

TRAINING UPDATE

Lab Location:SGAH & WAH *Department:Core* GEC is not using this application yet

 Date Distributed:
 3/21/2013

 Due Date:
 4/21/2013

DESCRIPTION OF PROCEDURE REVISION

Name of procedure:

Data Innovations Instrument Manager

GEC.L44, SGAH.L49, WAH.L47 v001

Description of change(s):

Section 5:

- 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)

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

Non-Technical SOP

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 Logon. 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.

a Instr	🖌 Instrument Manager by Data Innovations, LLC												
System	Configuration	Diagnostics	Security	t SSR	DC	SR	MM	MA	Reports	Window	Help		
			System										
			Users	and Groups									
			Chang	e Password									
			Reset										

To maintain system security logoff under system as demonstrated.

a Instr	Instrument Manager by Data Innovations, LLC											
System	Configuration	Diagnostics	Security	Specimen Management	SSR	DC	SR	MM	MA	Reports	Window	Help
Logon	I											
Logof	f											
Chang	ge Language Lo	tale										
Statu	5											
Shut [Down											
Statu	s of Instrument	Manager Sess	ions									
Trigge	ered User Define	ed Notifier Eve										
Exit												

C. Help

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



Quest Diagnostics Nichols Institute Site: GEC, SGAH & WAH



D. System menu



System Status The status of interfaces should be on all the time for the following: Qmgr Specimen Routing CENTAURS 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 attemp to repair the connection - click on the connection then select **STOP**/once stopped then **START** selected connection.

ø	Sy	stem Configuration	Diagnostics	Security Specimen	Management S	5SR DC SR MM	MA Reports Wind	ow Help	
10	D	Start Selected Conne	ctions 🗩 Sto	p Selected Connectio	ns 🔁 Resend	Messages 🗙 Clear	SendQ 💣 Mark Ou	ut-of-Service 🍣 L	.og Minimal SEL
ł		🗠 📝 🖓	0 🌈 🔄	1 💷 🛛 🔁	🗸 🛛 🐨 Enter F	ïnd Text 🛛 👫 🔡	• 🚰 🚍 🎲 🗛	- 🕐 🖕	
		t onnection \land	Statu	In Service	In	InQ	SendQ	Sent	Errors
	Ξ	S ₂ tem							
		Punje	0						0
		Qmg	n (2/2)				0	327	0
		Specir en Routing	0n						0
	E	User Dolined							
		CENTAURS	On	Yes	0	0	0	0	0
		CENTAURY	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 3							MA	Reports	Window	Help
		Communie	cations Tra	ce		1						
		List Comm	nunications									
		Loopback	Test									
		Specimen	Event Log	· · · · · · · · · · · · · · · · · · ·	-	Tra	cks	spe	cimen f	rom or	der to	
		System Log										and a
	while in the system.											

F. Specimen Management Menu

🦨 Instr	🖌 Instrument Manager by Data Innovations, LLC												
System	Configuration	Diagnostics	Security	Specimen Management	SSR	DC	SR	MM	MA	Reports	Window	Help	
				SM Workspace									
				Patient and Order Ma	nagem	ent							
				Rapid Order Entry									
				Manual Results Entry									

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.

d I	Instrument Manager by Data Innovations, LLC - [Specimen Management Workspace - SGAH CHEM HOLD (Modified)]										_ 8 ×					
ø	デ System Diagnostics Security Specimen Management SSR DC SR MM MA Reports Window Help															
<u>۶</u>	Workspace Edit View Format Action Help															
	🗁 📴 😨 🎒 🕌 🕌 🖺 SGAH CHEM HOLD 👘 👫 🔹 👔 Off 粒 📓 🔺 🔹 🕲 🖕 Audit Trail Specimen Event Log Specimen Tracking 🗻 🎭 関															
A	🗚 🝸 🥲 🚰 🚍 🏦 🗄 🗿 💂 🗄 😈 🖎 💿 🖉 🎽 🗙 💿 📟 🛄 📓 🚰 (1) 🌚 💂 🛃 Click here to see a list of warnings +															
i s	#14 #13 #12 #9 # × Patient Information #4 # ×															
	Patient Name: TESTSO,MARIE															
	pecim	en lype ∕										_=	Patient ID: TEST-200			
	S	becimen II) Specimer	n Completion	Status	Patient Name	F	Priority	To	tal Number	Collection Date/Ti	me	Date of Birth: 1/1/2000			
F	二 (n	ione)	7.11						0		7 10 1001 0 4 00 00		Sex: F			
P	#6 U1		Tests He			TESTSG,MARIE	: F	{	8		7/8/2012 4:03:00	PM	Location - Facility: TEST			
\vdash			Tests He			TESTSG,MARIE	- F	i)	7		7/8/2012 4:03:00	PM	Ordering Physician:	00-00 PM		
H		0000646	Tests He			TESTSU,MARIE	- r	1)	1		776/2012 4:02:00		Collection Date/Time: 7/6/2012 4.	03:00 PM		
H		0000042	Tests He	ю И		TESTSO, MARIE	- /	2	9		7/0/2012 3:00:00	PM	Specimen Type:			
H		00000000	Tests He	ю И		TESTSG MARIE	- '	2	11		7/8/2012 2:43:00	PM =1	opeoinen rype.			
		0000000	116363116			TEST SQ,MAILE	- l'	•			170/2012 2.40.00		Patient Status:			
					-								Diognosia Codo:			•
T	est W	orkshee	#5													Ψ×
	Tes	Test S	Test Code	Test Name	Result	Reference	Result Date/Time	Re	ə	Test Commen	t(s)	Error Cod	e(s) Error Name(s)	Previous.	. Previous	Previou:
*												#10		#11		
1	VS2	Held f	CL	Chloride	105.0	98 - 107	7/8/2012 4:34:37	РМ [HOLD	Other Tests Held	108.0	101.0	
1	VS2	Held f	ECO2	Total CO2	33.0	21 - 32	7/8/2012 4:37:19	PM [HOLD	Other Tests Held	27.0	18.0	20.0
	VS2	Held f	к	Potassium	6.5	3.5 - 5.1	7/8/2012 4:34:37	РМ [CBACK-; #8		сН	сН	4.3	4.3	3.9
	VS2	Held f	NA	Sodium	150.0	136 - 145	7/8/2012 4:34:37	РМ [HOLD	Other Tests Held	145.0	135.0	
	VS2	Held f	н	н	1		7/8/2012 4:35:45	РМ [HOLD	Other Tests Held	1	1	1
	VS2	Held f	I	1	2		7/8/2012 4:35:45	РМ [HOLD	Other Tests Held	1	1	1
	VS2	Held f	L	L	1		7/8/2012 4:35:45	РМ [HOLD	Other Tests Held	1	1	1
	VS2	Held f	AGAP	AGAP	19		7/8/2012 4:26:08	PM [HOLD	Other Tests Held	16	20	22
Г																
•																F

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
		hut not release it
#10	Error Codo	The Error Code or flag is what holds a sample for review. The
#10	Elloi Code	name of the error is listed in the adjacent call. 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
"11	Trevious Results	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 X rejects results you do not want to release. You can
	5	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 Sunguest. 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.

1	Syster	n Config	uration Di	agnostics S	Security	Specimen Man	agement SSR	DC	SR	MM MA Rej	ports Window	Help				_ 8 ×
M	<u>(</u> orksp	ace <u>E</u> di	t <u>V</u> iew	<u>F</u> ormat <u>A</u> o	tion į	Help										
	/ 🔛	🙀 ∂	X 🗅	🖺 🐴 se	AH CHE	M HOLD	-	<u>a</u> 0	ff	• 🖹 🔺	🕈 🛛 🕘 📮 🗄 AL	udit Trail	Specimen Event Log	. Specimen Tracking	1	Ŧ
A	Y	3 🔊	= 🔒 🗈		° 🖞	D 00	🛛 🗙 🗐 🛛		<u> </u> 🛃		🔲 🛃 🥂 Click	here to se	e a list of warnings 🗸	-		_
Sp	ecim	en Work	sheet				lanca					Ψ×	Patient Informatio	n n		ч×
	_	_		_	-			-	-	_			Patient Name: TESTS			
S	pecim	en Type /	<u> </u>										Patient ID: TEST-200	2,MARIE		
	Sp	becimen II) Specimer	n Completion	Status	Patient Name		Priori	ty To	otal Number	Collection Date/1	ime	Date of Birth: 1/1/2000)		
	드 (n	one)											Sex: F			
۲	01	0000647	Tests He	ld		TESTSG,MARIE	E	R	8		7/8/2012 4:03:0	D PM	Location - Facility: TES	ST		
	01	0000648	Tests He	ld		TESTSG,MARIE	E	R	7		7/8/2012 4:03:0	D PM	Ordering Physician:			
	01	0000646	Tests He	ld		TESTSG,MARIE	E	R	7		7/8/2012 4:02:0	D PM 🗨	Collection Date/Time: 3	7/8/2012 4:03:00 PM		
•													Specimen Comment(s)	:		-
Τe	st W	orksheel	:										, 			Ψ×
_																
_	Tes	Test S	Test Code	Test Name	Result	Reference	Result Date/Time	•	Re	Test Commen	t(s)	Error Coc	le(s) Error Name(s)	Previous	Previous	. Previou:
*																
	VS2	Held f	CL	Chloride	105.0	98 - 107	7/8/2012 4:34:3	7 PM				HOLD	Other Tests Held	108.0	101.0	
	VS2	Held f	ECO2	Total CO2	33.0	21 - 32	7/8/2012 4:37:1	9 PM				HOLD	Other Tests Held	27.0	18.0	20.0
	VS2	Held f	к	Potassium	6.5	3.5 - 5.1	7/8/2012 4:34:3	7 PM		CBACK-; Rok) at 16:40	сН	сн	4.3	4.3	3.9
	VS2	Held f	NA	Sodium	150.0	136 - 145	7/8/2012 4:34:3	7 PM				HOLD	Other Tests Held	145.0	135.0	
	VS2	Held f	н	н	1		7/8/2012 4:35:4	5 PM				HOLD	Other Tests Held	1	1	1
	VS2	Held f	1	1	2		7/8/2012 4:35:4	5 PM				HOLD	Other Tests Held	1	1	1
	VS2	Held f	L	L	1		7/8/2012 4:35:4:	5 PM				HOLD	Other Tests Held	1	1	1
▶	VS2	Held f	AGAP	AGAP	19		7/8/2012 4:26:0	B PM				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 \times the bad results.

ø	System) Config	juration Di	agnostics S	Security	Specimen Mana	agement SSR DC	SR	MM MA Reports Window H	Help				<u>_ 8 ×</u>
i y	<u>V</u> orkspa	ace <u>E</u> d	it <u>V</u> iew	Eormat <u>A</u> e	tion <u>H</u>	elp								
2	7 🔛	🙀 😹	1 X 🗈	🖺 👫 so	AH CHEN	1 HOLD	- 🛃 🤇	Off	🔹 🖹 🔺 🔹 🛛 🛃 🖡 Au	dit Trail	Specimen Event Log Specimer	Tracking	1	Ŧ
A	a 🍸	3	= 🔒 🗈	🗃 📮 🗄	b 00	Py 🚫 🛛 💆	🔁 🗙 📄 🕞 📗	<u> </u> [2	🖁 😁 🕕 🗐 📕 🧎 Click	here to se	e a list of warnings 👻 🖕			-
i s	pecim	en Work	sheet		Ord	ler Rerun/Refle	x			Ψ×	Patient Information			Ψ×
9) pecime	en Type /		Canalatian	Charlen	Detient Mana	Dia	ан. (Т.	tel Number - Collection Date /T		Patient Name: TESTSG,MARIE Patient ID: TEST-106			_
┢	5p	iecimen II 0000639	Tests He	n Completion Id	Status	Patient Name TESTSG MARIE	Filor B	4	7/8/2012 2:00:00	PM -1	Date of Birth: 1/1/2000			
Í						- Lot out the				⊵∸∥	Location - Facility: TEST			•
į Te	est Wo	orkshee	t											Ψ×
	Tes	Test S	Test Code	Test Name	Result	Reference	Result Date/Time	Re	Test Comment(s)	Error Cod	le(s) Error Name(s)	Previous	. Previous	Previous
*														
▶	VS1	Held f	LA	Lactic Acid			7/8/2012 3:02:24 PM			E172	No Sample	0.4		
	VS1	Held f	L	L			7/8/2012 3:02:24 PM			E172	No Sample	1	1	1
	VS1	Held f	I	I			7/8/2012 3:02:24 PM			E172	No Sample	1	1	1
	VS1	Held f	н	н			7/8/2012 3:02:24 PM			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.

Spec	imen T															
		уре 🛆											Patient Name: BBBSUNQUEST,VIST Patient ID: 31000161	A WOMAN		
	Specin	men ID	Specimen	Patient N	lame		Priority T	otal Co	llection	Date/Time	Specimen Dilution	Posi	Date of Birth: 6/18/1982			
	01000	0649	Complete	BBBSLIN	JOHEST	VISTAWOM	B 1	7 7/	8/2012	6:00:00 PM	1		Care 5			
	01000	0045	TComplete			M31A W0M	[III] III	· [//	072012	0.00.0011	· ·	The second se	Sex: F			
					_								Location - Facility: SLAB			-
Test	Works	sheet			This i	s an exan	nple of	a rejec	ted	result.	The status in	IM is co	mplete but note no			Ψ×
, 1050	nont	JIICCC			resul	ts were re	leased	to SQ.	Col	nplete I	nere indicates	s resolv	ed in IM.			
Tes	s Tes	st S	Test Code	Test Name	Result	Reference	Result Dat	te/Time	Re	Test Comm	nent(s)	Error Cod	e(s) Error Name(s)	Previous	. Previous	. Prev 🔺
*																
E vs	2 Rei	iect ¹	TP	Total Prot	55	64-82	7/8/2012 9	9:06:03 PM	1			HOLD	Other Tests Held	7.2	8.5	7.4
	2 Rei	iect	TP	Total Prot	53	64-82	7/8/2012 9	9:16:08 PM	; 			HOLD	Other Tests Held	7.2	8.5	7.4
VS	2 Rei	iect	TAII	Bilirubin	0.40	0-1	7/8/2012 9	9:05:56 PM	; 			HOLD	Other Tests Held	0.70	0.30	0.30
Vs	2 Rei	iect	TBIL	Bilirubin	0.40	0-1	7/8/2012 9	9:16:22 PN				HOLD	Other Tests Held	0.70	0.30	0.30
Vs	2 Rei	iect	NA	Sodium			7/8/2012 9	9:05:13 PN				E172	No Sample	130.0	140.0	142.
VS	2 Rej	ject	NA	Sodium			7/8/2012 9	9:05:13 PM	1 🗍			E172	No Sample	130.0	140.0	142.
VS	2 Rej	ject	NA	Sodium	102.0	136 - 145	7/8/2012 8	3:57:46 PM	1 🔽	CBACK-;		CL,DELTA	J cL,DELTA,Possible IV Contami	130.0	140.0	142.1
► VS	2 Rej	ject	L	L	1		7/8/2012 8	3:58:12 PM	1 0			HOLD	Other Tests Held	1	1	1
VS	2 Rej	ject	к	Potassium			7/8/2012 9	9:05:13 PN	1			E172	No Sample	HLK	HLK	HLK
VS	2 Rej	ject	к	Potassium			7/8/2012 9	9:05:13 PN	1			E172	No Sample	HLK	HLK	HLK
VS	2 Rej	ject	К	Potassium	HLK	3.5 - 5.1	7/8/2012 8	3:57:46 PN	1 🖌			HEMOLY2	ED HEMOLYZED	HLK	HLK	HLK
VS	2 Rej	ject	1	I	1		7/8/2012 8	3:58:12 PN	1			HOLD	Other Tests Held	1	1	1
VS	2 Rej	ject	н	н	4		7/8/2012 8	B:58:12 PN	1			HEMOLY2	ED HEMOLYZED	4	4	4
VS	2 Rej	ject	GLUC	Glucose	56	74 - 106	7/8/2012 9	9:01:30 PN	1			HOLD	Other Tests Held	86	205	50
VS	2 Rej	ject	GLUC	Glucose			7/8/2012 9	9:05:13 PN	1			E172	No Sample	86	205	50
VS	2 Rej	ject	ECO2	Total CO2			7/8/2012 9	9:05:13 PN	1			E172	No Sample	16.0	20.0	23.0
VS	2 Rej	ject	ECO2	Total CO2	11.0	21 - 32	7/8/2012 9	9:01:19 PN	1			HOLD	Other Tests Held	16.0	20.0	23.0
VS	2 Rej	ject	CREA	Creatinine			7/8/2012 9	9:05:13 PN	1			E172	No Sample	2.0	1.1	1.3
VS	2 Rej	ject	CREA	Creatinine	0.9	0.6 - 1.3	7/8/2012 9	9:01:04 PN	1 🗆			HOLD	Other Tests Held	2.0	1.1	1.3
VS	2 Rej	ject	CL	Chloride			7/8/2012 9	9:05:13 PN	1			E172	No Sample		102.0	108.
VS	2 Rej	ject	CL	Chloride			7/8/2012 9	9:05:13 PN	<u>4 🗌</u>			E172	No Sample		102.0	108.
I IVS	2 Rej	ject		Chloride	70.0	98 - 107	7/8/2012 8	8:57:46 PM	1 🔽	CBACK-:		CL,DELTA	"I cL,DELTA,Possible IV Contami		102.0	108.

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

į т	est Wo	orkshee	t								
	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				
	VS1	Relea	RISK	RISK	2.675		7/8/2012 2:14:41 PM				
	VS1	Relea	LDL	LDL	48		7/8/2012 2:14:41 PM				
	VS1	Relea	L	L	1		7/8/2012 2:22:26 PM				
	VS1	Relea	I	I	1		7/8/2012 2:22:26 PM				
	VS1	Relea	н	Н	1		7/8/2012 2:22:26 PM				
	VS1	Relea	CHOL	Cholester	107.0	0 - 200	7/8/2012 2:27:50 PM				
	VS1	Relea	AHDL	HDL	40		7/8/2012 2:30:32 PM				

Rejected and reordered.

i T	est Wo	orkshee	t								
	Tes	Test S	Test Code	Test Name	Result	Reference	Result Date/Time	Re	Test Comment(s)	Error Code(s)	Error Name(s)
*											
▶	VS1	Reject	LDL	LDL	NCAL		7/8/2012 2:42:12 PM			UNABLE T	UNABLE TO CALCULATE
	VS1	Reject	L	L	1		7/8/2012 2:48:36 PM			HOLD	Other Tests Held
	VS1	Reject	I	I	1		7/8/2012 2:48:36 PM			HOLD	Other Tests Held
	VS1	Reject	Н	Н	1		7/8/2012 2:48:36 PM			HOLD	Other Tests Held
	VS1	Reject	AHDL	HDL	135		7/8/2012 2:58:01 PM			HOLD	Other Tests Held

Example 5

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

English Text Codes are acceptable and the prefered 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 proceeded by (;). Remember the (-) is already appended.

English Text: HIR and REP

A	a V	3	= 🔒 🗈		ზ თ	₽, Ø Ø	∍×		[3 🚰 🕕 🗉	- i 🔥	lick here to see a	list of warnings 👻 💂			
5	pecim	en Work	sheet							Ψ×	Patie	nt Information	Ę	١X	Find	₽×
•	pecim Sp 04	en Type / becimen II 0003454	D Specime Complete	n Patient I BBBSUI	Name NQUEST	VISTA BABY	Priority R	Total (15 i	Collectio 7/4/201	n Date/Time S 2 3:00:00 PM 1	Patient Patient Date of Sex: F	Name: BBBSUNG ID: 31000160 f Birth: 6/3/2012	UEST, VISTA BABY	1	Find what: Field: Direction:	040003454 💌 Specimen IE 💌 All
і те	est Wo	orkshee	t										4	×		Find Next
	Tes	Test S	Test Code	Test Name	Result	Reference	Result D	Date/Time	Re.	. Test Comment(s)		Error Code(s	Error Name(s)	-		
*							<u> </u>									
▶	VS2	Relea	TBILN	Bilirubin,	10.20	0-1	7/8/201:	2 2:43:30	PM 🗌			DELTA	DELTA	-		
F	VS2	Relea	NA	Sodium	149.0	136 - 145	7/8/201:	2 2:34:44	M 🗆			HOLD	Other Tests Held			
	VS2	Relea	L	L	1		7/8/201:	2 2:35:24	M 🗌			HOLD	Other Tests Held			
	VS2	Relea	к	Potassium	4.7	3.5 - 5.1	7/8/201:	2 2:34:44	M 🗆	HIR		HEMOLYZED	HEMOLYZED			
	VS2	Relea	IBIL	Calc Indir	2		7/8/201:	2 2:32:21	PM 🗌			HOLD	Other Tests Held			
	VS2	Relea	I	I	4		7/8/201:	2 2:35:24	PM 🗌			HOLD	Other Tests Held			
	VS2	Relea	н	н	3		7/8/2013	2 2:35:24	PM 🗌			HEMOLYZE	HEMOLYZED, HEMOLYZED			
	VS2	Relea	GLUC	Glucose	242	74 - 106	7/8/2013	2 2:38:34	PM 🗌			HOLD	Other Tests Held	_		
	VS2	Relea	ECO2	Total CO2	17.0	21 - 32	7/8/2013	2 2:38:24	PM 🗌			HOLD	Other Tests Held			
	VS2	Relea	DBILN	Bilirubin,	8.19	0 - 0.3	7/8/201:	2 2:41:09	PM 🗌	HIR		HEMOLYZE	HEMOLYZED, DELTA	_		
	VS2	Relea	CREA	Creatinine	1.0	0.6 - 1.3	7/8/201:	2 2:38:09	PM 🗌	REP		DELTA	DELTA			
	VS2	Relea	CL	Chloride	122.0	98 - 107	7/8/201:	2 2:34:44	PM 🗌	REP		DELTA	DELTA			
	VS2	Relea	CA	Calcium	8.6	8.5 - 10.1	7/8/201:	2 2:38:02	PM 🗌	REP		DELTA	DELTA			
	VS2	Relea	BUN	Urea Nitr	12.0	7 - 18	7/8/201:	2 2:38:20	PM 🗌			HOLD	Other Tests Held			
	VS2	Relea	AGAP	AGAP	15		7/8/201:	2 2:32:21	PM 🗌			HOLD	Other Tests Held			
•														▶		

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	Relea	ТР	Total Prot	3.2	6.4 - 8.2	7 <i>/</i> 6/2012 9:12:18 PM			HOLD	Other Tests Held	6.9	7.1	7.1
VS2	Reject	тр	Total Prot	3.2	6.4 - 8.2	7/6/2012 9:21:03 PM		Repeat Rejected	HOLD	Other Tests Held	3.2	6.9	7.1
VS2	Reject	тр	Total Prot	3.2	6.4 - 8.2	7/6/2012 9:12:18 PM		Repeat Rejected	HOLD	Other Tests Held	6.9	7.1	7.1
VS2	Relea	L	L	1		7/6/2012 8:50:31 PM			HOLD	Other Tests Held	1	1	1
VS2	Relea	1	E.	1		7/6/2012 8:50:31 PM			HOLD	Other Tests Held	1	3	1
VS2	Relea	н	н	1		7/6/2012 8:50:31 PM			HOLD	Other Tests Held	1	1	1
VS2	Reject	GLUC	Glucose	11	74 - 106	7/6/2012 9:15:54 PM		Repeat Rejected	cL,DELTA	cL,DELTA	11	333	58
VS2	Reject	GLUC	Glucose	11	74 - 106	7/6/2012 9:15:54 PM		Repeat Rejected	cL,DELTA	cL,DELTA	11	333	58
VS2	Relea	GLUC	Glucose	11	74 - 106	7/6/2012 8:53:42 PM		CBACK-; SUZIE RN AT 2020-REP	cL,DELTA	cL,DELTA	333	58	61

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

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

Те	s	Test S	Test Code	Test Name	Result	Reference	Result Date/Time	Re	Test Comment(s)	Error Code(s)	Error Name(s)	Previous	Previous.	Previou
											.,,			
Vs	52	Reject	ТР	Total Prot	3.3	6.4 - 8.2	7/6/2012 10:48:10			HOLD	Other Tests Held	3.2	3.2	6.9
VS	S2	Reject	TP	Total Prot	3.2	6.4 - 8.2	7/6/2012 10:50:56			HOLD	Other Tests Held	3.2	3.2	6.9
VS	52	Reject	L	L	1		7/6/2012 10:33:07			HOLD	Other Tests Held	1	1	1
VS	52	Reject	1	1	1		7/6/2012 10:33:07			HOLD	Other Tests Held	1	1	3
VS	52	Reject	н	н	1		7/6/2012 10:33:07			HOLD	Other Tests Held	1	1	1
VS	S2	Relea	GLUC	Glucose	26	74 - 106	7/6/2012 10:36:32		C SUSANRNBACK-;	cL	cL	25	11	333
VS	S2	Reject	GLUC	Glucose	26	74 - 106	7/6/2012 10:43:01		CBACK-;	cL	cL	26	25	11

j T	est We	orksheel	t											Ą	×
	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,	•
*															
▶	VS3	Relea	TBILN	Bilirubin,	0.30	0 - 1	7/4/2012 6:12:07 PM			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			HOLD	Other Tests Held	146.0	149.0	151.)	
	VS3	Relea	L	L	1		7/4/2012 6:05:52 PM			HOLD	Other Tests Held	1	1	1	
	VS3	Relea	к	Potassium	HLK	3.5 - 5.1	7/4/2012 6:04:15 PM		;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			HOLD	Other Tests Held	0.3			
	VS3	Relea	I	I	1		7/4/2012 6:05:52 PM			HOLD	Other Tests Held	1	1	1	
	VS3	Relea	н	н	4		7/4/2012 6:05:52 PM			HEMOLYZED	HEMOLYZED	1	1	1	
	VS3	Relea	GLUC	Glucose	114	74 - 106	7/4/2012 6:07:19 PM		REP	DELTA	DELTA	19	71	77	
	VS3	Relea	ECO2	Total CO2	23.0	21 - 32	7/4/2012 6:07:12 PM			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		HIR-REP	DELTA	DELTA	0.09	< 0.05	< 0.C	
	VS3	Relea	CREA	Creatinine	0.7	0.6 - 1.3	7/4/2012 6:06:43 PM			HOLD	Other Tests Held	>60	>60	1.3	
	VS3	Relea	CL	Chloride	104.0	98 - 107	7/4/2012 6:04:15 PM			HOLD	Other Tests Held	109.0	110.0	108.	
	VS3	Relea	СА	Calcium	8.2	8.5 - 10.1	7/4/2012 6:06:36 PM			HOLD	Other Tests Held	9.0	9.4	9.2	-
1															

The below comments are entered correctly.

H. Patient and Order Management

a Inst	rument Manag	jer by Data	Innovatio	ons, LLC								
System	Configuration	Diagnostics	Security	Specimen Management	SSR	DC	SR	MM	MA	Reports	Window	Help
				SM Workspace			_[
				Patient and Order Ma	inagen	nent						
				Rapid Order Entry								
				Manual Results Entry								
							_					

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

 System Configuratio Patient Information Patient ID Patient Name SSN MRN DOB Sex Location Facility Admitting Physician 	n Diagnostics Security TESTSG*	Specimen Managemer	nt SSR DC SR	MM MA Repr Status : See Exa Name S or Specim (Do one	amples: earch en ID Sear e or the oth	Collectic	Specimens n D/T			
Specimen Information	*0625	* 🗛	Order Tests >>>			Tu s	Tests			
Specimen Collection	Date Tim	ie 7 :44:49 PM 🐥	Cancel Tests	Test	Result	Units	Errors	Connection(s)	Instrument ID	Result
Fluid Type		V	Send to Host							
Priority	€ Routine C STAT		Print Barcode							
Ordering Physician		V	Print Specimen							
Comments		×	Clear	<u>.</u>						Þ
				Dis	play All Specime	n Data 🛛 🖸)isplay Previou	us Results	Save	Close

Result of Patient Name search

🚽 System Configurati	on Diagnostics Securit	y Specimen Mana	gement SSR	DC SR MM	MA Reports	; Window	Help	
Patient Information—		#	🖌 Patient Se	arch			X	
Patient ID			Patients Mai	tching Search Ci	riteria		_	Specimens Collection D/T
Patient Name	TESTSG*		TEST-200	TESTSG,MARIE	-			
SSN			1231-201	reorod,marne				
MRN								
DOB	7/9/2012 💌		Selec	t appropri	ate patien		·	
Sex	C Male C Female	C Unknowr						
Location Facility		•						
Admitting Physician		-						
			Cancel			OK		
Specimen Information	1						//.	

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

Workspace Edit View Format Action Help																	
🕞 💐 🛃 👗 🖺 🐘 👫 SGAH CHEM HOLD 🔹 🔹 🔊 Off 🔹 🛛 🐟 🔹 🌒 📕 : Audit Trail Specimen Event Log Specimen Tracking 💷 🍇																	
🗛 🝸 🥹 🚰 🚍 🍰 🗄 🛛 🧝 💺 🕥 💟 🖸 🗙 📓 📓 🛄 📓 🛄 😨 👔 🕐 🕕 💿																	
i s	Specimen Worksheet Release									Ψ×	Patient Information						
Specimen Type 🛆						Note: Out Patients are highlighted in yellow.							Patient Name: BBBSUNQUEST,VISTA CHILD Patient ID: 31000163				
	Specimen ID Specimen Completion Statu			Status	Patient Name		Priority Total Number of Tests Sp		. Specimen	Dilu	Date of Birth: 6/15/2000						
	040003389 Tests Held		ld		BBBSUNQUEST	F,VISTA BABY	R	13		1		c F					
	04	0003334	Tests Held			BBBSUNQUEST, VISTA WOM			18	18 1			.ocation - Facility: Out Patient				
	040003307 Tests Held BBBSUNQUE 040003338 Tests Held BBBSUNQUE		BBBSUNQUEST, VISTA CHILD			R 3		1		Ordering Physician:							
			BBBSUNQUEST	I,VISTA CHILD R 3				1		Collection Date/Time: 7/4/2012 4:26:00 PM							
	1 Tests Held			R	5		1	-	Specimen Comment(s):								
									Specimen Type:								
Test Worksheet																	
	Tes	Test S	Test Code	Test Name	Result	Reference	Result Date/Tim	e	Re	Test Comment(s)		Error Code	(s) Error Name(s)	Previous	Previous		
*																	
	VS1	Held f	TP	Total Prot	3.2	6.4 - 8.2	7/9/2012 10:12:	25				HOLD	Other Tests Held		7.8		
	VS1	Held f	L	L	1		7/9/2012 9:51:0	0 PM				HOLD	Other Tests Held	1	1		
	VS1	Held f	I	I	1		7/9/2012 9:51:0	0 PM				HOLD	Other Tests Held	1	1		
	VS1	Held f	н	н	1		7/9/2012 9:51:0	0 PM				HOLD	Other Tests Held	1	2		
	VS1	Held f	GLUC	Glucose	32	74 - 106	7/9/2012 9:52:3	0 PM				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)



💋 System Configuration Diagnostics Security Specimen Management SSR DC SR MM MA Reports Window Help 🕼 Start Selected Connections 🛛 🔳 Stop Selected Connections 🛛 🛐 Resend Messages 🛛 🗙 Clear SendQ 🖉 💏 Mark Out-of-Service 🛛 👯 Log Minimal SEL Events 💷 | 🛐 | 🎒 🛛 | 🍸 Enter Find Text 👫 🗈 - | 🚰 🚍 🎇 🗛 | 🥑 🗧 92 2 🕨 🔲 ρα 🛐 2 Status In Service Start Holding All Tests for Verification Connection / InQ SendQ Sent Errors In 🖃 System Off 0 Purge Qmgr On (2/2) 0 193 0 0 Specimen Routi 0n Ь 🚽 User Defined CENTAURS On 0 0 0 Ω 0 Yes CENTAURW 0 0 0 0 0 Off Yes EZLINKG Off Yes 0 0 1690 0 0 EZLINKS On 0 42 0 0 Yes EZLINKW 28 0 0 46 0 Yes SG Chemistry 0 0 0 ∩ff Yes Π 7 SUNQUEST ORD... On 0 0 Yes 162 0 0 0 0 SUNQUEST RES... On Yes 0 0 18 TEST printer Off 0 0 13 0 0 Yes WAHLIS Off Yes n n n n n

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

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



¹ Workspace Edit View Format Action Help	
🗁 📴 🙀 🎒 👗 🐁 🛝 Al Sgah Chem Hold 🔹 🔹 👔 60 🔹 💽 🗸	🕨 🔹 🛛 🥑 💂 🗄 Audit Trail Specimen Event Log Specimen Tracking 📗 🧠 💂
، 😭 😨 🕲 🖓 🕄 🔒 📄 🦉 🖞 🖞 🖞 🖓 🖓 🖓 🖓 🖓 🖓	Stop Holding Selected Tests for Verification
Specimen Worksheet 4 ×	Patient Information P x Tests Scheduled to be Held P x
Drag a column header here to group by that column.	Patient Name: Connection Connection Name Instrument IC List CENTAURS
Spe Specimen ID Specimen Requested Date/Time Patient Name Prio, Specim	Date of Birth:
Stop Holding Tests	Sex:
	Location - Facility:
Are you sure you want to remove the Selected Tests from being Held?	Ordering Physician:
	Collection Date/Time:
Q Yes No 1	Specimen Comment(s):
	Specimen Type: Q
	Patient Status

System Configuration

_ 8 >

L. Quality Control:

The Data Innovation software evaluates each QC result against acceptable ranges and high lights 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 ⁽¹⁾ 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.

Ins Syyrian Wor A A Drac Spec S Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q	trument M stem Config kspace Ed Config space Ed Config space Config space config conf	anager by I uration Diag typew Ec Sheet ader here to gr omple Comple Comple Comple Comple Comple Comple Comple Comple	Contra I rmat rmat Coup by en C te te te te te te te te te te	Annovati Securit SGAH QC SGAH QC SGAH QC i i i i i i i i SGAH QC SGAH QC SGAT SGA SGAT SGAT SGA SGAT SGAT SGAT SGAT SGAT SGAT SGAT SGAT	ons, LLC - [S y Specimen M/ Elep List d Date/Time I 3 1:49:05 AM 3 1:40:57 AM 3 1:40:57 AM 3 1:40:57 AM 3 1:40:57 AM 3 1:23:55 AM 3 1:23:54 AM 3 1:236:54 AM	anagement SSR DC SI	Priority R R R R R R R R R R R R R	Specime 1 1 1 1 1 1 1 1 1 1 1 1 1	Add Corre AC Control I AC Control I AC Control I AC Control I AC Instrume AC Patient I AC Reagent AC Repeat I AC	ctive Ac cpeated le peated le peated le peated le sisting susp sisting susp change loc change	tion vel 1 - Accepte vel 2 - Accepte vel 3 - Accepte vel 3 - Accepte dentified detail anded. dentified detail whack not indi whack perform whack not indi whack not	d d. d. d. on QC summary re alled, supervisor/ cated, supervisor/ cated, not patient: ed and acceptabli cated, not patient: ed and Accepted. ed d. d. and Accepted. ed yled. sport. T change	sport, TIC ir e, s teste e,	Add New Action	××
	BIO1S CK2	Comple Comple	te te	3/5/2013 3/5/2013	3 12:31:55 AM 3 12:30:46 AM		R R	1 1	Add Selecte	d Action				Close	~
Test	est Test	t est Test I	Vame	Result	Reference Rar	nge Result Date/Time	Test C	omment	QC Rule Violated	QC Level	Error Code(s)	Error Name(s)		QC Action Lo	g Flag
* V:	S1 Rele	CL Chlori	de	102.58	100 - 108	3/5/2013 1:40:08 AM	-			2					_
	S1 Rel	NA Sodi	um	143	144.6 - 153.	4 3/5/2013 1:40:08 AM			1-25	2	BRQC	BRQC		245258	
•									Ì						×
Last U	pdated: 3/5	/2013 8:17:58	AM												
Logged	l On User: 15	3737 Locale:	Defaul	Lice	nse #: IM-34180	02 Customer Name: Quest	Dx Nich	ols Institut	e - Adventist HC					3/5/2013	
-	start	800	»	d In	strument Manag	er 🛛 😥 SmarTerm -	[LabA.s	tw]				-	0.5	9, N 🕉 🔂 8:1	9 AM

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	A. Chini	R. SanLuis
		Section 5: Added process to reinstate Auto-		
		verification to item K. Added QC section (item L)		

9. ADDENDA AND APPENDICES None