ADVIA Centaur® CP
Immunoassay System

Quick Reference Guide

REF 10700738
086D0361-01 Rev. 02, 2019-03

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SIEMENS

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The information in this manual was correct at the time of printing. However, Siemens continues to improve products and reserves the right to change specifications, equipment, and maintenance procedures at any time without notice.

If the system is used in a manner differently than specified by Siemens, the protection provided by the equipment may be impaired. Observe all warning and hazard statements.

Contents

5 Troubleshooting

1 Getting Started

The *ADVIA Centaur® CP Quick Reference Guide* provides a quick reference to common procedures. It is intended for use by trained operators of the ADVIA Centaur CP system. For detailed information, refer to the *ADVIA Centaur CP Operator's Guide*.

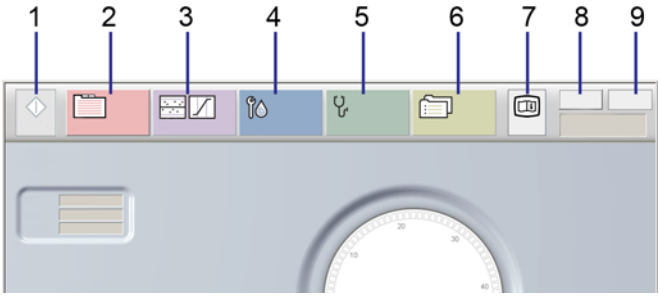
This section provides information on starting up and signing on to the system.

BIOHAZARD

Wear personal protective equipment. Use universal precautions. Refer to the *ADVIA Centaur CP Operator's Guide*, Appendix A for recommended precautions when working with biohazardous materials.

Workspace Taskbar

The taskbar (along the top of the workspace) is used to access screens and windows associated with specific tasks and functions. The task buttons (**2**–**6**) are used to access screens associated with specific tasks. The function buttons (**1**, **8**–**9**) are used to sign in, to start processing a job, or to exit the system.



1	Start and Stop	**6**	Setup
2	Results	**7**	Online Help
3	Definition	**8**	Sign In
4	Maintenance	**9**	Exit
5	Diagnostics		

Figure 1-1: Workspace Taskbar

Signing Into the System

Use this procedure to sign in to the system. User names and passwords are case-sensitive.

1. At the workspace, select **Sign In**.
2. In the Sign In window, enter your user name.
3. Enter your password.

   If you do not have a password, select the **Sign in as Guest** checkbox.
4. Select **OK**.

   The system number (identifier), date, your user name and security level are displayed on the System and User Data Area.

Signing Out of the System

At the workspace, select **Sign In**. The Sign In window displays, and you are signed out of the system.

When you sign out, samples that are in process will complete.

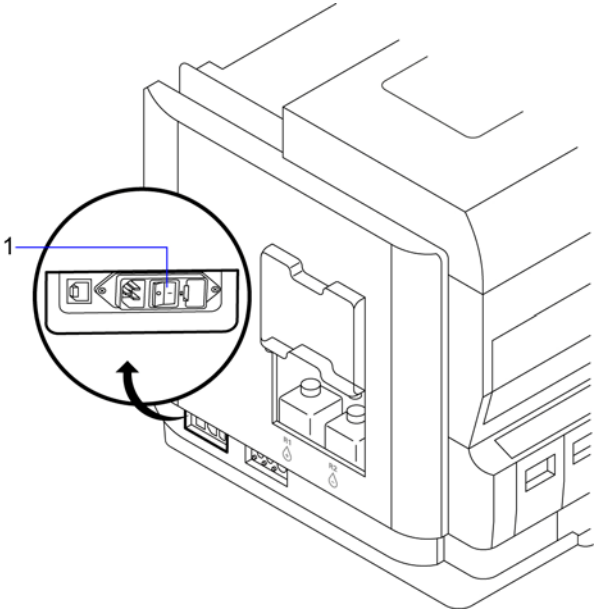
Restarting the System

Use this procedure to exit the system software and restart the software.

1. At the workspace, select **Exit**.
2. At the first prompt, select **Yes** if you want to exit the system software.
3. At the second prompt, select **No** to jump to the final prompt.
4. At the final prompt, select **Restart Software**.

Fast Stop

If you need to stop all system mechanics, press the power switch on the left side of the system.



1 Main power switch

Figure 1-2: System Power Switch

Recovering from a System Lockup or a Slow User Interface

Refer to the *ADVIA Centaur CP Operator's Guide,* Section 5, *Troubleshooting Principles*, to recover from any of the following conditions:

- The software responds very slowly after you make a selection.
- The software locks up.

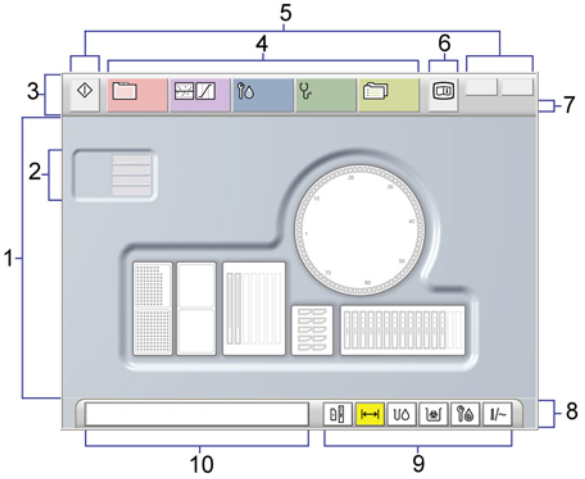
If the problem persists, contact your local technical support provider.

2 Overview

This section provides descriptions of the major components.

Workspace Overview

The ADVIA Centaur CP workspace provides access to all system functions and information necessary to operate the system.



1	Display Area	**6**	Help Button
2	System and User Data Area	**7**	Status and Time Display
3	Taskbar	**8**	Status Bar
4	Task Buttons	**9**	Status Buttons
5	Function Buttons	**10**	Event Log

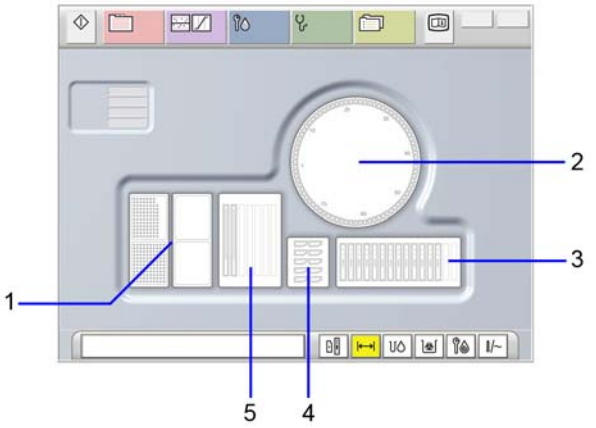
Figure 2-1: System Workspace

The workspace is grouped into three areas:

- Taskbar: see *Workspace Taskbar*, page 5.
- Display area: see *Display Area*, page 10.
- Status bar: The status bar contains the Event Log button and status buttons used to access screens and windows associated with the current status of the system. The status buttons change color from neutral to yellow or red to indicate that a system area requires attention.

Display Area

The display area in the center of the workspace shows the current active screen. Screens include System, Results, Definition, Maintenance, Diagnostics, Setup, and Help. When the software is launched, or when you close a screen, the System screen displays.

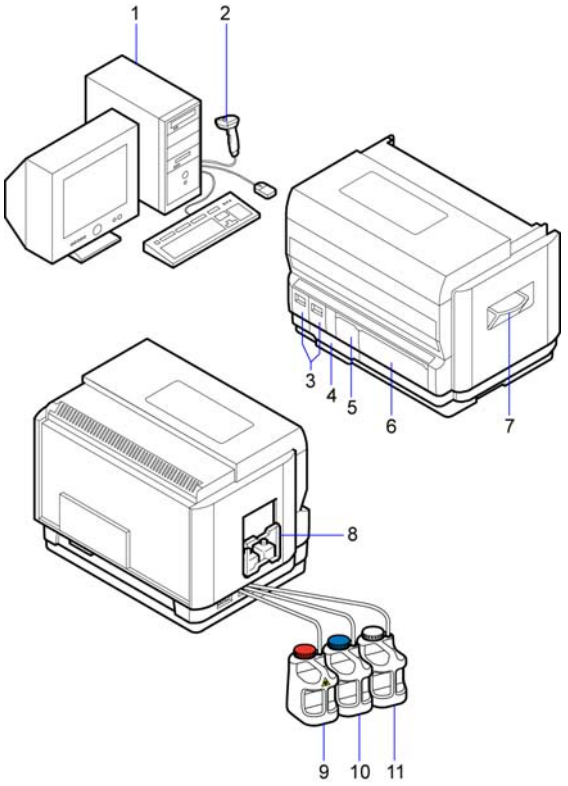


1 Tip Drawers
2 Incubation Ring
3 Primary Reagent Compartment
4 Ancillary Reagent Compartment
5 Sample Compartment

Figure 2-2: Display Area on the Workspace

Hardware Overview

This section provides descriptions and locations of the major subsystems and components.



1	Workstation	**7**	Cuvette Loading Bin
2	Barcode Scanner	**8**	Acid and Base Reagent Compartment
3	Tip Drawers	**9**	Waste Container (red top)
4	Solid Waste Drawer	**10**	DI Water Container (blue top)
5	Sample Compartment	**11**	Wash 1 Container (white top)
6	Reagent Compartment		

Figure 2-3: ADVIA Centaur CP System

Monitoring Status

A row of colored indicators alerts you when the system needs attention. Their coding is explained in the following table:

LED	*Color*	*Meaning*
	Neutral	The lane or drawer is full and recognized, but not actively in use by the system. The reagent, sample rack, or tip tray is not being accessed by the system. You can remove the supply in this area.
	Steady Green	Do not remove. The reagent, sample rack, or tip tray is actively in use by the system. The supply can be accessed by the system.
	Blinking Green	This sample lane, reagent position, or tip drawer is active and ready for loading.
	Steady Yellow	This lane is empty. This lane is not ready for sample rack or reagent loading.
	Blinking Yellow	The sample rack or reagent is loaded in this lane, but the barcode could not be read by the system.

Online Help

The online help button is located along the top of the workspace. The online help button provides access to all operating instructions and information necessary to run the system.

When you select the online help button, the online help system displays Screen Help information related to the current active screen. From there you can easily navigate to other sections of the online help system to find all the information you need to operate the system efficiently.

To access online help select the online help icon:

Online Help has five section tabs:

- **Screen Help**—provides detailed descriptions of the screens, windows and fields in the system software
- **Operator's Guide**—provides all the basic procedures required for operating the system
- **Troubleshooting**—provides detailed event code information for the system
- **Assay**—provides access to all of the assay Instructions For Use documents
- **Library**—provides access to reference documents, including the Setup Guide, the LIS Interface Guide, customer bulletins and version information for the system and software

Accessing Help for a Screen or a Window

To find information on a topic, follow this procedure:

1. Select a section tab.
2. Select a button.

   For example, if you select Screen Help you can select any of the following buttons:

   - Workspace
   - System
   - Results
   - Definition
   - Maintenance
   - Diagnostics
   - Setup
3. Select a topic from the Contents field.

Event Code Procedures

Event code procedures provide brief descriptions and procedures for identifying and solving system events.

Refer to *Troubleshooting*, page 29.

3 Operating the System

The ADVIA Centaur CP system accommodates many laboratory environments and workflow styles. Because of this flexibility, operating the ADVIA Centaur CP system can be as easy as loading samples, removing samples, and reviewing system and supply status.

The online help system for the ADVIA Centaur CP system also contains the most commonly used instructions and procedures.

This section provides an overview of defining calibrations and controls, processing samples, and evaluating results.

Using the Barcode Scanner

LASER WARNING
Do not look directly at the laser beam or at its reflection from a shiny surface. This may cause damage to the eyes. Refer to the *ADVIA Centaur CP Immunoassay System Operator's Guide*, Appendix A, *Safety Information*, for more information.

- Any task performed with the scanner can also be accomplished from the keyboard. This procedure is described in the *ADVIA Centaur CP Immunoassay System Operator's Guide*.
- Always scan barcodes from top to bottom.
- Ensure the keyboard's Caps Lock feature is disabled.

Calibration

The ADVIA Centaur CP system uses a Master Curve and a two-point, operator-initiated calibration to calibrate qualitative and quantitative assays.

Defining a Master Curve

Each ADVIA Centaur CP assay kit includes a Master Curve card that lists the analyte concentration and the RLUs for each Master Curve point. This is a two-sided card. Ensure you use the ADVIA Centaur CP side of the card. If you use the incorrect side of the card, the system does not accept the values.

To define a Master Curve for an assay, perform the following procedure:

1. At the workspace, select **Definition**.
2. Select the **Master Curves** tab.
3. Select **Scan**.
4. Scan the barcodes.

CAUTION
Do not select the OK button at the Scan Master Curve window. This saves incomplete data. The Scan Master Curve window automatically closes when the barcodes are scanned correctly. If the Scan Master Curve window remains open, select **Cancel** and rescan the barcodes.

5. Ensure that the calibrator values are correct.
6. At the Master Curve Details window, select **Close**.

Adding a New Calibrator Definition

Each Calibrator Kit includes a Calibrator Assigned Values card that provides the calibrator values for each analyte in the low and high calibrators.

1. At the workspace, select **Definition**.
2. Select the **Calibrators** tab.
3. Select **Scan**.
4. Scan the barcodes.
5. Ensure that the calibrator values are correct.
6. Select **Close**.

Scheduling Calibrators

To schedule calibrators, use the following procedure:

1. Load the low and high calibrators into appropriate sample pour-off tubes that accommodate the Siemens-supplied barcode labels.
2. Place the sample tubes into a sample rack.
3. Load the rack in the sample compartment.

4. On the Sample Compartment screen, select the lane containing the sample rack with the calibration material.
5. Select each calibrator and confirm the calibrator information.
6. To return to the workspace, select **Close**.
7. At the workspace, select the **Ancillary Reagent Compartment** and confirm that the required ancillary and wash packs are loaded.
8. Select the **Primary Reagent** button on the Ancillary Reagent Compartment window.
9. Select the assay to calibrate.
10. Select **Calibrate**.

    The system automatically begins sampling the calibrator material.

Quality Control

The ADVIA Centaur CP system allows you to define each control for use on the system. The ADVIA Centaur CP system has the data storage capability to:

- define up to 50 assays per control
- define up to 300 controls

Adding a New Quality Control Definition

Use this procedure to add a new control definition, which includes defining the assays for the control and the expected control values for each assay.

1. At the workspace, select **Definition**.
2. Select the **Controls** tab.
3. Select **Add**.
4. Enter a control name.

   For Routine controls, enter up to 11 alphanumeric characters for the control name. For ID Assay controls, enter 11 alphanumeric characters for the control name. Ensure that you enter the ID Assay control name exactly as displayed on the assay assignment sheet.

5. Select **Routine** or **Kit** in the Type field.

   Routine controls are not provided with the assay reagent kits. ID Assay controls are provided as part of specific assay reagent kits.

6. Enter the lot number and the expiration date.

   The lot number and the expiration date are located on the quality control material assay sheet.

   You can enter 1 to 10 characters for the lot number. Select or enter the expiration date in the format defined in system Setup, for example YYYY-MM-DD.

7. Enter the level of the control in the Level field.
8. Select the usage.
9. Enter the pool number.

   You can enter up to 8 characters for the pool number. If you use your own quality control pools, you can assign a pool number.

10. In the fields below the table, select an assay name and enter the Quality Control expected values.
11. Enter the number of replicates.
12. To run a control according to a schedule, enter a frequency. If you do not enter a frequency, you must schedule all controls manually. If you enter a frequency, you must have controls on the system when they are due to run.
13. Select **Add**.
14. Repeat steps 10 through 13 for all assays for the control.
15. Select **Save**.
16. Repeat steps 3 through 15 to add additional control definitions.

Scheduling QC Samples

Use this procedure to schedule controls:

1. Enter the control definitions from the information provided with the controls.
2. Load the quality control material into an appropriate sample pour-off tube that accommodates the Siemens-supplied barcode label.

3. Put the barcode label on the tube.
4. Load the control tube in a sample rack.
5. Load the rack in the sample compartment.
6. If the control is defined on the system, and the sample tube is properly labeled, the system automatically recognizes the sample as a control when it is loaded.
7. Perform the following steps to manually assign the control:
    a. On the Sample Compartment screen, select the lane containing the sample rack with the control material.
    b. Select the control, and manually enter the SID.
    c. Toggle the sample selection button to **ctrl**, if necessary.
8. Select the assays or profiles for the sample.
9. Select **Next Worklist** to process the controls the next time **Start** is selected from the workspace.

    Leave this button unchecked when loading quality control material on the system for scheduled quality control assays if you defined the quality control material to run based on frequency on the Control Definition screen.
10. If **Next Worklist** is selected, select **Start** from the workspace to begin sampling the control material.

Evaluating Results

Use this procedure to review all sample, calibration, and QC results, as well as access various result management functions:

1. At the workspace, select **Results**.
2. Select the appropriate results tab. These are the result summaries.
3. To view result details: Select a record.
4. Select **Details**.
5. Select **Close**.

Printing Results

Use this procedure to print results, from any of the Results screens:

1. At the workspace, select **Results**.
2. Select the appropriate results tab.
3. Select a sample ID or a range of sample IDs.

   To select a range of records, hold the Ctrl key down as you select the range of records you want to print with the mouse.
4. Select **Print**.

   From the Selection area of the Print Results screen, you can choose Selected Record, Today's Records, All Records, or Range (of records).

   If you choose to print a range of records, you can print by one of the following criteria: Sample ID, Assay, Date, Interpretations, Status, or RunID.

   Enter a date range indicating From: and To: to select a range of records to print.

   You can choose to print one of the predefined reports from the Reports area of the Print Result screen, for example, Summary With RLUs or Pending Results.
5. Select **OK**.
6. The records or predefined report prints on your default printer.

Automating the Printing of Results

If you need to print results as you process samples, use the following procedure:

1. At the workspace, select **Setup**.
2. Select the **System** tab.
3. At the System screen, for Runtime Reports, select **On**.
4. Select **Save**.

As the system processes samples, when 8 samples have processed, a report of those samples automatically prints on your local printer. When the system returns to the Ready state, the last results of the sample run print on the last page of the report, even if there are fewer than 8 records.

Note Runtime reports may fail to contain 8 results per page if line wrapping is caused by long patient names. When the last result is the component of a ratio result, that last page prints a second time. Review the Runtime Report carefully to ensure that the report contains a single listing of the results.

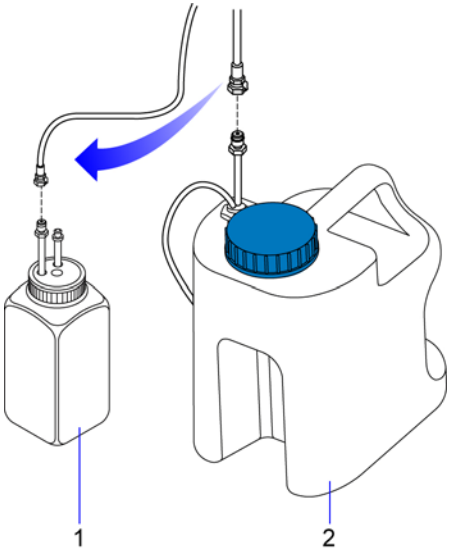
If you need to print results before the system has processed 8 records, you can select Print, then Force Printout from any of the Print windows available from the Results tabs. The system prints the last page with whatever results are complete at that time. The Force Printout option is available to you only if you have used the procedure described above.

4 Maintenance

The ADVIA Centaur CP system monitors maintenance tasks and notifies you when a scheduled task is due. This section provides an overview of scheduled maintenance procedures.

Performing an Automated Daily Cleaning

The automated daily maintenance uses the DI water tubing only. Do not remove the DI water sensor cable.



1 Cleaning Bottle
2 DI Water Container

Figure 4-1: Daily and Weekly Maintenance Containers

Use this procedure to perform the automated daily maintenance:

1. Prepare cleaning solution in the 2-liter cleaning bottle.
2. Ensure that the system is in the Ready state.
3. At the workspace, select the Maintenance Status button.
4. Select **Automated Daily Cleaning**.

5. Select **Perform**.
6. When procedure 1 displays, prompting you to install the cleaning bottle, perform the following steps:
    a. Remove the tubing from the DI water container.
    b. Connect the tubing to the bottle containing the cleaning solution.
    c. Select **Accept**.
7. When procedure 5 displays, prompting you to reinstall the DI water container, perform the following steps:
    a. Remove the tubing from the 2-liter cleaning bottle.
    b. Reconnect the tubing to the DI water container.
    c. Select **Accept**.
8. When procedure 9 displays, indicating that the task completed successfully, select **OK**. The system is now ready to process samples.

Performing an Automated Weekly Cleaning

Use this procedure to perform the automated weekly maintenance.

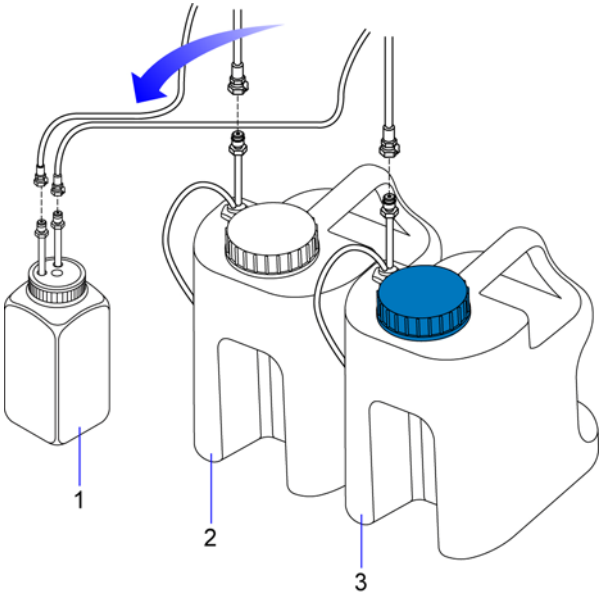
The automated weekly maintenance uses the DI water tubing only.

1. Prepare 2 liters of cleaning solution.
2. Ensure that the system is in the Ready state.
3. Disconnect the DI water container from the system:
    a. Disconnect the tubing from the container and set it aside on lint-free tissues or gauze to absorb drips.
    b. Disconnect the sensor from the container.
    c. Remove the cap from the container.
4. Dispose of the DI water into an appropriate receptacle.
5. Pour the cleaning solution into the DI water container.
6. Replace the cap on the DI water container.
7. Rock the container 10 times.
8. Let the container sit for 10 minutes.

9. Place the DI water container back in position.
10. At the workspace, select the Maintenance Status button.
11. Select **Automated Weekly Cleaning**.
12. Select **Perform**.
13. When procedure 1 displays, prompting you to install the DI water container containing the cleaning solution, perform the following steps:
    a. Connect the DI water tubing to the DI water container.
    b. Select **Accept**.
14. When procedure 5 displays, prompting you to empty, clean, and reinstall the DI water container, perform the following steps:
    a. Disconnect the tubing and sensor from the DI water container.
    b. Dispose of the cleaning solution in an appropriate receptacle.
        - Fill the container with approximately 3 liters of DI water.
        - Rock the container at least five times.
        - Dispose of the DI water in an appropriate receptacle.
        - Repeat at least three times.
    c. Refill the DI water container with fresh DI water.
    d. Reconnect the tubing and sensor to the DI water container.
    e. Select **Accept**.
15. When procedure 9 displays, indicating that the task completed successfully, select **OK**. The system is now ready to process samples.

Performing an Automated Monthly Cleaning

The automated monthly maintenance uses both the DI water tubing and the wash 1 tubing. Do not remove either the DI water sensor cable or the wash 1 sensor cable.



1 Cleaning Bottle
2 Wash 1 Container
3 DI water Container

Figure 4-2: Monthly Maintenance Containers

Use this procedure to perform the automated monthly maintenance:

1. Prepare cleaning solution in the 2-liter cleaning bottle.
2. Ensure that the system is in the Ready state.
3. At the workspace, select the Maintenance Status button.
4. Select **Automated Monthly Cleaning**.
5. Select **Perform**.
6. When procedure 1 displays, prompting you to install the cleaning bottle, perform the following steps:
   a. Remove the tubing from the DI water container and connect it to the 2-liter cleaning bottle.
   b. Remove the tubing from the wash 1 container and connect it to the 2-liter cleaning bottle.

c. Select **Accept**.

7. When procedure 6 displays, prompting you to fill the cleaning bottle with DI water, perform the following steps:
   a. Disconnect the DI water tubing from the 2-liter cleaning bottle.
   b. Disconnect the wash 1 tubing from the 2-liter cleaning bottle.
   c. Dispose of the cleaning solution in an appropriate receptacle.
   d. Rinse the cleaning bottle and cap at least three times with DI water.
   e. Fill the 2-liter cleaning bottle with DI water and attach the cap.
   f. Connect the DI water tubing to the 2-liter cleaning bottle.
   g. Connect the wash 1 tubing to the 2-liter cleaning bottle.
   h. Select **Accept**.
8. When procedure 10 displays, prompting you to reinstall the DI water and wash 1 containers, perform the following steps:
   a. Remove the DI water tubing from the 2-liter cleaning bottle.
   b. Remove the wash 1 tubing from the 2-liter cleaning bottle.
   c. Connect the DI water tubing to the DI water container.
   d. Connect the wash 1 tubing to the wash 1 container.
   e. Select **Accept**.
9. When procedure 13 displays, indicating that the task completed successfully, select **OK**. The system is now ready to process samples.

5 Troubleshooting

The ADVIA Centaur CP system provides features to help you identify and correct system problems.

This section provides information for identifying the possible cause and corrective action of an error condition.

Event Log Indicators

If a message displays in the event log window on the workspace, an event occurred. An event is a system activity or error recorded by the system.

Troubleshooting an Event

Most events do not require you to perform any action. Some events, however, identify a problem or error in the system that require you to perform some troubleshooting action. Use this procedure to troubleshoot an event using the system Event Log:

1. At the workspace, select the **Event Log** button.
2. Select the event you want to troubleshoot.
3. Select **Details**.

   The related event page displays in the Troubleshooting section of the Online Help system, indicating possible causes and corrective actions.
4. Carefully read the message, description, possible causes, and corrective actions.
5. Take the appropriate actions.
6. If you cannot resolve the problem with the information provided, contact your local technical support provider.

For more information on the flags and codes used in the Event Log, see the Screen Help section of the Online Help system.

Using the View Feature on the Event Log Screen

When you use the View button on the Event Log screen, you must enter the full text for the severity level, for example, “Critical Error” or “Fatal Error.” If you enter “Critical” or “Fatal,” the list does not display the set of events for those severity messages. Alternatively, you can enter the associated numeric value for that severity level, for example, 3 for Critical Error or 4 for Fatal Error, to see the messages you want to display.

Refer to the following table for a complete list of severity levels and associated codes.

Severity Level	Severity Code
0	Message
1	Warning
2	Problem
3	Critical Error
4	Fatal Error

Diagnostics

The Diagnostics screen allows you to perform diagnostics and troubleshooting procedures with the software. Entering or exiting the Diagnostics screen causes the system to re-initialize.

The Diagnostics screen is divided into six section tabs: Ring, Luminometer, Washer, Prime, Probes and Others. Each of these tabs has a command area to perform system actions, and a status area to monitor the system activities.

To access the Diagnostics mode, at the workspace, select the Diagnostics task bar.

For more information about Diagnostics, refer to the Screen Help section of the Online Help system.

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