



TRAINING UPDATE

Lab Location: SGAH & WAH *
Department: Core

Date Distributed: 3/21/2013
Due Date: 4/21/2013

* GEC is not using this application yet

DESCRIPTION OF PROCEDURE REVISION

Name of procedure:
Data Innovations Instrument Manager GEC.L44, SGAH.L49, WAH.L47 v001
Description of change(s):
Section 5: <ul style="list-style-type: none">• Added process to reinstate Auto-verification to item K.• Added QC section (item L)

Document your compliance with this training update by taking the quiz in the MTS system.

Approved draft for training all sites (version 001)

Non-Technical SOP

Title	Data Innovations Instrument Manager	
Prepared by	Robert SanLuis	Date: 7/11/2012
Owner	Robert SanLuis	Date: 3/12/2013

Laboratory Approval		
Print Name and Title	Signature	Date
<i>Refer to the electronic signature page for approval and approval dates.</i>		
Local Issue Date:		Local Effective Date:

Review:		
Print Name	Signature	Date

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1. PURPOSE

To describe the processes associated with the use of Instrument Manager (IM) to manage specimens and result release to into the Sunquest (SQ) Laboratory system.

2. SCOPE

Instrument Manager functions to provide connectivity between instrumentation and the laboratory information system (LIS). IM provides the ability to review multiple instruments and work areas at one time. IM utilizes rules-based decision processing via graphical interface to release results without technical intervention which provides technical staff additional time to attend to the true exceptions.

3. RESPONSIBILITY

Knowledge of IM is the responsibility of all laboratory technical staff.


4. DEFINITIONS

Instrument Manager (IM) – computer application to manage laboratory processes, instrument interfaces, and deploy rules-based decision processing via graphical interface.


5. PROCEDURE

A. Log on to Instrument Manager



If the program is not open double click on the icon  on the desktop.
(Note: A popup window may state unknown publisher. Click Run.)

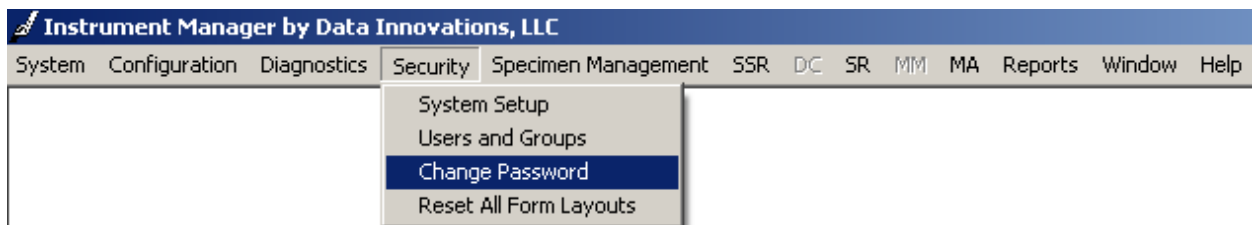


First time users will enter their Quest employee ID number then click . You will then be asked to establish a password. It is recommended to keep SunQuest and Instrument Manager passwords in sync.

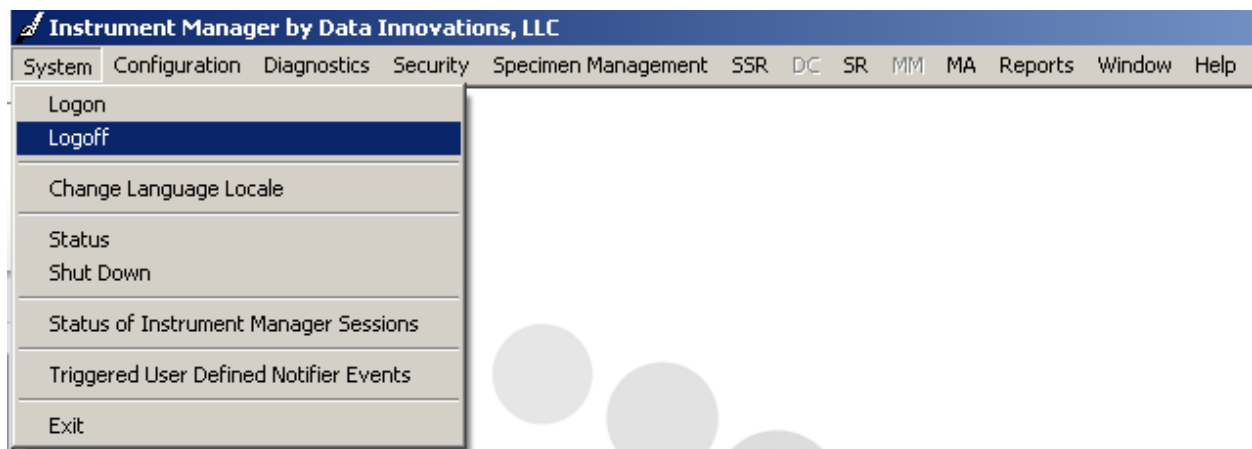
Once your password is established you will Logon with the above established user name and password to gain access to the system.

B. Security

You are responsible for results release under your code. See below to change your password on demand.

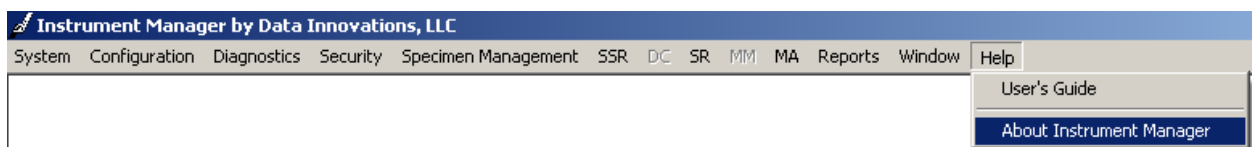


To maintain system security logoff under system as demonstrated.



C. Help

The About Instrument Manager under the help menu will provide required information when calling customer support.





D. System menu



System Status

The status of interfaces should be on all the time for the following:

- Qmgr
- Specimen Routing
- CENTAURS
- CENTAURW
- EZLINKG
- EZLINKS
- EZLINKW
- SUNQUEST ORDERS
- SUNQUEST RESULTS

Note the below screen shot demonstrates EZLINKG at Germantown is not working. It is trying to connect unsuccessfully. You can attempt to repair the connection - click on the connection then select **STOP**/once stopped then **START** selected connection.

Connection	Status	In Service	In	InQ	SendQ	Sent	Errors
System							
Purge	On						0
Qmg...	On (2/2)				0	327	0
Specimen Routing	On						0
User Defined							
CENTAURS	On	Yes	0	0	0	0	0
CENTAUR W	On	Yes	0	0	0	0	0
EZLINKG	Connecting	Yes	0	0	1606	0	0
EZLINKS	On	Yes	87	0	0	62	1
EZLINKW	On	Yes	6	0	0	51	1
SG Chemistry	Off	Yes	0	0	7	0	0
SUNQUEST ORD...	On	Yes	144	0	0	0	0
SUNQUEST RES...	On	Yes	0	0	0	38	0
TEST printer	Off	Yes	0	0	0	0	0
WAHLIS	Off	Yes	0	0	0	0	0

E. Diagnostics menu

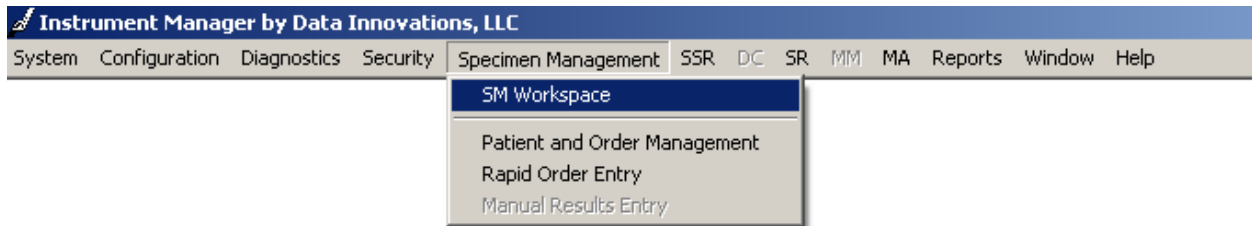
Troubleshooting – staff will use this infrequently with IT support direction. Arrows below denote key logs utilized to capture all actions within the system.

Instrument Manager by Data Innovations, LLC

System Configuration **Diagnostics** Security Specimen Management SSR DC SR MM MA Reports Window Help

- Communications Trace
- List Communications Trace Status for all Connections
- Loopback Test
- Specimen Event Log ← Tracks specimen from order to result.
- System Log ← Tracks user key strokes and actions while in the system.

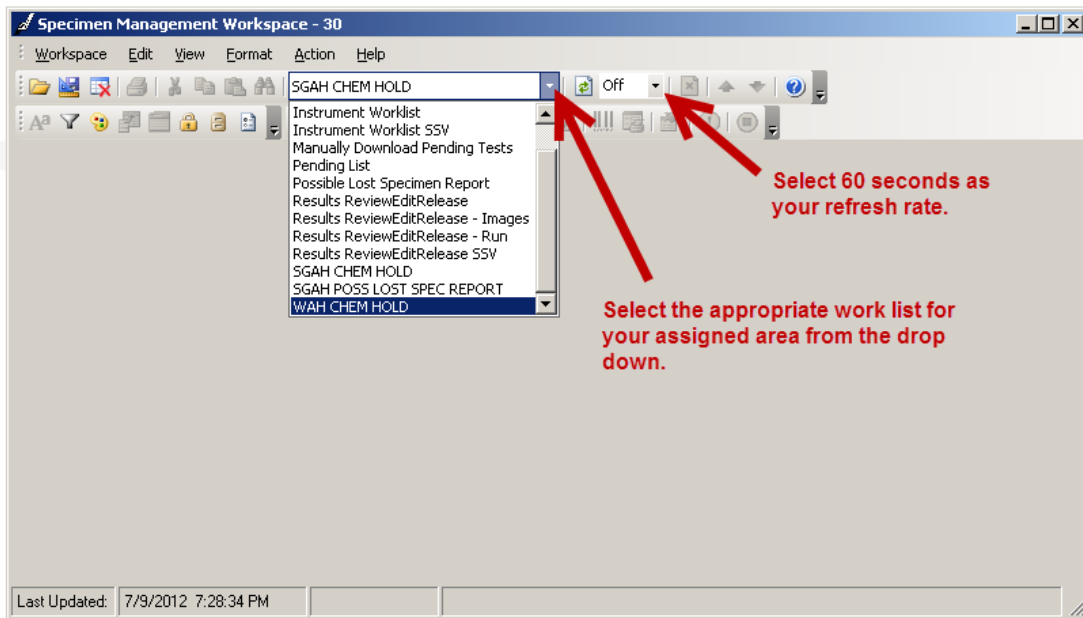
F. Specimen Management Menu



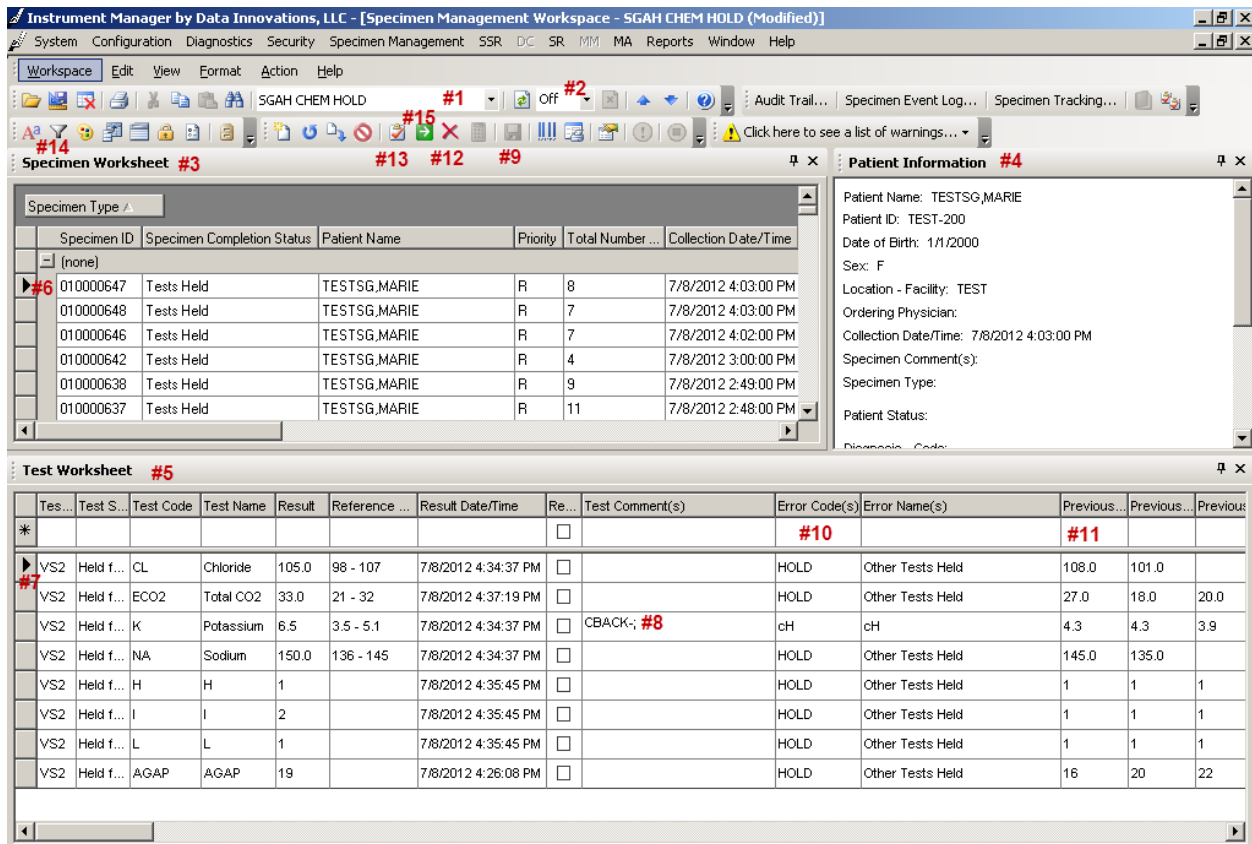
SM Workspace is the default window for technical staff. This is where specimen results are reviewed, rejected, and/or released.

- Click on SM Workspace – Your default screen will appear. The first time you log in it is blank because you have not selected a default worklist.
- Select your default worklist (SGAH, WAH, or GEC CHEM HOLD)
- Set a 60 second screen refresh rate.

See Example Below:





Below you will find key areas of interest denoted with description.



ITEM	DESCRIPTION	FUNCTION
#1	Work List	Select the work list appropriate for the area of assigned coverage. SGAH CHEM HOLD – Tests held for review for VS1, VS2, VS3, and CS1 WAH CHEM HOLD - Tests held for review for VW1, VW2, and CW1
#2	Screen Refresh Rate	The Refresh Rate is how frequently the computer looks for new data. Selections are OFF, 30s, 60s, 120s, and 300s. The Refresh Rate should generally be set to 60s. If you have a particularly complex result to review you can toggle the setting to OFF. If the setting is OFF the screen will not refresh automatically which could affect turnaround time negatively.
#3	Specimen Worksheet	List of specimens to review before result release.
#4	Patient Information	This panel displays patient demographic information on the selected patient.
#5	Test Worksheet	Displays the results of the selected patient.
#6	Selected Patient	The arrow designates the patient being evaluated and acted on.
#7	Selected Test Result	The arrow indicates the current test being evaluated. The test is CL run on VS2 with result of 105.0 and held of the critical high Potassium.
#8	Critical	The critical result is flagged with cH and CBACK-; appends for documentation of the call.

Form revised 3/31/00

ITEM	DESCRIPTION	FUNCTION
#9	Save Changes	Save changes after entering test comments so they will not be lost. If the screen refreshes you will be asked 'do you want to save changes'. Responding <i>yes</i> to the save request will save your work but not release it.
#10	Error Code	The Error Code or flag is what holds a sample for review. The name of the error is listed in the adjacent cell. Additional information may also be provided to assist in evaluating the specimen results.
#11	Previous Results	If available, previous results will be listed. Please note that delta flags are triggered at certain intervals thus the difference may exceed the delta range but the time for the flag to trigger has elapsed.
#12	Reject Result	The Red  rejects results you do not want to release. You can select individual results to reject or groups of results by depressing the Shift or Ctrl key in combination with the mouse. Always evaluate and reject before you release.
#13	Release Results	The clipboard with the check mark  allows you to release results to Sunquest. SQ requires results to be delivered in neat packets. Therefore, you must evaluate results and reject everything except that which you want sent to the patients chart. Do not send duplicate results - SQ gets confused.
#14	Filter	The filter will allow you to add or remove a filter from the current Work List (#1 Above) you are viewing. For example, the default Work List only shows "Tests Held" for review. If you click on the filter you can remove a filter and see both held for review and complete.
#15	Send to Host	Selected results may be resent to the host Sunquest. This is most effective if you have a single result that did not cross for some reason; such as, using a comment without appropriate format or mistype of a canned comment.

G. Result Evaluation Process

Example 1

1. Review results for errors, deltas, criticals, and HIL flags.
2. Only issues noted is a critical K of 6.5. Result called and read back (CBACK-) by Rob at 16:40.

Specimen Worksheet

Specimen ID	Specimen Completion Status	Patient Name	Priority	Total Number ...	Collection Date/Time
010000647	Tests Held	TESTSG, MARIE	R	8	7/8/2012 4:03:00 PM
010000648	Tests Held	TESTSG, MARIE	R	7	7/8/2012 4:03:00 PM
010000646	Tests Held	TESTSG, MARIE	R	7	7/8/2012 4:02:00 PM

Test Worksheet

Tes...	Test S...	Test Code	Test Name	Result	Reference ...	Result Date/Time	Re...	Test Comment(s)	Error Code(s)	Error Name(s)	Previous...	Previous...	Previous...
VS2	Held f...	CL	Chloride	105.0	98 - 107	7/8/2012 4:34:37 PM	<input type="checkbox"/>		HOLD	Other Tests Held	108.0	101.0	
VS2	Held f...	ECO2	Total CO2	33.0	21 - 32	7/8/2012 4:37:19 PM	<input type="checkbox"/>		HOLD	Other Tests Held	27.0	18.0	20.0
VS2	Held f...	K	Potassium	6.5	3.5 - 5.1	7/8/2012 4:34:37 PM	<input type="checkbox"/>	CBACK-; Rob at 16:40	cH	cH	4.3	4.3	3.9
VS2	Held f...	NA	Sodium	150.0	136 - 145	7/8/2012 4:34:37 PM	<input type="checkbox"/>		HOLD	Other Tests Held	145.0	135.0	
VS2	Held f...	H	H	1		7/8/2012 4:35:45 PM	<input type="checkbox"/>		HOLD	Other Tests Held	1	1	1
VS2	Held f...	I	I	2		7/8/2012 4:35:45 PM	<input type="checkbox"/>		HOLD	Other Tests Held	1	1	1
VS2	Held f...	L	L	1		7/8/2012 4:35:45 PM	<input type="checkbox"/>		HOLD	Other Tests Held	1	1	1
VS2	Held f...	AGAP	AGAP	19		7/8/2012 4:26:08 PM	<input type="checkbox"/>		HOLD	Other Tests Held	16	20	22

Example 2

1. Review results for errors, deltas, criticals, and HIL flags.
2. Error noted (E172) no sample detected.
3. Since only LA is ordered check the sample and order rerun.
4. Reject the bad results.

Specimen Worksheet

Specimen ID	Specimen Completion Status	Patient Name	Priority	Total Number ...	Collection Date/Time
010000639	Tests Held	TESTSG, MARIE	R	4	7/8/2012 2:00:00 PM

Test Worksheet

Tes...	Test S...	Test Code	Test Name	Result	Reference ...	Result Date/Time	Re...	Test Comment(s)	Error Code(s)	Error Name(s)	Previous...	Previous...	Previous...
VS1	Held f...	LA	Lactic Acid			7/8/2012 3:02:24 PM	<input type="checkbox"/>		E172	No Sample	0.4		
VS1	Held f...	L	L			7/8/2012 3:02:24 PM	<input type="checkbox"/>		E172	No Sample	1	1	1
VS1	Held f...	I	I			7/8/2012 3:02:24 PM	<input type="checkbox"/>		E172	No Sample	1	1	1
VS1	Held f...	H	H			7/8/2012 3:02:24 PM	<input type="checkbox"/>		E172	No Sample	1	1	1

Example 3

On evaluation of the below results the entire result set was rejected.

Note: Rejecting a result in IM does **NOT** cancel the test in SQ. Test cancellation is a separate process in SQ requiring specific documentation per applicable procedure.

Specimen Worksheet

Specimen ID	Specimen ...	Patient Name	Priority	Total...	Collection Date/Time	Specimen Dilution	Posi
010000649	Complete	BBBSUNQUEST,VISTA WOM...	R	17	7/8/2012 6:00:00 PM	1	

Patient Information

Patient Name: BBBSUNQUEST,VISTA WOMAN
 Patient ID: 31000161
 Date of Birth: 6/18/1982
 Sex: F
 Location - Facility: SLAB

This is an example of a rejected result. The status in IM is complete but note no results were released to SQ. Complete here indicates resolved in IM.

Test Worksheet

Tes...	Test S...	Test Code	Test Name	Result	Reference ...	Result Date/Time	Re...	Test Comment(s)	Error Code(s)	Error Name(s)	Previous...	Previous...	Prev...
VS2	Reject...	TP	Total Prot...	5.5	6.4 - 8.2	7/8/2012 9:06:03 PM	<input type="checkbox"/>		HOLD	Other Tests Held	7.2	8.5	7.4
VS2	Reject...	TP	Total Prot...	5.3	6.4 - 8.2	7/8/2012 9:16:08 PM	<input type="checkbox"/>		HOLD	Other Tests Held	7.2	8.5	7.4
VS2	Reject...	TBIL	Bilirubin, ...	0.40	0 - 1	7/8/2012 9:05:56 PM	<input type="checkbox"/>		HOLD	Other Tests Held	0.70	0.30	0.30
VS2	Reject...	TBIL	Bilirubin, ...	0.40	0 - 1	7/8/2012 9:16:22 PM	<input type="checkbox"/>		HOLD	Other Tests Held	0.70	0.30	0.30
VS2	Reject...	NA	Sodium			7/8/2012 9:05:13 PM	<input type="checkbox"/>		E172	No Sample	130.0	140.0	142.0
VS2	Reject...	NA	Sodium			7/8/2012 9:05:13 PM	<input type="checkbox"/>		E172	No Sample	130.0	140.0	142.0
VS2	Reject...	NA	Sodium	102.0	136 - 145	7/8/2012 8:57:46 PM	<input checked="" type="checkbox"/>	CBACK-;	cL_DELTA,J...	cL_DELTA,Possible IV Contami...	130.0	140.0	142.0
VS2	Reject...	L	L	4		7/8/2012 8:58:12 PM	<input type="checkbox"/>		HOLD	Other Tests Held	1	1	1
VS2	Reject...	K	Potassium			7/8/2012 9:05:13 PM	<input type="checkbox"/>		E172	No Sample	HLK	HLK	HLK
VS2	Reject...	K	Potassium			7/8/2012 9:05:13 PM	<input type="checkbox"/>		E172	No Sample	HLK	HLK	HLK
VS2	Reject...	K	Potassium	HLK	3.5 - 5.1	7/8/2012 8:57:46 PM	<input checked="" type="checkbox"/>		HEMOLYZED	HEMOLYZED	HLK	HLK	HLK
VS2	Reject...	I	I	4		7/8/2012 8:58:12 PM	<input type="checkbox"/>		HOLD	Other Tests Held	1	1	1
VS2	Reject...	H	H	4		7/8/2012 8:58:12 PM	<input type="checkbox"/>		HEMOLYZED	HEMOLYZED	4	4	4
VS2	Reject...	GLUC	Glucose	86	74 - 106	7/8/2012 9:01:30 PM	<input type="checkbox"/>		HOLD	Other Tests Held	86	205	50
VS2	Reject...	GLUC	Glucose			7/8/2012 9:05:13 PM	<input type="checkbox"/>		E172	No Sample	86	205	50
VS2	Reject...	ECO2	Total CO2			7/8/2012 9:05:13 PM	<input type="checkbox"/>		E172	No Sample	16.0	20.0	23.0
VS2	Reject...	ECO2	Total CO2	11.0	21 - 32	7/8/2012 9:01:19 PM	<input type="checkbox"/>		HOLD	Other Tests Held	16.0	20.0	23.0
VS2	Reject...	CREA	Creatinine			7/8/2012 9:05:13 PM	<input type="checkbox"/>		E172	No Sample	2.0	1.1	1.3
VS2	Reject...	CREA	Creatinine	0.9	0.6 - 1.3	7/8/2012 9:01:04 PM	<input type="checkbox"/>		HOLD	Other Tests Held	2.0	1.1	1.3
VS2	Reject...	CL	Chloride			7/8/2012 9:05:13 PM	<input type="checkbox"/>		E172	No Sample		102.0	108.0
VS2	Reject...	CL	Chloride			7/8/2012 9:05:13 PM	<input type="checkbox"/>		E172	No Sample		102.0	108.0
VS2	Reject...	CL	Chloride	70.0	98 - 107	7/8/2012 8:57:46 PM	<input checked="" type="checkbox"/>	CBACK-;	cL_DELTA,J...	cL_DELTA,Possible IV Contami...	102.0	108.0	108.0

Example 4

For a calculation to work all components of the calculation must be present. Below is an example of one that was successful and a failed calculation due to missing components. To get the calculation to fire rerun all components required for the calculation.

This is critical for the LPNL (Lipid Profile). See example.

Good

Test Worksheet

Tes...	Test S...	Test Code	Test Name	Result	Reference ...	Result Date/Time	Re...	Test Comment(s)	Error Code(s)	Error Name(s)
VS1	Relea...	TGL	Triglyceri...	97	0 - 150	7/8/2012 2:28:12 PM	<input type="checkbox"/>			
VS1	Relea...	RISK	RISK	2.675		7/8/2012 2:14:41 PM	<input type="checkbox"/>			
VS1	Relea...	LDL	LDL	48		7/8/2012 2:14:41 PM	<input type="checkbox"/>			
VS1	Relea...	L	L	1		7/8/2012 2:22:26 PM	<input type="checkbox"/>			
VS1	Relea...	I	I	1		7/8/2012 2:22:26 PM	<input type="checkbox"/>			
VS1	Relea...	H	H	1		7/8/2012 2:22:26 PM	<input type="checkbox"/>			
VS1	Relea...	CHOL	Cholester...	107.0	0 - 200	7/8/2012 2:27:50 PM	<input type="checkbox"/>			
VS1	Relea...	AHDL	HDL	40		7/8/2012 2:30:32 PM	<input type="checkbox"/>			

Rejected and reordered.

Test Worksheet											
	Tes...	Test S...	Test Code	Test Name	Result	Reference ...	Result Date/Time	Re...	Test Comment(s)	Error Code(s)	Error Name(s)
*								<input type="checkbox"/>			
▶	VS1	Reject...	LDL	LDL	NCAL		7/8/2012 2:42:12 PM	<input type="checkbox"/>		UNABLE T...	UNABLE TO CALCULATE
	VS1	Reject...	L	L	↓		7/8/2012 2:48:36 PM	<input type="checkbox"/>		HOLD	Other Tests Held
	VS1	Reject...	I	I	↓		7/8/2012 2:48:36 PM	<input type="checkbox"/>		HOLD	Other Tests Held
	VS1	Reject...	H	H	↓		7/8/2012 2:48:36 PM	<input type="checkbox"/>		HOLD	Other Tests Held
	VS1	Reject...	AHDL	HDL	↓35		7/8/2012 2:58:01 PM	<input type="checkbox"/>		HOLD	Other Tests Held

Example 5

Comment format is critical to properly file the result in SQ.

English Text Codes are acceptable and the preferred method for result comments.

Note-1: The format is slightly different in that the (-) is appended by SQ. Review the format utilized in the screen captures below.

Note-2: Free text comment must be preceded by (;). Remember the (-) is already appended.

English Text: HIR and REP

The screenshot displays the Data Innovations Instrument Manager interface. It features three main panels: Specimen Worksheet, Patient Information, and Test Worksheet. The Specimen Worksheet shows a table with columns for Specimen ID, Specimen Name, Patient Name, Priority, Total, and Collection Date/Time. The Patient Information panel displays details for Patient Name: BBBSUNQUEST,VISTA BABY, Patient ID: 31000160, Date of Birth: 6/3/2012, and Sex: F. The Test Worksheet panel shows a table with columns for Test Name, Result, Reference, Result Date/Time, and Test Comment(s). The Test Comment(s) column contains various codes such as HIR, REP, and DELTA.

Specimen Worksheet											
Specimen ID	Specimen ...	Patient Name	Priority	Total ...	Collection Date/Time	S					
▶	040003454	Complete	BBBSUNQUEST,VISTA BABY	R	15	7/4/2012 3:00:00 PM	1				

Test Worksheet											
	Tes...	Test S...	Test Code	Test Name	Result	Reference ...	Result Date/Time	Re...	Test Comment(s)	Error Code(s)	Error Name(s)
▶	VS2	Relea...	TBILN	Bilirubin, ...	10.20	0 - 1	7/8/2012 2:43:30 PM	<input type="checkbox"/>		DELTA	DELTA
	VS2	Relea...	NA	Sodium	149.0	136 - 145	7/8/2012 2:34:44 PM	<input type="checkbox"/>		HOLD	Other Tests Held
	VS2	Relea...	L	L	1		7/8/2012 2:35:24 PM	<input type="checkbox"/>		HOLD	Other Tests Held
	VS2	Relea...	K	Potassium	4.7	3.5 - 5.1	7/8/2012 2:34:44 PM	<input type="checkbox"/>	HIR	HEMOLYZED	HEMOLYZED
	VS2	Relea...	IBIL	Calc Indir...	2		7/8/2012 2:32:21 PM	<input type="checkbox"/>		HOLD	Other Tests Held
	VS2	Relea...	I	I	4		7/8/2012 2:35:24 PM	<input type="checkbox"/>		HOLD	Other Tests Held
	VS2	Relea...	H	H	3		7/8/2012 2:35:24 PM	<input type="checkbox"/>		HEMOLYZE...	HEMOLYZED,HEMOLYZED
	VS2	Relea...	GLUC	Glucose	242	74 - 106	7/8/2012 2:38:34 PM	<input type="checkbox"/>		HOLD	Other Tests Held
	VS2	Relea...	ECO2	Total CO2	17.0	21 - 32	7/8/2012 2:38:24 PM	<input type="checkbox"/>		HOLD	Other Tests Held
	VS2	Relea...	DBILN	Bilirubin, ...	8.19	0 - 0.3	7/8/2012 2:41:09 PM	<input type="checkbox"/>	HIR	HEMOLYZE...	HEMOLYZED,DELTA
	VS2	Relea...	CREA	Creatinine	1.0	0.6 - 1.3	7/8/2012 2:38:09 PM	<input type="checkbox"/>	REP	DELTA	DELTA
	VS2	Relea...	CL	Chloride	122.0	98 - 107	7/8/2012 2:34:44 PM	<input type="checkbox"/>	REP	DELTA	DELTA
	VS2	Relea...	CA	Calcium	8.6	8.5 - 10.1	7/8/2012 2:38:02 PM	<input type="checkbox"/>	REP	DELTA	DELTA
	VS2	Relea...	BUN	Urea Nitr...	12.0	7 - 18	7/8/2012 2:38:20 PM	<input type="checkbox"/>		HOLD	Other Tests Held
	VS2	Relea...	AGAP	AGAP	15		7/8/2012 2:32:21 PM	<input type="checkbox"/>		HOLD	Other Tests Held

English Text-English Text: CBACK-; SUZIE RN AT 2020-REP

Test Worksheet														
Tes...	Test S...	Test Code	Test Name	Result	Reference ...	Result Date/Time	Re...	Test Comment(s)	Error Code(s)	Error Name(s)	Previous...	Previous...	Prev...	
*							<input type="checkbox"/>							
VS2	Relea...	TP	Total Prof...	3.2	6.4 - 8.2	7/6/2012 9:12:18 PM	<input type="checkbox"/>			HOLD	Other Tests Held	6.9	7.1	7.1
VS2	Reject...	TP	Total Prof...	3.2	6.4 - 8.2	7/6/2012 9:21:03 PM	<input type="checkbox"/>	Repeat Rejected		HOLD	Other Tests Held	3.2	6.9	7.1
VS2	Reject...	TP	Total Prof...	3.2	6.4 - 8.2	7/6/2012 9:12:18 PM	<input type="checkbox"/>	Repeat Rejected		HOLD	Other Tests Held	6.9	7.1	7.1
VS2	Relea...	L	L	1		7/6/2012 8:50:31 PM	<input type="checkbox"/>			HOLD	Other Tests Held	1	1	1
VS2	Relea...	I	I	1		7/6/2012 8:50:31 PM	<input type="checkbox"/>			HOLD	Other Tests Held	1	3	1
VS2	Relea...	H	H	1		7/6/2012 8:50:31 PM	<input type="checkbox"/>			HOLD	Other Tests Held	1	1	1
VS2	Reject...	GLUC	Glucose	11	74 - 106	7/6/2012 9:15:54 PM	<input type="checkbox"/>	CBACK-; Repeat Rejected	cL,DELTA	cL,DELTA	11	333	58	
VS2	Reject...	GLUC	Glucose	11	74 - 106	7/6/2012 9:15:54 PM	<input type="checkbox"/>	CBACK-; Repeat Rejected	cL,DELTA	cL,DELTA	11	333	58	
VS2	Relea...	GLUC	Glucose	11	74 - 106	7/6/2012 8:53:42 PM	<input type="checkbox"/>	CBACK-; SUZIE RN AT 2020-REP	cL,DELTA	cL,DELTA	333	58	61	

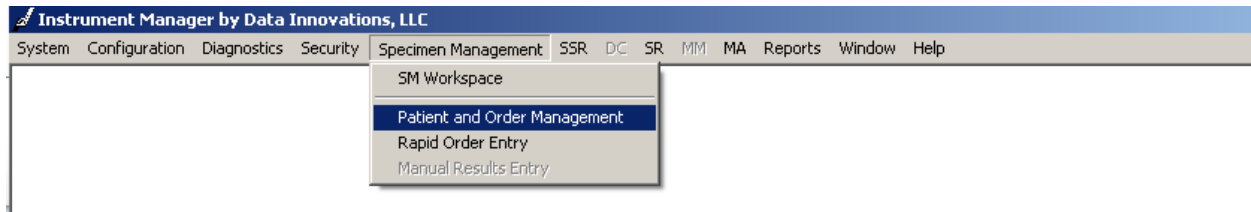
The below typo will cause the result to **NOT** file in SQ. You would need to correct the comment in OEM.

Test Worksheet														
Tes...	Test S...	Test Code	Test Name	Result	Reference ...	Result Date/Time	Re...	Test Comment(s)	Error Code(s)	Error Name(s)	Previous...	Previous...	Previous...	
*							<input type="checkbox"/>							
VS2	Reject...	TP	Total Prof...	3.3	6.4 - 8.2	7/6/2012 10:48:10 ...	<input type="checkbox"/>			HOLD	Other Tests Held	3.2	3.2	6.9
VS2	Reject...	TP	Total Prof...	3.2	6.4 - 8.2	7/6/2012 10:50:56 ...	<input type="checkbox"/>			HOLD	Other Tests Held	3.2	3.2	6.9
VS2	Reject...	L	L	1		7/6/2012 10:33:07 ...	<input type="checkbox"/>			HOLD	Other Tests Held	1	1	1
VS2	Reject...	I	I	1		7/6/2012 10:33:07 ...	<input type="checkbox"/>			HOLD	Other Tests Held	1	1	3
VS2	Reject...	H	H	1		7/6/2012 10:33:07 ...	<input type="checkbox"/>			HOLD	Other Tests Held	1	1	1
VS2	Relea...	GLUC	Glucose	26	74 - 106	7/6/2012 10:36:32 ...	<input type="checkbox"/>	C SUSANRNBACK-;	cL	cL	25	11	333	
VS2	Reject...	GLUC	Glucose	26	74 - 106	7/6/2012 10:43:01 ...	<input type="checkbox"/>	CBACK-;	cL	cL	26	25	11	

The below comments are entered correctly.

Test Worksheet													
Tes...	Test S...	Test Code	Test Name	Result	Reference ...	Result Date/Time	Re...	Test Comment(s)	Error Code(s)	Error Name(s)	Previous...	Previous...	Prev...
*							<input type="checkbox"/>						
VS3	Relea...	TBLN	Bilirubin, ...	0.30	0 - 1	7/4/2012 6:12:07 PM	<input type="checkbox"/>		HOLD	Other Tests Held	0.40	0.50	0.20
VS3	Relea...	NA	Sodium	140.0	136 - 145	7/4/2012 6:04:15 PM	<input type="checkbox"/>		HOLD	Other Tests Held	146.0	149.0	151.0
VS3	Relea...	L	L	1		7/4/2012 6:05:52 PM	<input type="checkbox"/>		HOLD	Other Tests Held	1	1	1
VS3	Relea...	K	Potassium	HLK	3.5 - 5.1	7/4/2012 6:04:15 PM	<input type="checkbox"/>	NOTIFIED RN XY AT 1745	HEMOLYZED	HEMOLYZED	4.6	4.6	3.9
VS3	Relea...	IBIL	Calc Indir...	0.3		7/4/2012 6:08:12 PM	<input type="checkbox"/>		HOLD	Other Tests Held	0.3		
VS3	Relea...	I	I	1		7/4/2012 6:05:52 PM	<input type="checkbox"/>		HOLD	Other Tests Held	1	1	1
VS3	Relea...	H	H	4		7/4/2012 6:05:52 PM	<input type="checkbox"/>		HEMOLYZED	HEMOLYZED	1	1	1
VS3	Relea...	GLUC	Glucose	114	74 - 106	7/4/2012 6:07:19 PM	<input type="checkbox"/>	REP	DELTA	DELTA	19	71	77
VS3	Relea...	ECO2	Total CO2	23.0	21 - 32	7/4/2012 6:07:12 PM	<input type="checkbox"/>		HOLD	Other Tests Held	15.0	24.0	22.0
VS3	Relea...	DBILN	Bilirubin, ...	0.05	0 - 0.3	7/4/2012 6:09:57 PM	<input type="checkbox"/>	HIR-REP	DELTA	DELTA	0.09	< 0.05	< 0.05
VS3	Relea...	CREA	Creatinine	0.7	0.6 - 1.3	7/4/2012 6:06:43 PM	<input type="checkbox"/>		HOLD	Other Tests Held	>60	>60	1.3
VS3	Relea...	CL	Chloride	104.0	98 - 107	7/4/2012 6:04:15 PM	<input type="checkbox"/>		HOLD	Other Tests Held	109.0	110.0	108.0
VS3	Relea...	CA	Calcium	8.2	8.5 - 10.1	7/4/2012 6:06:36 PM	<input type="checkbox"/>		HOLD	Other Tests Held	9.0	9.4	9.2

H. Patient and Order Management



Select Patient and Order Management to look up previous results, order tests, and print results (downtime use only).

Note: Patient reports should only be printed from SQ for distribution to providers. The print feature is utilized to create preliminary reports for downtime purposes only or for internal use only.

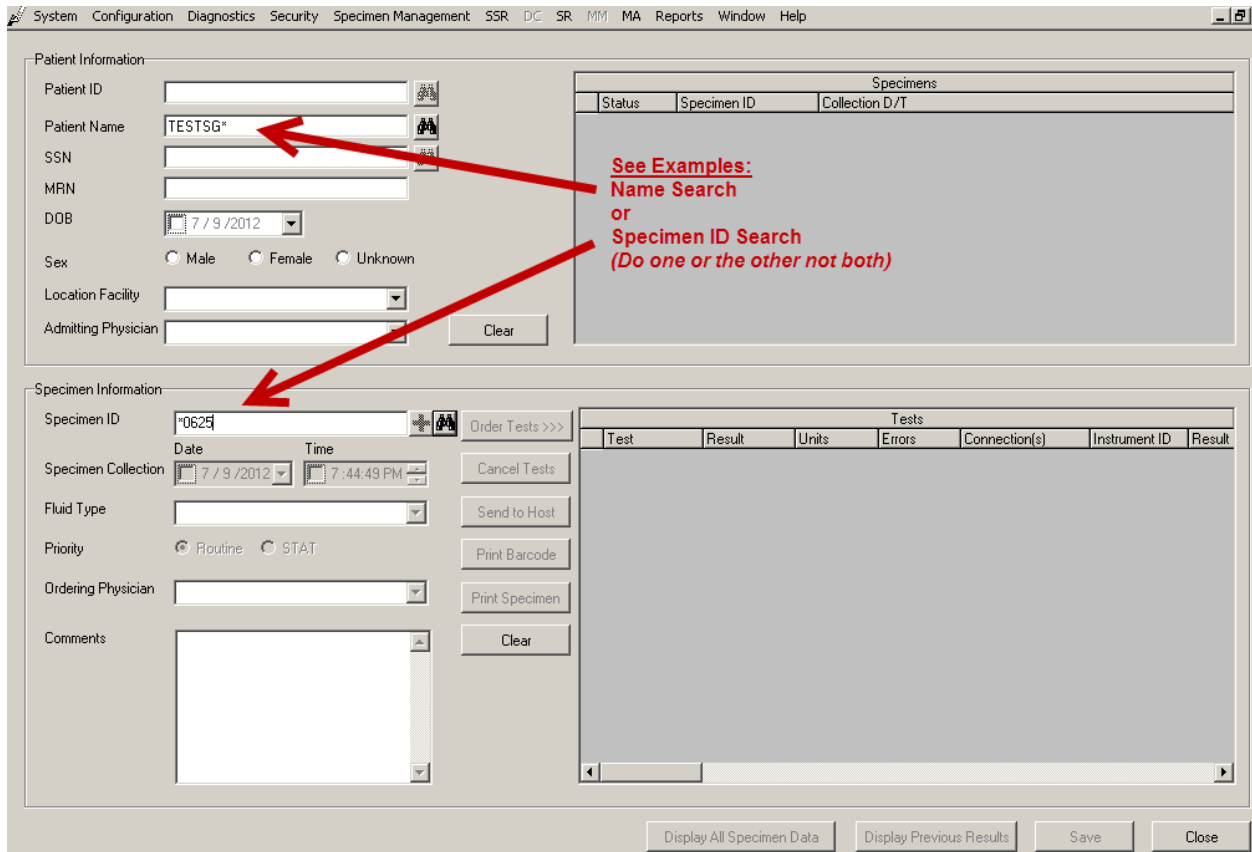
You can perform exact match searches or wild card searches.

Wild Card Searches

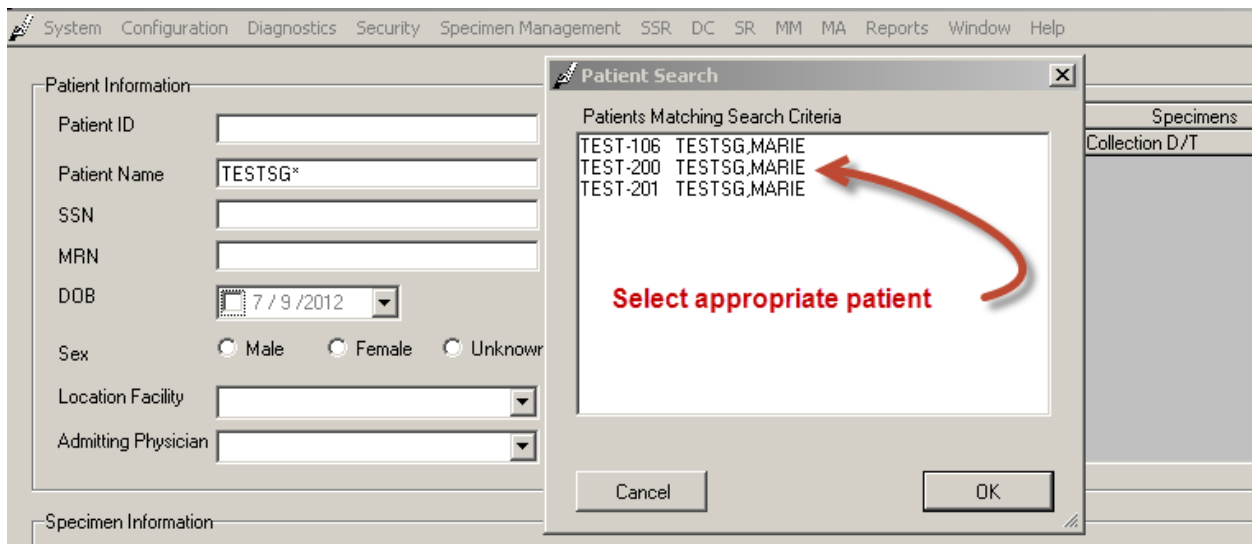
Patient name field type the search criteria, part of last name, followed by a wild card (*).

Specimen ID field type the wild card (*) followed by part of the specimen ID number.

Example Wild Card Searches



Result of Patient Name search



I. Out Patient Call Back List

Flag an Out-Patient for “Call Back” by removing the “CBACK-;” for the test comment field in IM.

When the result is released the Call Back List is automatically updated.

Example: Call Back

Specimen Worksheet

Specimen ID	Specimen Completion Status	Patient Name	Priority	Total Number of Tests ...	Specimen Dilu...
040003389	Tests Held	BBBSUNQUEST,VISTA BABY	R	13	1
040003334	Tests Held	BBBSUNQUEST,VISTA WDM...	R	18	1
040003307	Tests Held	BBBSUNQUEST,VISTA CHILD	R	3	1
040003338	Tests Held	BBBSUNQUEST,VISTA CHILD	R	3	1
1	Tests Held		R	5	1

Patient Information

Patient Name: BBBSUNQUEST,VISTA CHILD
 Patient ID: 31000163
 Date of Birth: 6/15/2000
 Sex: F
 Location - Facility: Out Patient
 Ordering Physician:
 Collection Date/Time: 7/4/2012 4:26:00 PM
 Specimen Comment(s):
 Specimen Type:

Test Worksheet

Tes...	Test S...	Test Code	Test Name	Result	Reference ...	Result Date/Time	Re...	Test Comment(s)	Error Code(s)	Error Name(s)	Previous...	Previous...
*							<input type="checkbox"/>					
VS1	Held f...	TP	Total Prot...	3.2	6.4 - 8.2	7/9/2012 10:12:25 ...	<input type="checkbox"/>		HOLD	Other Tests Held		7.8
VS1	Held f...	L	L	1		7/9/2012 9:51:00 PM	<input type="checkbox"/>		HOLD	Other Tests Held	1	1
VS1	Held f...	I	I	1		7/9/2012 9:51:00 PM	<input type="checkbox"/>		HOLD	Other Tests Held	1	1
VS1	Held f...	H	H	1		7/9/2012 9:51:00 PM	<input type="checkbox"/>		HOLD	Other Tests Held	1	2
VS1	Held f...	GLUC	Glucose	32	74 - 106	7/9/2012 9:52:30 PM	<input type="checkbox"/>		cL	cL	36	958

Remove CBACK-:
For an Out Patient Location removing CBACK-:
automatically sends the result to the call back list.

J. Tests Requiring Special Handling/Programming

Due to multiple fluid types on the same accession number special consideration must be given to CRCL and GTT testing. These tests should be manually programmed on the instrument utilizing the following format:

Program the accession number + TEST

CRCL - Example

F3200 UCRR

F3200 CREA

GTT

F3201 GT0

F3201 GT1

F3201 GT2

F3201 GT3

Results will need to be entered manually in MEM.

K. Start Holding All Results

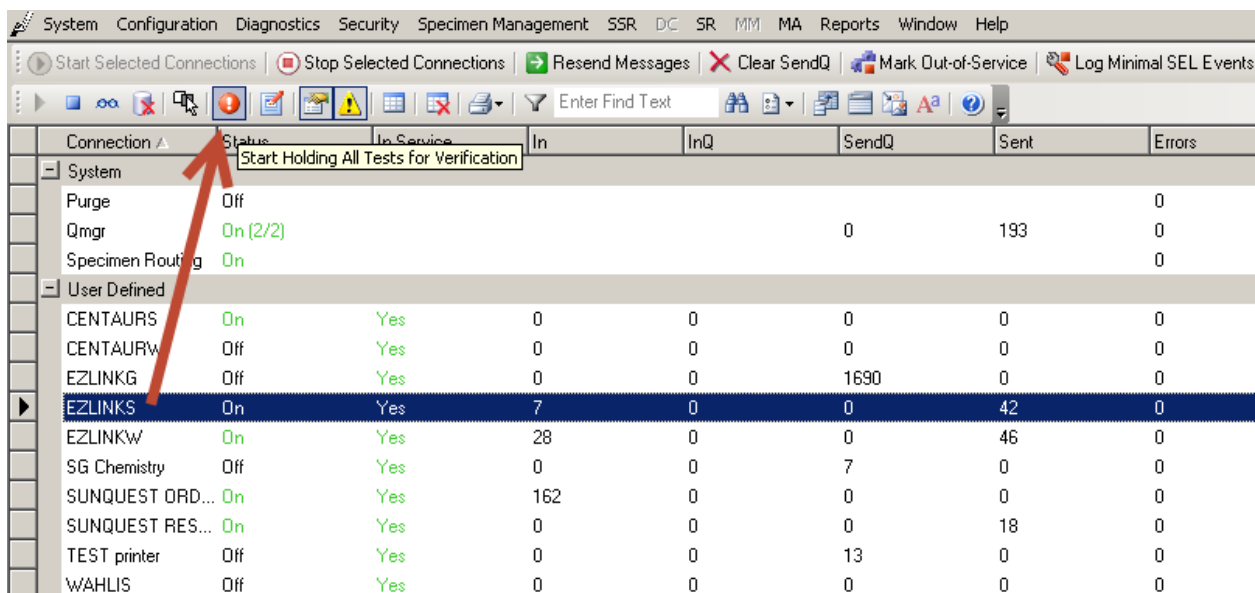
If there is a suspected problem with Auto-verification there is a command to Immediately Stop Auto-Verifying Results. If the need arises to STOP Auto-Verification do so, then immediately:

- Notify Lab Management (Supervisor/Director/Admin On-Call).
- Notify other system laboratories.
- Complete a QV Form.
- Begin releasing results manually.

Go to the System-Status screen.



Select the appropriate interface (example. ELINKS or EZLINKW)

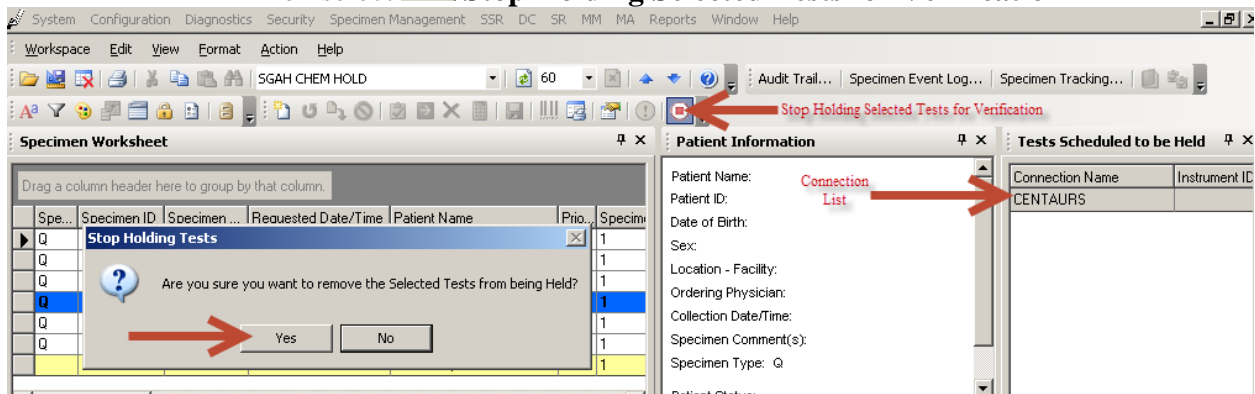
Select  Start Holding All Test For Verification



Connection	Status	In Service	In	InQ	SendQ	Sent	Errors
System							
Purge	Off						0
Qmgr	On (2/2)				0	193	0
Specimen Routing	On						0
User Defined							
CENTAURS	On	Yes	0	0	0	0	0
CENTAURW	Off	Yes	0	0	0	0	0
EZLINKG	Off	Yes	0	0	1690	0	0
EZLINKS	On	Yes	7	0	0	42	0
EZLINKW	On	Yes	28	0	0	46	0
SG Chemistry	Off	Yes	0	0	7	0	0
SUNQUEST ORD...	On	Yes	162	0	0	0	0
SUNQUEST RES...	On	Yes	0	0	0	18	0
TEST printer	Off	Yes	0	0	13	0	0
WAHLIS	Off	Yes	0	0	0	0	0

To turn the Auto – Verification back on, from the SM Workspace page

- Select  Stop Holding Selected Tests for Verification
- Select the appropriate connection name
- Then select  Stop Holding Selected Tests for Verification



Workspace Edit View Format Action Help

SGAH CHEM HOLD 60 Audit Trail... Specimen Event Log... Specimen Tracking...

Specimen Worksheet Patient Information Tests Scheduled to be Held

Connection List

Connection Name Instrument ID


CENTAURS

Are you sure you want to remove the Selected Tests from being Held?

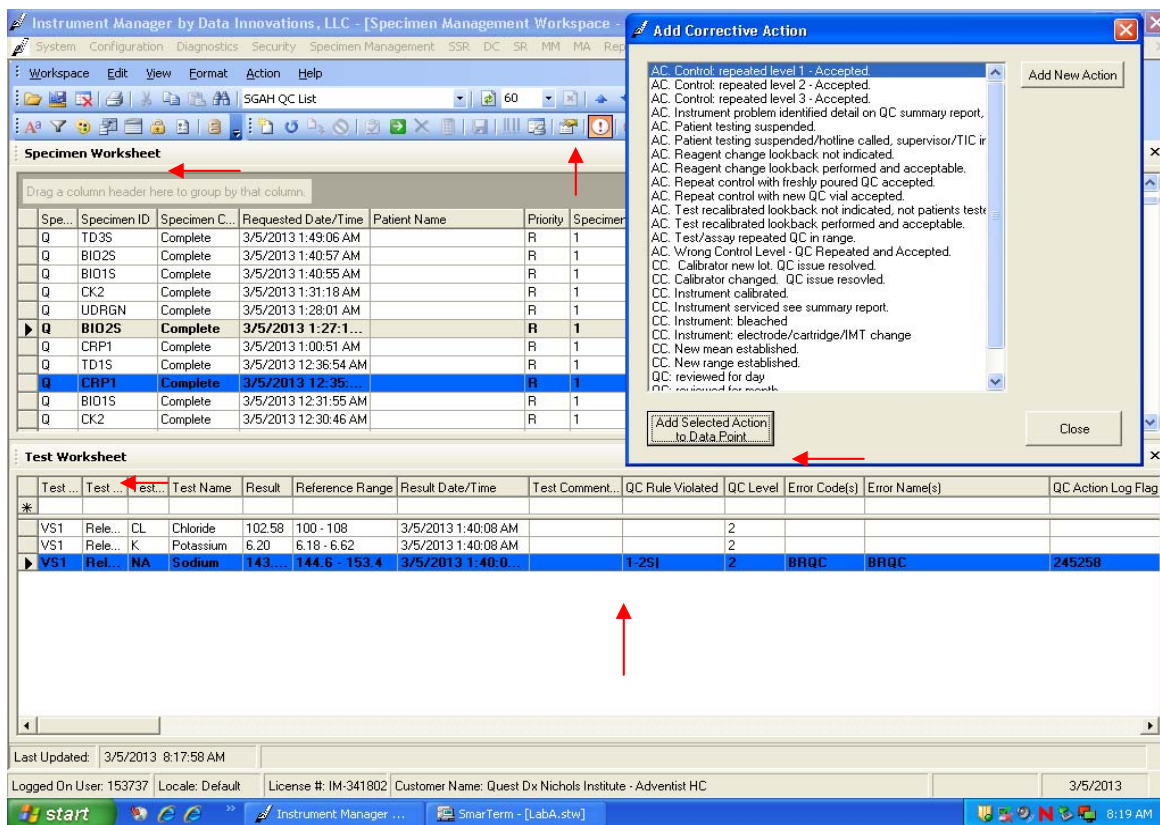
Yes No

L. Quality Control:

The Data Innovation software evaluates each QC result against acceptable ranges and highlights the ones that violate the QC rules, in blue color. The DI software will use the 1 – 2s, 2 – 2s and 1 – 3s Statistical Process Control (SPC) rules to describe the extent of the failure. Before releasing the QC result which has violated the QC rule, a corrective action must be added to the failed QC. To add a corrective action to QC results,



- under **Specimen Worksheet** click on blue high lighted QC
- under **Test Worksheet** select the blue high lighted assay which has violated the QC rule
- **QC Action Log**  icon gets activated
- select the appropriate action that has been (*Not Will Be*) taken to trouble shoot the failed QC
- click on **Add Selected Action to Data Point**

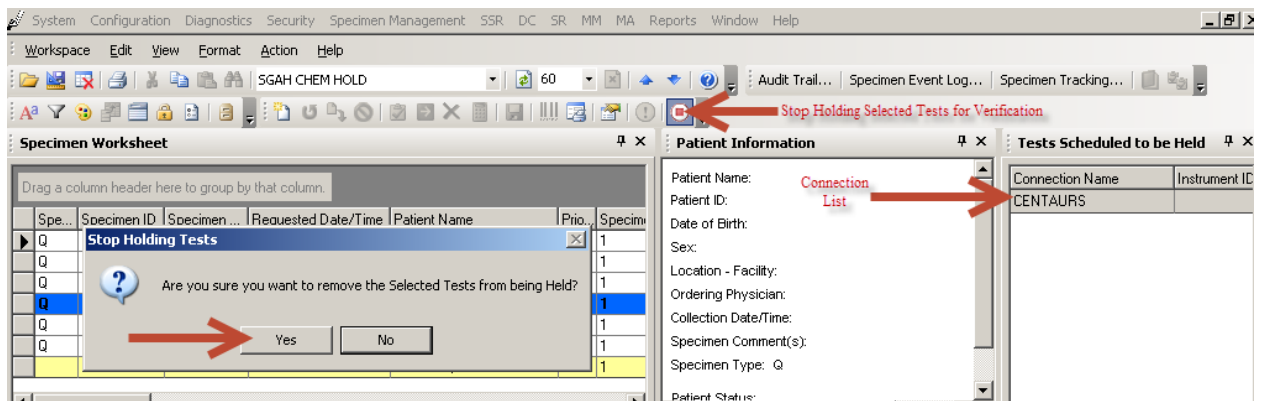
Release the QC result, the selected action will now migrate to Bio-Rad Unity Real Time.



When QC results fail, stop the Auto-Verification immediately. Once the QC is repeated and falls within acceptable ranges turn the Auto-Verification back on. Utilizing the process below, click on the designated icon, then select the connection name and designated test to stop holding:

To turn the Auto – Verification back on, from the SM Workspace page

- Select  **Stop Holding Selected Tests for Verification**
- Select the appropriate connection name
- Then select  **Stop Holding Selected Tests for Verification**



6. RELATED DOCUMENTS

OEM - On Line Entry Method, GEC/SGAH/WAH.LIS10
 MEM - Manual Result Entry, GEC/SGAH/WAH.LIS09
 Critical Values - Accepting Results in LIS, GEC/SGAH/WAH.LIS03
 Corrected Results, GEC.LIS43, SGAH.LIS51, WAH.LIS52

7. REFERENCES

User Documentation, *Instrument Manager v8.12*, Data Innovations, INC.

8. REVISION HISTORY

Version	Date	Reason for Revision	Revised By	Approved By
000	3/12/2013	Update owner Section 5: Added process to reinstate Auto-verification to item K. Added QC section (item L)	A. Chini	R. SanLuis

9. ADDENDA AND APPENDICES

None