sample, clean the analyzer using the instructions on page 25.

12. Analysis in progress

During analysis, a circle will show test progress. When the analysis is complete, a **Result** screen will appear.



Be careful not to bump the analyzer or strip while the sample is being analyzed.

13. Result screen

When the test is complete, the result will be displayed. If multiple units are available, touch unit specifier beside the result to switch to your preferred units.

To add a text comment to the result record, touch and enter the comment using the on-screen keyboard.

The bottom right of the Results screen contains a QR code icon . Pressing this icon will display a QR code that can be scanned to provide result data in a JSON format. Contact Sentia support for more information.

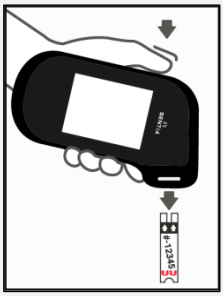
To exit, touch .

Unexpected results
If an unexpected result is reported, the test should be repeated with a fresh sample. If the result is similar, you may choose to confirm the result by other means. Inconsistent results could indicate poor test strip storage, a contaminated sample or analyzer malfunction.

14. Eject strip

Hold the analyzer over a waste bin so that the strip points toward the opening of the waste bin, then press the eject button to discard the test strip.

For disposal instructions, see page 58.



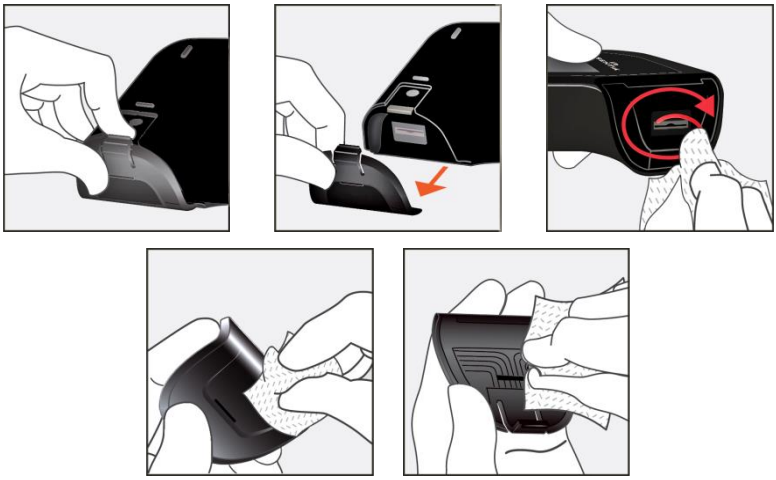
4. Cleaning the analyzer

If it is necessary to clean the Sentia™ analyzer, it should be wiped down using a damp cloth or lint-free tissue. If any of the test samples have left stains or marks on the plastic housings, these may be removed using a cloth lightly dipped in warm soapy water. Take care not to allow liquid to directly enter the test strip port.

Spills during sample application or cleaning

The Sentia™ analyzer comes with a protective cap to help prevent liquid from getting inside the analyzer strip port during sample application and cleaning.

After a spill, remove the protective cap and carefully blot up the excess from the inside of the cap. See below for visual instructions.



Cleaning spills around the sample port

If you suspect that liquid has entered the strip port, carefully mop up the liquid using absorbent, lint-free paper (such as coffee filter paper). Using a new strip of paper each time, insert the paper into the strip port until the paper comes out clean.

While cleaning spills, always keep the strip port pointed downwards to avoid getting liquid into the analyzer.

5. Historical results

The Sentia™ analyzer keeps a record of past tests. A summary of these tests (including tests that ended in an error) can be viewed on the analyzer. There is capacity for up to one thousand records. Once capacity has been reached, a new record will overwrite the oldest record.

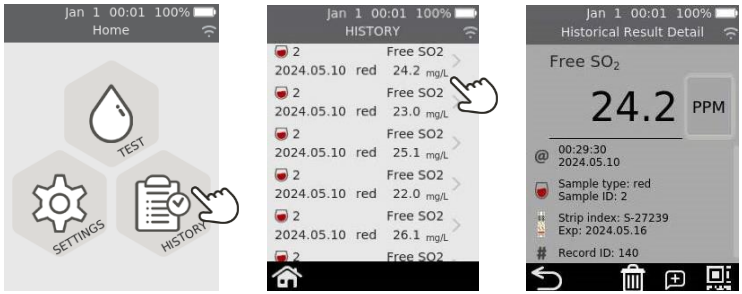
Past test results on the analyzer cannot be edited, however may be deleted from the device. See page 29 for more details.

Test results on the analyzer can also be exported to an external device for further processing or storage. See page 35 for more details.

Viewing past test results

To view the results of previous tests:

1. From the **Home** screen, touch the *HISTORY* button
2. Past results are listed with the most recent result at the top. If the list extends beyond the screen, swipe up and down to scroll through the list
3. Touch a result listing to see more details about that result



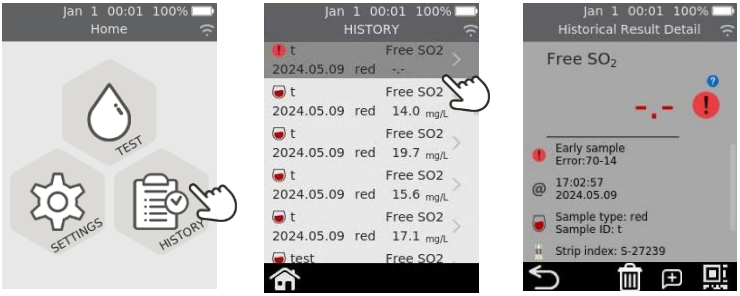
Past results are retained, even when the analyzer is off.
The bottom right of the Historical Result Detail screen contains a QR code icon. Pressing this icon will display a QR code that can be scanned to provide result data in a JSON format. Contact Sentia support for more information.

Viewing past tests that ended in an error

Tests that end in an error are also recorded in the result list. These tests are identified in the result list with the ! icon.

To view the results of tests that ended in an error:

1. From the **Home** screen, touch the *HISTORY* button
2. Past results are listed with the most recent result at the top. Tests that ended in an error are identified with the ! icon. If the list extends beyond the screen, swipe up and down to scroll through the list
3. Touch a result listing to see more details about that result. If the details extend beyond the screen, swipe up and down to scroll. See Section 8 (Troubleshooting) on page 42 for guidance on errors



Deleting Past Results

Follow the methods below if you wish to clear the results from your Sentia™ analyzer. There are several methods available depending on whether you want to delete an individual test result or all the results.

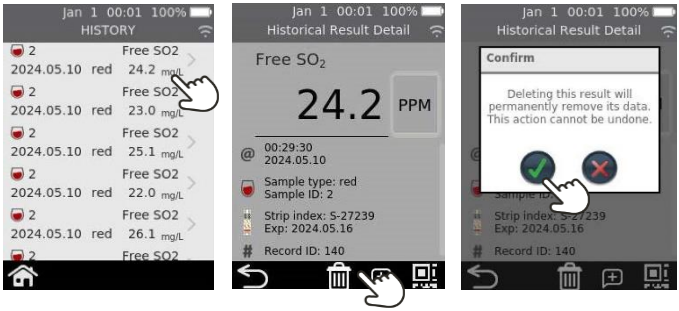
Be aware, deleted results cannot be recovered later.

Deleting individual past test results

To delete an individual past test result:

1. From the **Home** screen, touch the *HISTORY* button
2. Past results are listed with the most recent result at the top. If the list extends beyond the screen, swipe up and down to scroll through the list.
3. Touch the desired result for deletion
4. In the *Historical Result Detail* screen, touch
5. You will then be prompted to confirm the deletion required. To proceed, touch .

Be aware, results deleted in this manner cannot be recovered later on the analyzer.



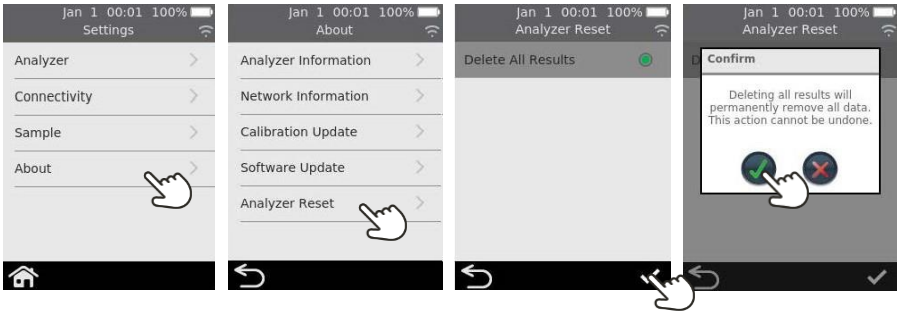
Deleting all past test results

To delete all past test results:

1. From the **Home** screen, touch the *SETTINGS* button
2. Go to *About*
3. Select *Analyzer Reset* and click on the *Delete All Results* button. Then touch ✔
4. You will then be prompted to confirm that you want to delete all records. To proceed, touch ✔

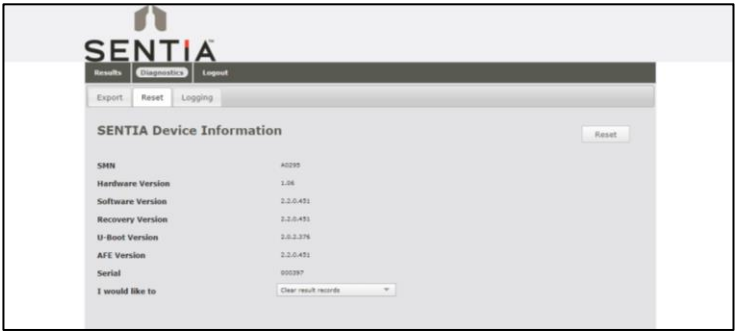
Be aware, results deleted in this manner cannot be recovered later on the analyzer.

All test results can be deleted when the analyzer is connected to a wireless network. See page 31 for more details.



Deleting all past test results using the webserver

1. Connect to the device as described in Section 6, Connecting to the analyzer
2. Select the Diagnostics tab, then click on the Reset tab.
3. Select from the drop menu “Clear result records” and then select “Reset”.



4. Click logout when you are finished to go back to the login page.

Be aware, results deleted in this manner cannot be recovered later on the analyzer.

This page is intentionally blank.

6. Connecting to the analyzer

Your Sentia™ analyzer includes embedded web-based device management that can be accessed from another device such as your PC's Internet browser.

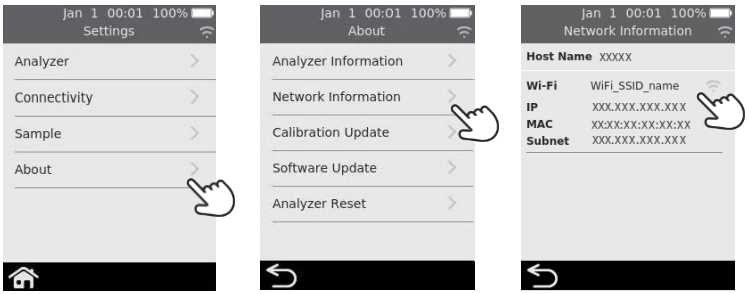
What you'll need

1. Your Sentia™ analyzer connected to a wireless network (see page 15 for instructions)
2. An external device that is connected to the same wireless network as the analyzer and has a web browser (e.g. laptop, tablet, smartphone)

Setting up

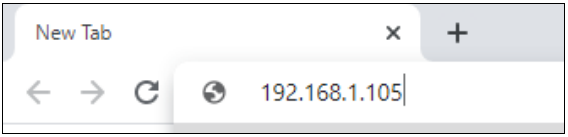
Find your Sentia™ analyzer's IP address by doing the following:

i. on your analyzer, tap *SETTINGS* from the **Home** screen,
ii. tap *About* on the **Settings** screen
iii. tap *Network Information* on the **About** screen and note the IP address of your analyzer



Connecting from the external device

1. On the external device, open a browser and navigate to your Sentia™ analyzer's IP address (see "Setting up" above)



NOTE: Your browser may give you a security warning about the website not being secure (because the analyzer uses the http rather than the https protocol). This is not of concern because the connection between the analyzer and your device is happening within your wireless network.

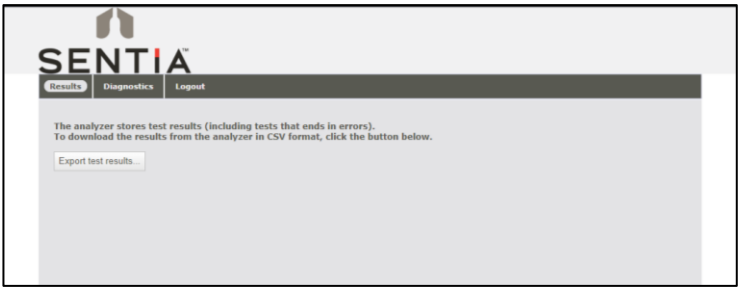
2. The analyzer login screen will appear. In the password field, enter your device's serial number (the six digit number found on the back cover next to the "SN" box) and then click the Login button.

Exporting past results to an external device

Test results on the analyzer can be exported to an external device in text (comma-delimited text) format.

Exporting the results

Select the Results tab, then click on the “Export test results…” button and specify a location and filename.



Your results will be exported as a ZIP file. Inside the ZIP file will be a CSV (comma-delimited text) file (called “results_all.csv”) which contains all of the historical results on the analyzer. This file can be opened in any spreadsheet program for easy filtering, sorting and analyzing. The first row contains headings for each column.

7. Settings

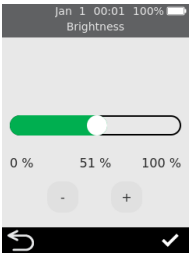
Analyzer settings

To adjust analyzer settings, on the **Home** screen tap on *SETTINGS*, then tap *Analyzer*.

Brightness

The brightness of the screen can be modified. The default value is 100%. Tap + or − to increase or decrease the screen brightness.

Press ✔ to accept the new brightness level.



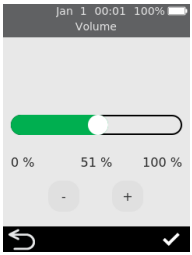
Sound volume

The analyzer emits audible alerts at various times, including when:

- a key event occurs during a test
- an error or warning occurs

Tap + or − to increase or decrease the sound volume of audible alerts.

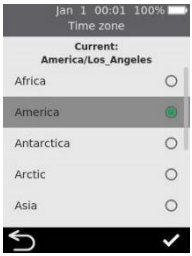
Press ✓ to accept the new volume level.



Time zone

The analyzer uses the internet and your time zone to set the date and time. To set your region and sub-region, swipe up or down to scroll through the list, select your region and sub-region, then touch ✓ to accept the details.

See page 14 for more details.

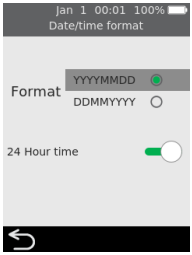


Date and Time format

The date format can be set to one of the two options shown.

The time format can be set to 12 or 24 hour time.

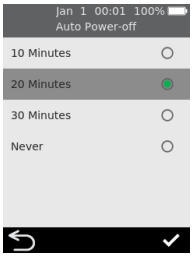
Touch ✓ to accept the date and time format.



Auto power-off

The analyzer can be configured to automatically turn off after a period of inactivity. This feature can be disabled by selecting “Never”.

To configure auto power-off, select the desired value then press ✔.



Connectivity (wireless network)

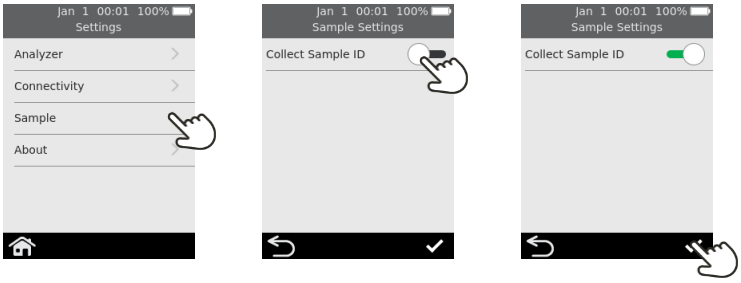
Wi-Fi (wireless) Settings

A wireless network connection must be established every 3 months or so because the analyzer must periodically obtain strip calibration data from the internet. See page 15 for instructions on how to connect to a Wireless network.

Sample ID Settings

To control whether the analyzer asks for a Sample ID during a test (see page 21), from the **Home** screen select SETTINGS and then:

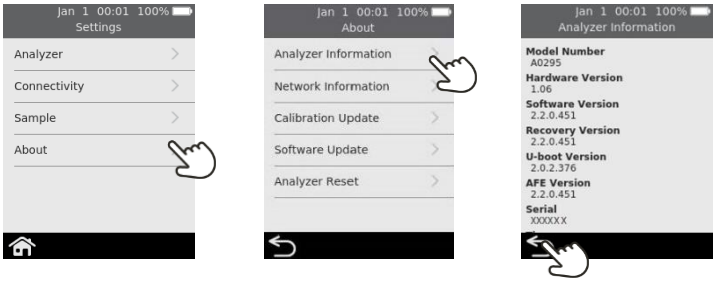
1. Select *Sample* to navigate to the **Sample Settings** screen
2. Turn on (or off) *Collect Sample ID*
3. Press ✔ to confirm your selection



About

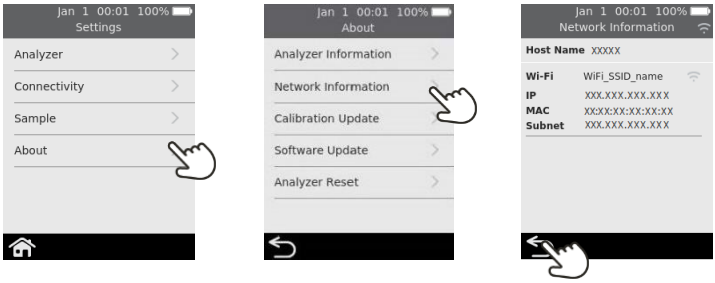
Analyzer information

Information about the analyzer such as serial number and software version can be found by selecting *SETTINGS* on the **Home** screen, then *About*, then *Analyzer Information*.



Network information

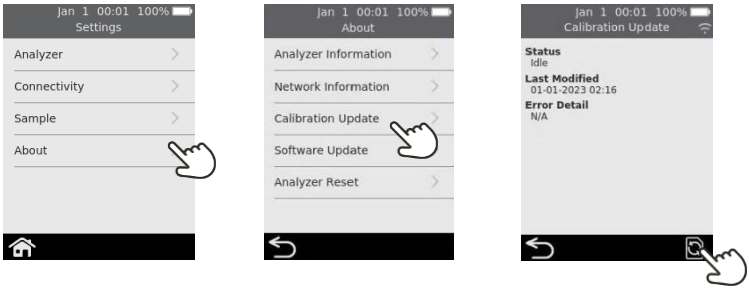
Information about the wireless network connection such as IP address and MAC address can be found by selecting *SETTINGS* on the **Home** screen, then *About*, then *Network Information*.



Calibration Update

To manually prompt the Sentia unit to search for and download new strip calibration data, go to *SETTINGS* on the **Home** screen, then *About*, then *Calibration Update*. Touch the refresh icon, located at the bottom right of screen.

You can also monitor the progress of a calibration download on the Calibration Update screen by noting details listed under *Status*. If the Status is *Downloading*, then the analyzer is still completing a download. If the Status is *Idle*, then a download finalized.



Software Update

See section 9 for software update details.

This page is intentionally blank.

8. Troubleshooting

General Troubleshooting

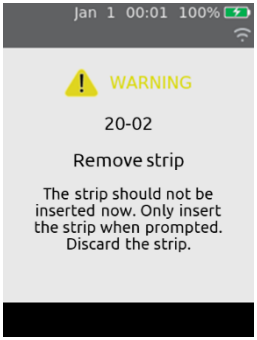
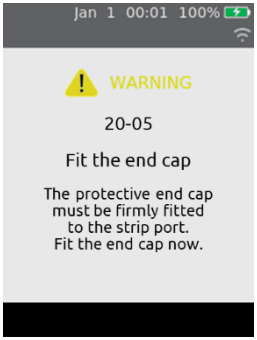
Situation	Solution
The test type I want to run doesn't seem to be available on the analyzer	Make sure you are running the latest version of software by connecting to a Wireless network and leaving the analyzer on for around 30 minutes – if a new version is available, it will be automatically downloaded, and you will be prompted to install it. The analyzer only supports 2.4 GHz Wi-Fi (channels 1 to 11). Routers using 5 GHz or 2.4 GHz channel 12 are not compatible with Sentia™ analyzers. Please also remember to scroll down on the Select Test Type screen, as not all Sentia assay options can be viewed at once in this screen.
The test generated an unexpected result	The test should be repeated with a fresh sample. If a similar result is obtained, you may choose to confirm the result by other means. Inconsistent results could indicate poor test strip storage, a contaminated sample or analyzer malfunction. There is risk of large variation from the true value when using poor sampling techniques. Ensure samples are not aerated excessively by filling the pipette fully and that the sample obtained is representative of the wine.
The touch screen and/or power button are unresponsive	Disconnect external power from the analyzer and then touch the power button for an extended period. Eventually (after 15 seconds or so), the screen will go black and the analyzer will turn off. If the problem persists, contact Customer Support.
Wi-Fi seems to turn itself off sometimes	The analyzer deliberately turns Wi-Fi off while the analysis is occurring and then turns Wi-Fi back on. This is completely normal and is not a cause for concern.
It is taking the device a long time to recognize that a software download is available	The analyzer requires a strong Wi-Fi signal. Try to connect your device to an alternative wireless network which has fewer competing devices using it, such as a mobile phone hotspot.

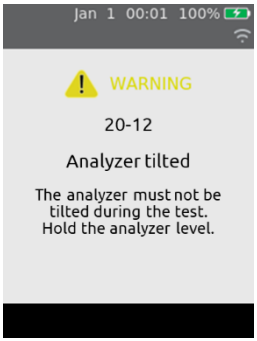
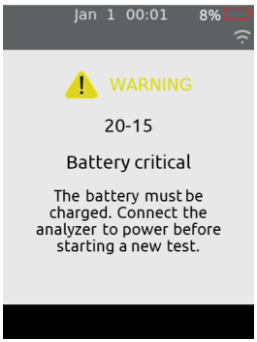
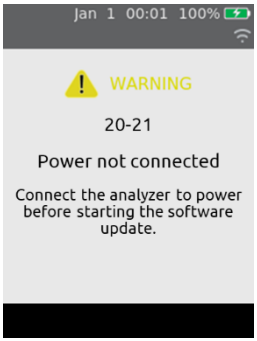
Warning and error messages

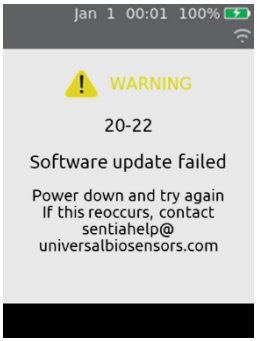
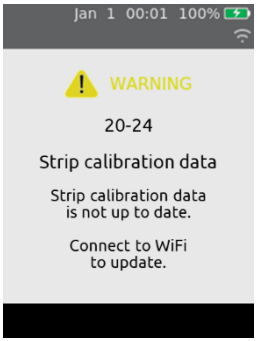
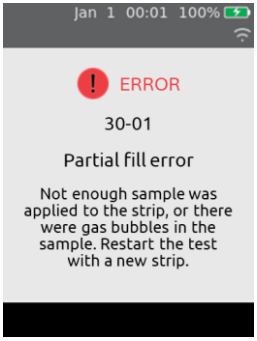
Warnings and errors are listed below in number order. To find the warning or error number, check the area under the WARNING or ERROR text in the top half of the screen.

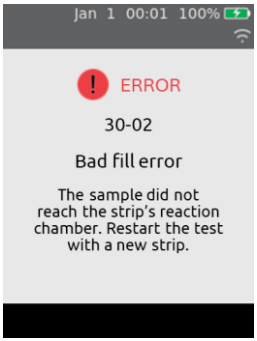
Whether a warning or error appears depends on the situation:

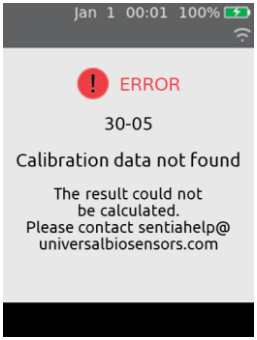
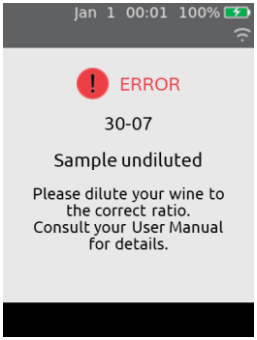
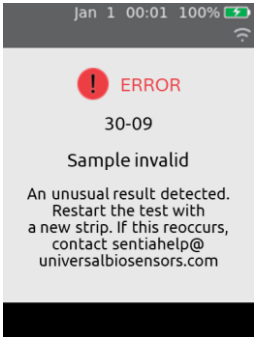
- **Warnings** inform you of something that needs to be corrected before a process can continue
- **Errors** inform you of an issue that is not recoverable (e.g. an issue that requires the test to be restarted with a new strip)

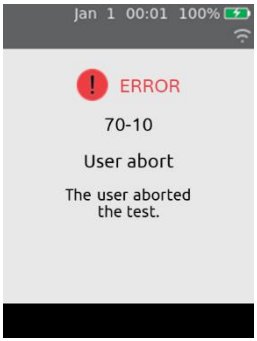
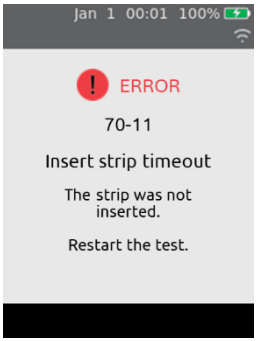
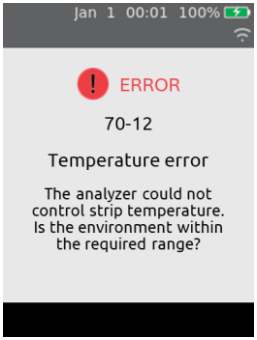
Warning/Error Screen	Cause	Solution
	The test strip was inserted at an inappropriate time. The test strip should only be inserted after the analyzer displays the **Insert strip** screen.	Discard the strip and start a new test. The strip must not be reused after it has been inserted into the strip port.
	The strip port's protective end cap (see item 4 on page 12) is not correctly fitted.	Fit the protective cap to the strip port. Keep the strip port protective end cap firmly fitted at all times (except during cleaning - see page 25).

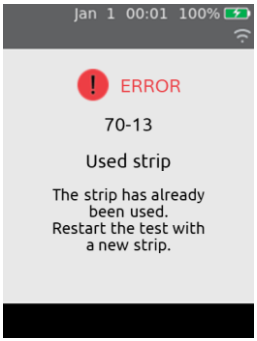
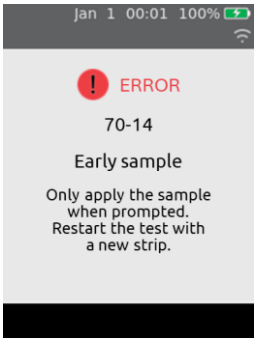
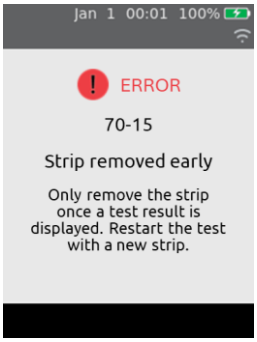
Warning/Error Screen	Cause	Solution
	The analyzer was tilted too much or was bumped.	Hold the analyzer level to continue the test. Do not bump or tilt the analyzer when the sample is being applied.
 (This row also applies to 20-16 and 20-20)	The battery level has become critical (less than 10%) while a test is in progress. If a test has already been started prior to this warning message appearing, the test can be completed.	Before a new test can be started you must connect the analyzer to an external power source, which will also charge the battery.
	When a software update is being performed the analyzer must be connected to external power. This is to ensure that the update will not be interrupted.	Connect the analyzer to external power and start the software update again.

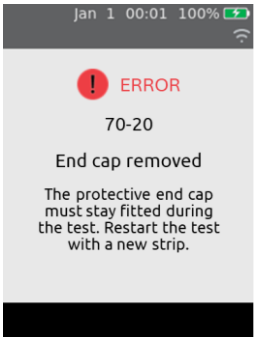
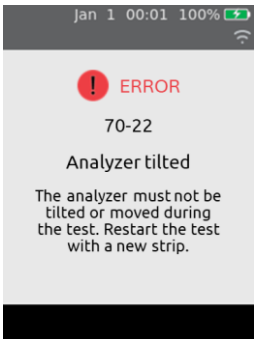
Warning/Error Screen	Cause	Solution
	Something stopped the software update from being performed.	Start the software update again. If it continues to fail, contact Customer Support (see page 52). In the meantime, you can continue to use your analyzer using the existing software version.
	The analyzer has not made recent contact with the Sentia website to obtain new strip calibration data.	Connect the analyzer to Wi-Fi and manually prompt the device to search for new calibration data. See instructions on page 40. Re-enter new strip details.
	Insufficient or gaseous sample was applied to the strip and the test could not be completed.	You must **not** apply additional sample to the test strip after the test has begun. Discard the strip and start the test again. Apply the sample as instructed on page 23.

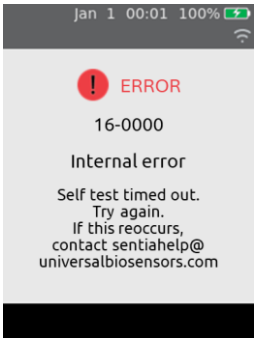
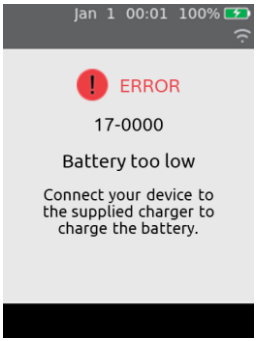
Warning/Error Screen	Cause	Solution
	The sample could not reach the strip's reaction chamber. Possible causes include too much analyzer movement, an unsupported sample type or an analyzer fault.	Discard the test strip and start the test again. Apply the sample as instructed on page 23. If the error persists, contact Customer Support (see page 52).
 (This row also applies to 30-06)	An analysis error occurred, and the test result could not be calculated. Possible causes include too much analyzer movement, an unsupported sample type, an analyzer fault, or test strips that have not been maintained properly.	Discard the test strip and start the test again. Apply the sample as instructed on page 23. If the error persists, contact Customer Support (see page 52).
	An analysis error occurred, and the test result could not be calculated. Possible causes include extreme levels of free sulfur in the sample, or a recent sulfur addition within 24 hours.	Check with an alternative method that the free sulfur level in the sample does not exceed approximately 90 mg/L. Only measure free sulfur 24 hours after an addition of sulfur. If the error persists, contact Customer Support (see page 52).

Warning/Error Screen	Cause	Solution
	The software version installed in the analyzer is no longer supported.	If the analyzer indicates that a software update is available, perform the update (see page 52) If an update is not displayed connect the analyzer to Wi-Fi and manually prompt the device to search for a software update (see page 53)
	The sample was not correctly diluted. To run some test types, the sample must be specially prepared.	Dilute the wine sample per the instructions provided. See Technical Specifications on page 57 or with your supplier for further details.
	An analysis error has occurred, and the test result could not be calculated. Possible causes include unsupported sample type.	Discard the test strip and start the test again. Apply the sample as instructed on page 23. If the error persists, contact Customer Support (see page 52).

Warning/Error Screen	Cause	Solution
	The user aborted a test after the strip was inserted.	Discard the strip and start a new test. The strip must not be reused after it has been inserted into the strip port.
	The strip was not inserted within the time limit on the **Insert strip** screen.	Start the test again and insert the strip when prompted by the analyzer.
	The analyzer could not adequately control the strip temperature.	Ensure the ambient temperature is between 10°C and 30°C (50°F to 86°F) and the device is not charging. Restart the test with a new strip. You may need to allow time for the analyzer temperature to stabilize. If the problem persists, contact Customer Support (see page 52).

Warning/Error Screen	Cause	Solution
	The inserted strip has already been used for a test. Alternatively, the strip might have been handled with wet hands or the sample port flooded during a previous wine analysis.	Discard the strip before starting a new test. Dry the strip port with a lint free tissue. If the error recurs, try a new vial of strips.
	The sample was applied too early.	Discard the strip before starting a new test. Apply the sample only when prompted by the analyzer.
	The test strip was removed before the test was finished.	Discard the strip before starting a new test. Ensure the strip is pushed fully into the strip port, and don't remove the strip until instructed.
Internal Error Includes Errors: 70-18, 70-25, 70-26, 80-00 16-XXXX, 18-XXXX	There was an internal error and the test result could not be obtained.	Turn the analyzer off and on, then repeat the test. If the same error occurs, contact Customer Support (see page 52).

Warning/Error Screen	Cause	Solution
	During a test, the strip port's protective end cap (see item 4 on page 12) was removed.	Fit the protective cap to the strip port and restart the test with a new test strip. Keep the strip port protective end cap firmly fitted at all times (except during cleaning - see page 25).
	The sample was not applied at the time requested by the analyzer.	Discard the strip before starting a new test. Apply the sample when prompted by the analyzer.
	During sample application, the analyzer was tilted too much or was bumped.	Discard the strip before starting a new test. Do not bump or tilt the analyzer after the sample is applied.

Warning/Error Screen	Cause	Solution
	An issue was detected during the boot up of the analyzer.	Turn the analyzer off and on. If the same error occurs, contact Customer Support (see page 52).
	The battery is too low for the analyzer to operate, most likely because the analyzer has not been used for a very long time.	Before the analyzer can be used, you must connect the analyzer to an external power source to charge the battery enough for it to be used safely. This may take 30 minutes or more.

9. Customer support

If you have unanswered questions, or the Sentia™ system is still not working as expected after you have tried the various troubleshooting options listed in Section 8, contact your authorized distributor or direct sales representative. Alternatively, contact Sentiahelp@universalbiosensors.com

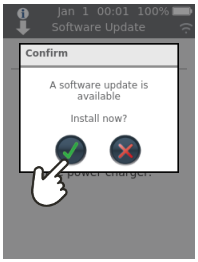
Ordering details

If you need replacement parts or consumables, contact your authorised distributor or direct sales representative, see https://sentiaanalysis.com/distributors/

Software updates

The analyzer will automatically check for a software update whenever it is connected to the internet (via Wi-Fi). If a software update is available the analyzer will ask your permission before performing the update, which should be done as soon as possible. It is required to connect your device to power to complete the download.

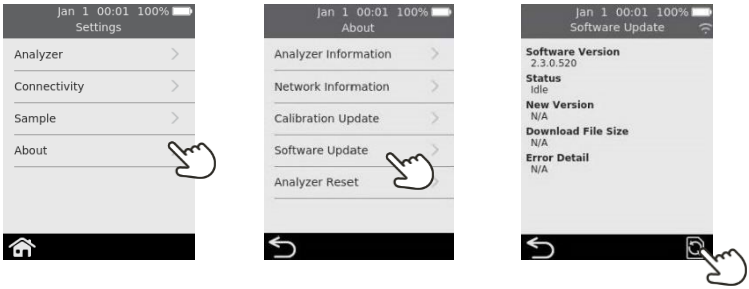
An icon on the home screen will alert you whenever a software update is ready to install (see below).



Manual Software Update

To manually prompt the analyzer to search for and download new software updates, go to *SETTINGS* on the **Home** screen, then *About*, then *Software Update*. Touch the refresh icon, located at the bottom right of screen.

You can also monitor the progress of a software download on the Software update screen by noting details listed under *Status*. If the Status is *Downloading*, then the analyzer is still completing a download. If the Status is *Idle*, then a download finalized.



10. Appendices

Abbreviations and terms

The following abbreviations and terms are used throughout this guide:

Abbreviation or term	Meaning
AC	Alternating Current
EMC	Electromagnetic compatibility
g/L	Grams per litre
ID	Identifier
mg/L	Milligrams per litre
PPM	Parts per million
USB	Universal Serial Bus

Labels and symbols

Label or symbol	Explanation
	Manufacturer
	Manufacturer's declaration that the product complies with applicable European Union directives
	Manufacturer's declaration that the product complies with the applicable essential requirement for sale in Great Britain
	European Authorized Representative
	Read the User Manual before use
	Consult the instructions for use for important cautionary information such as warnings and precautions that cannot, for a variety of reasons, be presented on the device itself
	Fragile
	Handle with care

Label or symbol	Explanation
	Single use only
	Serial number
	Product batch code
	Expiry date
	Keep dry
	This symbol indicates that the product has a storage temperature limitation and must be stored at 2 to 8 °C (35.6 to 46.4 °F).
	WEEE: The analyzer complies with EU 2012/19/EU. Do not dispose of the analyzer with normal rubbish. Refer to local regulations for disposal.
FCC ID	FCC registration identifier
	Keep out of direct sunlight
	Recycle
	This way up
	Contains 25 strips
	The Regulatory Compliance Mark (for Australia and New Zealand)

Technical specifications

Operating conditions	
Temperature	10 °C to 30 °C (50 °F to 86 °F)
Relative humidity	< 80% (without condensation)
Storage conditions (test strips)	
Temperature	2 °C to 8 °C (35.6 °F to 46.4 °F)
Relative humidity	< 80% (without condensation)
Storage conditions (analyzer)	
Temperature	2 °C to 40 °C (35.6 °F to 104 °F)
Relative humidity	< 80% (without condensation)
Analyzer Transport conditions (in packaging)	
Temperature	–20 °C to 40 °C (–4 °F to 104 °F)
Relative humidity	< 90% (without condensation)
Features	
Measurement range	**Acetic Acid:** 0.1 to 1.5 g/L **Free Sulfur Dioxide:** 3 to 75 mg/L **Fructose:** 0.1 to 10 g /L **Glucose:** 0.1 to 10 g/L **Malic acid:** 0.05 to 5 g/L **Titratable Acidity:** 3 to 10 g/L
Interface	Wireless (2.4GHz)
Automatic power off	Configurable: disabled, 10 mins, 20 mins, 30 mins
Dimensions	147 × 84 × 32 mm (5.79 × 3.31 × 1.26 in)
Weight	210 g (7.41 oz)
Design lifetime	5 years or 20,000 tests

Sample	
Sample type	**Red and white still wine:** titratable acidity, acetic acid, glucose, fructose and malic acid. **Post-fermentation red or white wine:** free sulfur dioxide
Sample size	At least 8 microlitres
Sample dilution	**Acetic Acid**: samples must undergo a 1 in 4 dilution with reagent grade deionized (or distilled) water. This means that 1 part wine sample is mixed with 3 parts diluent water. **Fructose**: samples must undergo a 1 in 5 dilution with the Sentia fructose buffer. This means that 1 part wine sample is mixed with 4 parts Sentia fructose buffer. **Malic acid**: samples must undergo a 1 in 5 dilution with the Sentia malic acid buffer. This means that 1 part wine sample is mixed with 4 parts Sentia malic acid buffer.
Sample degassing	**Titratable Acidity**: samples should be degassed prior to analysis. **Acetic Acid, fructose, glucose and malic acid**: samples with visible and excessive gas should be degassed prior to analysis.
For further information regarding sample preparation, see *Guide to sample preparation for analysis on Sentia* at https://sentiaanalysis.com/sentia-dilution-and-sample-prep-instruction-guide/	

Legal notices

Software licences

The Sentia™ analyzer uses proprietary, third party and open source software. Details of licenses are available at: https://www.universalbiosensors.com/Modified-Third-Party-Software.aspx

Use of the Sentia™ analyzer is subject to the terms of those licenses.

Disposing of the Sentia™ analyzer

The analyzer must not be disposed of with general rubbish. Contact your local distributor and/or local authorities for instructions on the disposal of the analyzer. Always comply with local procedures and guidelines for the disposal of electrical, electronic and hazardous waste.

Disposing of Sentia™ test strips

In most regions, Sentia™ test strips (and the vial they came in) can be disposed of with your general rubbish. You should ensure that the test strips are bagged separately.

Check with your local authorities for any special instructions that might apply in your jurisdiction.

European Union Radio Equipment Declaration

Hereby, Universal Biosensors declares that this radio equipment (of type Chemical Analysis Instrument) is in compliance with Directive 2014/53/EU.

To view the full text of the EU declaration of conformity, contact your local supplier. Find your local supplier details on our website at https://sentiaanalysis.com/distributors/

United Kingdom Declaration of Conformity

Hereby, Universal Biosensors declares that this radio equipment (of type Chemical Analysis Instrument) is in compliance with the relevant statutory requirements.

To view the view the full text of the United Kingdom declaration of, contact your local supplier. Find your local supplier details on our website at https://sentiaanalysis.com/distributors/

Radio emissions and electromagnetic compatibility

FCC Compliance Statement
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
CAUTION: The grantee is not responsible for any changes or modifications not expressly approved by the party responsible for compliance. Such modifications could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
– Reorient or relocate the receiving antenna.
– Increase the separation between the equipment and receiver.
– Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
– Consult the dealer or an experienced radio/TV technician for help.
This equipment has been tested and meets applicable limits for radio frequency (RF) exposure as a portable device as per 47 CFR § 2.1093.

Canadian Compliance Statement
This device contains license-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada license-exempt RSS(s). Operation is subject to the following two conditions:
(1) This device may not cause interference.
(2) This device must accept any interference, including interference that may cause undesired operation of the device.
L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :
1) L'appareil ne doit pas produire de brouillage;
2) L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

NOTE: This equipment complies with RSS-102 radiation exposure limits. This equipment was tested and found compliant for safe use as a handheld product.
REMARQUE: Cet équipement est conforme aux limites d'exposition aux radiations RSS-102 établies pour un environnement non contrôlé. Cet équipement a été testé et jugé conforme pour une utilisation en tant que produit portable.

Sentia™ analyzer – Warranty

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law ("consumer guarantees"). You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

Warranty Period

In addition to the consumer guarantees, Universal Biosensors Pty Ltd ("UBS") warrants that this product will operate substantially in conformance with UBS' published specifications, when subject to normal, proper and intended usage by properly trained personnel, for a period of twelve (12) months from the date of shipment to the customer. Lamps, fuses, bulbs and other expendable items are expressly excluded from the Warranty. The Warranty Period for spare parts for this product is three (3) months from the date of shipment to the customer. UBS does not warrant that the operation of this product will be uninterrupted, error-free or will accomplish any particular result. The Warranty is given to the original customer only and, subject to applicable law, is not assignable or transferable.

Remedy

How to claim under the Warranty

The Warranty is given on the express condition that, if the customer wishes to make a claim under the Warranty, it must during the Warranty Period notify UBS (using the contact details below) of the claim in writing promptly after the discovery of any alleged defect. The customer must then at its own pre-paid cost (DDP – as defined in INCOTERMS 2010) send the product to a location designated by UBS. All requests for repairs, replacements or corrections required under the Warranty during the Warranty Period must comply with UBS' returned goods procedure as specified or modified from time to time by UBS. This procedure will be notified to the customer after receipt of the warranty claim.

If the product is found by UBS to not comply with the Warranty, it will be repaired or replaced, at UBS's sole discretion, so as to cause the product to operate in conformance with the Warranty. Replacement parts used may (subject to applicable law) be new or refurbished, at the election of UBS. All replaced parts become the property of UBS.

If UBS determines that the product for which customer has submitted a claim to UBS under the Warranty complies with the Warranty, customer shall before return of this product pay or reimburse UBS for all costs of investigating and responding to the Warranty claim and returning this product to the customer, at UBS' then-prevailing time and materials rates. If UBS provides repair services or replacement parts that are not covered by the Warranty, customer shall pay UBS therefor at UBS's then-prevailing time and materials rates.

Consumer Law

The Warranty is offered in addition to, and does not affect, other rights and remedies available to the customer under the law.

Warranty exclusions

ANY INSTALLATION, MAINTENANCE, REPAIR, SERVICE, RELOCATION OR ALTERATION TO OR OF, OR OTHER TAMPERING WITH, THIS PRODUCT PERFORMED BY ANY PERSON OR ENTITY OTHER THAN UBS WITHOUT UBS' PRIOR WRITTEN APPROVAL, OR ANY USE OF REPLACEMENT PARTS

NOT SUPPLIED BY UBS, SHALL IMMEDIATELY VOID AND CANCEL THE WARRANTY WITH RESPECT TO THIS PRODUCT.
IN NO EVENT SHALL UBS HAVE ANY OBLIGATION UNDER THE WARRANTY WHERE A DEFECT IN THIS PRODUCT IS, IN WHOLE OR IN PART, THE RESULT OF (1) NORMAL WEAR AND TEAR, (2) ACCIDENT, DISASTER OR EVENT OF FORCE MAJEURE, (3) MISUSE, FAULT OR NEGLIGENCE OF OR BY CUSTOMER, (4) USE OF THE PRODUCT IN A MANNER FOR WHICH IT WAS NOT DESIGNED, (5) CAUSES EXTERNAL TO THE PRODUCT SUCH AS, BUT NOT LIMITED TO, POWER FAILURE OR ELECTRICAL POWER SURGES, (6) IMPROPER STORAGE OF THE PRODUCT, (7) IMPROPER INSTALLATION OF THE PRODUCT OR LACK OF PERIODICAL AND PROPER MAINTENANCE, (8) ANY BREAKAGE OF GLASS OR GLASSWARE, OR (9) USE OF THE PRODUCT IN COMBINATION WITH PRODUCT OR SOFTWARE NOT SUPPLIED BY UBS.
THE OBLIGATION CREATED BY THE WARRANTY TO REPAIR OR REPLACE THIS PRODUCT SHALL BE THE SOLE REMEDY OF CUSTOMER UNDER THE WARRANTY. EXCEPT AS EXPRESSLY PROVIDED IN THE WARRANTY, TO THE EXTENT PERMITTED BY LAW UBS DISCLAIMS ALL WARRANTIES, WHETHER EXPRESS OR IMPLIED, ORAL OR WRITTEN, WITH RESPECT TO THIS PRODUCT, INCLUDING WITHOUT LIMITATION ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.

Contact us

You may contact us via your local supplier. Find your local supplier on our website at https://sentiaanalysis.com/distributors/

11. Index

Notes:

Notes:

Notes:

Universal Biosensors

Printed in China

Manufactured and Designed by

Universal Biosensors Pty Ltd
1 Corporate Avenue, Rowville, 3178,
Victoria Australia

EC REP

EU authorised representative:
Obelis S.A Bd. General Wahis, 53.
1030 Brussels Belgium

UK authorised representative:
Obelis UK
Sandford Gate
East Point Business Park
Oxford, OX4 6LB
United Kingdom

www.universalbiosensors.com/products/sentia/

79003 Rev 4.1.1 (20250224)