TRAINING UPDATE

Lab Location: Department: GEC, SGMC & WAH Core Lab
 Date Distributed:
 2/22/2018

 Due Date:
 3/15/2018

 Implementation:
 3/15/2018

DESCRIPTION OF PROCEDURE REVISION

Name of procedure:

Data Innovations Instrument Manager SGAH.L49 v7

Description of change(s):

Section 5.D: Replaced ELINKG with EXPG1 & EXPG2.

Section 5: Added windows color setting as item M & N. (pages 18 & 19)

Addendum 3: Added color flagging of critical/delta (page 39)

This revised SOP will be implemented on March 15, 2018

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

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								
Refer to the electronic signature page for										
approval and approval dates.										
Local Issue Date:	Local Effective Date:									

Review:		
Print Name	Signature	Date

TABLE OF CONTENTS

1.	PURPOSE	. 2
2.	SCOPE	. 2
3.	RESPONSIBILITY	. 2
4.	DEFINITIONS	. 2
5.	PROCEDURE	. 3
6.	RELATED DOCUMENTS	19
7.	REFERENCES	19
8.	REVISION HISTORY	20
9.	ADDENDA AND APPENDICES	20

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.

🦨 Instr	🖌 Instrument Manager by Data Innovations, LLC													
System	Configuration	Diagnostics	Security	Specimen Managemen	t SSR	DC SR	MM	MA	Reports	Window	Help			
			Systen	n Setup										
			Users	and Groups										
			Chang	e Password										
			Reset	All Form Layouts										

🖌 Instrument Manager by Data Innovations, LLC System Configuration Diagnostics Security Specimen Management SSR DC SR MM MA Reports Window Help Logon Logoff Change Language Locale Status Shut Down Status of Instrument Manager Sessions Triggered User Defined Notifier Events Exit

To maintain system security logoff under system as demonstrated.

Note: Auto-logoff: will automatically logoff users from Instrument Manager after a defined period of inactivity. The timer is currently set to 60 minutes





C. Help

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

a Insti	rument Manag	ger by Data (Innovatio	ons, LLC									
System	Configuration	Diagnostics	Security	Specimen Management	SSR	DC	SR	[M][M]	MA	Reports	Window	Help	
												Use	er's Guide
												Abo	out Instrument Manager
🔣 Ab	out Instrument	t Manager				X							
	<i>di</i> I	DATA ISTRU		OVATIONS	ER	М							
Ve	ersion 8.13.03	.01	\leftarrow										
Co	pyright (c) D	ata Innovati	ons, LLC										
Tł	nis product is	licensed to:	:										
Τe	est System - C	Quest Dx Ni	chols Ins	titute - Ad∨entis HC									
Lie	cense #: IM-3·	41795	-										
(8)	02) 658-1955	•		www.datainnovatio	ns.co	 m							

D. System menu



System Status The status of interfaces should be on all the time for the following: Qmgr PurgeSpecimen Routing ArchiveCENTAURS CENTAURW EZLINKS EZLINKW EXPAND-EXPG1 EXPAND-EXPG2 STAGO-GS1 STAGO-SS1 STAGO-SS2 STAGO-WS1 STAGO-WS2 IRIS1S **IRIS1W** SUNQUEST ORDERS SUNQUEST RESULTS **GEC HEME Counter** SGAH HEME Counter 1 SGAH HEME Counter 2 WAH HEME Counter 1 WAH HEME Counter 2 SYSMEX-GEC SYSMEX-SG SYSMEX-WAH

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.

Þ	Sys	stem Configuration	n Diagnostics	Security Specimer	Management S	SSR DC SR MM	MA Reports Wind	ow Help	
:(DS	itart Selected Conne	ctions 🗩 Stop	p Selected Connectio	ons 💽 Resend	Messages 🗙 Clear	SendQ 💣 Mark Ou	ut-of-Service 💐 L	.og Minimal SEL
		🗠 📝 🖓	0	🚹 💷 🔀 👍	🖌 🛛 🍸 Enter F	ind Text 🛛 👫 📴) • 🚰 🚍 🎲 🗛	I 🕐 📮	
		upnnection ∠	Stati	In Service	In	InQ	SendQ	Sent	Errors
	Ξ	System							
		Punje	0						0
		Qmg.	n (2/2)				0	327	0
		Specia en Routing	On						0
	E	User Doined							
		CENTAURS	On	Yes	0	0	0	0	0
		CENTAUR /	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.

Site: Shady Grove Medical Center, Washington Adventist Hospital, Germantown Emergency Center

a Instr	🖌 Instrument Manager by Data Innovations, LLC													
System	Configuration	Diagnostics	Security	Specimen Management	SSR	DC	SR	MM	MA	Reports	Window	Help		
		Communic	cations Tra	ce		1								
		List Comm	nunications	Trace Status for all Conn	;									
		Loopback	Test											
		Specimen	Event Log	← ←	-	Tra	cks	spe	cimen f	rom or	der t			
		System Lo	og			Tra	acks	use	er key s	trokes	and a			
							wh	ile ir	n the	e syster	m.			

F. Specimen Management Menu

a 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	nagen	nent									
				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 site specific (SGAH, WAH or GEC) worklist (CHEM HOLD, COAG HOLD, or CHEM & COAG HOLD)
- Set a 60 second screen refresh rate.

See Example Below:

strument	Manager	by Data	Innovati	ons, LLC	n Management	SSD	DC (SD MM	MO	Beports	Window	Halo	
m Config	<mark>⊿ Specin</mark> <u>₩</u> orkspa	agnostics nen Mana ace <u>E</u> dit	gement View	Specime Workspa Format	n Management Ice - 30 Action Help SGAH CHEM H	OLD	DC	SR MM	MA	Reports	Window		<u> </u>
	₩a A	3		•	Instrument W Manually Down Pending List Possible Lost 3 Results Revier Results Revier Results Revier Results Revier SGAH CHEM H SGAH POSS L WAH CHEM H	orkist <u>s</u> ipecime wEditRk wEditRk wEditRk OLD OST SPI DLD	55V tending 1 en Repor elease elease - elease S EC REPC	Tests rt Images Run SV DRT		Sele you dow	act the a r assig rn.	Select 60 seconds as your refresh rate.	
ſ	Last Updati	ed: 7/9/2	2012 7:28	:34 PM									

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

🖌 Instrument Manager by Data Innovations, LLC - [Specimen Management Workspace - SGAH CHEM HOLD (Modified)]													_ 8 ×				
	lorksn	ace Ed	it View	Format A	tion H												
				⊡onnide <u>p</u> e		M HOLD	#1 . 3	L OFF #	2	- Dur	lit Trail	Specimen Event Log Specimer	Tracking	in e.			
						A A #	15					peciliter Evene Log Speciliter	r macking		Ŧ		
A	#14	3 🔁		1 🗃 🖕 1	0			, <u>,,,,</u> E	3 1 1 1 1	🔍 📮 i 🦺 Click I	here to se	e a list of warnings • 😴					
; Sp	ecim	ien Work	csheet #3			#13	#12 #9				Ψ×	Patient Information #4			4 ×		
s	pecim	ien Type /	4								_	Patient Name: TESTSG,MARIE			-		
E	S	necimen II	D Specimer	o Completion	Status	Patient Name	P	rioritu 1	otal Number	Collection Date/Ti	me	Patient ID: TEST-200					
Н	(n	none)	o Toboonnoi	roompiodori	ortatuo	r ddorit rtanio		iony [Sev: F					
Þ	#6 01	10000647	Tests He	ld		TESTSG,MARIE	: R	8	}	7/8/2012 4:03:00	PM	Location - Facility: TEST					
	01	10000648	Tests He	ld		TESTSG,MARIE	E R	1	,	7/8/2012 4:03:00	PM	Ordering Physician:					
	01	10000646	Tests He	ld		TESTSG,MARIE	E R	7	,	7/8/2012 4:02:00	PM	Collection Date/Time: 7/8/2012 4:0:	3:00 PM				
010000642 Tests Held TESTSG,MARIE F								4	ļ	7/8/2012 3:00:00	PM	Specimen Comment(s):					
	010000638 Tests Held TESTSG,MARIE R 9 7/8/2012 2:49:00 PM Specimen Type:																
	01	10000637	Tests He	ld	_	TESTSG,MARIE	: R	1	1	7/8/2012 2:48:00	PM 👤	Patient Status:					
												Diagooojo Codo:			-		
: Te	st W	orkshee	t #5												ą×		
	Tes	. Test S	Test Code	Test Name	Result	Reference	Result Date/Time	Re.	. Test Comme	nt(s)	Error Cod	e(s) Error Name(s)	Previous	. Previous	Previou:		
*											#10		#11				
	VS2	Held f	CL	Chloride	105.0	98 - 107	7 <i>/</i> 8/2012 4:34:37 F	M 🗆			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 F	M 🗌			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 F	M 🗆	CBACK-; #8	3	сН	сн	4.3	4.3	3.9		
	VS2	Held f	NA	Sodium	150.0	136 - 145	7 <i>1</i> 8/2012 4:34:37 F	M 🗆			HOLD	Other Tests Held	145.0	135.0			
	VS2	Held f	н	н	1		7 <i>/</i> 8/2012 4:35:45 F	M 🗌			HOLD	Other Tests Held	1	1	1		
	VS2	Held f	1	I	2		7 <i>1</i> 8/2012 4:35:45 F	M 🗆			HOLD	Other Tests Held	1	1	1		
	VS2	Held f	L	L	1		7 <i>/</i> 8/2012 4:35:45 F	M 🗆			HOLD	Other Tests Held	1	1	1		
	VS2	Held f	AGAP	AGAP	19		7/8/2012 4:26:08 F	M 🗆			HOLD	Other Tests Held	16	20	22		
															Þ		

ITEM	DESCRIPTION	FUNCTIO	ON					
#1	Work List							
		Site	Chemistry	Coagulati	on	Combi	ned	Quality Control
		GEC	GEC CHEM	GEC COA	AG	GEC CH	EM &	GEC QC
			HOLD	HOLD		COAG H	IOLD	LIST
			SCAU CHEM	SGAH		SGAH C	HEM	SCAL
		SGMC		COAG		& CO4	AG	OCLIST
			HOLD	HOLD		HOL	D	QULIST
		WAH	WAH CHEM HOLD	WAH COAG HOLD		WAH CHEM & COAG		WAH QC LIST
						HOL	D	
		Site	Uninglycic		Co	mbinod	Quali	ty Control
		Site	Ormarysis			Combined		ty Control
		SGMC	SGAH URINALYS	SIS HOLD	N/A	4	SGAF	I QC LIST
		WAH	WAH URINALYSI	IS HOLD	N/A	4	WAH	QC LIST
		Site	Hematology			Combin	ed	Quality
								Control
		GEC	GEC HEME HOLD	N/A		N/A		
		SGMC	SG HEME HOLD		N/A			N/A
		WAH	WAH HEME HOL	D		N/A		N/A

ITEM	DESCRIPTION	FUNCTION
#2	Screen Refresh	The Refresh Rate is how frequently the computer looks for new data.
	Rate	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	This panel displays patient demographic information on the selected
	Information	patient.
#5	Test Worksheet	Displays the results of the selected patient.
#6	Selected	The arrow designates the patient being evaluated and acted on.
	Patient	
#7	Selected Test	The arrow indicates the current test being evaluated. The test is CL run
	Result	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.
#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 yes 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	If available, previous results will be listed. Please note that delta flags
	Results	are triggered at certain intervals thus the difference may exceed the delta
#10	Daiaat Dagult	range but the time for the hag to trigger has elapsed.
#12	Reject Result	The Red K 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
11.1 A	T '1.	
#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 inter you can
#15	Sand to Uast	Selected results may be resent to the best Sunguest. This is most
#13		affective if you have a single result that did not cross for some reasons
		such as using a comment without appropriate format or mistype of a
		canned comment
		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	System	n Config	guration Di	iagnostics S	Security	Specimen Man	agement SSR	DC	SR	MM MA Re	ports Window	Help				_ 8 ×
M	orksp	ace <u>E</u> d	it <u>V</u> iew	Eormat <u>A</u> o	tion !	Help										
	1	🙀 😹	1 🖁 🖬	🛍 👫 se	AH CHE	M HOLD	-	ø 🚺	ff	- 🛛 🔺	🔹 🕘 📮 🗄 Au	udit Trail	Specimen Event Log	Specimen Tracking	1	ç
A	Y	3 🗗	🗐 🔒 🗈		° 🖞	D. 00	D 🗙 🗐 🛛		<u> </u> [2	1 😤 1 🕦 1	🔲 🛃 🧎 🔥 Click	here to se	e a list of warnings 🗸			-
Sp	ecim	en Work	sheet				lanca					Ψ×	Patient Information			Ψ×
	_	_		_	-			-	-	_			Patient Name: TESTSCI	MARIE		_
S	pecim	en Type /	<u>د ا</u>										Patient ID: TEST-200	MARIE		
	Sp	ecimen II	D Specime	n Completion	Status	Patient Name		Priori	ty To	otal Number	Collection Date/T	ime	Date of Birth: 1/1/2000			
	<u> (n</u>	one)											Sex: F			
►	01	0000647	Tests He	ld		TESTSG,MARI	E	R	8		7/8/2012 4:03:00) PM	Location - Facility: TEST			
	01	0000648	Tests He	ld		TESTSG,MARI	E	R	7		7/8/2012 4:03:00	D PM	Ordering Physician:			
	01	0000646	Tests He	bld		TESTSG,MARII	E	R	7		7/8/2012 4:02:00	D PM 🚽	Collection Date/Time: 7/	3/2012 4:03:00 PM		
•													Specimen Comment(s):			-
Те	st We	orkshee	t													ąχ
	Tes	Test S	Test Code	Test Name	Result	Reference	Result Date/Tim	e	Re	Test Commen	t(s)	Error Coo	le(s) Error Name(s)	Previous	Previous	Previous
*	_							_					., .,			
T	V62	Held f	a	Chloride	105.0	98 - 107	7/8/2012 4:34:3	7 DM				ногр	Other Tests Held	108.0	101.0	
-	V02	Held 4	5000	Tatal COD	22.0	24 22	7/0/2012 4:04:0	0.014				HOLD	Other Tests Held	27.0	40.0	20.0
_	v 52	neiu i	ECOZ	Total CO2	33.0	21 - 32	770/2012 4.37.1	9 PIVI				HOLD	Other Tests Heid	27.0	10.0	20.0
	VS2	Held f	к	Potassium	6.5	3.5 - 5.1	7/8/2012 4:34:3	7 PM		CBACK-; RO	bat16:40	сH	CH	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	I	I	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	8 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.

Å	System	Config	uration Di	agnostics S	ecurity	Specimen Mana	agement SSR DC	SR	MM MA Reports Window H	Help				_ <u>8 ×</u>
ŝ y	<u>N</u> orkspa	ice <u>E</u> di	t <u>V</u> iew	Eormat <u>A</u> o	tion <u>F</u>	<u>i</u> elp								
1	> 🔛	🔀 🎒	X 🖬	🖹 👫 sg		1 HOLD	- 🛃 C	OFF	🔹 🖹 🔺 🔹 🥘 💂 🗄 Au	dit Trail	Specimen Event Log Specimen	Tracking	1	
A	a 🍸	😗 🚰	= 🔒 🗈	1 🗃 📜 🗄	10	Pa 🚫 🛛	🔁 🗙 🗐 🔛 🗍	<u> </u> [2] 🚰 🕕 🗉 📕 j 🥂 Click	here to se	e a list of warnings 🗸 💂			
i s	pecim	en Work	sheet		Ore	der Rerun/Refle	x			Ψ×	Patient Information			Ψ×
	Specime	en Type /									Patient Name: TESTSG,MARIE Patient ID: TEST-106			<u> </u>
F	Sp	ecimen II) Specimer	n Completion	Status	Patient Name	Prior	ity To	otal Number Collection Date/T	ime	Date of Birth: 1/1/2000			
F		0000639	Tests He	a		LESTSU,MARIE	: R	4	77872012 2:00:00		Sex: F			
<u> </u>					_						Location - Facility: TEST			-
i T	est Wo	orkshee	:											Ψ×
	Tes	Test S	Test Code	Test Name	Result	Reference	Result Date/Time	Re	Test Comment(s)	Error Cod	e(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.

į s	pecim	en Work	sheet									Ψ×	Patient Information			Ψ×
	Specim	en Type /	<u> </u>										Patient Name: BBBSUNQUEST,VIST Patient ID: 31000161	'A WOMAN		-
	S	pecimen II) Specimer	n Patient M	lame		Priority To	tal Col	lection	Date/Time	Specimen Dilution	Posi	Date of Birth: 6/18/1982			
	01	10000649	Complete	BBBSUN	QUEST.	VISTA WOM	B 17	7/8	/2012	6:00:00 PM	1 1	-	Sex: F			
1	Ĺ												Location Excilitur SLAR			-
_					Thie	ie an evan	anle of a	rejec	had a	oeult '	The status in	IM is co	molete but note no	_		
j T	est W	orkshee	t		1113				Car	coult.	me status m					ч×
					resul	is were re	leased t	0 50.		npiete	here indicate	sresolve				
	Tes	. Test S	Test Code	Test Name	Result	Reference	Result Date	/Time	Re	Test Comn	nent(s)	Error Code	e(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				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				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				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				HOLD	Other Tests Held	0.70	0.30	0.30
	VS2	Reject	NA	Sodium			7/8/2012 9:	05:13 PM				E172	No Sample	130.0	140.0	142./
	VS2	Reject	NA	Sodium			7/8/2012 9:	05:13 PM				E172	No Sample	130.0	140.0	142./
	VS2	Reject	NA	Sodium	102.0	136 - 145	7/8/2012 8:	57:46 PM		CBACK-;		cL,DELTA	I cL,DELTA,Possible IV Contami	130.0	140.0	142.
	VS2	Reject	L	L	1		7/8/2012 8:	58:12 PM				HOLD	Other Tests Held	1	1	1
	VS2	Reject	К	Potassium			7/8/2012 9:	05:13 PM				E172	No Sample	HLK	HLK	HLK
	VS2	Reject	К	Potassium			7/8/2012 9:	05:13 PM				E172	No Sample	HLK	HLK	HLK
	VS2	Reject	к	Potassium	HLK	3.5 - 5.1	7/8/2012 8:	57:46 PM				HEMOLYZ	ED HEMOLYZED	HLK	HLK	HLK
	VS2	Reject	1	I	1		7/8/2012 8:	58:12 PM				HOLD	Other Tests Held	1	1	1
	VS2	Reject	н	н	4		7/8/2012 8:	58:12 PM				HEMOLYZ	ED HEMOLYZED	4	4	4
	VS2	Reject	GLUC	Glucose	56	74 - 106	7/8/2012 9:	01:30 PM				HOLD	Other Tests Held	86	205	50
	VS2	Reject	GLUC	Glucose			7/8/2012 9:	05:13 PM				E172	No Sample	86	205	50
	VS2	Reject	ECO2	Total CO2			7/8/2012 9:	05:13 PM				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				HOLD	Other Tests Held	16.0	20.0	23.0
	VS2	Reject	CREA	Creatinine			7/8/2012 9:	05:13 PM				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				HOLD	Other Tests Held	2.0	1.1	1.3
	VS2	Reject	CL	Chloride			7/8/2012 9:	05:13 PM				E172	No Sample		102.0	108.
	VS2	Reject	CL	Chloride			7/8/2012 9:	05:13 PM				E172	No Sample		102.0	108.
	IVS2	Reject		Chloride	70.0	98 - 107	7/8/2012 8:	57:46 PM		CBACK-:		CL,DELTA	I cL,DELTA,Possible IV Contami	1	102.0	108.

Note: For a calculation to work all components of the calculation must be present. Review results for 'Unable to Calculate' errors. To get the calculation to fire rerun all components required for the calculation.

Example 4

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 Y	3	-		<u>0</u>	₽ , 0 Ø	∍ ×		III 🛛] 🚰 🕛 🗐	💂 i 🔥 c	lick here to see a	list of warnings 👻 💂			
i s	pecim	en Work	sheet							Ψ×	Patie	nt Information		φ×	Find	Ψ×
9	pecim	en Type /	Δ								Patient	Name: BBBSUNG ID: 31000160	UEST, VISTA BABY		Find what:	040003454 💌
	Sp	ecimen II	D Specime	n Patient I	Name		Priority	Total Co	llection	Date/Time S	Date of	Birth: 6/3/2012			Field:	Specimen IE 💌
	04	0003454	Complete	BBBSU	NQUEST	VISTA BABY	R	15 7/	4/2012	3:00:00 PM 1 🖵	Sex: F				Direction	
													-	▶	Direction.	
																Find Next
э то	est Wo	orkshee	t											ΨX		
	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	7/8/201	2 2:43:30 Pt	1			DELTA	DELTA			
F	VS2	Relea	NA	Sodium	149.0	136 - 145	7/8/201	2 2:34:44 PI	1 🗆			HOLD	Other Tests Held			
	VS2	Relea	L	L	1		7/8/201	2 2:35:24 Pt	1			HOLD	Other Tests Held			
	VS2	Relea	к	Potassium	4.7	3.5 - 5.1	7/8/201	2 2:34:44 Pt	1	HIR		HEMOLYZED	HEMOLYZED			
	VS2	Relea	IBIL	Calc Indir	2		7/8/201	2 2:32:21 Pt	1			HOLD	Other Tests Held			
	VS2	Relea	I	I	4		7/8/201	2 2:35:24 Pl	1			HOLD	Other Tests Held			
	VS2	Relea	н	н	3		7/8/201	2 2:35:24 Pt	1			HEMOLYZE	HEMOLYZED, HEMOLYZE	D		
	VS2	Relea	GLUC	Glucose	242	74 - 106	7/8/201	2 2:38:34 Pl	1			HOLD	Other Tests Held			
	VS2	Relea	ECO2	Total CO2	17.0	21 - 32	7/8/201	2 2:38:24 PI	1			HOLD	Other Tests Held			
	VS2	Relea	DBILN	Bilirubin,	8.19	0 - 0.3	7/8/201	2 2:41:09 Pt	1	HIR		HEMOLYZE	HEMOLYZED, DELTA			
	VS2	Relea	CREA	Creatinine	1.0	0.6 - 1.3	7/8/201	2 2:38:09 Pt	1	REP		DELTA	DELTA			
	VS2	Relea	CL	Chloride	122.0	98 - 107	7/8/201	2 2:34:44 PI	1	REP		DELTA	DELTA			
	VS2	Relea	CA	Calcium	8.6	8.5 - 10.1	7/8/201	2 2:38:02 Pt	1	REP		DELTA	DELTA			
	VS2	Relea	BUN	Urea Nitr	12.0	7 - 18	7/8/201	2 2:38:20 Pt	1			HOLD	Other Tests Held			
	VS2	Relea	AGAP	AGAP	15		7/8/201	2 2:32:21 Pt	1			HOLD	Other Tests Held			
•														•		

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

Te	st Wo	orkshee	:											ą
ŀ	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	7/6/2012 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	I	ı	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	44	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 <i>/</i> 6/2012 8:53:42 PM		CBACK-; SUZIE RN AT 2020-REP	cL,DELTA	cL,DELTA	333	58	61
_														

Τe	est Wo	orkshee	t											Ψ×
	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	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
	VS2	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
	VS2	Reject	L	L	1		7/6/2012 10:33:07			HOLD	Other Tests Held	1	1	1
	VS2	Reject	I	I	1		7/6/2012 10:33:07			HOLD	Other Tests Held	1	1	3
	VS2	Reject	н	н	1		7 <i>/</i> 6/2012 10:33:07			HOLD	Other Tests Held	1	1	1
	VS2	Relea	GLUC	Glucose	26	74 - 106	7/6/2012 10:36:32		C SUSANRNBACK-;	cL	cL	25	11	333
	VS2	Reject	GLUC	Glucose	26	74 - 106	7/6/2012 10:43:01		CBACK-;	cL	cL	26	25	11
			1											Þ

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

The below comments are entered correctly.

) T	est Wo	orkshee	t											Ψ×
	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	1	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
Г	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	< 0.0
	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	CA	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														Þ

Example 5

Review results for QC failures

- 1. Error noted (AC) means "QC Out of Range or Not Done Check Instrument Status"
- 2. Reject the bad results (FIBR and PTT). Release the DDIMER, INR, AND PTA only
- 3. Check the instrument for QC issues and troubleshoot. Rerun samples with bad results once QC for FIBR and PTT are in range.

Sp	ecime	n Works	heet									¥ ¥	Patient In	formation			Ψ×
Di	ag a c	olumn hea	ader here to	group by that column.								^	Patient Nam	e: CHEN			
	Spe.,	Specime	n ID	Specimen Reque	sted Date	/Time ∧	Patient Name		Prio	Specimen Dil.	Collection Date/Time	6	Date of Birt	h: 8/22/1962			
▶		0300214	174	Tests Held 3/7/20	15 9:12:4	4 PM	CHEN		S		3/7/2015 9:10:00 PM		Sex: F	. 0/22/1302			
		0200502	292	Tests Held 3/7/20	15 9:13:3	6 PM	CHEN		R		3/7/2015 9:11:00 PM		Location - F	acility: 3E10A	A		_
		0200492	212	Taste Hald 3/7/2	15 9-17-2	A PM	CHEN		R		3/7/2015 9-12-00 PM	-	Ordering Ph	ysician:			
•											•		Collection D	ate/Time: 3/7/2	015 9:10:00 PM		-
Te	st Wo	rksheet															4×
	Tes	Test St	Test Code	Test Name	Result	Reference	Result Date/Time ∧	Rer	Test Co	mment(s)				Error Code(s)	Error Name(s)	Previous R	. Pre
*																	
▶	SS1	Held f	DDIME	DDIMER	1.83	0 · 0.50	3/7/2015 10:35:4							HOLD	Other Tests Held	0.35	<0.2
	SS1	Held f	FIBR	Fibrinogen	638	200 · 400	3/7/2015 10:35:4							AC	QC Out of Range or Not	<60	60
	SS1	Held f	INB	INB	0.8		3/7/2015 10:35:4							HOLD	Other Tests Held	<0.7	3.8
	SS1	Held f	PTA	Prothrombin Time	11.5	12.5 - 14.8	3/7/2015 10:35:4							HOLD	Other Tests Held	<10	38.(
	SS1	Held f	PTT	PTT	28	23 - 37	3/7/2015 10:35:4							AC	QC Out of Range or Not	<20	104

Example 6

Review of results with "Previously Resulted from a Different Instrument" error

- 1. DI will display an error and HOLD the results whenever a specimen or two specimens with the same accession numbers are run on two different instruments from the same class (for example, Vista 1 and Vista 2, Xpand 1 and Xpand 2, Stago 1 and Stago 2, Sysmex 1 and Sysmex 2)
- 2. Check SQ to see if the test has already been resulted. If resulted, then reject the rerun. If the first result has not been resulted, then select which run to release and reject the other run. Do not release both results from Instrument 1 and Instrument 2 to SQ as the first result will be overwritten by the second result

	030047	414	Tests Hel	d 2/2	28/2017	23207 PM	TESTING,STA	60 R		2/28/2017 2:30:00 Patient Status:	
st W	orkshee	ŧ									
Tes.	Test St.	Test C.	Test Name	Result	Units	Referenc	Result Date/Time /	Test Comment(s	Emor Code(s)	Error Name(s)	Prev
\$\$1	Held f	INR	INB	3.8	INR	+	2/28/2017 2.42.4	RVT	DELTA	DELTA	1.0
\$\$1	Held f	PTA	Prothrom	36.8	sec.	125-148	2/28/2017 2.42.4		HOLD	Other Tests Held	13.2
\$\$1	Held f	PTA	Prothrom	36.8	sec.	125-148	2/28/2017 3.03.4		Rerun	Range High,Rerun Test	13.2
\$\$1	Held f	INR	INB	3.8	INR		2/28/2017 3.03.4	RVT	DELTA,Rer	DELTA,Rerun Test	1.0
SS2	Held f	PTA	Prothrom	39.1	sec.	12.5 - 14.8	2/28/2017 0.12.0	\rightarrow	Rerun	Range High, Previously resulted from a different instrument	13.2
\$\$2	Held f	INR	INR	42	INR		2/28/2017 3 12 3	CBACK-; "RVT	CH.DELTA.	Critical High DELTA Previously resulted from a different instrument	1.0

H. Patient and Order Management

🥖 Instr	ument 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	anagen	nent						
				Rapid Order Entry								
				Manual Results Entry	1							
							_					

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

🚽 System Configuratio	on Diagnostics Security	Specimen Manag	gement SSR	DC SR M	1M MA Re	eports Wi	indow Help)
Patient Information		#	🖌 Patient Se	arch			>	≤
Patient ID			Patients Ma	tching Search	Criteria			Specimens
Patient Name	TESTSG*		TEST-106 TEST-200 TEST-201	TESTSG,MAR TESTSG,MAR TESTSG,MAR				Collection D/1
MRN								
DOB	7/9/2012 💌		Selec	t approp	riate pat	ient	/	
Sex	C Male C Female	C Unknowr						
Location Facility		•						
Admitting Physician		•						
Specimen Information			Cancel				OK	<u>//</u>

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

1	<u>W</u> orksj	oace <u>E</u> di	: <u>V</u> iew	Eormat <u>A</u> o	tion į	<u>H</u> elp									
1	> 🔛	🙀 🎒	1 X 🗈	🛝 👫 SG	AH CHE	M HOLD	▼	of 😰	f	• 🖹 🔺 🔹 🔮	🕽 🖕 🤅 Auc	lit Trail	Specimen Event Log Specimen	Tracking	i 🗈 🔩 🖕
1	a Y	3 🗗	= 🔒 🗈	🗃 📜 🗄	<u>b</u> 0	کا 🛇 🗅	🔁 🗙 🗐 🖟		12	😤 🕕 🔳 🜉	🚺 Click I	nere to see	a list of warnings 👻 🖕		
9	Specin	nen Work	sheet	_		Re	lease			_		Ψ×	Patient Information		
	Specin	nen Type /				Note: Out highlighte	Patients are d in yellow.		ļ				Patient Name: BBBSUNQUEST,VIS Patient ID: 31000163	FA CHILD	
L	S	pecimen ID) Specimer	n Completion	Status	Patient Name		Priority	- To	otal Number of Tests	Specimen	Dilu	Date of Birth: 6/15/2000		
L	0	40003389	Tests He	ld		BBBSUNQUES	F,VISTA BABY	R	13	1	1		Sex: F		
		40003334	Tests He	ld		BBBSUNQUES	F,VISTA WOM	R	18	l	1		Location - Facility: Out Patient		
		40003307	Tests He	ld		BBBSUNQUES	F,VISTA CHILD	R	3		1		Ordering Physician:		
	•	40003338	Tests He	ld		BBBSUNQUES	F,VISTA CHILD	R	3		1		Collection Date/Time: 7/4/2012 4:26	:00 PM	
Г	1		Tests He	ld				R	5		1		Specimen Comment(s):		
													Specimen Type:		
1	fest W	orksheet	:												
	Tes.	. Test S	Test Code	Test Name	Result	Reference	Result Date/Time	э Б	te	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	D 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	D 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)

Select **Start** Holding All Test For Verification

∦ s	ystem Configuratio	n Diagnostics	Security Specimen M	anagement	SSR DC SR MM M	IA Reports Wind	ow Help	
	Start Selected Conne	ections 🔳 Sta	p Selected Connections	🔁 Resen	d Messages 🗙 Clear S	iendQ 💣 Mark O	ut-of-Service 💐 Li	og Minimal SEL Events
$\exists \ \flat$	🔲 🗠 📝 🖓	0 🗹 😁	1	🛛 🍸 Enter	Find Text 🛛 👫 🗈 •	- 🚰 🚍 🍇 🗚	. 0 -	
	Connection 🛆 💦	Statue Charle Under	In Service	In	InQ	SendQ	Sent	Errors
	🛛 System 🛛 🏹		ig All Tests for Verificatio	<u>n</u>				
	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

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 ^(D) Stop Holding Selected Tests for Verification

🖋 System Configuration Diagnostics Security Specimen Management SSR DC SR MM MA F	Reports Window Help
<u>Workspace Edit View Format Action H</u> elp	
🗁 🕍 🐼 🎒 👗 ங 🛝 👫 SGAH CHEM HOLD 🔹 🔹 🏚 60 🔹 💌 🐟	🔹 🔹 🛛 📮 🗄 Audit Trail Specimen Event Log Specimen Tracking 🗐 🖏 🥃
i 🗛 🝸 😏 🚰 🚍 🔒 i 🔒 🥛 i 🖞 ʊ 🗣 🎯 i 🖄 🖾 🗶 📓 i 🖳 i 🔛 i 🖉 i 😤 i 🕄	Stop Holding Selected Tests for Verification
Specimen Worksheet 7 ×	Patient Information P x Tests Scheduled to be Held P x
Drag a column header here to group by that column. Spe Specimen ID Q Stop Holding Tests Q Are you sure you want to remove the Selected Tests from being Held? Q Yes No 1	Patient Name: Connection Patient ID: List Date of Birth: Sex: Location - Facility: Ordering Physician: Collection Date/Time: Specimen Comment(s): Specimen Type: Q Patient Status:

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 highlighted QC
- under **Test Worksheet** select the blue highlighted 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.

e Edit Vi	ew Eormat	Action SGAH QC	Help C List 5 D () 2	• 2 × 1 2 0	-	R ▲	AC. Contr AC. Contr AC. Contr AC. Instru AC. Patie AC. Reag AC. Reag AC. Reag	ol: repeated le ol: repeated le ol: repeated le ment problem nt testing susp nt testing susp ent change lo ent change lo at control with	vel 1 - Accepte vel 2 - Accepte vel 3 - Accepte identified detail ended. ended/hotline okback not ind okback perform freshly poured	d d. d. on QC summary repo called, supervisor/TIC icated. ed and acceptable. QC accepted.	ort, C ir	Add New Action
necimen ID	Specimen C	Bequest	ed Date/Time	Patient Name	Priorite	Specime	AL. Hepe AC. Test	at control with ecalibrated lo	new QC vial a okback not indi	ccepted. cated, not patients te	este	
D3S	Complete	3/5/201	3 1-49-06 AM	dionenatio	B	1	AL. Test	ecalibrated lo	okback perform d OC in range	ied and acceptable.		
1025	Complete	3/5/201	3 1 40 57 AM		B	1	AC. Wron	g Control Lev	el - QC Repeate	ed and Accepted.		
1015	Complete	3/5/201	3 1:40:55 AM		B	1	CC. Calib	rator new lot.	QC issue resolv	ed.		
K2	Complete	3/5/201:	3 1:31:18 AM		B	1	CC Instru	ator changed. ment calibrate	d un issue reso	VIEQ.		
IDRGN	Complete	3/5/201	31:28:01 AM		B	1	CC. Instru	ment serviced	see summary r	eport.		
1025	Complete	3/5/20	13 1:27:1		B	1	CC. Instru	ment: bleache	d	T		
RP1	Complete	3/5/201	3 1:00:51 AM		B	1	CC New	ment: electroc mean establis	e/carmdge/IM hed	i change		
D1S	Complete	3/5/201:	3 12:36:54 AM		R	1	CC. New	range establis	ned.			
RP1	Complete	3/5/20	13 12:35:		R	1	QC: revie	wed for day			~	
I01S	Complete	3/5/201:	3 12:31:55 AM		R	1	110 1 100	lies for month				
:K2	Complete	3/5/201	3 12:30:46 AM		R	1	Add Sele	cted Action				0
r sheet Test Test	Test Name	Result	Reference Rar	nge Result Date/Time	Test	Comment	QC Rule Viola	ed QC Level	Error Code(s)	Error Name(s)		QC Action Log
	eu con	100.50	100, 100	Q IE 10010 1 40 00 AM	-			2	1			
neiē UL Polo	Rotacoium	6 20	619.662	3/5/2013 1:40:08 AM	-			2				
Rol NA	Sodium	142	144 6 152	3/3/2013 1.40.00 AM	1		1	4		0000		0.0000
	Workshee mn header h aecimen ID 035 025 025 015 (2 DRGN 1025 RP1 D15 (2 sheet iest Test iede CL iede K	Worksheet worksh	Complete Complete Complete Complete String String	Pierre Pierre<	Image: Complete Complete	Image: Complete Operation Operation	Image: Complete Openation Openation	Image: Complete Operation Operation	AC Image: Action of the ac	AC. Instrument problem identified detail AC. Patient testing suspended. AC. Test recalibrated lookback petier C. Listument servicel of Casure resolution. C. Instrument serviced see summary r CC. In	AC. Instrument replaced defail on QC summary report AC. Patient testing suspended/hotline called, supervisor/TIL AC. Testureatility supervisor/TIL AC.	AC. Instrument problem identified defai on QC summary report. AC. Instrument problem identified defai on QC summary report. AC. Patient testing suspended/holline called, supervisor/TIC ir AC. Regent change lookback performed and acceptable. AC. Regent change lookback performed and acceptable. AC. Fest recalibrated lookback performed and acceptable. CC. Instrument classed and Accepted CC. Instrument classed

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

M. Color Coding Standard

(Standard coding across all instruments connected via DI)

IM C	olor Coding / Field Formatt	ing				×
9	New Format Edit Formatt	ing 🛛 🔄 Copy	X Delete	🔶 Priority Up 🛛 🔫 F	riority Down	
Γ	Description	Criteria	Format Type	Field to Format	Value	Workspaces to Format
	Critical	'cH' or 'cL'	Cell	Error Code(s)	N/A	All
	Delta	'DELTA'	Cell	Error Code(s)	N/A	All
	Stat Priority	'S'	Cell	Priority	N/A	All
	Rejected	'Rejected'	Cell	Result	N./A	All
	Cancelled	'Cancelled'	Cell	Result	N/A	All
	Outpatient	'S'	Row		N/A	SGAH CHEM HOLD
	No Sample	'E172'	Cell	Error Code(s)	N/A	Al
	Above Assay RNG	'E521'	Cell	Error Code(s)	N/A	All
	CRIT	'CRIT'	Cell	Error Name(s)	N/A	Al
	QC	'BRQC'	Row		N/A	All
	Stago QC OUT	'AC'	Row		N/A	Connection Testing,GEC CHEM & COAG HOLD,GEC COAG HOLD,SGAH
	Stago Numeric Errors Codes	'2' or '5' or 'DELTA'	Cell	Error Code(s)	N/A	Connection Testing, GEC CHEM & COAG HOLD, GEC COAG HOLD, SGAH
	Stago Alpha Errors Codes	'AA' or 'AH' or 'AI' or '	Cell	Error Code(s)	N/A	Connection Testing, GEC CHEM & COAG HOLD, GEC COAG HOLD, SGAH
	Stago QNS	'6' or 'AE' or 'AF' or 'A	Cell	Error Code(s)	N/A	Connection Testing, GEC CHEM & COAG HOLD, GEC COAG HOLD, SGAH
	Stago Assay RNG	'3' or '4' or '8'	Cell	Error Code(s)	N/A	Connection Testing,GEC CHEM & COAG HOLD,GEC COAG HOLD,SGAH
	UA Hold	'Correlation' or 'Refra	Cell	Error Code(s)	N/A	SGAH Second Level Review HOLD, SGAH URINALYSIS HOLD, WAH
	USPG	'Refractometer'	Cell	Result	N/A	SGAH Second Level Review HOLD, SGAH URINALYSIS HOLD, WAH
	Result Run Workspace	"	Cell	Result	N/A	All
	Urine QC Expired/Out	Fail' or 'QC Time Out	Row		N/A	SGAH Second Level Review HOLD, SGAH URINALYSIS HOLD, WAH
	For Path Review	'Review' or 'TEA' or '	Cell	Error Code(s)	N/A	GEC HEME HOLD, Hematology Workspace, SGAH HEME HOLD, WAH
	Hemo HOLD	DIFF' or 'MORPH' or	Cell	Error Code(s)	N/A	GEC HEME HOLD, Hematology Workspace, SGAH HEME HOLD, WAH

N. Computer display settings for using Data Innovation:

It is important that the desktop windows colors are set correctly. If not, your color flagging in the DI application will not be correct.

To check or change the display setting:

1. With your cursor on the desktop, right click THEN click on Personalize



2. In the "Basic and High Contrast Themes" section - Look at the "Windows Classic" icon. The Current theme being used will be backlit (see example below). "Windows Classic" is backlit. If it is not backlit on your computer, then click on the theme. "Please wait" will display on the screen while it is resetting. Once done, X out of the screen (the setting will be saved).



6. **RELATED DOCUMENTS**

OEM - On Line Entry Method, LIS procedure MEM - Manual Result Entry, LIS procedure Critical Values - Accepting Results in LIS, LIS procedure Correcting Results, LIS procedure Delta Check, QA procedure

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)		
001	3/18/2015	Section 5: Add auto-log off, update screen shots,	D.	R. SanLuis
		add Coag and GEC instruments, update work lists,	Concepcion	
		remove outdated calculation example, add Coag	L. Barrett	
		example		
		Section 6: add Delta Check		
		Footer: version # leading zero's dropped due to new		
		EDCS in use as of 10/7/13		
2	6/8/2016	Section 5: Add Iris (Urinalysis) processing through	D.	R. SanLuis
		DI	Concepcion	
			M. Sabonis	
3	8/1/2016	Header: Add other sites	D.	R. SanLuis
		Section 5: Add second level review for crystals	Concepcion	
4	5/18/2017	Section 5: Add Hematology Interfaces & work lists,	D.	R. SanLuis
		Update Iris QC, add example 6 (previously resulted	Concepcion	
		from different instrument error)	M. Sabonis	
		Section 6: Remove SOP numbers	L. Barrett	
		Section 9: Add addenda; Move Iris actions from		
		section 5, add Coag and Sysmex (Hematology)		
		processing through DI		
5	9/17/2017	Addendum 3: add steps 11-19	D.	R. SanLuis
			Concepcion	
6	2/13/2018	Section 5.D: Replaced ELINKG with EXPG1 & EXPG2.	M. Sabonis	R. SanLuis
		Section 5: Added windows color setting as item N.		
		Addendum 3: Added color flagging of critical/delta		

9. ADDENDA AND APPENDICES

- 1. Stago (Coagulation) Instrument Specific Actions
- 2. Iris (Urinalysis) Instrument Specific Actions
- 3. Sysmex (Hematology) Instrument Specific Actions

Addendum 1

Stago (Coagulation) Instrument Specific Actions

The DI Stago driver is set to collate all the coagulation tests on the same accession number until all the results have been completed within a set amount of time. For example, if the first test has been completed and the second test is still pending and the collation time has been exceeded, DI will release the first test as long as it does not have an error. This setting is at the Driver level.

📈 Diagnostica Stago STA-R Evolution, STA Compact, STA Satellite	Configuration
Standard Configuration Driver Configuration	ation Comment Configuration
Rerun/Reflex/Repeat Support Yes O No	STA-R Evolution STA Compact/Satellite
 ✓ Hold Results Until Complete 20 → Send Results Automatically After Timeout (min) 	Logical ASTM Records Per Frame C Single
Date Of Birth Format MM/DD/YYYY	Separate Outbound Messages O Yes I No

Addendum 2

Iris (Urinalysis) Instrument Specific Actions A. General Information

1. Color

With the cursor in the result cell, right click \rightarrow Insert Coded Entry \rightarrow Click on desired result \rightarrow Ok. Result in Cell will update.

Ă.	C4	Chiex 1					
a,	Grov	Col+C					
3	Ente	Chiek					
	Sheet Coded Entry						
Y.	FRM						
	Color Coding / Field Formatting						
92	Field Chooser	- 1					
3	Group By Box						
	Preeze Columns	1					
	Exves	•					
6	Order New Tests	Colen E					
Ŭ.	Order Renun/Reflex	F					
4	Nancally Download Fending Testa	ŀ					
6	Cettel	-					
4	Release for Second Level Review						
2	Release		_				
1	Send to Host	-	IM	Insert Co	oded Entry (Result)		X
×	Reject Result	1					
×	Renuh/Reject	-	C.	alact Coda	d Entre		
YS.	Print/Renun/Reject		0		a chuy.		OK I
8	Average Selected Annults						
UI;	Pred Europein			Entry	Description	▲	
3	Print Report			DUCI			Canaal
3	QCAroniag			DYEL	DARK YELLOW		Cancer
8	Shop Heading Salarted Feets for Heriti	one -	H				
	Audit Tral			RED	RED		
	Specimen Tracking	1					
	Specimen Event Log	t i		YEL	YEL		
	Send Selected Data to Rules Testing.	. 1		1.55			
-2					1		

2. View Sample Reruns and Release Results

With the Iris you may have to rerun a sample. Reruns will be indicated in the Error Codes column. The "Urinalysis Hold" SM workspace is designed to display a tab on the right side of the workspace called "Run Worksheet". This is where the original and the rerun results will display.

a. To display both results, click on specimen ID and then use mouse to hover over or click on the green "Run Worksheet" tab

pe	ecimen Worksheet										4 X	Patient Info	ormation		~
iā	ag a column headet here to gr	oup by that colu									–	Patient Name:	TEST,RISONE		-
S	S. Specimen ID	Spectien	Requested Dat	e/Time T	Patient Na	me	Phonty	Specim.	Collection Date/Tin	10		Date of Birth:	5/21/1975		
	040000978	anplete	6/1/2016 1.04	01 PM	YYYWAH	REGRESSION,E	8	1.1	6/1/2016 1:02:00 8	эм		Sex: F			
d	Q BC00000000000000000	Tests Held	5/28/2016 4:33	2:59 PM								Location - Fac	ity: TEST		
	020000766	Tests Held	5/26/2016 10:	2-45 AM	TEST,IRI	ONE	ß	1:1	5/23/2016 7:00:00			Collection Date	rcian. 5/Time: 5/23/20	16 7:00:00	AM
t	020000765	Tests Held	5/26/2016 10.3	30:45 AM	TEST, IRI	5	R	1:1	5/23/2016 7:36:00	-		Specimen Com	ment(s):		
T	040051779	Tests Held	5/26/2016 10.1	9:57 AM	SMITH,G	RALD		1:1		1		Specimen Type	e:		
1	040052061	Complete	5/26/2016 10.1	9.21 AM	DUHAIME	,AMANDA M		1.1				Patient Status			
T	050030961	Complete	5/26/2016 10.1	8:45 AM	ARGUETA	ANA YANCI		1:1				Diagnosis - Co	ode:		
ł	1						. t	t.		-	<u> </u>	4			
es	st Worksheet														
T	Test Code Test Name	Test Inst	I Test Statur	Result	Units	Reference	Result Date	e/Time ⊤	Test Comment(s) E	ince Code(s)	Error Name(s)		Previous R.	Previous.	Prev
1															
- 9	Sedment Sedment	IRIS1W	Held for V	Done	-	1	5/26/2016	12:36.04		IOLD,Retun	Other Test(s) Held For Rev	iew.	-	-	1
1	UBBC Bed Blood Cell	IBIS1W	Held for V	02	THPE	0.2	5/26/2016	12:36:04		ICED Conelabon Rerun	Check Chemistry/Microsco	ov Correlation			

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b. Both runs display.

Addendum 2 (continued)

	Test Name	Result (1) Δ	Units (1)	Result Date/Time (1)	Test Instrument	. Result (2)	Units (2)	Result Date/Time (2
-	CHEMISTRY							
	Dipstick Lot	;9EB6A18		5/26/2016 12:01:3	IRIS1W	;9EB6A18		5/26/2016 12:36:0
	Urobilinogen	<2.0	mg/dL	5/26/2016 12:01:3	IRIS1W	<2.0	mg/dL	5/26/2016 12:36:0.
	Specific Gravity	1.012		5/26/2016 12:01:3	IRIS1W	1.012		5/26/2016 12:36:0.
	pН	5.5		5/26/2016 12:01:3	IRIS1W	5.5		5/26/2016 12:36:0.
	Clarity	CLER		5/26/2016 12:01:3	IRIS1W	CLER		5/26/2016 12:36:0.
	Chemistry	Done		5/26/2016 12:01:3	IRIS1W	Done		5/26/2016 12:36:0.
	Nitrite	NEG		5/26/2016 12:01:3	IRIS1W	NEG		5/26/2016 12:36:0.
	Leukocytes	NEG	Leu/uL	5/26/2016 12:01:3	IRIS1W	NEG	Leu/uL	5/26/2016 12:36:0.
	Bilirubin	NEG	mg/dL	5/26/2016 12:01:3	IRIS1W	NEG	mg/dL	5/26/2016 12:36:0.
	Glucose	NEG	mg/dL	5/26/2016 12:01:3	IRIS1W	NEG	mg/dL	5/26/2016 12:36:0.
	Ketone	NEG	mg/dL	5/26/2016 12:01:3	IRIS1W	NEG	mg/dL	5/26/2016 12:36:0.
	Blood	NEG	mg/dL	5/26/2016 12:01:3	IRIS1W	NEG	mg/dL	5/26/2016 12:36:0.
	Protein	TR	mg/dL	5/26/2016 12:01:3	IRIS1W	TR	mg/dL	5/26/2016 12:36:0.
	Color	YEL		5/26/2016 12:01:3	IRIS1W	YEL		5/26/2016 12:36:0.
_	(none)							
	Fat	PRESENT	/HPF	5/26/2016 12:01:3	IRIS1W			
	Oval Fat Body	PRESENT	/HPF	5/26/2016 12:01:3	IRIS1W			
	Trichomonas	PRESENT	/HPF	5/26/2016 12:01:3	IRIS1W	PRESENT	/HPF	5/26/2016 12:36:0.
-	SEDIMENT							
Γ	Fat					PRESENT	/HPF	5/26/2016 12:36:0.
	Oval Fat Body					PRESENT	/HPF	5/26/2016 12:36:0.
	Mucous	1+	/LPF	5/26/2016 12:01:3	IRIS1W	1+	/LPF	5/26/2016 12:36:0.
	Bacteria	1+		5/26/2016 12:01:3	IRIS1W	1+		5/26/2016 12:36:0.
	Squamous Epithel	2+	/LPF	5/26/2016 12:01:3	IRIS1W	2+	/LPF	5/26/2016 12:36:0.

c. To release a run, place your cursor in one of the result cells for the run you want to release and right click. Select appropriate option.



d. To close the Run Worksheet for the specimen that you are viewing, click on a cell in either the specimen or test worksheet.

** DO NOT CLICK ON THE X in the Run Worksheet as this will cause the Run Worksheet tab to be removed from viewing.



Note: To re-display the RUN WORKSHEET (green tab) -From the main banner select View→Panes→ Run Worksheet.

Addendum 2 (continued)



B. Iris (Urinalysis) Manual Refractometer testing

1. If the specific gravity is >1.035, then the result is suppressed and an error message will alert tech to perform a manual refractometer to determine specific gravity.

Ъ.											
	l	JSPG	Specific Gravity	IRIS1S	Held for V		1.005 • 1.030	5/29/2016 4:25:37		HOLD,Confirm with Refractometer	Confirm with Refractometer
10											

2. If manual refractometer result is >1.035, then enter result into DI as >1.035

C. Iris (Urinalysis) Pyridium (Orange colored urines)

- 1. If urine is orange, you will see error code "HOLD, Color"
- 2. Verify that urine is truly orange, if urine is orange then
 - a. Report out Color, Appearance and Microscopic (if applicable).
 - b. Remove and replace the rest of the Chemistry results with COLINT. With cursor in result cell, right click → Insert Coded Entry→click on COLINT→ OK. Result in result cell updates.

Addendum 2 (continued)

D. Abnormal Crystals for Second Level Review

1. If an abnormal crystal is present in the urine, you will see error code of "Abnormal Crystal"

¢	ecimen Wo	rksheet												
	en a column l	ander here to more	ha that only		_	-	_	-	-	-	_	-	_	_
	S. Specimer	1D	Specimen.	Requested	Date/Time	Patient 1	Vame 💎		Priority	Specim	Collection Da	e/Time	Last Run ID	
	0100001	17	Tests Held	5/29/2016	4:46:06 PM	TEST, IN	STRUMENT		R	1:1	5/29/2016 4:	44:00	2	
	01000012	23	Tests Held	5/29/2016	10.20.38 PM	TEST, IN	STRUMENT		R	1:1	5/29/2016 10	19.0	3	1
1	0100001	5	Tests Held	5/29/2016	10:48:06 PM	TEST, IN	STRUMENT		R	1:1	5/29/2016 10	.46:0	3	1
•	st Workshe	et												
	Test Code	Test Name	Test I	Test Status	Result	Units	Reference	Result	Date/Tir	ne 🖓 🔤	est Comment(s)	Error Co	ode(s)	Error Name(s)
1														
-								-						
1	· CHEMIST	RY												
		KY COPY												
	CHEMIST MICROST ULEUC	DPY Leucine Crystal	IRIS1S	Held for V	FEW	1HPF	NONE	7/13/2	016 5:21	1:32		Abnom	al Crystal,R	Review Crystal
A DESCRIPTION OF A DESC	CHEMIST MICROSI ULEUC USEPI	COPY Leucine Dystal Squamous Epitheli	IRIS1S al IRIS1S	Held for V Held for V	FEW	1HPF	NONE 0-2	7/13/2	016 5:21 016 5:21	1:32		Abnorm Rerun	al Crystal, R	Review Crystal Rerun
	CHEMIST MICROST ULEUC USEPT UTYRO	NY COPY Leucine Crystal Squamous Epitheli Tyrosine Crystal	IRIS1S al IRIS1S IRIS1S	Held for V Held for V Held for V	FEW A	nipf Npf Npf	NONE 0-2 NONE	7/13/2 7/13/2 7/13/2	016 5:21 016 5:21 016 5:21	1:32 1:32	-	Abnorm Rerun Abnorm	al Crystal,R	Review Crystal Rerun Review Crystal

- 2. Verify the abnormal crystal with a second technologist
- 3. If both are in agreement, then follow the steps below to release the result for Second Level Review, then to LIS
 - a. First Tech Within the DI Urinalysis workspace, select the abnormal crystal and release it for Second Level Review. Click YES on the Release for Second Level Review window. The result will go to the Second Tech for review

	est workshe	et	0	Cancel	
	Test Code	Test Na	1	Release for Second Level Review	Refe
*			N	Release	
	+ CHEMIST	RY		Send to Host	
	- MICROSC	OPY	×	Reject Result	
	UBACT	Bacteria	×	Rerun/Reject	NEG
	USEPI	Squamou	ß	Print/Rerun/Reject	0.2
	UW/BC	White Blo		Average Selected Results	0.2
	Sediment	Sediment	<u>[]]</u>	Print Barcode	
	URBC	Red Bloc	3	Print Report	0.2
	UWBC	White Blo	0	QC Action Log	0.2
	UBBC	Bed Bloc	(6)	Stop Holding Selected Tests for Verification	0.2
-	Sediment	Sediment		Audit Trail	-
	LIBACT	Bacteria		Specimen Tracking	NEG
•	UTYBO	Turosine		Specimen Event Log	NON
-	ULEUC	Leucine	22	Send Selected Data to Rules Testing	NON
-	LISEPI	Caustonie		Test Status History	0.2
-	USEFI	Squamou		Show All Data	0.2



b. Second Tech – Go to the Second Level Review HOLD, then release the abnormal crystal. The result will then go to LIS

	necir	nen W	orksheet										
-	peen		onconcer	_	_	-	-	_	_	-	_	_	
D	rag a	column	header here to	group b	y that column	1		22			12 1	5	16
	S. 5	pecim	en ID		pecimen_ A	Requested	Date/Time v	Patient Na	me	Priority	Specim	Collection Date/T	me Last Run I
		60026	845	1	Fests Held	7/12/2016	12:44:55 PM	BARRY,W	ILLIAM N		1:1		1
		10000	126		fests Held	5/29/2016	10:55:40 PM	TESTJINS	TRUMENT	R	1:1	5/29/2016 10:54	0 2
	0	10000	125	1	Fests Held	5/29/2016	10:48:06 PM	TESTJINS	TRUMENT	R	1:1	5/29/2016 10:46	0 3
2	0	010000124 Tests Held		ests Held	5/29/2016 10:28:06 PM		TEST,INSTRUMENT		R	1:1	5/29/2016 10:26	0 3	
	0	010000123 Tests Held		Fests Held	5/29/2016 10:20:38 PM		TEST JNSTRUMENT R		R	1:1	5/29/2016 10:19	.0 3	
		060011993 Tests Held		fests Held	5/20/2016 10:32:41 AM		TESTJRIS3		R	1:1	5/20/2016 10:31	0 2	
n	est V	Vorkst	eet			_				_			
	Test	Code	Test Name 💎	Test I	Test Status	Result	Units	Reference	Result Date/Time	1	Fest Comme	nt(s) Error Code(s)	Error Name(s)
ł													
	UTY	'RO	Tyrosine Cry	IRIS1S	Held for V	FEW	/HPF	NONE	7/13/2016 5:18:0	3		Abnormal C	Review Crystal
	UTY	180	Tyrosine Cry	IRIS1S	Held for V	FEW	/HPF	NONE	7/13/2016 5:21:3	2		Abnormal C	Review Crystal
	ULE	UC	Leucine Cry	IRIS1S	Held for V	FEW	/HPF	NONE	7/13/2016 5:21:3	2		Abnormal C	Review Crystal
	UCY	FT	Cystine Crystal	IRIS1S	Held for V	FEW	/HPF	NONE	7/13/2016 5:18:0	3		Abnormal C.	Review Crysta
-				-		CD.4	ALCO	NONE	74320010 6.01.0	2		11	

Addendum 3



Sysmex (Hematology) Instrument Specific Actions

2. Hematology RunWorksheets Test Grouping

The Hematology RunWorksheet is divided into six test groups. The groups are IP Messages, CBC, Platelet, ADIFF, MDIFF and Images. See the description of each group below.

Run	Worksheet				
Γ	Test Name ∠	Result (1)	Units (1)	Error Code(s) (1)	Error Name(s) (1)
E	IP Messages				
	Left_Shift?	130		A,HOLD	Abnormal,DIFF
	PLT_Abn_Distrib	1		A,HOLD	Abnormal,Vorte
	Thrombocytopenia	1		A	Abnormal
E	CBC				
	WBC	4.5	10*3/uL	HOLD	Other Tests Held
	RBC	2.47	10*6/uL	Check for clot,	L,Other Tests
	HGB	8.6	g/dL	HOLD,	L,Other Tests
	НСТ	25.9	%	HOLD,	L,Other Tests
	MCV	104.9	fL	HOLD,	H,Other Tests
	мсн	34.8	pg	HOLD,	H,Other Tests
	мснс	33.2	g/dL	HOLD	Other Tests Held
	RDW-CV	25.7	%	SCAN,HOLD	Other Tests Held,
E	Platelet				
	MPV	UTC	fL	A,HOLD,HOLD	Abnormal, Invali
	PLT	28	10×3/uL	W,HOLD,HOL	Low Reliability
	IPF	HIDE		HOLD	Other Tests Held
-	ADIFF				
	DTYPE	ADIFF		HOLD,HOLD	Other Tests Hel
	NEUT%	74.0	%	W,HOLD	Low Reliability,
	LYMPH%	11.8	%	HOLD	L,Other Tests
	MONO%	8.5	%	HOLD	Other Tests Held
	E0%	5.1	%	W,HOLD	Low Reliability
	BASO%	0.2	%	HOLD	Other Tests Held
	IG%	0.4	%	W,HOLD,HOLD	Low Reliability
	NRBC%	0.0	/100	HOLD	Other Tests Held
	NEUT#	3.31	10*3/uL	W,HOLD	Low Reliability
	LYMPH#	0.53	10*3/uL	HOLD	L.Other Tests
	MONO#	0.38	10*3/ul	HOLD	Other Tests Held
	EO#	0.23	10*3/ul	W.HOLD	Low Reliability
	BASO#	0.01	10*3/JU	HOLD	Other Tests Held
	NBBC#	0.00	10*3/JU	HOLD	Other Tests Held
	I MDIFE	0.00	10 OraL		e unor riosta riold
1					
+					I
ſ		PNG&B			
		PNG2P			
ļ		rnuαn		1	-

- 3. Release or reject by Group
 - a. Right click on the test to be released/rejected
 - b. If "Release CBC/Reject Other Runs" is selected, DI will release the CBC and reject other CBC from a different run



- 4. Release or reject by Run #
 - a. Right click on the specific Result # column to be released/rejected
 - b. If "Release Run 1/Reject Other Runs" is selected, DI will release that specific run# and reject other runs

	Test Name 🛆	Test St	Result (2)	Units	Ref
Ξ	IP Messages				
	Left_Shift?	Releas	300		
	PLT_Clumps?	Releas	140		
1	WBC_Abn_Scatt	Releas	1		
Ξ	CBC				
	WBC	Held fo	11.0	10*3	4.2
	RBC	Held fo	2.17	10*6	4.6:
	HGB	Held fo	7.5	g/dL	13.
	нст	Held fo	21.2	%	40.1
	MCV	Held fo	97.7	fL	79.1
	мсн	Held fo	34.6	pg	25.
	мснс	Held fo	35.4	g/dL	32.:
	RDW-CV	Held fo	12.8	%	\vdash
	Platelet				-
	MPV	Held fo	10.3	fL	9.4
	PLT	Held fo	120	10×3	163
	IPF	Held fo	HIDE		
	ADIFF	1			-
	DTYPE	Held fo	ADIFF		
	NEUT%	Held fo	78.8	%	42 -
	LYMPH%	Held fo	9.2	%	17 -
	MONO%	Held fo	11.3	%	3 -
	E0%	Held fo	0.1	%	0 - 1
	BASO%	Held fo	0.1	%	0-;
	16%	Held fo	0.5	%	0.0
	NRBC%	Held fo	0.0	/100	0 - 1
	NEUT#	Held fo	8.69	10×3	1.7

- 5. To Insert Coded Entry within the Hematology Run Worksheet
 - a. Right click on the result field to be edited
 - b. Select "Insert Coded Entry"
 - c. Select the appropriate code and click OK to close the window



6. To see the previous MDIFF performed

Go to the DTYPE1 result field and scroll to the right until the most recent previously result of MDIFF is displayed. If there is one, check the date and time of resulting

	1	1	1	1	1	1	1	1		1	1	1	1	
ADIFF														
DTYPE	Held fo	ADIFF			5/4/2017 12:53:40	SXN1		Other Tests Held, Other Te	ADIFF	5/3/2017 8:35:59 AM			-	
NEUT#	Held fo	0.24	10"3/uL	2.10 • 11.52	5/4/2017 12:13:01	SXN1	W	Low Reliability,L,,Other Te	9.66	5/3/2017 8:35:54 AM		I D	TYPE	±1 showing
LYMPH#	Held fo	0.94	10"3/uL	1.75 • 7.68	5/4/2017 12:13:01	SXN1	W	Low Reliability,L,,Other Te	0.72	5/3/2017 8:35:54 AM		+1-		
MONO#	Held fo	1.01	10"3/uL	0.15 • 1.60	5/4/2017 12:13:01	SXN1	W	Low Reliability, Other Tests	0.49	5/3/2017 8:35:54 AM		ղ ա	ie pre	vious result
EO#	Held fo	0.19	10°3/uL	0.00 • 0.96	5/4/2017 12:13:01	SXN1		Other Tests Held	0.00	5/3/2017 8:35:54 AM			f MDI	FF with
BASO#	Held fo	< 0.03	10°3/uL		5/4/2017 12:13:01	SXN1		Other Tests Held	< 0.03	5/3/2017 8:35:54 AM				
IG#	Held fo	< 0.03	10°3/uL		5/4/2017 12:13:01	SXN1	W	Low Reliability,Other Tests	0.24	5/3/2017 8:35:54 AM		da 🛛	ate/tin	ne
NRBC#	Held fo	0.00	10°3/uL		5/4/2017 12:13:01	SXN1		Other Tests Held	0.05	5/3/2017 8:35:54 AM				
NEUT%	Held fo	10.0	*	42 - 72	5/4/2017 12:13:01	SXN1	W,DIFF	Low Reliability,L,,Count In	86.7	5/3/2017 8:35:54 AM				
LYMPH%	Held fo	39.0	%	34 - 42	5/4/2017 12:13:01	SXN1	W,HOLD	Low Reliability, DIFF, Count	6.5	5/3/2017 8:35:54 AM				
MONO%	Held fo	41.9	%	3 - 10	5/4/2017 12:13:01	SXN1	W,DIFF	Low Reliability,H,,DIFF;,Ot	4.4	5/3/2017 8:35:54 AM				
E0%	Held fo	7.9	%	0 - 6	5/4/2017 12:13:01	SXN1		H,,Other Tests Held	0.0	5/3/2017 8:35:54 AM				
BASO%	Held fo	0.8	%	0.2	5/4/2017 12:13:01	SXN1		Other Tests Held	0.2	5/3/2017 8:35:54 AM				
IG%	Held fo	0.4	%		5/4/2017 12:13:01	SXN1	W	Low Reliability, Other Tests	2.2	5/3/2017 8:35:54 AM				
NRBC%	Held fo	0.0	/100WBC		5/4/2017 12:13:01	SXN1		Other Tests Held	0.4	5/3/2017 8:35:54 AM				
MDIFF														
DTYPE1	Releas				5/4/2017 12:53:40	SXN1				5/4/2017 12:27:42	Held fo	MDIFF		5/4/2017 1:13:59 F
POLY#											Held fo	2.26	10"3/uL	5/4/2017 1:13:59 F
LYMPHO#											Held fo	0.02	10*3/uL	5/4/2017 1:13:59 F
MONOC#											Held fo	0.02	10°3/ul	5/4/2017 1:13:59 F

- 7. Overview of the the Cell Counter
 - a. Cell Counter Functions and Fields



b. Cell Counter Grouping

Send Data Through System 🔜 Save Ru	n Data to SM 🗙 Clear Al Data	
GMC HEME 1 Counter		Displays the default MDIFF result for DTYPET
Test Code Result X DIFF TYPE IMDIFF IMDIFF IMORPH COMMENT RCOM WCOM VCOM WCOM Imount Imount Pladelet Imount Imount	Abookde Unite Teel Commenţia) Shorte	The section used to enter the results for RCOM, PCOM and WCOM. To result any of these fields, select "BELOW" from the drop down menu and enter the comment under the Test Comment(s) field preceded with ";"
PLTEST ⇒] DIFF POLY 0.0% LYMPHO 0.0% MONOC 0.0% E0SO 0.0% E0SO 0.0%	0.00 B 0.00 N 0.00 M 0.00 X 0.00 Z	When this PLT Estimate field is not empty, DI will add "RCM" as a comment on the RunWorksheet.
BAND 0.02 BAND 0.02 MTTA 0.02 MYELO 0.03 MYELO 0.03 PROM 0.03 PASM 0.05 BLAST 0.05 LIMBEC 0.05 LIMBEC 0.05 BINST 0.05 SCAND 0.05 DIRDEROLOGY 4.005 BURDEROLOGY 6.001 AMSO 0.0102 DETIPL 0.0102 DETIPL 0.0102	000 V 000 C 000 G 000 G 000 F 000 H 000 J 000 J K	This is where the WBC Differential cells are counted. The manual cell count can be entered by first activating the cell counter and entering the count by using the assigned shortcut keys. Another way of entering the manual count is by deactivating the cell counter and using the number keypad to enter the count.
ELUP1 HEIN28 HU800 HV70C MACR0C DVAL0 PDIX.0 PDIX.0 PDIX.0 PDIX.0 PDIX.0 PDIX.0		This is where the RBC morphology cells are entered. To enter morphology, deactivate the cell counter and select the result field of the cell type observed. A drop down list will display the different results for the selected morphology.
SCHIST SUERD SILD SPHERD STOMA TARGET TEARDR L WRCMONHOLOGY AUERR DOHLE		This is where the WBC morphology cells are entered. To enter morphology, deactivate the cell counter and select the result field of the cell type observed. A drop down list will display the different results for the selected
HYSEG SMUDGE TONGRN VACUOL PLT MORPHOLOGY		This is where the PLT observations are entered
GPLT		

c. Each site, with the exception of GEC, has two cell counters. Each cell counter can only handle one active user. If another user tries to access the same cell counter that is already in use, DI will display an error that says "configuration is being edited by user: 123456"



Location	Cell Counter Assignment
GEC	GEC Heme Counter
SGMC Microscope #1	SGMH Heme 1 Counter
SGMC Microscope #2	SGMH Heme 2 Counter
WAH Microscope #1	WAH Heme 1 Counter
WAH Microscope #2	WAH Heme 2 Counter

- 8. Using the Cell Counter
 - a. To Enter the Accession number for the Cell Counter

There are two ways of entering the accession number for use by the Cell Counter. Once the accession number has been entered, the WBC Count_from_the_Analyzer field will be populated with the WBC count from the selected run

- i. By using the "Verify Run with Cell Counter"
 - Right click on the specific result column that you would like to be verified by the cell counter
 - Select the "Verify Run with Cell Counter"



Note: When the verify Run with Cell Counter is grayed out, do the following:

- go to the cell counter tab and select a cell counter that is not in use (see section 7c)
- o go back to the run worksheet
- ii. By manually typing the specimen ID within the Cell Counter
 - Select the appropriate cell counter for your location
 - Enter the accession number within the Specimen ID field and press the TAB key

Cell Counter		
🔁 Send Data Through System 层 Save Rur	n Data to SM 🗙 Clear All Data Env	able Cell Counter Keys
GEC HEME Counter		
Specimen Information		
Specimen ID 1234	WBC count from the analyzer	
Instrument ID GEC HEME Counter	Total Number of Cells to be Counted	100
Operator ID 164525	Number of Cells Counted	0

b. Setting the Total Number of Cells to be Counted field

To change the Total Number of Cells to be Counted:

- Disable the Enable Cell Counter Keys button. •
- Enter the desired total count on the "Total Number of Cells to be • Counted" field. The default count is 100

Cell Counter		÷×	
Send Data Through System 🚽 Save Run Data to	5M 🗙 Clear All Data Enable Cell Co	ounter Keys	Enter total
Aª 🛅 🕐		-	count
SGMC HEME 1 Counter			
Specimen Information			
Specimen ID 020001125	WBC count from the analyzer	6.20	
Instrument ID SGMC HEME 1 Counter	Total Number of Cells to be Counted	50	
Operator ID 164525	Number of Cells Counted	0	

- c. To Insert Coded Entry within the Cell Counter
 - Toggle the "Enable Cell Counter" button to disable it a.
 - b. Click on the result field to show the drop-down menu arrow
 - c. Click on the drop-down menu arrow
 - d. Select the appropriate code
 - Note: The coded entry only works for Morph Comment, Platelet, RBC Morphology, WBC Morphology and PLT Morphology groups

E



- d. Resulting WCOM (Path Review)
 - To enter the narrative from the Path Review, click on the WCOM result field and select "BELOW" from the drop down list. Under the WCOM Test Comment field, enter the path review narrative.
 - There is a limit of 450 characters for WCOM. This limit also applies to RCOM and PCOM fields. DI will display an error message of "Over 450 characters" when the comment entered on this field is over the limit

workspace goit View Format Ar	ction Help ematology Workspace	• 📄 Off 🔹 🖣	× 2 0 0 0 0 0 X		a
Specimen Worksheet 4 ×	Run Worksheet		888	# ×	Ima
Specimen ID Patient Name	Test Name /	Error Code(s) (8)	Error Name(s) (8)	Test Comment(s) (8)	ges
040001533	BLAST%				
040001533	PLASM%				Cell
040001533	NRBC				Cou
040001533	PCOM			;The contents of this messa	nter
040001522	RCOM	Over 450 chars	Limit comment to under 450 characters	Coded Entry: BELOW : See Bel	low
1040001333	WCOM	Over 450 chars	Limit comment to under 450 characters	Test Comment(s): The contents	of this message, together
	Suspect IP Mes	sages		any attachments, are intended or to which they are addressed and	nly for the use of the perso I may contain confidential
pecimen Information # ×	Left_Shift?			and/or privileged information. Fur	ther, any medical information
tient Name: TEST,INSTRUMENT	E (none)			unauthorized persons to use, rev	iew, copy, disclose, or
tient ID: TEST-17	DIST_PLT			disseminate confidential medical intended recipient zvcvb zbnmm	information. If you are not 450
asimon ID: 010001527	DIST_RBC				100 CO CO CO CO
Jecimen ID. 040001527	DIST_WDF(FS0	3		Previous Result BELUW 4/25/2	2017 2:52:59 PM
ocation - Facility: TEST	SCAT_WDF			Test Status: Held for Verification	
dmitting Physician:	SCAT_WNR			Result Date/Time: 4/25/2017 3:	10:11 PM
~ ~ _				Run Date/Time: 4/25/2017 3:10	0:09 PM
				Connection Name: SGMC HEME	1 Counter

9. Error and IP (Interpretive Program) Messages

Error Code	Error Name	Description
А	Abnormal	Abnormal result due to analysis or hardware error
W	Low Reliability	This error code is equivalent to asterisk (*) on Sysmex printout

IP Message	Work Instruction
Atypical_Lympho?	DIFF- Perform diff
Blasts/Abn_Lympho?	DIFF- Perform diff
Dimorphic_Population	Scan smear for abnormal RBC morph
Fragments?	Scan smear for abnormal RBC morph
IG_Present	DIFF- Perform diff
Left_Shift?	DIFF- Perform diff
NRBC_Present	SCAN. Remove if not seen on smear
PLT_Abn_Distribution	Vortex and Rerun
PLT_Abn_Scattergram	Vortex and Rerun
PLT_Clumps(S)	If not clotted, Vortex. Rerun in PLT-F mode. If unresolved, SCAN
PLT_Clumps?	If not clotted, Vortex. Rerun in PLT-F mode. If unresolved, SCAN
RBC_Abn_Distribution	Scan smear for abnormal RBC morph
RBC_Agglutination?	Warm at 37, rerun. If unresolved, perform plasma replacement
RET_Abn_Scattergram	Perform 1:5 dilution
Sample_Mixing_Failure?	Vortex and Rerun
Turbidity/HGB_Interference?	If gross hemolysis, cancel with HMT. If lipemic, do saline
	replacement
WBC_Abn_Scattergram	SCAN for abnormal cells and NRBC

Ru	In '	Worksheet					_		
		Test Name ∠	Test St	Result (2)	Units	Error Code(s) (2)	Error Name(s) (2)		
	_	IP Messages							
		Left_Shift?	Releas	300		A,HOLD	Abnormal,DIFF		Examples of IP
		PLT_Clumps?	Releas	140		A,HOLD	Abnormal, If not clotted,		Messages and
		WBC_Abn_Scatt	Releas	1		A,HOLD	Abnormal,SCAN for abn		Abnormal error codes
	-	CBC							
		WBC	Held fo	11.0	10×3	HOLD	H,Other Tests Held]	
		RBC	Held fo	2.17	10×6	HOLD,HOLD,H	L,Other Tests Held	1	
		HGB	Held fo	7.5	g/dL	HOLD	L,Other Tests Held	1	
		нст	Held fo	21.2	%	HOLD	L,Other Tests Held	1	
		MCV	Held fo	97.7	fL	HOLD	H,Other Tests Held]	
		мсн	Held fo	34.6	pg	HOLD	H,Other Tests Held]	
		мснс	Held fo	35.4	g/dL	HOLD	Other Tests Held	,	
		RDW-CV	Held fo	12.8	%	HOLD	Other Tests Held		Examples of "W"
	-	Platelet							(Low reliability) error
		MPV	Held fo	10.3	fL	W,HOLD	Low Reliability,Other Te		codes "W" is
		PLT	Held fo	120	10×3	W,Check for Cl	Low Reliability,Vortex,		aquivalent to actorial
		IPF	Held fo	HIDE		HOLD	Other Tests Held		(*) on Sysmex

10. Release/Hold Conditions

Condition	CBC	PLT	DIFF	RET	Release/Hold			
1	Normal	Normal	Normal	Normal	Release CBC, PLT, DIFF & RET			
2	Normal	Normal	Normal	Abnormal	Release CBC, PLT, DIFF. Hold RET			
3	Normal	Normal	Abnormal	Normal	Release CBC, PLT & RET. Hold DIFF			
4	Normal	Normal	Abnormal	Abnormal	Release CBC & PLT. Hold DIFF & RET			
5	Normal	Abnormal	Normal	Normal	Release CBC & RET. Hold PLT & DIFF			
6	6 Normal		Normal	Abnormal	Release CBC. Hold PLT, DIFF & RET			
7	7 Normal		Abnormal	Normal	Release CBC & RET. Hold PLT & DIFF			
8	Normal	Abnormal	Abnormal	Abnormal	Release CBC. Hold PLT, DIFF & RET			
9	Abnormal	Normal	Normal	Normal	Release RET. Hold CBC, PLT, DIFF			
10	Abnormal	Normal	Normal	Abnormal	Hold CBC,PLT,DIFF & RET			
11	Abnormal	Normal	Abnormal	Normal	Release RET. Hold CBC, PLT, DIFF			
12	Abnormal	Normal	Abnormal	Abnormal	Hold CBC,PLT,DIFF & RET			
13	Abnormal	Abnormal	Normal	Normal	Release RET. Hold CBC, PLT, DIFF			
14	Abnormal	Abnormal	Normal	Abnormal	Hold CBC,PLT,DIFF & RET			
15	Abnormal	Abnormal	Abnormal	Normal	Release RET. Hold CBC, PLT, DIFF			
16	Abnormal	Abnormal	Abnormal	Abnormal	Hold CBC,PLT,DIFF & RET			

11. Coded Entry

The following are added to all the components of the CBC and Platelets:

- HIS: Result consistent with patient history
 PTR: Patient transfused
 SREV: Smear reviewed
 UTC: Unable to calculate
 CLMP: Clumped **Added to platelet group only
 OCC-CLMP: Occasional Clumping **Added to Platelet group only
 1+, 2+, 3+, 4+, OCC: Possible results for GPLT (Giant Platelets)
 INC, DEC, ADEQ, BELOW: Possible results for PCOM
- 12. Clumped platelets

Action: Depending upon quantity of clumping noted

- a. If platelets clumping is more than occasional, then report PLT as CLMP and result MPV as UTC.
- b. If platelets clumping is occasional, then add comment of OCC-CLMP in the Test comment field associated with PLT.

13. MPV

If on the first run MPV is resulted as "---" DI will display an error code to rerun. If the rerun is still "---" DI will automatically replace "---" with code UTC

Ru	n١	Worksheet									4	×
		Test Name ∠	Result (1)	Units (1)	Error Code(s) (1)	Error Name(s) (1)	Test Comment(s	Result (2)	Units (2)	Error Code(s) (2)	E	3
	-	IP Messages										
		PLT_Abn_Distrib	1		A,HOLD	Abnormal, Vortex and R					П	
		Thrombocytopenia	1		А	Abnormal		1		A,Rerun	А	
	-	CBC										
		WBC	5.3	10*3/uL	HOLD	Other Tests Held		5.1	10*3/uL	Rerun,HOLD	Р	
		RBC	4.13	10*6/uL	Check for clot,H	Other Tests Held,		4.08	10*6/uL	Check for clot,Rer	Р	
		HGB 11.4 g/dL HOLD		Other Tests Held		11.4	g/dL	Rerun,HOLD	Р			
		нст	34.3	%	HOLD	Other Tests Held		33.8	%	Rerun,HOLD,	L	
		MCV	83.1	fL	HOLD	Other Tests Held		82.8	fL	Rerun,HOLD	Р	
		мсн	27.6	pg	HOLD	Other Tests Held		27.9	pg	Rerun,HOLD	Р	
		мснс	33.2	g/dL	HOLD	Other Tests Held		33.7	g/dL	Rerun,HOLD	P	
		RDW-CV	14.2	%	HOLD	Other Tests Held		14.2	%	Rerun,HOLD	Ρ	
	-	Platelet										
		MPV		fL	A,HOLD,HOLD	Abnormal,Invalid result,		UTC	-	A,HOLD,HOLD	A	
		PLT	16	10*3/uL	W,HOLD,HOLD	Low Reliability,Vortex a	CBACK-;	13	0°3/uL	Check for clot,cL,	L	
		IPF	HIDE		HULD	Uther Lests Held		29	%	HOLD	Н	

14. SCAN indicated in DI

Action:

Review slide for abnormal cells. If no abnormal cells are seen, then enter SREV [Smear Reviewed] under the Test Comment field for the test that is associated with the SCAN comment.

- 15. Resulting CBC with automated diff with Morphology
 - a. Change DTYP1 result to ADIFF
 - b. Enter morphology results via the Cell Counter
 - c. Click on "Send data through system"
 - d. Release the MDIFF group on the run that you want to release
 - e. Release the ADIFF group on the run that you want to release
- 16. Platelet Estimates
 - a. Use Cell Counter to result platelet estimate.
 - b. Click on "Send data through system"
 - c. Platelet estimate results will display in a new run along with the MPV results.
 - d. Release the platelet group with the platelet estimate (it will automatically reject the other platelet groups)

Note: if MPV result is "" then resu	ult MPV in Cell Counter as UTC
-------------------------------------	--------------------------------

Rı	IN ,	Worksheet						
		Test Name ∧	Result (9)	Units (9)	Reference	Test I	Error Code(s) (9)	Test Comment
	-	IP Messages						
		WBC_Abn_Scattergram						
	Ξ	CBC						
		WBC						
		RBC						
		HGB						
		нст						
		MCV						
		мсн						
		мснс						
		RDW-CV						
		MPV						
		PLT						
	-	Platelet						
		MPV	8.7			SXN1		
		PLT						
		IPF	HIDE			SXN1		
		PLT Estimate	400	10*3/uL	140 - 400	SXN1		RCM

17. How to select results to release

a. If you want to release by Group Left click on one of the results in the group. Then right click and select release by group. *Example*:

> We want to release the "CBC" group. We select the WBC result field and then right click to select "release by group"

	Test Name A	Test St	Besult (2)	L Inite.
-	IP Messages	rescot	rresult (2)	ionits
	Left_Shift?	Releas	300	
	PLT_Clumps?	Releas	140	
	WBC_Abn_Scatt	Releas	1	
-] CBC			
	WBC	Held fo	11.0 🖌	10*3
	RBC	Held fo	2.17	10×6
	HGB	Held fo	7.5	g/dL
	нст	Held fo	21.2	%
	MCV	Held fo	97.7	fL
	мсн	Held fo	34.6	pg
	мснс	Held fo	35.4	g/dL
	RDW-CV	Held fo	12.8	%
-	Platelet			
	MPV	Held fo	10.3	fL
	PLT	Held fo	120	10×3
	IPF	Held fo	HIDE	
-	ADIFF			
	DTYPE	Held fo	ADIFF	
	NEUT%	Held fo	78.8	%

- b. If you want to release an individual test result Left click on the result **on the RUN** that you want to release. Then right click and select **Release.**
- 18. Order of result release is **VERY IMPORTANT**

Never release the ADIFF or MDIFF first

Depending on the actual test results for a particular specimen, release in this order:

CBC group, followed by Platelet group, then ADIFF or MDIFF

CBC group, followed by Platelet group, then Morphology, and ADIFF last

CBC group, followed by Platelet Estimate, then MDIFF

19. Review of results with critical and/or delta error flags.

Color flagging of results with critical and/or delta error flags(s) will display on both the Specimen and Run Worksheets.

	•	For result	s with	n ONL	Y	a delta err	or fla	ng	T of	he rov f the I	v is ye Delta e	llow rror	because flag
	Specimen Wor	ksheet		ά×	ļ	Run Worksheet							
	Specimen ID	Patient Name	Speci	Last P 🔺		Test Name 🔺	Test	Resul	Units	Refere	Result	Test	Error Code(s) (1)
	050001637	TEST, INSTRUM	Partial	6/15/2		IP Messages							
	050001641	TEST, INSTRUM	Partial	6/10/:		PLT_Clump	Rele	120			6/15/2	SXN2	A,HOLD
	050001650	TEST,INSTRUM	Partica	6/15/2		E CBC							
	050001652	V	Compl	6/15/2		WBC	Rele	9.0	10*3/	5.0 - 16	6/15/2	SXN2	HOLD
ľ	050001653	TEST.INSTRUM	Partial	6/15/		RBC	Rele	4.89	10*6/	3.90 - 5	6/15/2	SXN2	HOLD
ŀ	050001655	TESTINSTRUM	Partial	7/12/		HGB	Rele	12.6	g/dL	11.5 - 1	6/15/2	SXN2	HOLD
	050001005	TEOT, NOTEUM	n catical	CHER		нст	Rele	39.9	%	34.0 - 4	6/15/2	SXN2	HOLD
	050001694	TEST,INSTRUM	Partial	6/15/2		MCV	Rele	81.6	fL	73.0 - 8	6/15/2	SXN2	DELTA#,HOLD
	050010010		Tests	4/5/20			Dele	00.0		040 0	0.110.0	OVN0	

• For results with ONLY a critical error flag

The row is red because of the Critical error flag

	Specimen Wor	ksheet	R	Rvar Worksheet										
	Specimen ID	Patient Name	Speci	Last 🗖 🔺		Test Name ⊿	Test	Resul	Units	Refere	Result	Test	Error Code(s) (1)	TE
	050001442	COMPETENCY,T	Terts	4/12/2		- CBC								
P	050001443	TEST, INSTRUM	Tests	4/12/3		WBC	Rele	98.52	10*3/	5-16	3/30/2	SXN1	W,Check for clot,cH,HOLD	L
	050001451	TEST, INSTRUM	Compl	4/13/2		RBC	Held f	2.48	10*6/	3.9 - 5.5	3/30/2	SXN1	HOLD	L
	050001452	TEST, INSTRUM	Compl	4/13/2		HGB	Held f	9.0	g/dL	11.5 - 14	3/30/2	SXN1	HOLD	L
	050001453	TEST,INSTRUM	Compl	4/13/2	Ц	НСТ	Held f	29.8	%	34 - 42	3/30/2	SXN1	HOLD	L
	050001454		Tooto	A1121		MCV	Held f	120.2	fL	73-87	3/30/2	SXN1	MORPH,HOLD	ŀ
	050001454	COMPETENCE, I	Tests	4/13/2		MCH	Held f	36.3	na	24 - 30	3/30/2	SXN1	HOLD	١F

• For results with critical and delta error flags

The row is red because of the Critical
error flag. A Critical flag has higher
catergory than a Delta flag

Specimen Worksheet * * ×					ļF	tun Worksheet									
	Specimen ID	Patient Name	Speci	Last P 🔺		TestNam	e⊿ Test	Resul	Units	Refere	Result	Test	Error Code(s) (1)	Error Name(s) (1)	
	050001631	TEST, INSTRUM	Partial	6/15/2		IP Messag	ges	_	<u>, </u>						
	050001637	TEST, INSTRUM	Partial	6/15/		PLT_Abn_	Rele	1			6/15/2	SXN2	AHOLD	Abnormal,Vortex	
	050001641	TEST, INSTRUM	Partial	6/18/:		El CBC									
	050001650	TEST, INSTRUM	Partial	6/15/2		WBC	Rele	9.5	10*3/	5.0 - 16	6/15/2	SXN2	HOLD	Other Tests Held	
	050001652		Compl	6/15/		RBC	Rele	2.69	10*6/	3.90 - 5	6/15/2	SXN2	DELTA,HOLD,	L,DELTA%,Other	
	03000103E			0/10/1		HGB	Rele	6.0	g/dL	11.5 - 1	6/15/2	SXN2	Check for clot,cL,DELTA#,HOLD,	L,Check for clot, r	
	050001653	TEST,INSTRUM	Partial	6/15/2		нст	Bele	19.2	%	34.0 - 4	6/15/2	SXN2	HOLD.	LOther Tests Held	
	050001655	TEST, INSTRUM	Partial	7/12/2		MCV	Rele	71.4	fL	73.0 - 8	6/15/2	SXN2	DELTA#,HOLD,	L,DELTA,Other T	
	050001694	TEST, INSTRUM	Partial	6/15/2		мсн	Rele	22.3	pg	24.0 - 3	6/15/2	SXN2	HOLD,	L,Other Tests Held	