

## 2.2.1 Beam Options

The efficiency of the Vanta analyzer can be maximized based on the setting of the beam options. Both of the alloy methods include the **Single Beam - No LE** and **Single Beam - With LE** options (LE: Light Elements — Al, Mg, Si, P and S [below Ti]).

The **Alloy Plus** method also includes **Two Beams Always** and **SmartSort** options (see Figure 2-56 on page 71).

- **Single Beam - No LE**

Select this option when using a weld mask. Tests for elements Ti (Atomic Number 22) and higher. It is not possible to sort several aluminum-based alloy grades (that are separated by light elements) with this option.

- **Single Beam - With LE**

Tests for elements Ti (atomic number 22) and higher. In addition, this option detects aluminum (Al) and other light elements (LE) indirectly during the beam one test and reports them as LE.

- **Two Beams Always** (Alloy Plus)

Tests with two beams. Select this option to get information about lighter elements (Mg, Al, Si, P, S). For many grade separations this option is unnecessary.

- **SmartSort** (Alloy Plus)

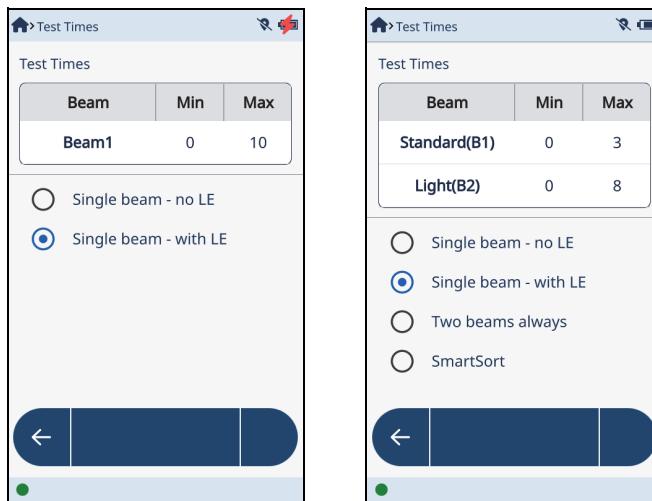
Promotes automated sorting decisions that enable you to maximize speed and sorting accuracy. When **SmartSort** is selected, **Alloy Plus** switches to the second beam, if necessary, to provide a conclusive grade match. The SmartSort option provides the following advantages:

- Short test times (less than three seconds) for most grades.
- Specific grades set up to automatically extend testing time for proper analysis.
- Maximum speed testing efficiency by using a second beam when needed to detect light elements (Mg, Al, Si, P, S) without creating unwanted data.

### To use the beam options



1. Tap the **Test Times** button ( ) [either in the Menu Tray or on the **Live View** screen, if available].
2. On the **Test Times** screen, tap the option button of the beam that you want to select.



**Figure 2-56 Test Times screen – Alloy (left) and Alloy Plus (right)**

## 2.2.2 Grade Match

### NOTE

**Grade Match** is only available in the **Alloy** and **Alloy Plus** methods.

After calculating chemistry, the Vanta compares the chemical composition values to grade tables in a Grade library. The value for a parameter called “match number” is then calculated. The match number indicates how close the measured alloy chemistry is to the library specification. The lower the match number, the better the match. A match number equal to 0 indicates an exact match.

There are three match determination possibilities provided within the Alloy methods:

- **Exact match**

An exact match means that the calculated chemistry for all elements falls within the grade table specifications. A Grade ID is displayed on the Results screen.

- **Multiple matches**

In some cases, several grades are shown as possible matches. This can signify one of three conditions:

- Grade specifications may overlap, meaning that a single sample meets the specification of two or more alloys. In this case, it is possible to see an exact match to multiple alloys, and increasing the test time will not separate the matches.
  - There was not enough information to definitively separate two or more alloys. The actual identification of the unknown alloy is one of the grades listed. Often, increasing the testing time makes it possible to separate the alloys.
  - Several grades matched the sample's chemistry closely enough to have a match number below the "**Show Match No <**" cutoff. Multiple matches with equal match numbers are displayed in alphabetical order.
- **No match**  
There is one cause for a "no match" result: The sample under test does not meet specification. There are several reasons why the result might not meet specification:
    - The test sample does not meet any of the specifications in the Grade library.
    - The test sample is coated.
    - The testing time was too short.
    - The "show match number less than" value is too low.

### 2.2.2.1 Grade Match Screen

The Grade Match screen is designed to help you set up grade matching, set the parameters for pass/fail, and set your grade comparisons. Grade libraries can also be selected from this screen.

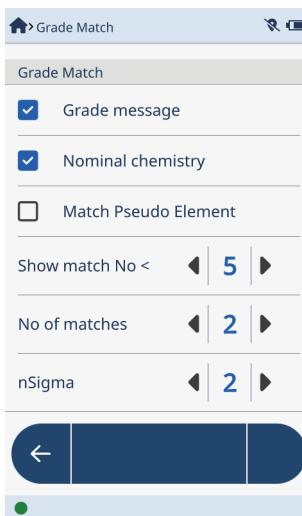
#### To display the Grade Match screen

- ◆ Tap the **Grade Match** button () [either in the Menu Tray or on the **Live View** screen, if available] to display the Grade Match screen.

The screen is divided into four areas:

- **Grade Match** (see Figure 2-57 on page 73), where you can do the following:
  - Adjust the **Show Match No <** value to determine the highest value (poorest match) displayed in the results (see "Calculations using nSigma and Match Cutoff values" on page 75).

- Adjust the **nSigma** value to set the amount of uncertainty that should be applied to the grade boundary (see “Calculations using nSigma and Match Cutoff values” on page 75).
- Adjust the **No of Matches** value to determine the maximum number of matches displayed on the test screen.
- Select **Grade Message** to display any message associated with the grade in the grade library.
- Select **Nominal Chemistry** to display the elements that are inferred to be detected in the results of a test based on the grade match.
- Select **Match Pseudo Element** to include any defined pseudo element in the grade match calculation.



**Figure 2-57 Grade Match section of the Grade Match screen**

- **Pass Fail** (see Figure 2-58 on page 74).

You can turn on or off the pass/fail display using the **Pass Fail** selection for the selected grade. Other grades can be listed with their accompanying match numbers. You can view the elemental chemistries of those grades to see how they differ from an exact match.

- **Residuals** (see Figure 2-58 on page 74).

You can use this library option to ensure that residual (tramp) elements are not penalizing the grade matching. Allowances for residual elements are applied by

- base (Aluminum, Cobalt, Copper, Iron non-stainless, Stainless, Nickel, Titanium, or General).
- **Grade Compare** (see Figure 2-58 on page 74).  
Enables you to select whether to display a grade comparison and determines the grade to display.
  - **Grade Libraries** (see Figure 2-58 on page 74).  
Displays currently selected grade and residuals libraries that are loaded on the instrument. If available, alternate libraries can be selected.

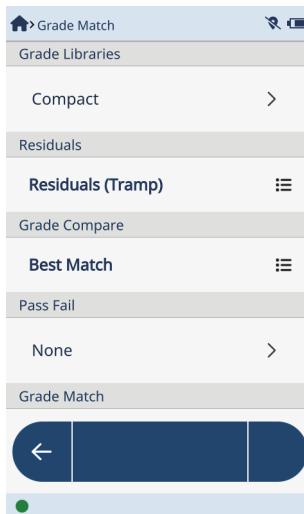
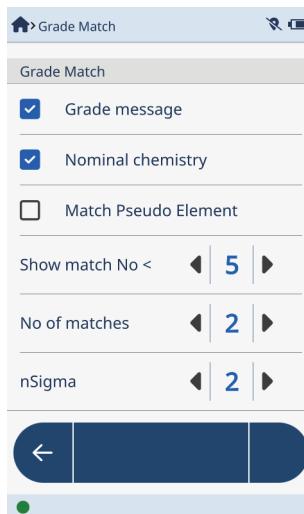


Figure 2-58 Pass Fail, Grade Compare, Residuals, and Grade Libraries areas

### To configure the match settings

1. On the **Grade Match** screen, tap the left or right arrow next to **Show Match No <** to select a match number “less than” value (see Figure 2-59 on page 75).  
The match number “less than” value determines whether a grade is considered a match by comparing the calculated match number for that alloy to a cutoff “less than” value.
2. Tap the left or right arrow next to **nSigma** to select the **nSigma** value. The **nSigma** setting is usually no higher than 2:
  - For scrap sorting, an **nSigma** setting of 0 or 1 is most common.

- For positive materials identification (PMI) applications, an **nSigma** setting of 1 or 2 is most common.
3. Optionally do any of the following:
- Tap the left or right arrow next to **No of Matches** to select the maximum number of matches that can be displayed on the test screen.
  - Select the **Grade Message** check-box to enable the display of grade match messages.
  - Select the **Nominal Chemistry** check-box to display the elements that are inferred to be detected in the results of a test based on the grade match.
  - Select the **Match Pseudo Element** check-box to display the elements that are inferred to be detected in the results of a test based on the grade match.



**Figure 2-59 Configure match settings**

### 2.2.2.2 Calculations using nSigma and Match Cutoff values

The Vanta calculates match settings using the **nSigma** and **Show Match No <** values.

- **nSigma**

The analyzer collects measurements and the **nSigma** value is used to calculate the amount of tolerable variation, relative to the grade boundary. The grade boundary is set by the min/max values in the grade library for each element.

The **nSigma** parameter factors in the precision of the measurement to account for statistical variation in the measurement when matching the measurement against a grade specification. The match number calculation widens the grade boundary by the nSigma value times the  $\pm$  reading on the screen. Lower **nSigma** values mean a sharper, more well defined grade boundary for easier sorting while higher **nSigma** values provide greater confidence in the measured value.

- **Show Match No <**

After the measured calculations are analyzed relative to the nSigma value, the match number is calculated and compared to the user-configured match number. If the calculated match number is lower than the setting, the grade can be displayed as a match.

### 2.2.2.3 Pass Fail

The **Pass Fail** feature is designed for high-throughput alloy sorting and quality control.

#### To create a Pass Fail operation

1. In the **Pass Fail** section of the **Grade Match** screen, tap the arrow to open the **Base Elements** screen (see Figure 2-60 on page 76).
2. Flick through the list of base elements.
3. Tap an element to select.

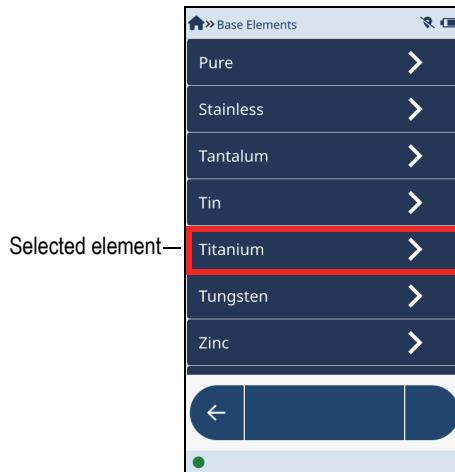
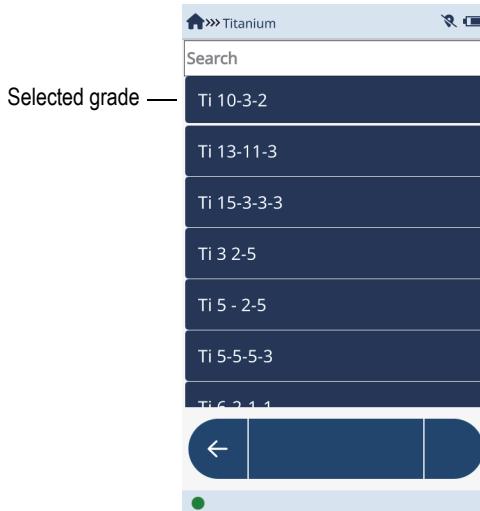


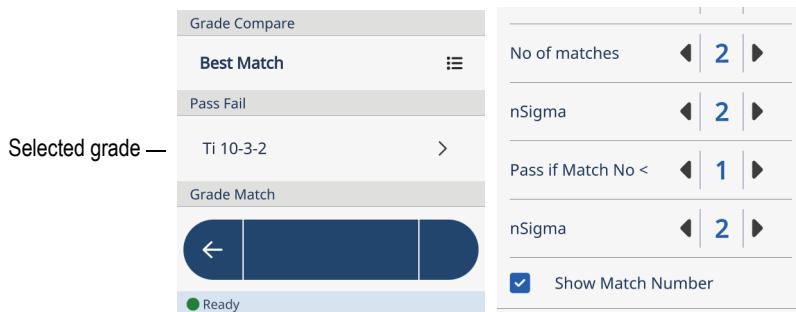
Figure 2-60 Base Elements screen — Selected element

- On the next screen, tap an element grade (see Figure 2-61 on page 77).  
This is the grade that **Pass Fail** will use as the reference.



**Figure 2-61** Element grade screen

- Tap the left or right arrow next to **Pass if Match No <** and **nSigma** to set boundaries for the pass or fail (see Figure 2-62 on page 77).

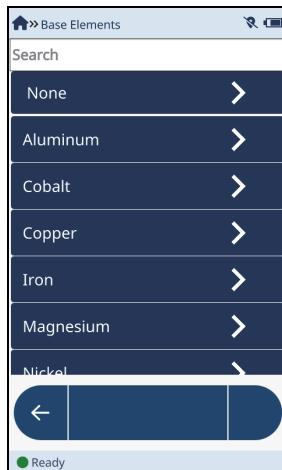


**Figure 2-62** Pass Fail reference grade

After the pass/fail parameters have been set, the test pass/fail information is displayed in **Live View**.

## To turn off Pass Fail

1. Tap an element in the **Pass Fail** section of the **Grade Match** screen to display the **Base Elements** screen (see Figure 2-63 on page 78).
2. At the top of the list tap **None**.



**Figure 2-63 Base Elements screen**

3. Tap **None** on the next screen to confirm the selection (see Figure 2-64 on page 79).

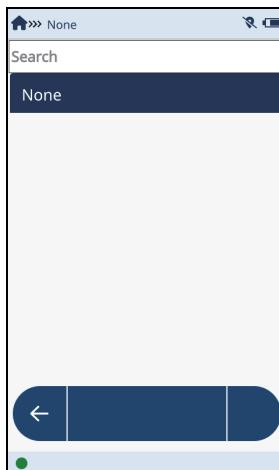


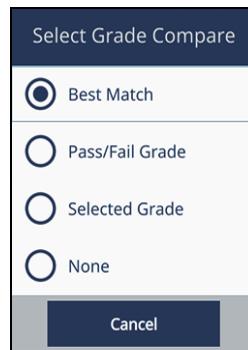
Figure 2-64 None confirmation

#### 2.2.2.4 Grade Compare

**Grade Compare** determines which library grade to compare against the measured grade.

##### To compare grades

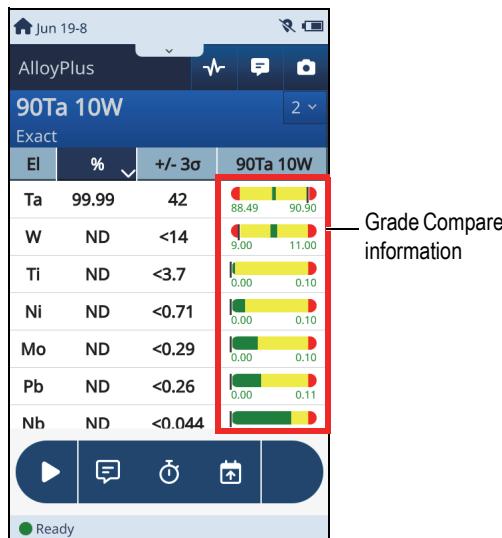
1. Tap the list button (  $\equiv$  ) in the **Grade Compare** section of the **Grade Match** screen.
2. Select one of the options in the **Select Grade Compare** dialog box (see Figure 2-65 on page 80).
  - **Best Match** — Compares measured chemistry to the closest match.
  - **Pass/Fail Grade** — Compares measured chemistry with the Pass Fail grade.
  - **Selected Grade** — Compares measured chemistry with a specific selected grade.
  - **None** — No grade comparison is made. This option is useful if you know what the material is supposed to be.



**Figure 2-65 Select Grade Compare dialog box**

When a test is run in **Live View** with one of the Grade Compare choices set to something other than None an added column is displayed. The column displays the following information:

- The comparison grade
- A color-coded concentration bar for each specified element showing the upper and lower boundaries, and where the detected percentage falls within (or outside of) the boundaries (see Figure 2-66 on page 81).



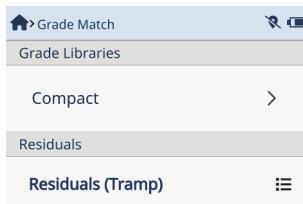
**Figure 2-66 Grade Compare information in Live View**

### 2.2.3 Grade Libraries

Grade libraries are available only in the Alloy, Alloy Plus, and Hot Alloy Plus methods.

You can edit all libraries, including the Factory Grade library. However, Evident does not recommend that you edit the Factory Grade library. Instead, Evident suggests that you duplicate the Factory Grade library as a user library, then make any edits on the newly created user library.

The **Libraries** section of the screen, accessed from the **Grade Match** icon, enables you to select, load, and edit one or more grade libraries (see Figure 2-67 on page 81).



**Figure 2-67 Grade Library section of Grade Match screen**

### 2.2.3.1 Loading Grade Libraries

The **Grade Libraries** screen enables you to select the libraries that are referenced during testing.

#### To load a grade library

1. Tap the arrow ( ) to display the **Grade Libraries** screen (see Figure 2-68 on page 82).
2. Select one or more check-boxes to load the corresponding libraries.

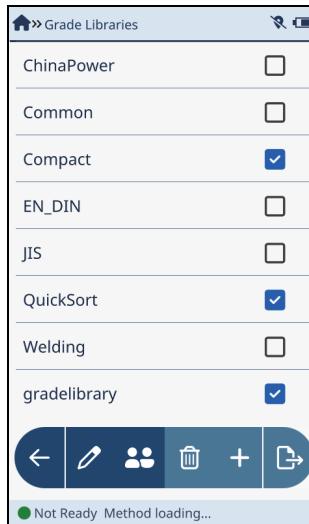
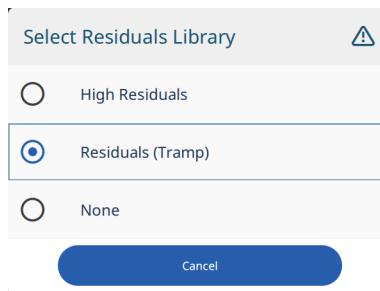


Figure 2-68 Grade Libraries screen

#### To load a residuals library

The Residual library specifies by base material what residual (tramp) elements are tolerated and at what concentration.

1. Tap the list button ( ) in the **Libraries** section of the screen (see Figure 2-67 on page 81).
2. In the **Select Residuals Library** dialog box, select a check-box to load a residuals library (see Figure 2-69 on page 83).



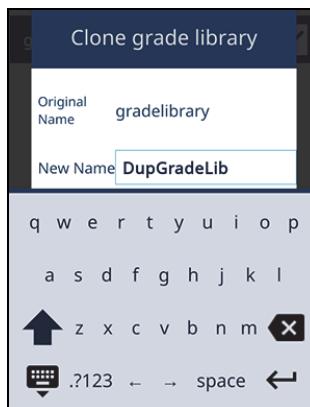
**Figure 2-69 Select Residuals Library dialog box**

### 2.2.3.2 Duplicating Grade Libraries and Individual Grades

You can duplicate grade libraries and grades within libraries using the **Grade Libraries** screen.

#### To duplicate a grade library

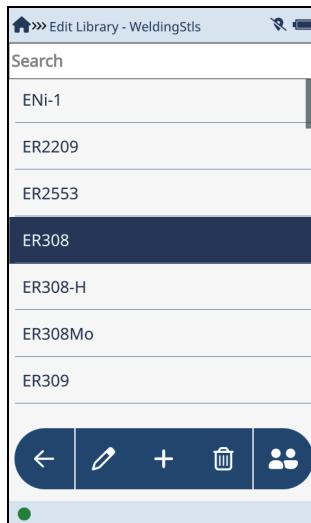
1. On the **Grade Libraries** screen, select a library and tap the **Clone** button ( ) to open the **Clone Grade Library** dialog box (see Figure 2-70 on page 83).
2. Enter a library name in the **New Name** box.
3. Dismiss the virtual keypad, and then tap **OK** to create the duplicate grade library.



**Figure 2-70 Clone Grade Library dialog box**

## To duplicate a grade

1. On the **Grade Libraries** screen, select a library and tap the **Edit** button (  ) to open the **Edit Library** screen (see Figure 2-71 on page 84).
2. Tap to select a grade.



**Figure 2-71** Edit Library screen

3. Tap the **Clone** button (  ) to open the **Clone Grade** dialog box (see Figure 2-72 on page 85).
4. Enter a grade name in the **New Name** box.
5. Dismiss the virtual keypad and then tap **OK** to create a duplicate grade.

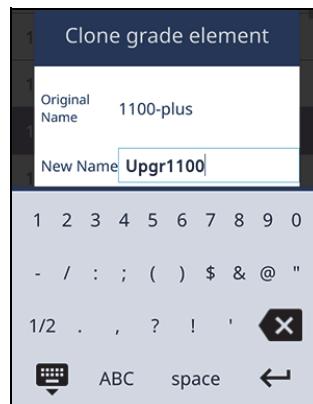


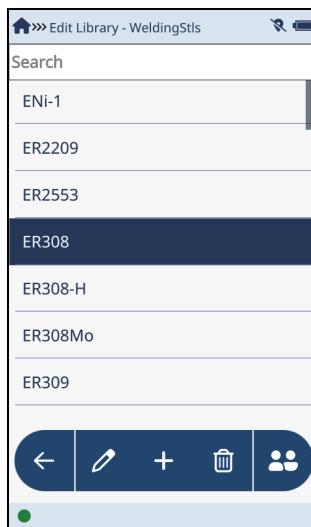
Figure 2-72 Clone Grade dialog box

### 2.2.3.3 Deleting Library Grades and Library Grade Elements

You can delete an entire library grade or individual library grade elements using the **Grade Libraries** screen.

#### To delete a library grade

1. On the **Grade Libraries** screen, tap the **Edit** button (  ) to open the **Edit Library** screen (see Figure 2-73 on page 86).



**Figure 2-73** Edit Library screen

2. Tap to highlight a library grade.

3. Tap the **Delete** button (  ).

The **Delete** button turns red to indicate that the selected library grade will be deleted when you tap again to confirm the deletion (see Figure 2-74 on page 87).

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**NOTE**

You have three seconds to tap the **Delete** button while it is red to confirm the deletion. After three (3) seconds the **Delete** button reverts back to blue, and you must tap it again to start over the delete action.

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4. Tap the **Delete** button again (while it is still red) to confirm the deletion.

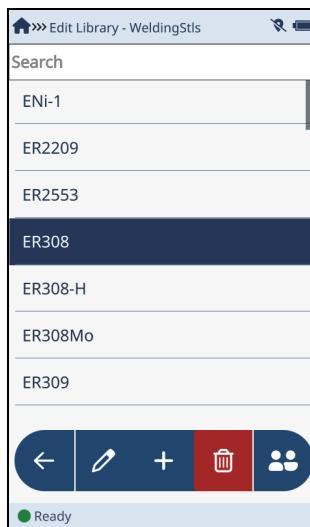


Figure 2-74 Library grade delete confirmation

### To delete a grade element

1. On the **Grade Libraries** screen, tap the **Edit** button (  ) to open the **Edit Library** screen (see Figure 2-75 on page 88).

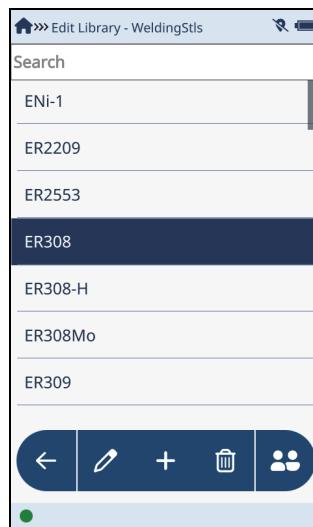
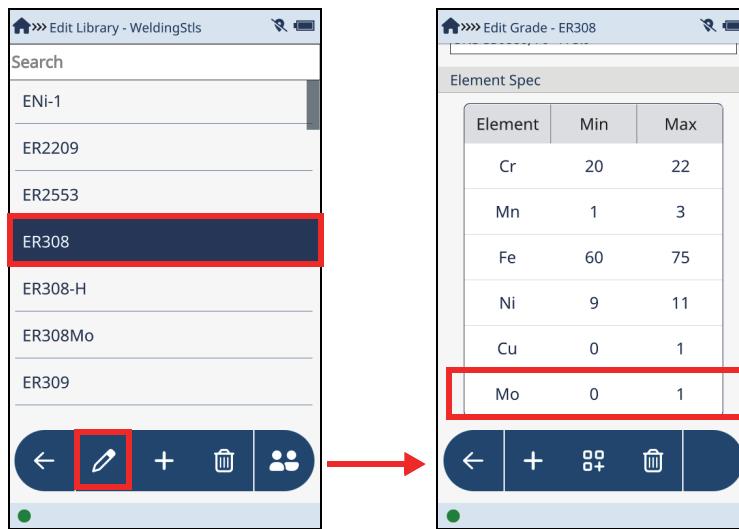


Figure 2-75 Edit Library screen

2. Tap to highlight a library grade, and then tap the **Edit** button (  ) to open the **Edit Grade** screen (see Figure 2-76 on page 89).
3. In the **Edit Grade** screen, tap to highlight an element.



**Figure 2-76 Edit Library screen (left), Edit Grade screen (right)**

4. Tap the **Delete** button ( ).

The **Delete** button turns red to indicate that the selected element will be deleted when you tap again to confirm the deletion (see Figure 2-74 on page 87).

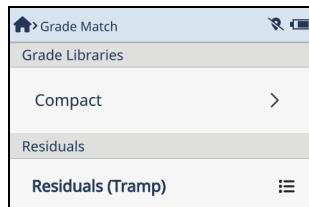
**NOTE**

You have three seconds to tap the **Delete** button while it is red to confirm the deletion. After three (3) seconds the **Delete** button reverts back to blue, and you must tap it again to start over the delete action.

5. Tap the **Delete** button again (while it is still red) to confirm the deletion.

#### 2.2.3.4 Editing Grade Libraries

The **Edit Library** screen provides several configuration options that can be applied to the Vanta analyzer's libraries. New grades can be added to any library, and existing grades can be edited. Also, user-defined libraries can be renamed. Libraries are edited in the **Libraries** section of the **Grade Match** screen (see Figure 2-77 on page 90).



**Figure 2-77 Grade Library section of Grade Match screen**

### To select a library for editing

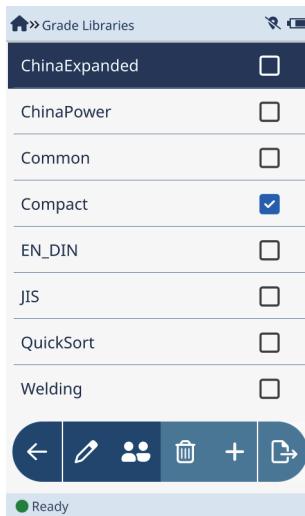
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#### **NOTE**

You can edit any library, including the Factory Grade library. However, Evident does not recommend that you edit the Factory Grade library.

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1. Tap the arrow ( ) to display the **Grade Libraries** screen (see Figure 2-78 on page 91).
2. Select a check-box.



**Figure 2-78 Grade Libraries screen**

### To select a grade for editing

1. In the **Grade Libraries** screen (see Figure 2-78 on page 91), tap the **Edit** button (  ) to open the **Edit Library** screen (see Figure 2-79 on page 92).
2. Tap to select a grade, and then tap the **Edit** button (  ) to open the **Edit Grade** screen (see Figure 2-79 on page 92).

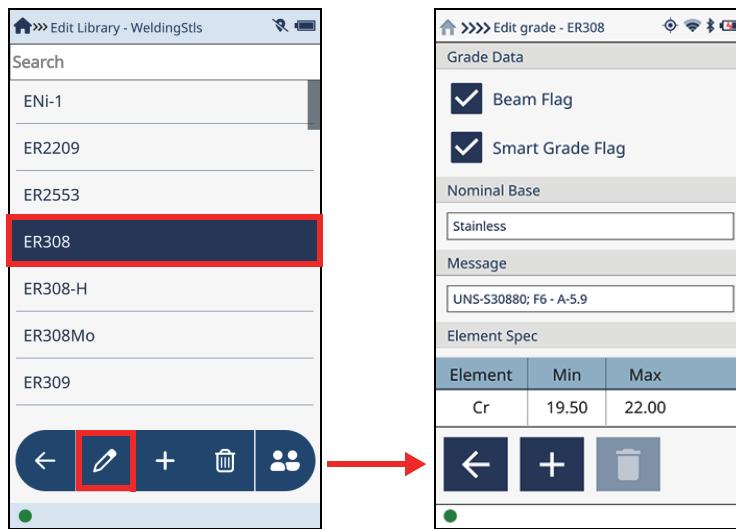


Figure 2-79 Edit Library screen (left), Edit Grade screen (right)

### To edit grade data

In the Grade Data section (see Figure 2-80 on page 92) the following options are available:

- Tap the **Beam Flag** check-box to apply the grade parameters to Beam 1 (Alloy mode only), or both beams (Alloy Plus and Hot Alloy Plus modes only).
- Tap the **Smart Grade Flag** check-box to maximize speed and sorting accuracy. When you select the **Smart Grade Flag** check-box, the current grade is then selected to automatically extend the testing time if necessary for proper analysis. Otherwise, the minimum specified testing time is applied.

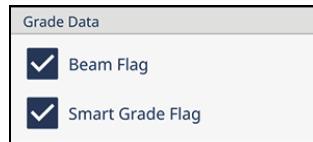


Figure 2-80 Grade Data section of Edit grade screen

## To create or edit a grade match message

1. Tap the **Message** text box (see Figure 2-81 on page 93) to edit an existing message or create a new message.

To select a portion of a message or the entire message, tap and drag your finger on the portion you want to select.



Figure 2-81 Message selected in dialog box

2. Type a message using the virtual keypad.
3. Dismiss the virtual keypad, and then tap **OK** to create or edit the message.

## To change existing elements in a grade

1. In the **Element Spec** section of the **Edit Grade** screen (see Figure 2-82 on page 94), tap an element to change it in the **Edit Element Specification** dialog box (see Figure 2-82 on page 94).
2. Tap the **Min** or **Max** box to change the percentage range of an element within a test sample.

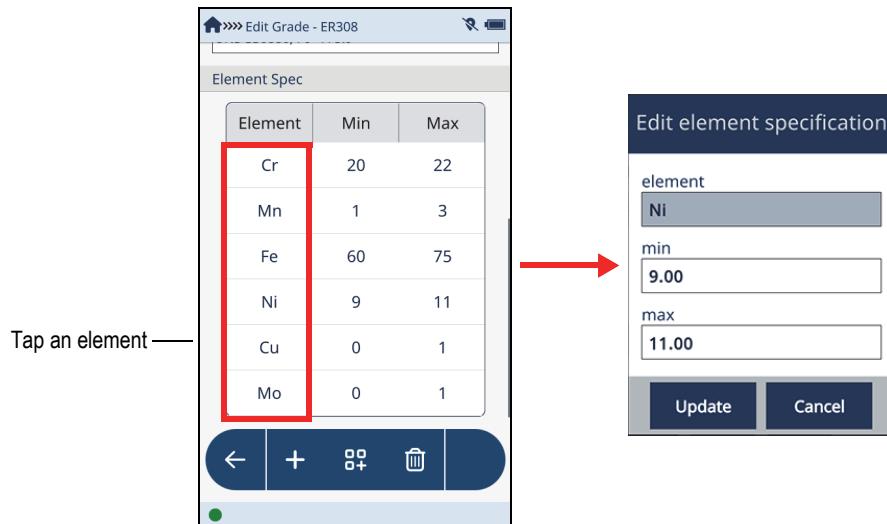


Figure 2-82 Edit Grade screen (left), Edit Element Spec dialog (right)

### 2.2.3.5 Adding Grades

You can add element grades to libraries using the **Grade Libraries** screen.

#### To add a grade

1. In the **Grade Libraries** screen, tap the **Edit** button (  ) to open the **Edit Library** screen (see Figure 2-83 on page 95).
2. Tap the **Add** button (  ) to open the **Add Grade** dialog box (see Figure 2-83 on page 95).
3. Enter an element name in the **New Name** box.

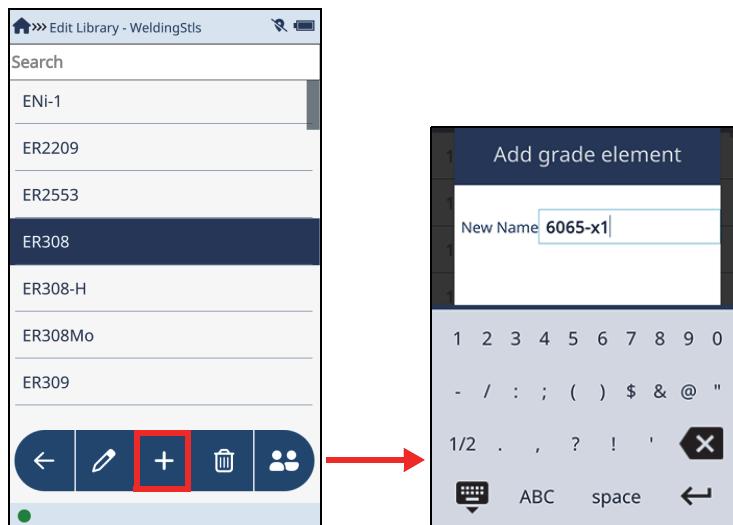


Figure 2-83 Edit Library screen (left), Add Grade Element dialog (right)

4. Dismiss the virtual keypad, and then tap **OK** to open the **Edit Grade** screen for the new element.
5. Complete the information in the Grade Data and Message areas of the screen.
6. Tap the **Add** button ( + ) to open the **Element Order** dialog box (see Figure 2-84 on page 96).



**Figure 2-84** Element Order dialog box

7. Tap an element to select it, and then tap **Ok**.  
The selected element appears in the Element Spec.
8. To add more elements, repeat steps 6 and 7.

## 2.3 RoHS and RoHS Plus Methods

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### **IMPORTANT**

RoHS is not compatible with Rh anode instruments. It is available in the following models: V2CW, V2CA, and V2ES.

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RoHS and RoHS Plus methods test polymer, alloy, and mixed samples for RoHS regulated elements Cr, Br, Cd, Hg, and Pb.

### 2.3.1 RoHS Action Level

Set the action level and view the EAC (Eurasian Conformity) settings. EAC settings are always visible in the **RoHS Action Level** screen.

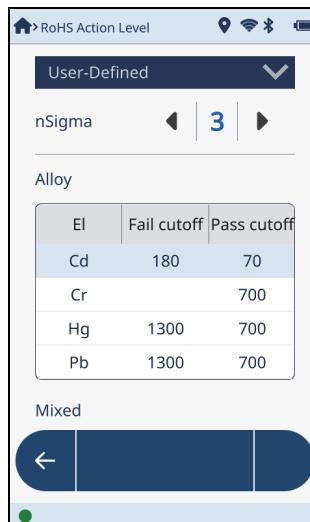
## To open the RoHS Action Level screen

- ◆ Tap the RoHS Action Level button () [either in the **Menu Tray** or on the **Live View** screen, if available] to display the **RoHS Action Level** screen (see Figure 2-85 on page 97).

## To set the action level

1. Tap the down arrow to select **User-Defined**.
2. Enter an **nSigma** value (the default is 3.0).

The **nSigma** value is multiplied by the measurement  $\pm$  value and broadens the inconclusive range. So the sample will not pass until all RoHS elements are below the pass cutoff plus **nSigma** times the  $\pm$  value. And the sample will not be classified as failed unless an element is above the fail cutoff plus **nSigma** times the  $\pm$  value.



**Figure 2-85 RoHS Action Level screen**

## To view the EAC settings

- ◆ Flick down to view the **Alloy**, **Mixed**, and **Plastic** action level pass/fail values.

## To edit user defined settings

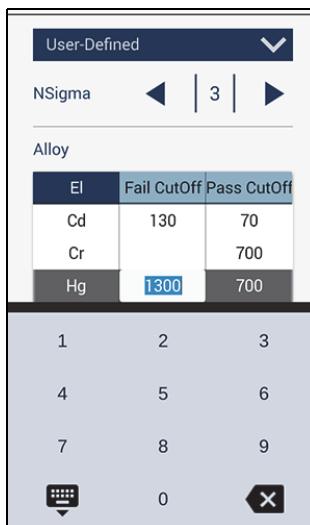
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### NOTE

EAC Defaults are set at the factory. In some circumstances, you may want to apply your own screening values in place of the default EAC **Fail Cutoff** and **Pass Cutoff** settings.

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1. Double-tap a **Fail Cutoff** or **Pass Cutoff** box to highlight the value and display the keypad (see Figure 2-86 on page 98).
2. Enter a value.



**Figure 2-86 Defining cutoff value**

### NOTE

Each classification (**Alloy**, **Mixed**, or **Plastic**) has its own set of action levels. For example, changing **Plastic** settings will not affect **Mixed** settings.

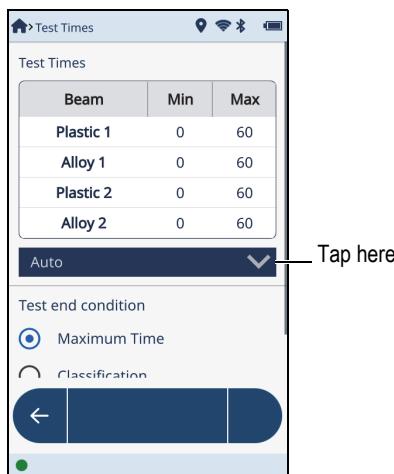
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## 2.3.2 Force Classification

Force classification parameters aid in the identification of certain materials.

### To set Force Classification

1. Tap the **Test Times** button (  ) [either in the Menu Tray or on the **Live View** screen, if available] to display the **Test Times** screen.
2. Tap the down arrow to display the force classifications (see Figure 2-87 on page 99).



**Figure 2-87** RoHS Test Times screen

3. Choose the appropriate classification method (see Figure 2-88 on page 100):
  - **Auto:** Allow the analyzer to choose which calibration matches the current sample.
  - **Forced Plastic:** Always test the sample using the polymer calibration. Also used when testing mixed samples.
  - **Forced Alloy:** Always test the sample using the alloy/metals calibration. This option is useful when testing aluminum alloys, as these will not be automatically classified as alloy.

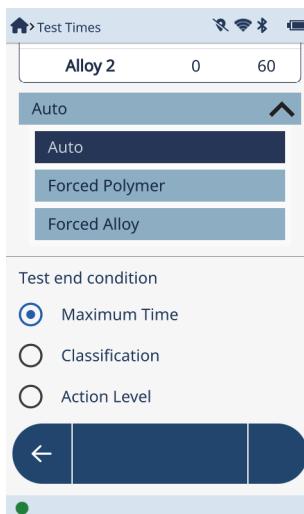


Figure 2-88 Force Classification options

## 2.4 Geochem (1, 2, and 3) Methods

The **Compound** setup parameter is unique to the Geochem methods.

In the **Geochem** methods, you can display the concentration of elements in their compound form. Note that XRF analyzers are elemental analyzers and are not capable of distinguishing compounds. However, you may want to compare to data that is in the form of an oxide or some other compound form. The Vanta analyzer can display the calculated concentration of compounds based on their atomic weights. For example, the Vanta measures iron (Fe) but can display Fe<sub>2</sub>O<sub>3</sub>.

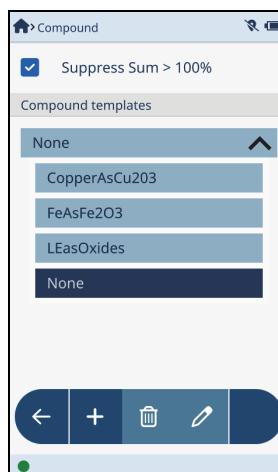
### To open the Compound screen

1. Tap the **Compound** button () [either in the Menu Tray or on the **Live View** screen, if available] to display the **Compound** screen.

**NOTE**

The compound calculation evaluates the entered compound (and does not directly measure it). So it is possible to get data where the concentration adds up to more than 100%. The Vanta analyzer default setting suppresses sums greater than 100% to prevent the “**Caution: Sum > 100%**” message from being displayed in the **Live View** screen.

2. Tap the **None** down arrow in the **Compound Templates** section of the screen to display the list of existing templates (see Figure 2-89 on page 101).



**Figure 2-89 Compound screen**

3. Tap the **Add** button ( ) to add a new template (see Figure 2-90 on page 102).



Figure 2-90 Adding new template

4. Tap the **Add** button ( ) to display the **Select Compounds** dialog box (see Figure 2-91 on page 102).



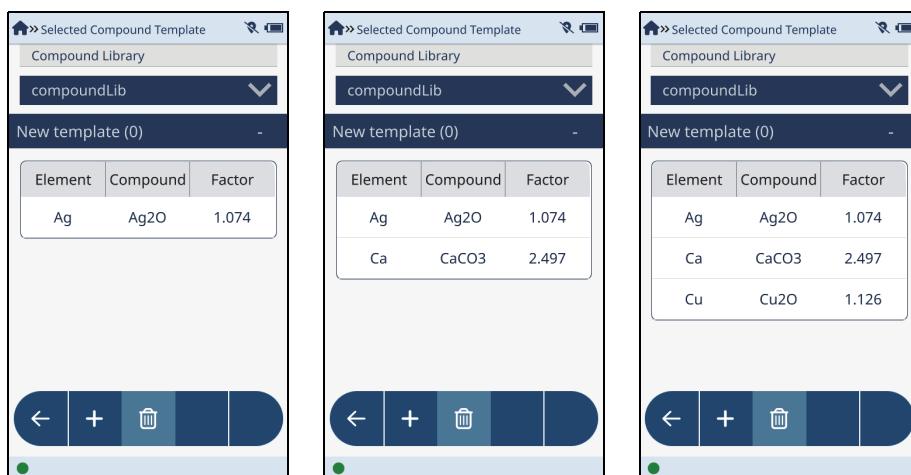
Figure 2-91 Select Compounds dialog

- Tap a compound in the list to add it to the template.

Examples of acceptable compound names (forms) are  $\text{Fe}_3\text{O}_2$  or  $\text{Fe}_2(\text{OH})_2$ . The factor for the compound calculation (using  $\text{Fe}_2(\text{OH})_2$  as an example) is based on:

$$\frac{\text{Total atomic weight for } \text{Fe}_2(\text{OH})_2}{\text{Total atomic weight for } \text{Fe}_2}$$

- Continue adding compounds until your template is finished (see Figure 2-92 on page 103).



**Figure 2-92 Sequence of adding three compounds**

- Tap the **Back** button ( ) to return to the previous screen.
- Tap the **Edit** button ( ) and then tap and hold on the template name to give the new template a name.
- Enter a name in the dialog box and tap **Return** to save the name.
- Tap the **Back** button ( ).

The newly added compound is listed in the **Live View** screen after running a test.

## To delete a compound template

1. In the **Compound templates** list, tap the template that you want to delete.

2. Tap the **Delete** button (  ).

The **Delete** button turns red to indicate that the selected template will be deleted when you tap again to confirm the deletion (see Figure 2-93 on page 104).

---

### NOTE

You have three seconds to tap the **Delete** button while it is red to confirm the deletion. After three (3) seconds the **Delete** button reverts back to blue, and you must repeat step 2 to start over the delete action.

---

3. Tap the **Delete** button again (while it is still red) to confirm the deletion.

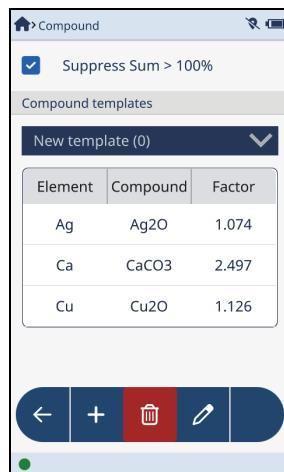


Figure 2-93 Compound template delete confirmation

## 3. Testing

---

---

### 3.1 Running a Test

The instructions in this section describe all of the actions (procedures) required to start and stop a test. Your analyzer may require specific procedures to start or stop a test. The procedures you will use are set by Evident at the factory, as mandated by the regulations in your region. There is no provision for you to change those regional settings. Please contact Evident with any questions.

Regional settings may activate a secondary infrared (IR) proximity sensor. The IR proximity sensor is an additional safety interlock measure, which stops the test if no sample is detected in front of the analyzer measurement window. Because the secondary IR proximity sensor relies on sample reflectivity, the sensitivity of the proximity sensor depends on the type of sample. Not all features are on every Vanta analyzer model.

The first screen displayed after logging into the Vanta analyzer is the Live View, where you can run a test and then view real-time analysis results.

#### To begin a test

1. Position the measurement window of the analyzer over the test sample.
2. Begin the test using one of the following methods:
  - ◆ Tap the **Start** action button ()  
OR
  - ◆ Pull the trigger.  
OR

- ◆ Pull and hold the trigger until the test has completed (satisfies the deadman trigger option if selected in the **Safety** screen).  
OR
- ◆ Pull and hold the trigger and press the Back navigation button ( ) until the test has completed (if settings that satisfy regional requirements for two-handed trigger operation have been activated at the factory).
  - The test begins, using the currently set parameters.
  - The status bar shows the progress of the test.
  - Results are displayed during testing and upon test completion.

## To stop a test

- ◆ Press the **Stop** button ( ).  
OR
- ◆ Pull the trigger (if the deadman trigger or two-handed trigger options are *not* selected in the **Safety** screen.)  
OR
- ◆ Release the trigger if the deadman trigger is selected in the **Safety** screen.  
OR
- ◆ Release either the trigger or the Back navigation button ( ) (if settings that satisfy regional requirements for two-handed trigger operation have been activated at the factory).

When the test is complete, tap the method name to view the results.

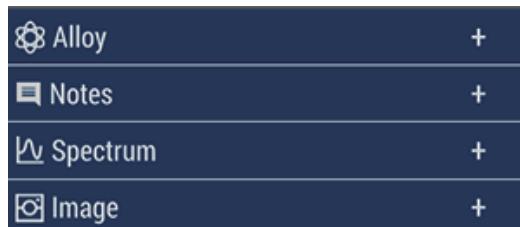


Figure 3-1 Expandable bars

At the end of a day of testing, it is a good practice to export the results to one of the following:

- A PC via a USB cable
- An installed microSD card
- A storage device through the wireless LAN
- A storage device through Bluetooth®
- A USB flash drive.

---

**NOTE**

See “Export Settings” on page 49 for details about exporting data.

---

### 3.1.1 Automatically Exported Test Results

---

**NOTE**

The correct export settings must be made before results will automatically be exported (see “Export Settings” on page 49).

---

When the export settings are properly configured, test results are automatically exported immediately after the test completes.

## 3.2 Viewing Elemental Results

As a test is run, data begins to populate the Elemental Results expandable bar in Live View. When testing is complete, you can view the fully populated final results (see Figure 3-2 on page 108).

Tap the % or +/- column headings to reverse the display order.

Tap the EL (element) column heading to change the display order to A-Z, Z-A, or the display order specified in the Element Order screen (see “Element Order” on page 58).



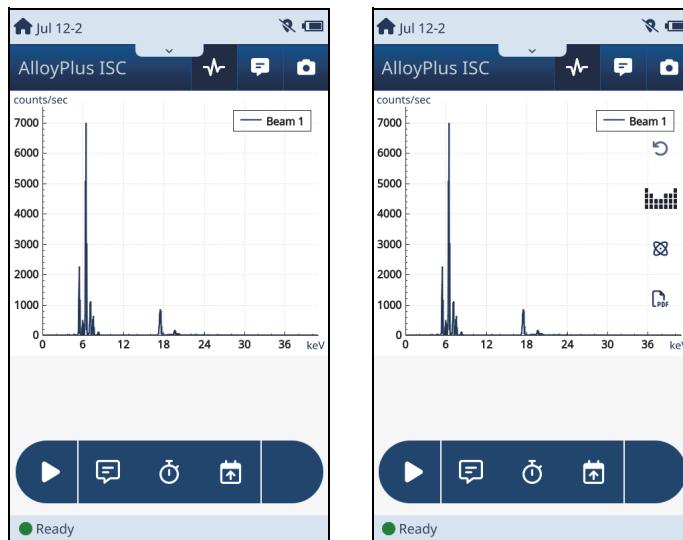
**Figure 3-2** Live View – Elemental Results

### 3.3 Viewing the Spectrum Graph

The spectrum graph can be manipulated to zoom in and scroll for close inspection. The XY coordinates change as you zoom and pan.

#### To activate the spectrum graph

1. Tap the Spectrum button ( ) to open and view the spectrum image.
2. Tap and hold the spectrum image until it expands to fill the available screen area (see Figure 3-3 on page 109).



**Figure 3-3 Spectrum — Unexpanded (left) and expanded (right)**

**NOTE**

When dragging to zoom and pan, move your finger slowly and deliberately across the screen. You can always return to the initial view by tapping the undo (undo icon) icon.

### To zoom in and out

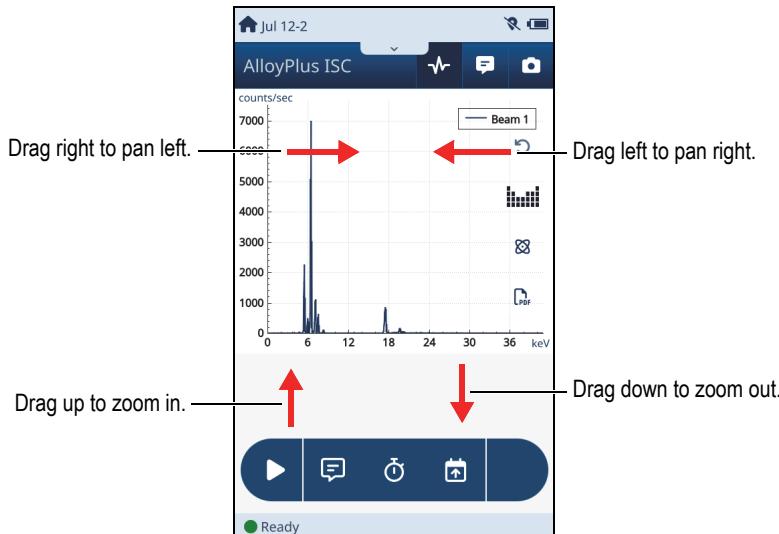
- ◆ Drag up from near the bottom of the spectrum to zoom in or drag down from near the top of the spectrum to zoom out. If the spectrum disappears from view, try panning to the right to bring it back (see the next step). As the spectrum peak of interest becomes larger, you can use that peak as a point of reference for zooming and panning (see Figure 3-4 on page 110).

### To pan left and right

- ◆ Drag from the left or right side of the screen in a straight line to pan.

The spectrum should move in the direction of your finger. If the spectrum gets larger or smaller, you are not moving your finger in a straight line across the screen.

As you pan the spectrum, the counts per second scale on the left changes to accommodate the height of the spectrum as it varies (see Figure 3-4 on page 110).



**Figure 3-4 Spectrum zoom and pan**

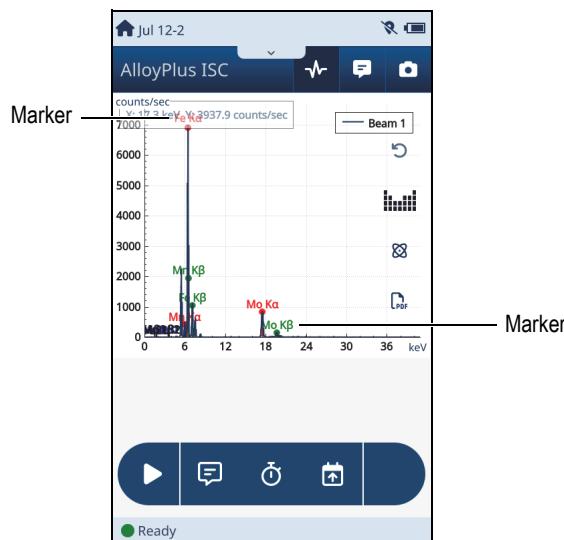
### 3.3.1 Spectrum Markers

You can display markers on the spectrum to compare samples or to verify the accuracy of a result.

Markers consist of lines that represent element composition. The lines reach from the base to the peak concentration point of a given element. At the peak point is text that identifies the element.

#### To display spectrum markers

1. Activate the spectrum graph.
2. Optionally zoom and pan to display a specific peak.
3. Tap a spectrum peak to make markers appear (see Figure 3-5 on page 111).



**Figure 3-5 Marker on spectrum**

#### To select additional elements for marker display

1. Tap the Elements icon (  ) to display the **Select Elements** dialog box.
2. Tap the check-box of the element you want marked and displayed.
3. Tap **OK**.

#### To select additional elements for marker display

1. Tap the Element Lines icon (  ) to display the **Select Element Line** dialog box.
2. Tap the check-box of the element line you want displayed.
3. Tap **Remove All** to remove all element markers from the display.

### 3.3.2 Saving an Image of the Spectrum

You can save an image of the spectrum as a PDF file.

## To save a spectrum as PDF

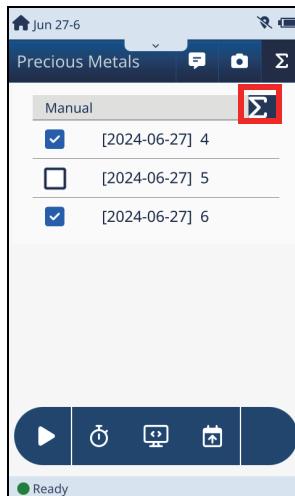
- ◆ Tap the PDF icon (  ) in the spectrum screen.

## 3.4 Manually Averaging Results

When averaging is in manual mode you can choose to exclude certain results from averaging. For instructions on how manual averaging mode is set, see “To manually run and average tests” on page 33.

### To exclude certain results from averaging

1. After more than one test has been run, you can tap the **Live Average** button (  ) to display the manual averaging list of results.
2. Tap one or more of the check-boxes to exclude those results from the averaging calculations (see Figure 3-6 on page 112).
3. Tap the **Average** button (  ) above the list to begin averaging (see Figure 3-6 on page 112).



**Figure 3-6 Live View — Results 2 and 4 excluded**

## 4. Standard and Optional Features

---

The Vanta analyzer has standard and optional features that can be configured before initial testing. The buttons that represent these features are located in the **Menu Tray** (Hardware and System sections), and in the **System Tray**. Most of the features in this section are seldom used after initial setup.

### 4.1 Standard Features

The standard features described below can be found on every Vanta.

#### 4.1.1 Network Folder

---

**NOTE**

The wireless LAN must be enabled before you can use this feature. See “Wireless LAN” on page 133.

---

The **Network Folder** lists folders that can be mounted to receive exported data. Additional folders can also be added to the list.

---

**NOTE**

Your IT department may be needed to set up the permissions that allow you to share a network folder.

---

## To display the Network Folder screen

- ◆ Tap the **Network Folder** button (  ) in the **Menu Tray** to display the **Network Folder** screen.

## To mount a network folder

---

### NOTE

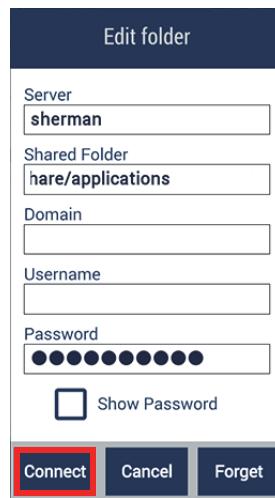
The network folder must properly defined before it can be mounted. See “To add a new folder” on page 116.

- 
1. Tap a network folder in the **Network Shared Folders** list (see Figure 4-1 on page 114).



Figure 4-1 Network Shared Folders list

2. Tap **Connect** in the **Edit Folder** dialog box (see Figure 4-2 on page 115).



**Figure 4-2 Edit Folder dialog box**

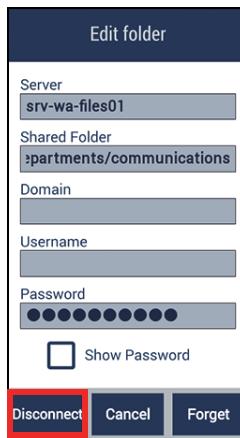
The “Mounted” annotation is displayed under the folder you selected (see Figure 4-3 on page 115).



**Figure 4-3 Folder successfully mounted**

#### To disconnect a mounted folder

1. Tap the mounted network folder (see Figure 4-3 on page 115).
2. Tap **Disconnect** in the **Edit Folder** dialog box (see Figure 4-4 on page 116).



**Figure 4-4 Disconnect a mounted folder**

## To add a new folder

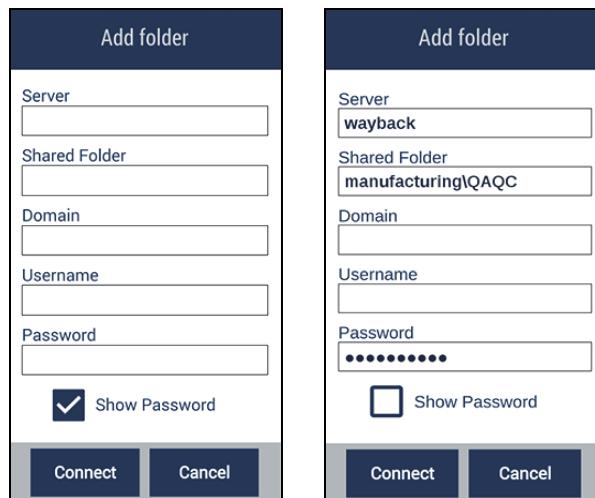
1. Tap the **Add** button (+) in the **Network Folder** screen.
  2. Fill in the boxes in the **Add Folder** dialog box (see Figure 4-5 on page 117).
- 

### NOTE

To display the backslash character (\) on screen two of the special character keypad, tap (.?123) on the alphabet keypad, then tap (1/2).

---

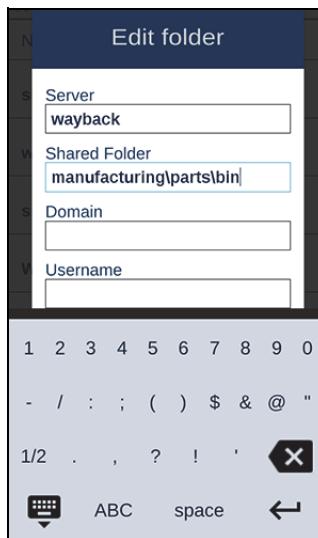
3. Tap **Connect** to accept the changes and connect to the folder.



**Figure 4-5** Empty (left) and completed (right) Add folder dialog boxes

### To change folder information

1. Tap an unmounted network folder in the **Network Shared Folders** list (see Figure 4-1 on page 114).
2. Tap an IP address (see Figure 4-1 on page 114).
3. Tap **Edit** in the **Edit Folder** dialog box.
4. Tap in a field, and then edit the information (see Figure 4-6 on page 118).
5. Dismiss the keypad, and then tap **Connect** to accept the changes and connect to a folder using the updated information.



**Figure 4-6 Edit Folder (editing enabled)**

### To remove a folder from the list

1. Tap a folder (mounted or unmounted) in the **Network Shared Folders** list (see Figure 4-3 on page 115).
2. Tap **Forget** to remove the folder from the **Network Shared Folders** list (see Figure 4-7 on page 119).



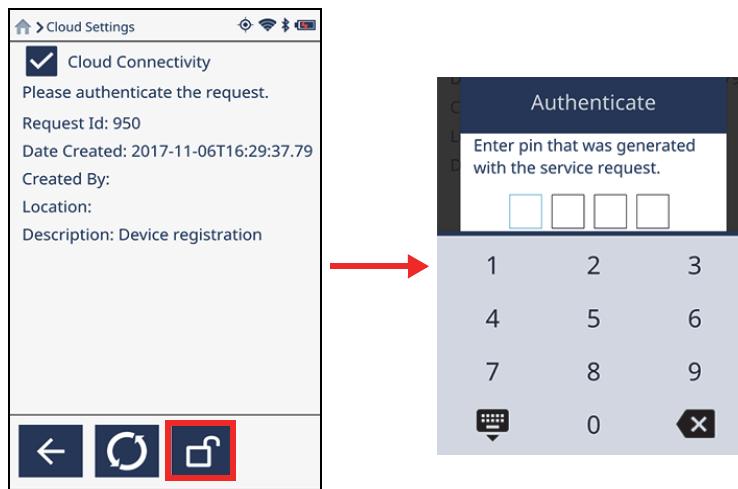
**Figure 4-7 Edit Folder — Forget**

#### 4.1.2 Cloud Settings

Cloud Settings enables you to register and connect your Vanta to the Evident Cloud.

##### To configure the cloud settings

1. Go to the Evident Cloud ([www.EvidentScientific.com](http://www.EvidentScientific.com)), register your Vanta, and obtain a PIN.
2. In the Vanta **Menu Tray**, tap the **Cloud Settings** button (  ) to open the Vanta **Cloud Settings** screen (see Figure 4-8 on page 120).
3. Tap the **Lock** button, and then enter the PIN (that you obtained from the cloud) in the **Authenticate** dialog box.



**Figure 4-8** Cloud Settings screen

4. When the PIN is authenticated, the **Cloud Settings** screen indicates that the instrument is connected to the cloud (see Figure 4-9 on page 120).



**Figure 4-9** Vanta connected in Cloud Settings screen.

If screen sharing is configured in the Evident Cloud, the **Share Screen** check-box appears in the **Cloud Settings** screen.

### 4.1.3 GPS

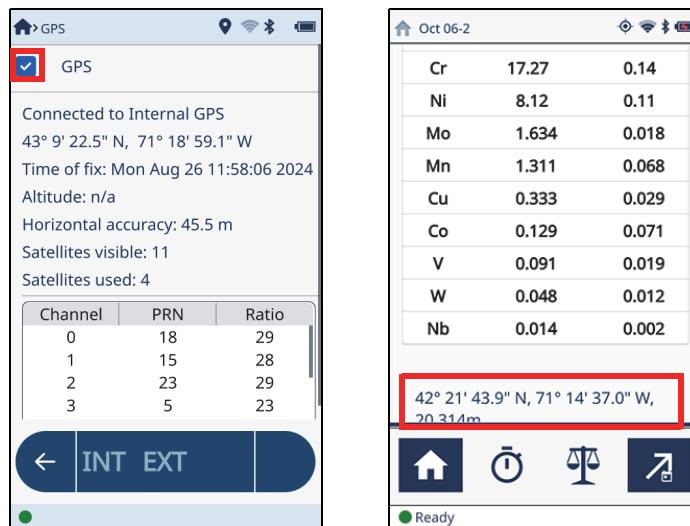
Turns on the Vanta GPS (Global Positioning System). In the **Live View** screen when GPS is on, the current GPS coordinates are displayed below each test result.

#### To enable GPS

1. Tap the GPS button () in the **Menu Tray** to open the Vanta **GPS** screen.
2. Select the check-box to turn on the GPS (see Figure 4-10 on page 121, left).  
The Live View screen will display the current GPS coordinates (see Figure 4-10 on page 121, right).

#### NOTE

Ensure that the **Show GPS** check-box is checked in the **Method Display** screen.



**Figure 4-10** GPS screen (left), GPS coordinates in Live View (right)

## To quickly turn GPS on or off

1. Close the **Menu Tray** (if open), and then swipe down anywhere on the left side of the menu bar to open the **System Tray**.
2. Tap the **GPS** action button (  ) to turn GPS on or off.

### 4.1.4 Date & Time

Set the date and time manually, or set the Vanta to automatically synchronize the date and time when it is connected to a network.

#### To automatically synchronize the date and time

1. Tap the **Date & Time** button (  ) in the **Menu Tray** to open the **Date & Time** screen (see Figure 4-11 on page 122).
2. Make sure that the **Automatic date & time** check-box is selected to update the time whenever the instrument is connected to a server.

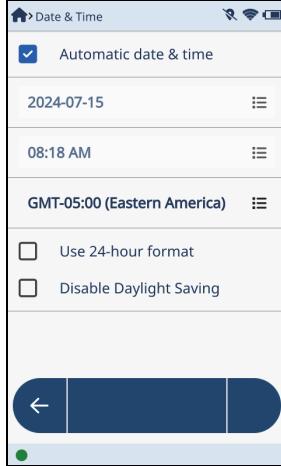


Figure 4-11 Date & Time screen

## To choose the display format

1. To choose the 12-hour format, clear the **Use 24-hour format** check-box.
2. To choose the 24-hour format, select the **Use 24-hour format** check-box.

## To manually set the date and time

1. Make sure that the **Automatic date & time** check-box is cleared.
2. Tap the top list button (  $\equiv$  ) to open the **Set Date** dialog box (see Figure 4-12 on page 123).
3. Flick up or down on the year, month or day to set the correct date.
4. Tap **OK**.

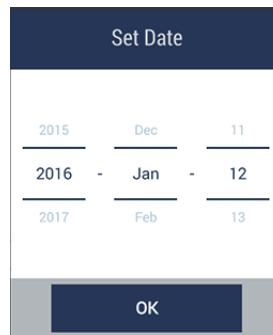


Figure 4-12 Set Date dialog box

5. Tap the middle list button (  $\equiv$  ) to open the **Set Time** dialog box (see Figure 4-13 on page 124).
6. Flick up or down on the hour, minute, or AM/PM to set the correct time.
7. Tap **OK**.

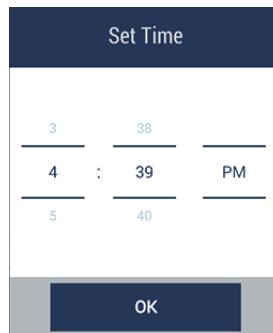


Figure 4-13 Set Time dialog box

8. Tap the bottom (GMT) list button (≡) to open the **Choose Time Zone** dialog box (see Figure 4-14 on page 124).
9. Select the correct time zone.
10. Tap **OK**.



Figure 4-14 Choose Time Zone dialog box

11. Tap to select the **Use 24-hour format** check-box to use twenty-four hour format, or tap to clear the check-box for AM/PM format.

12. Tap to select the **Disable Daylight Saving** check-box to disable daylight savings time, or tap to clear the check-box to use daylight savings time.

#### 4.1.5 Display

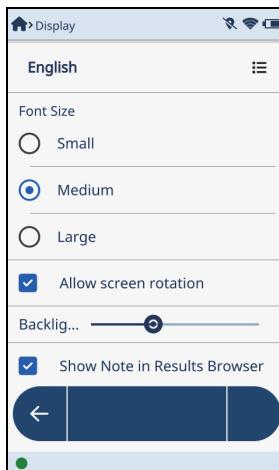
Sets the language, font size, backlight intensity, and screen rotation on or off.

##### To change the Display settings



1. Tap the **Display** button ( ) in the **Menu Tray** to open the **Display** screen (see Figure 4-15 on page 125).
2. To select a font size, tap an option button.
3. To allow the Vanta screen to change orientation, select the **Allow screen rotation** check-box.
4. Drag the **Backlight** slider left or right to change the screen brightness.

The **Backlight** slider sets the brightness of the User Defined setting in the **System Tray** (see “To quickly change the screen brightness” on page 126).



**Figure 4-15 Display screen**

5. To change the user interface language:

- a) Tap the **Language** list button (≡) to open the **Choose Language** dialog box (see Figure 4-16 on page 126).
- b) Tap an option button to select a language.



Figure 4-16 Choose Language dialog box

### To quickly change the screen brightness

1. Swipe down to open the **System Tray**.



2. Tap the **Display** action button ( ).
3. Slide the **Backlight** control to change the screen brightness.

### 4.1.6 Power Settings

The power settings screen is used to control Vanta energy usage. The Vanta has three power profiles that control analyzer energy usage:

---

**NOTE**

When setting the performance and power save presets, make sure the durations are longer than the settings in the **Test Times** screen (see “Test Times” on page 24). Otherwise, the test ends when the screen shuts off.

---

- **Always on** — The touch screen and microprocessor are always on.
- **Performance** — The screen can be set to shut off after a preset time.
- **Power save** — The screen can be set to shut off after a preset time, and the microprocessor can be set to enter sleep mode after a preset time.

### To open the power settings screen



- ◆ Tap the **Power Settings** button ( ) in the **Menu Tray** to open the **Power Settings** screen (see Figure 4-17 on page 128).

### To set the power profile

- ◆ Tap the power profile you want to select a new power profile.

### To turn the cooling fan on or off

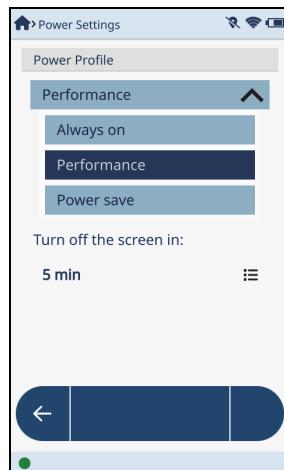
---

**NOTE**

The internal cooling fan is an option that may be installed on your Vanta. See the *Vanta Family X-Ray Fluorescence Analyzer User’s Manual* for more information on installing the optional internal cooling fan.

---

- ◆ Tap the **Enable cooling fan** check-box to either enable or disable the cooling fan.



**Figure 4-17 Power Settings screen**

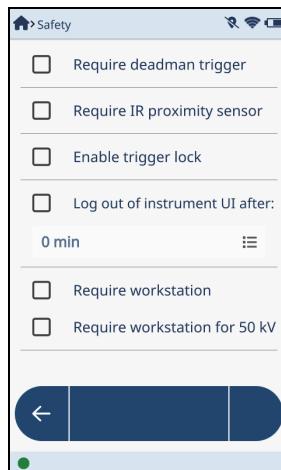
#### 4.1.7 Safety

Sets the deadman trigger, trigger lock, or whether a workstation is required to run a test.

- The deadman trigger requires that you pull and hold the trigger until the test has completed.
- The trigger lock automatically locks the trigger. You cannot run tests while the trigger is locked.
- The workstation requirement mandates that the instrument be connected to an optional Vanta workstation. Also, a workstation is required for 50 kV exposures.

#### To open the Safety screen

- ◆ Tap the **Safety** button () in the **Menu Tray** to open the **Safety** screen (see Figure 4-18 on page 129).



**Figure 4-18 Safety screen**

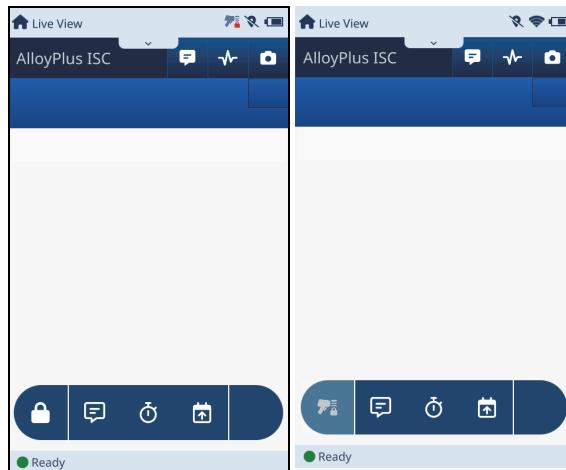
#### To enable the deadman trigger

- ◆ Select the **Require deadman trigger** check-box to enable the deadman trigger.

#### To enable the trigger lock

1. Select the **Enable trigger lock** check-box to lock the instrument trigger.

In live view, the Trigger Locked icon (🔒) replaces the **Start** button (see Figure 4-19 on page 130).



**Figure 4-19 Live View — Trigger locked**

### To unlock the trigger

1. Swipe down to open the menu.
2. Tap the **Trigger Lock** button (  ) to unlock the trigger.

---

#### NOTE

You can also use the **Trigger Lock** button (  ) to lock the trigger.

---

### To enable operation only when connected to a workstation

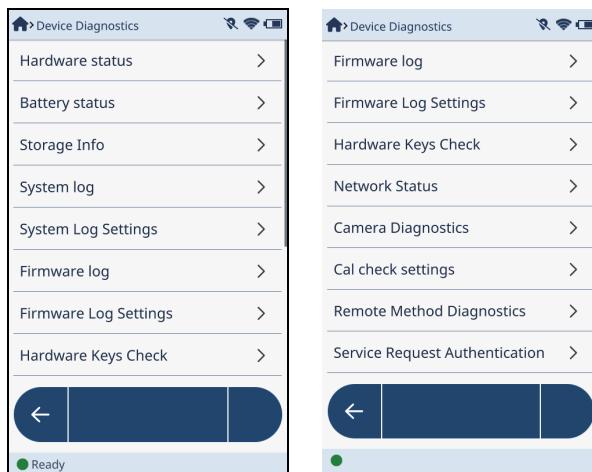
- ◆ Tap **Require workstation** to only enable the instrument to run tests when connected to an optional Vanta workstation.

## 4.1.8 Diagnostics

Use this parameter to view the hardware and battery status and display the system or firmware log.

## To open the Device Diagnostics screen

- ◆ Tap the **Diagnostics** button (  ) in the **Menu Tray** to open the **Device Diagnostics** screen (see Figure 4-20 on page 131).



**Figure 4-20 Device Diagnostics screen**

## To view the diagnostic information

- ◆ Tap the arrow (  ) of a diagnostic category to view the status or log file.

### 4.1.9 About Device

The About Device screen provides the following information about the Vanta:

- **Model** — Information on the model type, serial number, and cameras
- **Versions and Updates** — Information on the software and firmware versions.
- **Legal** — Intellectual property protection information.
- **Regulatory** — Contains the regulatory symbols found on the instrument and in the *Vanta Family X-Ray Fluorescence Analyzer User's Manual*.
- **Licenses** — Various licensing information.

## To open the About Device screen

- ◆ Tap the **About Device** button (  ) in the **Menu Tray** to open the **About Device** screen (see Figure 4-21 on page 132).



**Figure 4-21 About Device screen**

## To view the device information

- ◆ Tap the arrow (  ) of a listed category to view that information.

### 4.1.10 Cal Check

Cal Check is an action button in the Menu Tray that runs a quick calibration check.

## To run a cal check

1. Open the **Menu Tray**.
2. Place the Vanta window on a 316 coin (included) and tap the **Cal Check**



The test runs (X-rays are emitted) and the results (pass or fail) are reported.

### 4.1.11 Logout Session

Logout Session is an action button in the Menu Tray that logs out of the current test session.

#### To log out of the current session

1. Open the **Menu Tray**.



2. Tap the **Logout Session** button ( ) to log out of the current test session and display the **Welcome** screen.

## 4.2 Optional Features

Optional features are included on the Vanta when specified at the time of purchase.

### 4.2.1 Wireless LAN

#### NOTE

A wireless USB adaptor is required with this feature.

The Wireless LAN (Local Area Network) feature connects the instrument to a wireless local area network. It behaves much like making a cell phone Wireless LAN connection.

#### To connect to a Wireless LAN network



1. Tap the **Wireless LAN** button ( ) in the **Menu Tray** to display the **Wireless LAN Networks** screen.
2. Select the **Wireless LAN** check-box to enable the **Wireless LAN** (see Figure 4-22 on page 134).

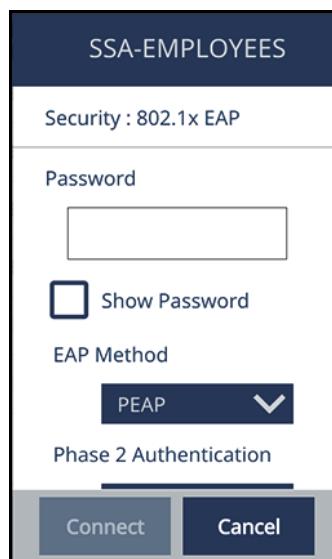
3. Tap to select a network from the list of available networks.



**Figure 4-22** Wireless LAN Networks screen

4. Tap in the **Password** box, and then enter a password (see Figure 4-23 on page 135).

Optionally select the **Show Password** check-box to show the actual password characters you are typing.



**Figure 4-23 Authentication dialog box (part A)**

5. Flick down to scroll down to the **Identity** box (see Figure 4-24 on page 136).
6. Enter a network user name.  
For example: mabray.andrews

**NOTE**

To display the backslash character ( \ ) on screen two of the special character keypad, tap ( .?123 ) on the alphabet keypad, then tap ( 1/2 ).

7. Enter the network domain name/network user name in the following format:  
xxxxxxxx\xxxxxxxx  
For example: Evident-demo\james.spillane
8. Tap **Connect**.  
This should authenticate the network and connect the analyzer to it.

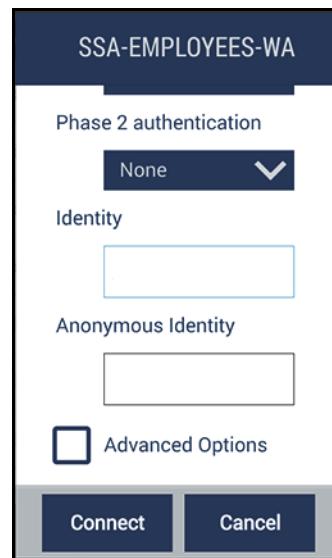
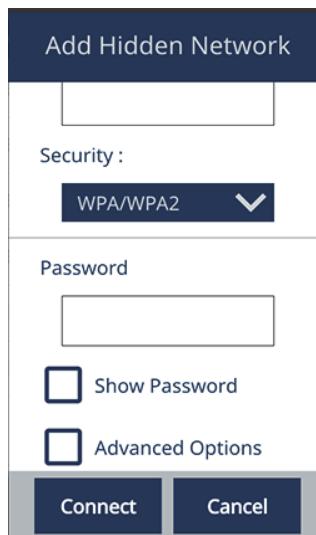


Figure 4-24 Authentication dialog box (part B)

## To add a network

1. Tap the **Add** button in the **Wireless LAN Networks** screen.
2. Enter a **Network Name** and **Password** in the **Add Hidden Network** dialog box (see Figure 4-25 on page 137).
3. Optionally set the **Security** and **Advanced Options**.
4. Tap **Connect**.



**Figure 4-25 Add Hidden Network dialog box**

#### To quickly enable or disable the Wireless LAN

1. Close the **Menu Tray** (if open), and then swipe down anywhere on the left side of the menu bar to open the **System Tray**.
2. Tap the **Wireless LAN** (action) button (  ).

#### 4.2.2 Cameras

The optional cameras are the aiming camera/collimator, and the panoramic camera.

The aiming camera and collimator are activated in the **Camera** screen and operated in **Live View**. The aiming records a photo when the next test is started.

The panoramic camera is always available in Live View. Any photos taken with the panoramic camera are saved with the results of the current test.

After you run a test, the image from the aiming camera and any images from the panoramic camera are saved with the test.

## To use the panoramic camera

1. On the **Live View** screen, swipe left to display the **Aiming Camera** screen.
2. Tap the **Switch Camera** button (  ) to display the **Panoramic Camera** screen (see Figure 4-26 on page 138).

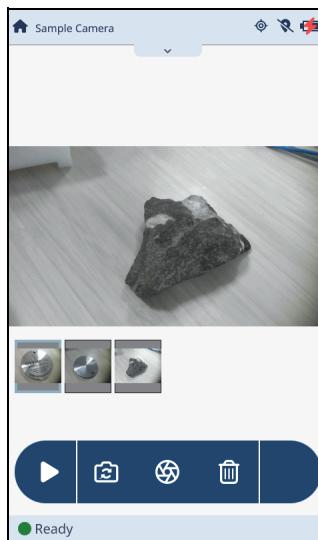


**Figure 4-26 Panoramic camera screen**

3. Aim the Vanta at the object of interest.

There are no focus or zoom controls on the Vanta, so make sure that the area of interest is in focus and positioned within the image frame.

4. Tap the **Shutter** button (  ) to capture the image.  
A thumbnail of the image appears at the bottom of the Vanta screen. This image will be saved with the results of the current test (see Figure 4-27 on page 139).
5. Take as many pictures as you need using the **Shutter** button.  
A thumbnail of each new picture appears at the bottom of the Vanta screen.
6. Press and hold on a thumbnail to select it as the image to be saved with the test information.

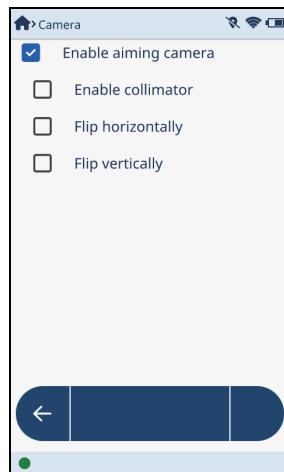


**Figure 4-27 Thumbnails in panoramic screen**

7. Tap the **Start** button (▶) to begin a test.

### To use the aiming camera

1. Tap the **Camera** button (CAMERA) to open the **Camera** screen (see Figure 4-28 on page 140).
2. Select the **Enable aiming camera** check-box.
3. Select the **Enable collimator** check-box.



**Figure 4-28 Camera screen**

4. Go to the **Live View** screen, and then swipe left to display the **Sample Camera** screen (see Figure 4-29 on page 141).
5. Aim the Vanta at the sample.  
Make sure that the area of interest is in focus and positioned within the red circle on the screen.
6. Drag up or down the slider on the right to increase or decrease LED brightness.



**Figure 4-29 Live aiming camera**

7. Tap and hold the red circle.  
The circle will shrink to approximately half the diameter to indicate the focus area of the collimated beam (see Figure 4-30 on page 141).
8. Make any final positioning adjustments to either the Vanta or the sample.



**Figure 4-30 Collimated focus area within red circle**

9. Tap the **Start** button (▶) to begin a test.

### To view saved images

- When the test is complete, tap the **Image** bar (plus sign) to view the collimated image (see Figure 4-31 on page 142).



Figure 4-31 Saved camera image

- Flick up to view any panoramic images.

### To quickly turn on or off the aiming camera

- Close the **Menu Tray** (if open), and then swipe down anywhere on the left side of the menu bar to open the **System Tray**.
- Tap the **Aiming Camera** button (CAMERA) to turn the aiming camera on or off.

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## Appendix: Software Buttons

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The tables in this section describe the software buttons found in the Vanta UI. The New Screen buttons open new screens or dialog boxes. The Action buttons immediately execute an action.

**Table 2 Software New Screen buttons**

Button	Name	Description
	About Device	Opens the <b>About Device</b> screen.
	Bluetooth®	Opens the <b>Bluetooth®</b> screen.
	Browse Results	Opens the <b>Browse Results</b> screen.
	Camera	Opens the <b>Camera</b> screen.
	Cloud Settings	Opens the <b>Cloud Settings</b> screen.
	Compound	Opens the <b>Compound</b> screen.

**Table 2 Software New Screen buttons (*continued*)**

<b>Button</b>	<b>Name</b>	<b>Description</b>
	Date & Time	Opens the <b>Date &amp; Time</b> screen.
	Diagnostics	Opens the <b>Diagnostics</b> screen.
	Display	Opens the <b>Display</b> screen.
	Element Order	Opens the <b>Element Order</b> screen.
	Export Settings	Opens the <b>Export Settings</b> screen.
	GPS	Opens the <b>GPS</b> screen.
	Grade Match	Opens the <b>Grade Match</b> screen.
	List	Opens a dialog box with a list of choices.
	Method Display	Opens the <b>Method Display</b> screen.
	Multiple Tests	Opens the <b>Multiple Tests</b> screen.
	Network Folder	Opens the <b>Network Folder</b> screen.

**Table 2 Software New Screen buttons (*continued*)**

<b>Button</b>	<b>Name</b>	<b>Description</b>
	Notes	Opens the <b>Notes</b> screen.
	Power Settings	Opens the <b>Power Settings</b> screen.
	Printers	Opens the <b>Printer Settings</b> screen.
	Pseudo Elements	Opens the <b>Pseudo Element</b> screen.
	RoHS Action Level	Opens the <b>RoHS Action Level</b> screen.
	Safety	Opens the <b>Safety</b> screen.
	Select Method	Opens the <b>Select Method</b> screen.
	Test Times	Opens the <b>Test Times</b> screen.
	User Factors	Opens the <b>User Factors</b> screen.
	Wireless LAN	Opens the <b>Wireless LAN</b> screen.

**Table 3 Software Action buttons**

<b>Button</b>	<b>Name</b>	<b>Description</b>
	Add	Adds a new item.
	Aiming Camera	Accesses the parameters (including enabling/disabling) the (Live View) Aiming camera.
	Back	Return to the previous screen.
	Bluetooth®	Turns on or off Bluetooth®.
	Cal Check	Runs a quick cal check.
	Delete	Deletes the selected item.
	Edit	Edits the selected item(s).
	Export	Exports the selected results.
	Export Today	Exports the results collected during the current day.
	GPS	Turns on or off the GPS.
	Logout Session	Logs out of the current test session.

**Table 3 Software Action buttons (*continued*)**

<b>Button</b>	<b>Name</b>	<b>Description</b>
	Print	Prints to the Bluetooth® printer.
	Start	Starts a test.
	Stop	Stops an in-progress test.
	Switch Camera	Switches between the Aiming camera and the Panoramic camera.
	Shutter	Captures an image with the Panoramic camera.
 	Trigger Lock	Disables the Vanta from turning on X-rays. You can pull the trigger, but nothing happens. The Start button is replaced by a lock icon (  ) to indicate that X-rays are disabled until the trigger is unlocked.
 	Wireless LAN	Turns on or off the Wireless LAN radio.



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