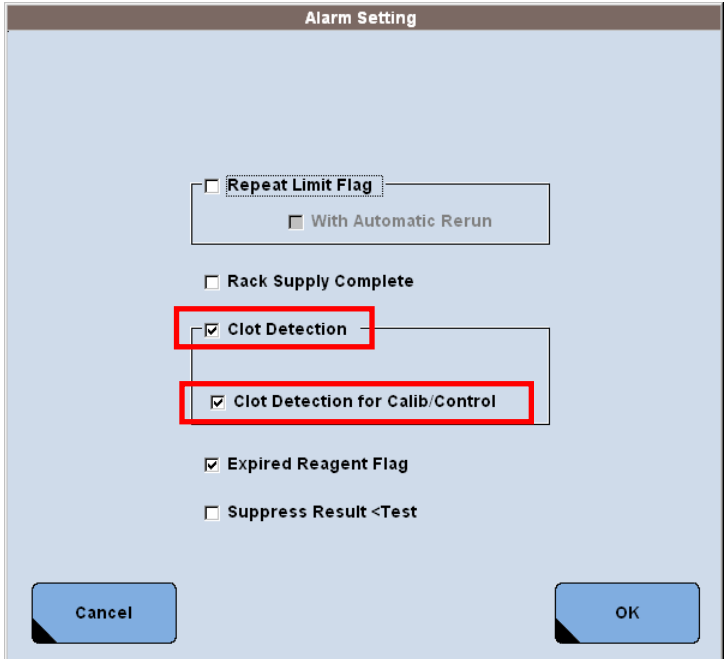
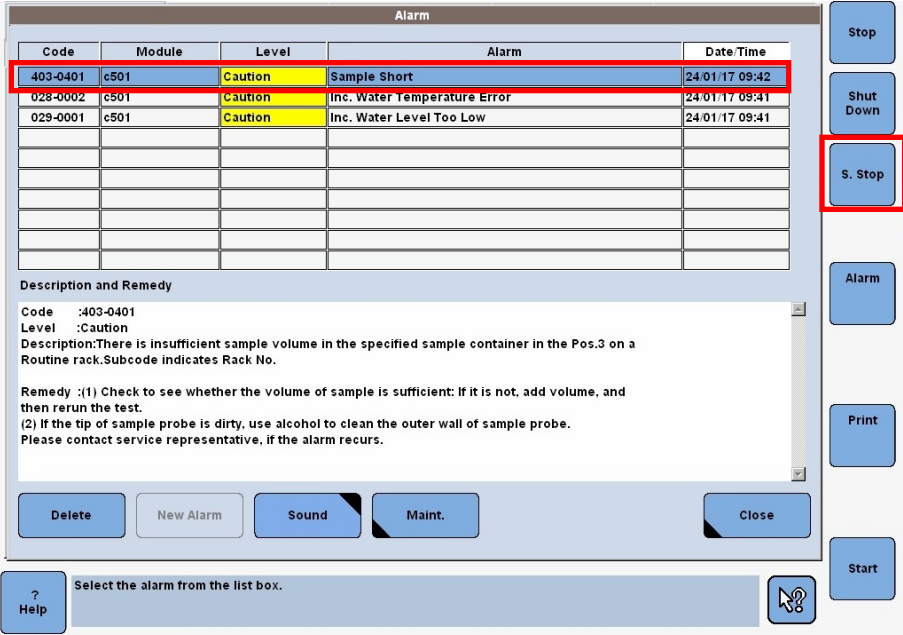
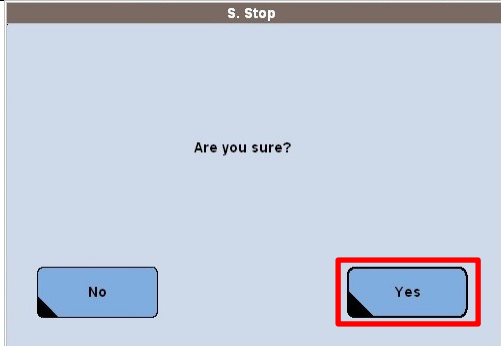



When the system alarm *Sample Short* or *Abnormal Probe Sucking* is issued while there is still sufficient amount of sample volume, it is necessary to replace the sample probe. A verification of the measurement results is required.

When there is no replacement sample probe available, clean the inside and the outside of the sample probe. This is described in the Operator's Manual Version 8.0 and in the manual "Interlock function cobas c 501 with ISE Version 1.2". The inside cleaning maintenance actions of the cobas® 6000 analyzer series can only be performed by specially trained operators. Please refer to the coinciding procedures "Replacing sample, ISE and reagent probes – elimination of blockages" and "Cleaning sample probe, reagent probes, ISE probe and ISE sipper nozzle".

	Step	Action
<p>Preparation: Clot Detection ON</p>	<p>1</p>	<p>Enable the Clot Detection and Clot Detection for Calib/Control settings in <i>Utility-System-Alarm Settings</i>.</p> 

	Step	Action																																							
Check the Sample Short and Sample Clot alarm	2	<p>The table below shows the system alarm list of Sample Short and Sample Clot.</p> <table border="1" data-bbox="540 359 1365 951"> <thead> <tr> <th>Alarm¶</th> <th>Alarm Code¶</th> <th>Alarm Sub-Code¶</th> </tr> </thead> <tbody> <tr> <td rowspan="9">Sample Short¶</td> <td>431--435¶</td> <td>0001-9999¶</td> </tr> <tr> <td>436--440¶</td> <td>0001-9999¶</td> </tr> <tr> <td>401--405¶</td> <td>0001-9999¶</td> </tr> <tr> <td>406--410¶</td> <td>0001-9999¶</td> </tr> <tr> <td>411--415¶</td> <td>0001-9999¶</td> </tr> <tr> <td>416--420¶</td> <td>0001-9999¶</td> </tr> <tr> <td>421--425¶</td> <td>0001-9999¶</td> </tr> <tr> <td>426--430¶</td> <td>0001-9999¶</td> </tr> <tr> <td>441¶</td> <td>0001¶</td> </tr> <tr> <td rowspan="8">Abnormal Probe sucking¶ ¶ (The alarm of Sample Clot is issued as "Abnormal Probe sucking")¶</td> <td>481--485¶</td> <td>0001--9999¶</td> </tr> <tr> <td>486--490¶</td> <td>0001--9999¶</td> </tr> <tr> <td>451--455¶</td> <td>0001--9999¶</td> </tr> <tr> <td>456--460¶</td> <td>0001--9999¶</td> </tr> <tr> <td>461--465¶</td> <td>0001--9999¶</td> </tr> <tr> <td>466--470¶</td> <td>0001--9999¶</td> </tr> <tr> <td>471--475¶</td> <td>0001--9999¶</td> </tr> <tr> <td>476--480¶</td> <td>0001--9999¶</td> </tr> </tbody> </table>	Alarm¶	Alarm Code¶	Alarm Sub-Code¶	Sample Short¶	431--435¶	0001-9999¶	436--440¶	0001-9999¶	401--405¶	0001-9999¶	406--410¶	0001-9999¶	411--415¶	0001-9999¶	416--420¶	0001-9999¶	421--425¶	0001-9999¶	426--430¶	0001-9999¶	441¶	0001¶	Abnormal Probe sucking¶ ¶ (The alarm of Sample Clot is issued as "Abnormal Probe sucking")¶	481--485¶	0001--9999¶	486--490¶	0001--9999¶	451--455¶	0001--9999¶	456--460¶	0001--9999¶	461--465¶	0001--9999¶	466--470¶	0001--9999¶	471--475¶	0001--9999¶	476--480¶	0001--9999¶
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Sampling Stop	3	<p>a) When the alarm is issued, select the <i>S. Stop</i> button.</p>  <p>b) When the [S. Stop] window appears, choose [Yes].</p>																																							

		 <p>S. Stop</p> <p>Are you sure?</p> <p>No Yes</p> <p>c) Confirm the confirmation window with [Yes]</p>  <p>Confirmation</p> <p>Are you sure?</p> <p>No Yes</p>
<p>Wait until racks are unloaded</p>	<p>4</p>	<p>Wait until all racks are transferred to the unloader. (Waiting time may vary depending on the condition of the ordered analysis)</p>

Identify sample for which alarm was issued

5

Identify the sample for which the system alarm was issued according to the code of the system alarm (refer to the following figure).

Code	Module	Level	Alarm	Date/Time
403-0401	c501	Caution	Sample Short	24/01/17 09:42
028-0002	c501	Caution	Inc. Water Temperature Error	24/01/17 09:41
029-0001	c501	Caution	Inc. Water Level Too Low	24/01/17 09:41

Description and Remedy

Code :403-0401
 Level :Caution
 Description:There is insufficient sample volume in the specified sample position. Routine rack.Subcode indicates Rack No.
 Remedy :(1) Check to see whether the volume of sample is sufficient and then rerun the test.
 (2) If the tip of sample probe is dirty, use alcohol to clean the outer tip. Please contact service representative, if the alarm recurs.

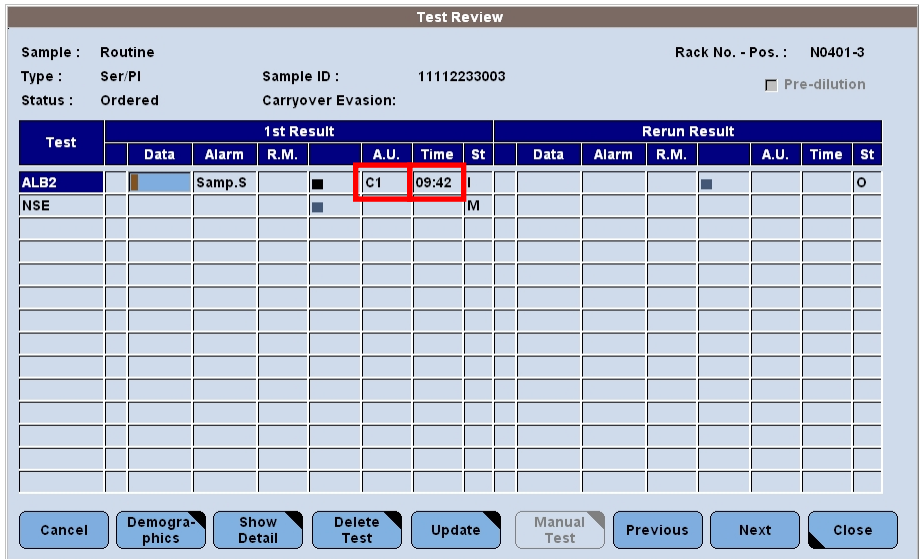
Buttons: Delete, New Alarm, Sound, Main

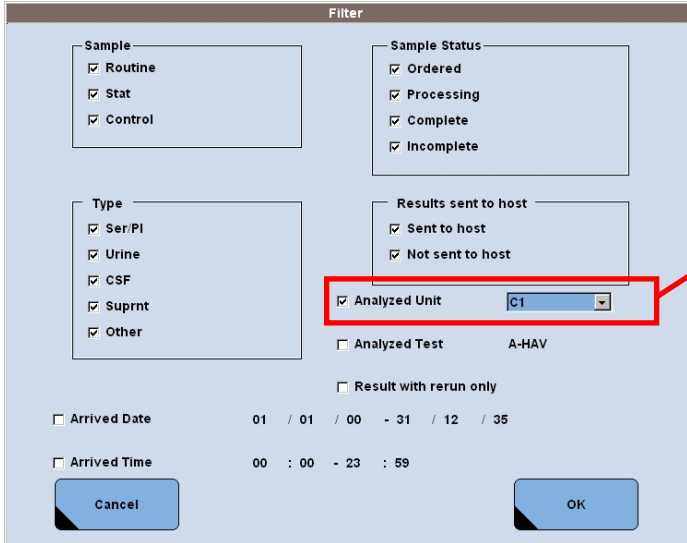
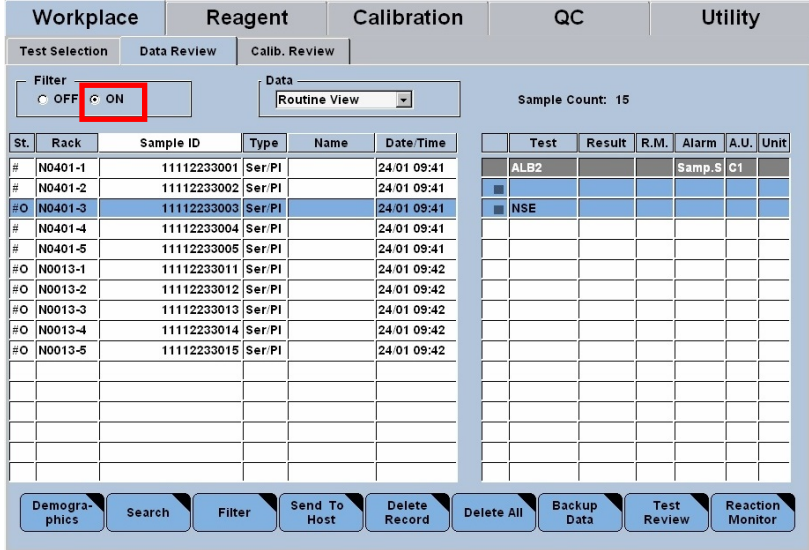
403-0401: Sample Short
 Routine Rack No.:401
 Position: 3

St.	Rack	Sample ID	Type	Name	Date/Time	Test	Result	R.M.	Alarm	A.U.	Unit
#	N0401-1	11112233001	Ser/Pl		24/01 09:41	ALB2			Samp.S	C1	
#	N0401-2	11112233002	Ser/Pl		24/01 09:41						
#	N0401-3	11112233003	Ser/Pl		24/01 09:41	NSE					
#	N0401-4	11112233004	Ser/Pl		24/01 09:41						
#	N0401-5	11112233005	Ser/Pl		24/01 09:41						
O	N0229-1	11112233006	Ser/Pl		24/01 09:42						
O	N0229-2	11112233007	Ser/Pl		24/01 09:42						
O	N0229-3	11112233008	Ser/Pl		24/01 09:42						
O	N0229-4	11112233009	Ser/Pl		24/01 09:42						
O	N0229-5	11112233010	Ser/Pl		24/01 09:42						
#O	N0013-1	11112233011	Ser/Pl		24/01 09:42						
#O	N0013-2	11112233012	Ser/Pl		24/01 09:42						
#O	N0013-3	11112233013	Ser/Pl		24/01 09:42						
#O	N0013-4	11112233014	Ser/Pl		24/01 09:42						
#O	N0013-5	11112233015	Ser/Pl		24/01 09:42						

Buttons: Demographics, Search, Filter, Send To Host, Delete Record, Delete All, Backup Data, Test Review, Reaction Monitor

Example of a sample with Sample Short alarm on a routine rack.

<p>Check sample volume</p>	<p>6</p>	<p>Check</p> <p>a) the sample volume in the sample container, and</p> <p>b) whether there is any substance adhered to the sample probe.</p> <p>No action is required when the sample volume is insufficient, and the sample probe is clean.</p> <p>When there is sufficient sample volume, replace the sample probe and move on to step 7.</p>
<p>Module and sampling time in Test Review</p>	<p>7</p>	<p>Check the module and the sampling time for which the alarm was issued in the <i>Test Review</i> screen (<i>Workplace-Data Review-patient sample (in sample list)-Test Review</i>).</p>  <p>The screenshot shows the 'Test Review' interface. At the top, it displays 'Sample : Routine', 'Type : Ser/PI', 'Status : Ordered', 'Sample ID : 11112233003', and 'Rack No. - Pos. : N0401-3'. Below this is a table with columns for 'Test', '1st Result', and 'Rerun Result'. The '1st Result' section has sub-columns: 'Data', 'Alarm', 'R.M.', 'A.U.', 'Time', and 'St'. The 'Rerun Result' section has sub-columns: 'Data', 'Alarm', 'R.M.', 'A.U.', 'Time', and 'St'. The 'ALB2' row shows 'Samp.S' in the 'Alarm' column, 'C1' in the 'A.U.' column, and '09:42' in the 'Time' column. The 'NSE' row shows 'M' in the 'St' column. At the bottom, there are buttons for 'Cancel', 'Demographics', 'Show Detail', 'Delete Test', 'Update', 'Manual Test', 'Previous', 'Next', and 'Close'.</p>

<p>Set filter for the specific module</p>	<p>8</p>	<p>Set an "Analyzed Unit" filter for samples for which sampling was performed on the specific module from step 7 (in <i>Workplace-Data Review-Filter</i>).</p> 																																																																																																																																				
<p>Filter for the specific module</p>	<p>9</p>	<p>Select the [ON] radio button for Filter on <i>Data Review</i> screen.</p>  <table border="1" data-bbox="532 1035 1317 1262"> <thead> <tr> <th>St</th> <th>Rack</th> <th>Sample ID</th> <th>Type</th> <th>Name</th> <th>Date/Time</th> <th>Test</th> <th>Result</th> <th>R.M.</th> <th>Alarm</th> <th>A.U.</th> <th>Unit</th> </tr> </thead> <tbody> <tr> <td>#</td> <td>N0401-1</td> <td>11112233001</td> <td>Ser/PI</td> <td></td> <td>24 01 09:41</td> <td>ALB2</td> <td></td> <td></td> <td></td> <td>Samp.S</td> <td>C1</td> </tr> <tr> <td>#</td> <td>N0401-2</td> <td>11112233002</td> <td>Ser/PI</td> <td></td> <td>24 01 09:41</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>#</td> <td>N0401-3</td> <td>11112233003</td> <td>Ser/PI</td> <td></td> <td>24 01 09:41</td> <td>NSE</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>#</td> <td>N0401-4</td> <td>11112233004</td> <td>Ser/PI</td> <td></td> <td>24 01 09:41</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>#</td> <td>N0401-5</td> <td>11112233005</td> <td>Ser/PI</td> <td></td> <td>24 01 09:41</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>#</td> <td>N0013-1</td> <td>11112233011</td> <td>Ser/PI</td> <td></td> <td>24 01 09:42</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>#</td> <td>N0013-2</td> <td>11112233012</td> <td>Ser/PI</td> <td></td> <td>24 01 09:42</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>#</td> <td>N0013-3</td> <td>11112233013</td> <td>Ser/PI</td> <td></td> <td>24 01 09:42</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>#</td> <td>N0013-4</td> <td>11112233014</td> <td>Ser/PI</td> <td></td> <td>24 01 09:42</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>#</td> <td>N0013-5</td> <td>11112233015</td> <td>Ser/PI</td> <td></td> <td>24 01 09:42</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	St	Rack	Sample ID	Type	Name	Date/Time	Test	Result	R.M.	Alarm	A.U.	Unit	#	N0401-1	11112233001	Ser/PI		24 01 09:41	ALB2				Samp.S	C1	#	N0401-2	11112233002	Ser/PI		24 01 09:41							#	N0401-3	11112233003	Ser/PI		24 01 09:41	NSE						#	N0401-4	11112233004	Ser/PI		24 01 09:41							#	N0401-5	11112233005	Ser/PI		24 01 09:41							#	N0013-1	11112233011	Ser/PI		24 01 09:42							#	N0013-2	11112233012	Ser/PI		24 01 09:42							#	N0013-3	11112233013	Ser/PI		24 01 09:42							#	N0013-4	11112233014	Ser/PI		24 01 09:42							#	N0013-5	11112233015	Ser/PI		24 01 09:42						
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<p>Verify the results or discard the samples</p>	<p>10</p>	<p>Check the test results which measured after the sampling time in step 7 on the data review screen in step 9.</p> <p>All affected samples have to be verified/ discarded according to the local rules.</p> <p>An example of tests to be verified is described on the next page.</p>																																																																																																																																				

Example

11

On the *Data Review* screen, select all samples that were sampled on the analyzer unit after the sample with the sample short alarm, including the sample concerned.

Then display the *Test Review* window.

403-0401: Sample Short
Routine Rack No.:401 Position: 3

St.	Rack	Sample ID	Type	Name	Date/Time
#	N0401-1	11112233001	Ser/PI		24/01 09:41
#	N0401-2	11112233002	Ser/PI		24/01 09:41
#	N0401-3	11112233003	Ser/PI		24/01 09:41
#	N0401-4	11112233004	Ser/PI		24/01 09:41
#	N0401-5	11112233005	Ser/PI		24/01 09:41
O	N0229-1	11112233006	Ser/PI		24/01 09:42
O	N0229-2	11112233007	Ser/PI		24/01 09:42
O	N0229-3	11112233008	Ser/PI		24/01 09:42
O	N0229-4	11112233009	Ser/PI		24/01 09:42
O	N0229-5	11112233010	Ser/PI		24/01 09:42
#O	N0013-1	11112233011	Ser/PI		24/01 09:42
#O	N0013-2	11112233012	Ser/PI		24/01 09:42
#O	N0013-3	11112233013	Ser/PI		24/01 09:42
#O	N0013-4	11112233014	Ser/PI		24/01 09:42
#O	N0013-5	11112233015	Ser/PI		24/01 09:42

Confirm the module and the time on which the sampling was performed.

403-0401: Sample Short
Routine Rack No.:401 Position: 3
Pipetting time in *Test Review* T = 9:42

Test	1st Result					Rerun Result						
	Data	Alarm	R.M.	A.U.	Time	St	Data	Alarm	R.M.	A.U.	Time	St
ALB2		Samp.S		C1	09:42							O
NSE						M						

The example *Test Review* window of samples on *Data Review* screen is described in the table below.

Rack	Test	Alarm	A.U.	Time	St.	Judgment of measurement result				
N0401-1	ALB2		C1	09:42		OK				
	NSE		E1-2	09:47		OK				
N0401-2	ALB2		C1	09:42		OK				
	NSE		E1-2	09:48		OK				
N0401-3	ALB2	Samp.S	C1	09:42		Target for verification (Sample for which the sample short alarm was issued) Time T=09:42, Module C1				
	NSE				M					
N0401-4	ALB2		C1	09:42		Target for verification (pipetted on module C1 after 9:42)				
	NSE		E1-2	09:48		Target for verification (sample pipetted on module c1 after 9:42)				
N0401-5	ALB2		C1	09:42		Target for verification (pipetted on module C1 after 9:42)				
	NSE		E1-2	09:49		Target for verification (sample pipetted on module c1 after 9:42)				
N0013-1	ALB2				M	No target for verification, since not pipetted on c1 module				
	NSE		E1-2	09:44			OK			
N0013-2	ALB2				M		No target for verification, since not pipetted on c1 module			
	NSE		E1-2	09:44				OK		
N0013-3	ALB2				M			No target for verification, since not pipetted on c1 module		
	NSE		E1-2	09:45					OK	
N0013-4	ALB2				M				No target for verification, since not pipetted on c1 module	
	NSE		E1-2	09:46						OK
N0013-5	ALB2				M					No target for verification, since not pipetted on c1 module
	NSE		E1-2	09:46						
N0229-1	ALB2		C1	09:42		Target for verification (pipetted on module C1 after 9:42)				
	NSE				M					
N0229-2	ALB2		C1	09:43		Target for verification (pipetted on module C1 after 9:42)				
	NSE				M					
N0229-3	ALB2		C1	09:43		Target for verification (pipetted on module C1 after 9:42)				
	NSE				M					
N0229-4	ALB2		C1	09:43		Target for verification (pipetted on module C1 after 9:42)				
	NSE				M					
N0229-5	ALB2		C1	09:43		Target for verification (pipetted on module C1 after 9:42)				
	NSE				M					