



# Field Service Report

Work Order No: WO-00044626

Printed: Tue May 13 2014

Customer		Instrument		Call	
Name:	RADBOUD UMC	Name:	LX100, Top Level, Complete	Type/Code:	- HARDWARE
Address:	WELVAARTSTRAAT 1, HERENTALS, , BE-2200	Serial Number:	LX10004347302	Category:	PM - PM
Contact:	GEPKE VISSER (g.visser@labgk.umcn.nl)	PC Model:	Dell Optiplex 7010	Contract:	SLA Gold

Problem		TSB		Resolution	
May 2014 12M PM due		01 *	21	PM Service to LX100 instrument. Performed 13th MAY 2014. WO-00044626 - UMC	
		02 *	22	St. Radboud - Geert Groteplein Zuid Nr. 30, Centrale Ontvangst Goederen,	
		03 *	23 *	Nijmegen, Nederland. LX10004347302-A Firmware: 2.3.9 DSP: 3.17.0 NEW	
		04 *	24 *	Luminex Dell Optiplex 7010 PC. Service Tag: 9B6RDZ1 Express Service Code:	
		05 *	25 *	20267524477 E-mail : G.Visser@labgk.umcn.nl Ms. Gepke Visser Tel: +31 24 361	
		06 *	26 *	5358 E-mail : Y.vanBerkel@labgk.umcn.nl E-mail : S.Hendriks@labgk.umcn.nl	
		07 *	27	E-mail : J.Linders@labgk.umcn.nl TSB 01-08, 10-14, 16, 18-20, 23-26, 31 Problem	
		08 *	28	Description : "PM Service on LX100 Instrument". Dried Particles seen on probe (thick	
		09	29	part not probe end) & needle alignment guide replaced NEW (68-00026-00-001) x1	
		10 *	30	due to wear seen at the top. Reset mechanical - needle arm actuator linkage	
		11 *	31 *	including fixing to Bimba cylinder to make the probe go vertically straight - Tested -	
		12 *	32	OK. Checked XYP positions to confirm at the end of PM. 96 Well uPlate checked :	
		13 *	33	probe in SW direction with x=1mm, y=1mm from CL position. A1 Pos (Org) x=1537,	
		14 *	34	y=721 WRT Home pos x=1688, y=839 A1 Pos (Final) x=1532, y=726 WRT Home	
		15	35	pos x=1683, y=844 Replace PM Consumables (64-50011-00-001). Check ALL valves	
		16 *	36	- Tested - OK. Declog Cuvette- a fine jet of sheath fluid is seen exiting the hockey	
		17	37	puck reliably on command. *Please make Sanitise solution from thin domestic	
		18 *	38	household bleach (Sodium Hypochlorite <5%) 20% Volume / 80% fresh DI Water to	
		19 *	39	prevent clogs. - only make enough for one weeks use. Determine Flowrate = 11.0ml	
		20 *	40	@ Sheath Pressure=7.610psi. DD Temp=23.958 degC Red laser power= 8.08 mW	
				Red laser time = 7399704s Green laser power= 13.4 mW (Coherent 215M Type) -	
				replaced NEW 3rd April 2013 Green laser time = 2177377s Split = 36.000us CALs &	
				CONs - Events/S >250 TO 550 in <30s -PASS Optical Verification:- Lots used for	
				testing. CAL1 (B32944) CAL2 (B32945) CON1 (B32469) CON2 (B32470) Verification	
				(Final) - PASS. PEAK=9779 %CV's: DD=9.83 (Tol<16) CL1=3.49 (Tol<6) CL2=3.23	
				(Tol<7.5) RP1=7.04 (Tol<10) MEAN: DD=10553.93 CL1=3453.77 CL2=3542.55	
				RP1=3732.63 47Plex beads are hitting left of centre in regions - OK. Probe height	
				adjusted for Greiner Mylar bed uPlate 2 discs, Checked with Millipore filter bed update	
				-3 discs used to setup probe height for CALibrations/ CONtrols & Assay use.	
				Checked with AMP - CALs & VERs (CONs) including Fluidics 1 & 2 - PASS. Run	
				Twice. Review results- OK. Basic Instruction given to the customer on "PC - Windows	
				Firewall settings - allow Programs Access- Lifecodes has full access to DOMAIN,	
				Private & Public". xPONENT only has access to PUBLIC. Travel = 0.75hour Labour =	
				5hours	

## Parts

Serial No	Item No	Description	Quantity	Price	Extended Price
	TRAVEL	Travel for On-Site Field Service	17.00		
	LABOR	Labor Charges	4.50		
	64-50011-00-001	PM Kit (12 Month)	1.00		
	68-00026-00-001	Tube, Alignment, XY	1.00		

Travel Time Total:

0.75

**Luminex****Field Service Report**  
Work Order No: WO-00040345

Printed: Mon Dec 2 2013

Customer	Instrument	Call
Name: UMC ST RADBOUD GEERT GROOTEPLEIN ZUID NR 30 CENTRALE ONTVANGST GOEDEREN NIJMEGEN Address: LABORATORIUM MEDISCHE IMMUNOLOGIE, NIJMEGEN, , 6525 GA Contact: YVONNE VAN BERKEL (y.vanberkel@labgk.umcn.nl)	Name: LX100, Top Level, Complete Serial Number: LX10004347302 PC Model: Dell optiplex 760	Type/Code: - HARDWARE Category: Service - Site Visit Contract: Warranty

Problem	TSB	Resolution
problemen met de luminex	01 * 21	Repair Service to LX100 instrument. Performed 2nd December 2013. WO-00040345-
	02 * 22	UMC St. Radboud - Geert Groteplein Zuid Nr. 30, Centrale Ontvangst Goederen,
	03 * 23 *	Nijmegen, Nederland. LX10004347302-A Firmware: 2.3.9 DSP: 3.17.0 Was
	04 * 24 *	IS2.3.182 (July 2013 Christine Heylen U/G software) now is xPONENT 3.1.971 Dell
	05 * 25 *	Optiplex 760 Service Tag : 5FGT94J. E-mail : G.Visser@labgk.umcn.nl Ms. Gepke
	06 * 26 *	Visser Tel:+31 24 361 5358 E-mail : Y.vanBerkel@labgk.umcn.nl E-mail :
	07 * 27	S.Hendriks@labgk.umcn.nl E-mail : J.Linders@labgk.umcn.nl Problem Description :
	08 * 28	"Repair Service on LX100 Instrument - No eject retract on XYP or other WASH
	09 29	functions etc. on xPONENT 3.1.971 system" Arrive on site XPONENT 3.1.971 -
	10 * 30	Eject/Retract works. Customer report problems with Output.csv not showing in their
	11 * 31 *	respective locations on Drive H: etwork - H:LuminexMyBatches_ABoutput "Could not
	12 * 32	write Output.csv. See the startup log for more information. Kan geen verbinding
	13 * 33	maken omdat de doelcomputer de verbinding actief heeft geweigerd 127.0.0.1:11113"
	14 * 34	Error code reported. : 800C955C Support Utility file generated errors -
	15 35	xPonentDM_InvalidParameter(0x800CA000) Computer is operating slow. Perform
	16 * 36	Basic Computer Maintenance. Test Write function on C:My Sessions & C:My
	17 37	Batches, able to create Jeremy Write Test folders - works OK. Unable to Update
	18 * 38	Windows XP OS & review installed history - I.T. dept has it locked down. Computer
	19 * 39	hard disk is only 50GB - Disk clean up takes 2.5hours to remove unwanted data from
	20 * 40	Recycle Bin, Temp Installer files etc. freed of around 15GB. Inform Customer that
		they need to update the computer with a bigger C:> hard disk plus Windows 7 OS,
		have loaded xPONENT 3.1.971 loaded on cleanly. In addition this will assist Ms.
		Christine Heylen with Life Match external analysis software upgrade (who
		experienced issues) in the next 2 weeks. *Notice that Lxr Maintenance is showing on
		the desktop & Bio-Plex Manager v4.1. Discuss with Customer Yvonne & Bram
		(Bio-plex Manager user UMC Radboud R&D) to use the Bio_plex Manager on a
		different PC to avoid problems with the PC for the future. Checked for data &
		uninstalled Bio-Plex Manager v4.1 with Bram. Uninstalled LXR MAINT executable. Lxr
		Errors seen on startup of xPONENT Lxr initialisation Error - Lxr Error. Value cannot
		be null. Parameter name: path1 Error Code : LXRSystemError(0x800C9580). Use
		xPONENT 3.1.971 DVD to "Repair" PC. COLD BOOT PC. Results TAB -> SAVED
		BATCHES - rerun a batch - previously errors seen, Now works perfectly. Long
		sample needle was not running straight through the needle alignment guide -
		re-aligned Needle arm linkage to Bimba Cylinder to make more straight. Check ALL
		valves - Tested - OK. *Please make Sanitise solution from thin domestic household
		bleach (Sodium Hypochlorite <5%) 20% Volume / 80% fresh DI Water to prevent
		clogs. - only make enough for one weeks use. Sheath Pressure=7.478psi Red laser
		power= N/A mW Red laser time = 6488927s Green laser power= N/A mW (Coherent
		215M Type) - replaced NEW 3rd April 2013 Green laser time = 1266598s Split =
		(previous Calibration) 38.400us Optical Verification - N/A. Probe height adjusted for
		Millipore filter bed update -3 discs used to setup probe height for CALibrations/
		CONTROLS & Assay use. CALS & CONS using customer beads using xPONENT

**Optics Alignment Verification**

DD Temp:	23.3	deg (C)	Laser Time	
Sheath Pressure:	7.478		Green:	1266598
Flow Rate (2 min):	N/A	ml	Red:	6488927

**Classification Results**

	DD	CL1	CL2	RP1
CV (Initial/If required):	N/A	N/A	N/A	N/A
Mean (Initial/If required):	N/A	N/A	N/A	N/A
CV (Final):	N/A	N/A	N/A	N/A
Mean (Final):	N/A	N/A	N/A	N/A

Classification Passed: Yes  
Control Passed: Yes

Fluidics 1 Passed: N/A  
Fluidics 2 Passed: N/A



# Field Service Report

Work Order No: WO-00044626

Printed: Tue May 13 2014

Customer		Instrument		Call	
Name:	RADBOUD UMC	Name:	LX100, Top Level, Complete	Type/Code:	- HARDWARE
Address:	WELVAARTSTRAAT 1, HERENTALS, , BE-2200	Serial Number:	LX10004347302	Category:	PM - PM
Contact:	GEPKE VISSER (g.visser@labgk.umcn.nl)	PC Model:	Dell Optiplex 7010	Contract:	SLA Gold

Problem					TSB		Resolution
May 2014 12M PM due					01 *	21	PM Service to LX100 instrument. Performed 13th MAY 2014. WO-00044626 - UMC St. Radboud - Geert Groteplein Zuid Nr. 30, Centrale Ontvangst Goederen, Nijmegen, Nederland. LX10004347302-A Firmware: 2.3.9 DSP: 3.17.0 NEW Luminex Dell Optiplex 7010 PC. Service Tag:9B6RDZ1 Express Service Code: 20267524477 E-mail : G.Visser@labgk.umcn.nl Ms. Gepke Visser Tel:+31 24 361 5358 E-mail : Y.vanBerkel@labgk.umcn.nl E-mail : S.Hendriks@labgk.umcn.nl E-mail : J.Linders@labgk.umcn.nl TSB 01-08, 10-14, 16, 18-20, 23-26, 31 Problem Description : "PM Service on LX100 Instrument". Dried Particles seen on probe (thick part not probe end) & needle alignment guide replaced NEW (68-00026-00-001) x1 due to wear seen at the top. Reset mechanical - needle arm actuator linkage including fixing to Bimba cylinder to make the probe go vertically straight -Tested - OK. Checked XYP positions to confirm at the end of PM. 96 Well uPlate checked : probe in SW direction with x=1mm, y=1mm from CL position. A1 Pos (Org) x=1537, y=721 WRT Home pos x=1688, y=839 A1 Pos (Final) x=1532, y=726 WRT Home pos x=1683, y=844 Replace PM Consumables (64-50011-00-001). Check ALL valves - Tested - OK. Declog Cuvette- a fine jet of sheath fluid is seen exiting the hockey puck reliably on command. *Please make Sanitise solution from thin domestic household bleach (Sodium Hypochlorite <5%) 20% Volume / 80% fresh DI Water to prevent clogs. - only make enough for one weeks use. Determine Flowrate = 11.0ml @ Sheath Pressure=7.610psi. DD Temp=23.958 degC Red laser power= 8.08 mW Red laser time = 7399704s Green laser power= 13.4 mW (Coherent 215M Type) - replaced NEW 3rd April 2013 Green laser time = 2177377s Split = 36.000us CALs & CONs - Events/S >250 TO 550 in <30s -PASS Optical Verification:- Lots used for testing. CAL1 (B32944) CAL2 (B32945) CON1 (B32469) CON2 (B32470) Verification (Final) - PASS. PEAK=9779 %CV's: DD=9.83 (Tol<16) CL1=3.49 (Tol<6) CL2=3.23 (Tol<7.5) RP1=7.04 (Tol<10) MEAN: DD=10553.93 CL1=3453.77 CL2=3542.55 RP1=3732.63 47Plex beads are hitting left of centre in regions - OK. Probe height adjusted for Greiner Mylar bed uPlate 2 discs, Checked with Millipore filter bed update -3 discs used to setup probe height for CALibrations/ CONTROLS & Assay use. Checked with AMP - CALs & VERs (CONs) including Fluidics 1 & 2 - PASS. Run Twice. Review results- OK. Basic Instruction given to the customer on "PC - Windows Firewall settings - allow Programs Access- Lifecodes has full access to DOMAIN, Private & Public".xPONENT only has access to PUBLIC. Travel = 0.75hour Labour = 5hours
<b>Optics Alignment Verification</b>					02 *	22	
DD Temp:	23.958	deg (C)	Laser Time		03 *	23 *	
Sheath Pressure:	7.610		Green:	2177377	04 *	24 *	
Flow Rate (2 min):	11.0	ml	Red:	7399704	05 *	25 *	
					06 *	26 *	
					07 *	27	
					08 *	28	
					09	29	
					10 *	30	
					11 *	31 *	
					12 *	32	
					13 *	33	
					14 *	34	
					15	35	
					16 *	36	
					17	37	
					18 *	38	
					19 *	39	
					20 *	40	
<b>Classification Results</b>							
	DD	CL1	CL2	RP1			
CV (Initial/if required):	N/A	N/A	N/A	N/A			
Mean (Initial/if required):	N/A	N/A	N/A	N/A			
CV (Final):	9.83	3.49	3.23	7.04			
Mean (Final):	10553.93	3453.77	3542.55	3732.63			
Classification Passed: Yes					Fluidics 1 Passed: Yes		
Control Passed: Yes					Fluidics 2 Passed: Yes		

## Parts

Serial No	Item No	Description	Quantity	Price	Extended Price
	TRAVEL	Travel for On-Site Field Service	17.00		
	LABOR	Labor Charges	4.50		
	64-50011-00-001	PM Kit (12 Month)	1.00		
	68-00026-00-001	Tube, Alignment, XY	1.00		

Travel Time Total:

0.75



## Field Service Report

Work Order No: WO-00040345

Printed: Mon Dec 2 2013

Customer	Instrument	Call
Name: UMC ST RADBOUD GEERT GROOTEPLEIN ZUID NR 30 CENTRALE ONTVANGST GOEDEREN NIJMEGEN Address: LABORATORIUM MEDISCHE IMMUNOLOGIE, NIJMEGEN, , 6525 GA Contact: YVONNE VAN BERKEL (y.vanberkel@labgk.umcn.nl)	Name: LX100, Top Level, Complete Serial Number: LX10004347302 PC Model: Dell optiplex 760	Type/Code: - HARDWARE Category: Service - Site Visit Contract: Warranty

Problem	TSB	Resolution
problemen met de luminex	01 * 21	Repair Service to LX100 instrument. Performed 2nd December 2013. WO-00040345-
	02 * 22	UMC St. Radboud - Geert Groteplein Zuid Nr. 30, Centrale Ontvangst Goederen,
	03 * 23 *	Nijmegen, Nederland. LX10004347302-A Firmware: 2.3.9 DSP: 3.17.0 Was
	04 * 24 *	IS2.3.182 (July 2013 Christine Heylen U/G software) now is xPONENT 3.1.971 Dell
	05 * 25 *	Optiplex 760 Service Tag : 5FGT94J. E-mail : G.Visser@labgk.umcn.nl Ms. Gepke
	06 * 26 *	Visser Tel:+31 24 361 5358 E-mail : Y.vanBerkel@labgk.umcn.nl E-mail :
	07 * 27	S.Hendriks@labgk.umcn.nl E-mail : J.Linders@labgk.umcn.nl Problem Description :
	08 * 28	"Repair Service on LX100 Instrument - No eject retract on XYP or other WASH
	09 29	functions etc. on xPONENT 3.1.971 system" Arrive on site XPONENT 3.1.971 -
	10 * 30	Eject/Retract works. Customer report problems with Output.csv not showing in their
	11 * 31 *	respective locations on Drive H: etwork - H:LuminexMyBatches_ABoutput "Could not
	12 * 32	write Output.csv. See the startup log for more information. Kan geen verbinding
	13 * 33	maken omdat de doelcomputer de verbinding actief heeft geweigerd 127.0.0.1:11113"
	14 * 34	Error code reported. : 800C955C Support Utility file generated errors -
	15 35	xPonentDM_InvalidParameter(0x800CA000) Computer is operating slow. Perform
	16 * 36	Basic Computer Maintenance. Test Write function on C:My Sessions & C:My
	17 37	Batches, able to create Jeremy Write Test folders - works OK. Unable to Update
	18 * 38	Windows XP OS & review installed history - I.T. dept has it locked down. Computer
	19 * 39	hard disk is only 50GB - Disk clean up takes 2.5hours to remove unwanted data from
	20 * 40	Recycle Bin, Temp Installer files etc. freed of around 15GB. Inform Customer that
		they need to update the computer with a bigger C:> hard disk plus Windows 7 OS,
		have loaded xPONENT 3.1.971 loaded on cleanly. In addition this will assist Ms.
		Christine Heylen with Life Match external analysis software upgrade (who
		experienced issues) in the next 2 weeks. *Notice that Lxr Maintenance is showing on
		the desktop & Bio-Plex Manager v4.1. Discuss with Customer Yvonne & Bram
		(Bio-plex Manager user UMC Radboud R&D) to use the Bio_plex Manager on a
		different PC to avoid problems with the PC for the future. Checked for data &
		uninstalled Bio-Plex Manager v4.1 with Bram. Uninstalled LXR Maint executable. Lxr
		Errors seen on startup of xPONENT Lxr initialisation Error - Lxr Error. Value cannot
		be null. Parameter name: path1 Error Code : LXRSystemError(0x800C9580). USE
		XPONENT 3.1.971 DVD to "Repair" PC. COLD BOOT PC. Results TAB -> SAVED
		BATCHES - rerun a batch - previously errors seen, Now works perfectly. Long
		sample needle was not running straight through the needle alignment guide -
		re-aligned Needle arm linkage to Bimba Cylinder to make more straight. Check ALL
		valves - Tested - OK. *Please make Sanitise solution from thin domestic household
		bleach (Sodium Hypochlorite <5%) 20% Volume / 80% fresh DI Water to prevent
		clogs. - only make enough for one weeks use. Sheath Pressure=7.478psi Red laser
		power= N/A mW Red laser time = 6488927s Green laser power= N/A mW (Coherent
		215M Type) - replaced NEW 3rd April 2013 Green laser time = 1266598s Split =
		(previous Calibration) 38.400us Optical Verification - N/A. Probe height adjusted for
		Millipore filter bed update -3 discs used to setup probe height for CALibrations/
		CONtrols & Assay use. CALS & CONS using customer beads using xPONENT

### Optics Alignment Verification

DD Temp:	23.3	deg (C)	Laser Time	
Sheath Pressure:	7.478		Green:	1266598
Flow Rate (2 min):	N/A	ml	Red:	6488927

### Classification Results

	DD	CL1	CL2	RP1
CV (Initial/If required):	N/A	N/A	N/A	N/A
Mean (Initial/If required):	N/A	N/A	N/A	N/A
CV (Final):	N/A	N/A	N/A	N/A
Mean (Final):	N/A	N/A	N/A	N/A

Classification Passed: Yes	Fluidics 1 Passed: N/A
Control Passed: Yes	Fluidics 2 Passed: N/A



# Field Service Report

Work Order No: WO-00056537

Printed: Tue May 26 2015

Customer	Instrument	Call
Name: RADBOUD UMC GEERT GROOTEPLEIN ZUID 30 CENTRALE Address: ONTVANGST GOEDEREN NIJMEGEN, NIJMEGEN, , 6525 GA Contact: YVONNE VAN BERKEL (yvonne.vanberkel@radboudumc.nl)	Name: LX100, Top Level, Complete Serial Number: LX10004347302 PC Model: Dell Optiplex 7010	Type/Code: - HARDWARE Category: PM - PM Contract: SLA Gold

Problem	TSB	Resolution																								
May 2015 12M PM due	01 * 21 02 * 22 03 * 23 * 04 * 24 * 05 * 25 * 06 * 26 * 07 * 27 08 * 28 09 * 29 10 * 30 11 * 31 * 12 * 32 13 * 33 14 * 34 15 * 35 16 * 36 17 * 37 18 * 38 19 * 39 20 * 40	Performed 12 months PM (details see checklist). Performs system verification: all cv's and means in spec. (Sheath fluid B43483, Cal1 B44396, Cal2 B44332, Con1 B42996, Con2 B42997). Run controls from customer: all ok.																								
Optics Alignment Verification		Parts																								
DD Temp: 23.958 deg (C) Laser Time Sheath Pressure: 7.610 Green: 4860024 Flow Rate (2 min): 11.0 ml Red: 10082351		<table border="1"> <thead> <tr> <th>Serial No</th> <th>Item No</th> <th>Description</th> <th>Quantity</th> <th>Price</th> <th>Extended Price</th> </tr> </thead> <tbody> <tr> <td></td> <td>TRAVEL</td> <td>Travel for On-Site Field Service</td> <td>60.00</td> <td></td> <td></td> </tr> <tr> <td></td> <td>LABOR</td> <td>Labor Charges</td> <td>3.50</td> <td></td> <td></td> </tr> <tr> <td></td> <td>64-50011-00-001</td> <td>PM Kit (12 Month)</td> <td>1.00</td> <td></td> <td></td> </tr> </tbody> </table>	Serial No	Item No	Description	Quantity	Price	Extended Price		TRAVEL	Travel for On-Site Field Service	60.00				LABOR	Labor Charges	3.50				64-50011-00-001	PM Kit (12 Month)	1.00		
Serial No	Item No	Description	Quantity	Price	Extended Price																					
	TRAVEL	Travel for On-Site Field Service	60.00																							
	LABOR	Labor Charges	3.50																							
	64-50011-00-001	PM Kit (12 Month)	1.00																							
Classification Results																										
CV (Initial/if required): Mean (Initial/if required): CV (Final): Mean (Final):	DD CL1 CL2 RP1 9.15 3.38 3.54 7.57 10760.25 3313.39 3568.15 3560.26																									
Classification Passed: Yes Control Passed: Yes	Fluidics 1 Passed: Yes Fluidics 2 Passed: Yes																									
		Travel Time Total: 1.25 <b>TOTAL:</b> 0.00 This is an estimate of charges. An invoice will be sent to you.																								

Field Service Technician	Customer
Name: Rob Wilkens Date: May 19 2015	Name: YVONNE VAN BERKEL Date: May 19 2015

Signature:



# Field Service Report

Work Order No: WO-00058373

Printed: Wed Jun 10 2015

Customer	Instrument	Call
Name: RADBOUD UMC GEERT GROOTEPLEIN ZUID 30 CENTRALE Address: ONTVANGST GOEDEREN NIJMEGEN, NIJMEGEN, , 6525 GA Contact: YVONNE VAN BERKEL (yvonne.vanberkel@radboudumc.nl)	Name: LX100, Top Level, Complete Serial Number: LX10004347302 PC Model:	Type/Code: - HARDWARE Category: Service - Site Visit Contract: SLA Gold

Problem	TSB	Resolution												
RMA 8865 06/09 LX100 Batch complete message when using the first 4 rows: The movement command failed because of a x-axis step loss. (0xCFF01034)	01 21 02 22 03 23 04 24 05 25 06 26 07 27 08 28 09 29 10 30 11 31 12 32 13 33 14 34 15 35 16 36 17 37 18 38 19 39 20 40	Replaced XYP module. Performed XYP test in maintenance software. Run a plate with water to check positions: all ok.												
Optics Alignment Verification		Parts												
DD Temp: deg (C) Laser Time Sheath Pressure: Green: Flow Rate (2 min): ml Red:		<table border="1"> <thead> <tr> <th>Serial No</th> <th>Item No</th> <th>Description</th> <th>Quantity</th> <th>Price</th> <th>Extended Price</th> </tr> </thead> <tbody> <tr> <td></td> <td>LABOR</td> <td>Labor Charges</td> <td>0.50</td> <td></td> <td></td> </tr> </tbody> </table>	Serial No	Item No	Description	Quantity	Price	Extended Price		LABOR	Labor Charges	0.50		
Serial No	Item No	Description	Quantity	Price	Extended Price									
	LABOR	Labor Charges	0.50											
Classification Results		Travel Time Total: 0.0												
CV (Initial/if required): Mean (Initial/if required): CV (Final): Mean (Final):	DD CL1 CL2 RP1	<b>TOTAL:</b> 0.00												
Classification Passed: No Control Passed: No	Fluidics 1 Passed: N/A Fluidics 2 Passed: N/A	This is an estimate of charges. An invoice will be sent to you.												

Field Service Technician	Customer
Name: Rob Wilkens Date: Jun 10 2015	Name: YVONNE VAN BERKEL Date: Jun 10 2015
	Signature:



# Field Service Report

Work Order No: WO-00041181

Printed: Thu Jan 16 2014

Customer		Instrument	Call
Name:	UMC ST RADBOUD	Name: LX100, Top Level, Complete	Type/Code: - HARDWARE
Address:	GEERT GROOTEPLEIN ZUID NR 30 CENTRALE ONTVANGST GOEDEREN NIJMEGEN	Serial Number: LX10004347302	Category: Service - Site Visit
	LABORATORIUM MEDISCHE IMMUNOLOGIE, NIJMEGEN, 6525 GA	PC Model: Dell Optiplex 760	Contract: SLA Gold
Contact:	YVONNE VAN BERKEL (y.vanberkel@labgk.umcn.nl)		

**Problem**  
Failing CAL2 and CON2, actuator error and sample empty error

**Optics Alignment Verification**

DD Temp:	23.958	deg (C)	Laser Time	
Sheath Pressure:	7.610		Green:	1528771
Flow Rate (2 min):	11.0	ml	Red:	6751100

**Classification Results**

	DD	CL1	CL2	RP1
CV (Initial/If required):	NA	NA	NA	NA
Mean (Initial/If required):	NA	NA	NA	NA
CV (Final):	9.71	3.74	3.73	6.98
Mean (Final):	10705.82	3414.08	3525.89	3721.45

Classification Passed: Yes      Fluidics 1 Passed: Yes  
Control Passed: Yes              Fluidics 2 Passed: Yes

**TSB**

01 \* 21  
02 \* 22  
03 \* 23 \*  
04 \* 24 \*  
05 \* 25 \*  
06 \* 26 \*  
07 \* 27  
08 \* 28  
09 29  
10 \* 30  
11 \* 31 \*  
12 \* 32  
13 \* 33  
14 \* 34  
15 35  
16 \* 36  
17 37  
18 \* 38  
19 \* 39  
20 \* 40

**Resolution**

Repair Service to LX100 instrument. Performed 16th January 2014. WO-00041181- UMC St. Radboud - Geert Groteplein Zuid Nr. 30, Centrale Ontvangst Goederen, Nijmegen, Nederland. LX10004347302-A Firmware: 2.3.9 DSP: 3.17.0 Was IS2.3.182 (July 2013 Christine Heylen U/G software) now is xPONENT 3.1.971 Dell Optiplex 760 Service Tag : 5FGT94J. E-mail : G.Visser@labgk.umcn.nl Ms. Gepke Visser Tel:+31 24 361 5358 E-mail : Y.vanBerkel@labgk.umcn.nl E-mail : S.Hendriks@labgk.umcn.nl E-mail : J.Linders@labgk.umcn.nl Problem Description : "Repair Service on LX100 Instrument - long sample needle bent above filter bed microplate, Instrument disconnects on xPONENT 3.1.971 system" Remove damaged Long sample needle. Leave with customer a New long sample needle (62-00001-00-070) NO CHARGE. New sample needle was not running straight through the needle alignment guide particles seen - cleaned. Re-aligned Needle arm linkage to Bimba Cylinder to make more straight. Checked LX100 - Coherent PSU Top, N.C., Blk, Green=-14.99Vdc, Yellow=+15.03Vdc, Orange=+24.08Vdc & Red=+5.488Vdc - measurement ON/OFF LOAD - OK. Use Lxr Maintenance to check connectivity of LX100 & XYP - No disconnects or 30minutes Laser Warmups experienced. Check ALL valves - Tested - OK. \*Please make Sanitise solution from thin domestic household bleach (Sodium Hypochlorite <5%) 20% Volume / 80% fresh DI Water to prevent clogs. - only make enough for one weeks use. Determine Flowrate = 10.6ml @ Sheath Pressure=7.3750psi. Manufacturing (org)=7.4psi adjusted Flowrate = 11.0ml @ Sheath Pressure=7.610psi. DD Temp=23.958 Deg C Red laser power= 8.08 mW Red laser time = 6751100s Green laser power= 13.4 mW (Coherent 215M Type) - replaced NEW 3rd April 2013 Green laser time = 1528771s Split = (previous Calibration) 38.400us -> 37.6us CALs & CONs - Events/S >250 TO 550 in <30s -PASS. Stability seen. Optical Verification:- Lots used for testing. CAL1 (B29568) CAL2 (B32945) CON1 (B32469) CON2 (B32470) Verification (Final) - PASS. PEAK=9990 %CV's: DD=9.71 (Tol<16) CL1=3.74 (Tol<6) CL2=3.73 (Tol<7.5) RP1=6.98 (Tol<10) MEAN: DD=10705.82 CL1=3414.08 CL2=3525.89 RP1=3721.45 47Plex beads are hitting left of centre in regions - OK. Probe height adjusted for Greiner Mylar bed uPlate 2 discs, Checked with Millipore filter bed update -3 discs used to setup probe height for CALibrations/ CONTROLS & Assay use. Checked with AMP - CALs & VERs (CONs) including Fluidics 1 & 2 - PASS. Confirmed CALs & CONs using customer beads using xPONENT 3.1.971 PC - Events/s >250 to 550 in <30s - Passed. Create Jeremy CALs\_CONs test well A1 to D1 to test automation functionality - PASS no error seen. CAL1 (B33156) CAL2 (B33157) CON1 (B32946) CON2 (B32947) Review results- OK. Basic Instruction given to the customer on "how to look after the Luminex". Travel = 0.75hour Labour = 6hours

## Parts

Serial No	Item No	Description	Quantity	Price	Extended Price
	TRAVEL	Travel for On-Site Field Service	17.00	1.00	0.00
	LABOR	Labor Charges	6.00	191.00	0.00
	62-00001-00-070	Assy, Weldment, Long_Short_Sleeve_w/Filter_f/XYP	1.00	184.49	0.00

Travel Time Total: 0.75

TOTAL: 0.00

This is an estimate of charges. An invoice will be sent to you.



## Field Service Report

Work Order No: WO-00041318

Printed: Mon Jan 20 2014

Customer		Instrument		Call	
Name:	UMC ST RADBOUD	Name:	LX100, Top Level, Complete	Type/Code:	- HARDWARE
Address:	GEERT GROOTEPLEIN ZUID NR 30 CENTRALE	Serial Number:	LX10004347302	Category:	Service - Site Visit
	ONTVANGST GOEDEREN NIJMEGEN	PC Model:	Dell Optiplex 760	Contract:	SLA Gold
	LABORATORIUM MEDISCHE IMMUNOLOGIE,				
	NIJMEGEN, , 6525 GA				
Contact:	YVONNE VAN BERKEL (y.vanberkel@labgk.umcn.nl)				

**Problem**  
(01/14 FS disp) Failing CAL2 and CON2, actuator error and sample empty error

Optics Alignment Verification				
DD Temp:	24.175	deg (C)	Laser Time	
Sheath Pressure:	7.610		Green:	1567220
Flow Rate (2 min):	11.0	ml	Red:	6789547

Classification Results				
	DD	CL1	CL2	RP1
CV (Initial/If required):	NA	NA	NA	NA
Mean (Initial/If required):	NA	NA	NA	NA
CV (Final):	10.19	3.54	3.34	6.74
Mean (Final):	10529.49	3395.77	3507.61	3793.71

Classification Passed: Yes  
Control Passed: Yes

Fluidics 1 Passed: Yes  
Fluidics 2 Passed: Yes

TSB	
01 *	21
02 *	22
03 *	23 *
04 *	24 *
05 *	25 *
06 *	26 *
07 *	27
08 *	28
09 *	29
10 *	30
11 *	31 *
12 *	32
13 *	33
14 *	34
15 *	35
16 *	36
17 *	37
18 *	38
19 *	39
20 *	40

**Resolution**  
Repair Service to LX100 Instrument. Performed 17th anuary WO-00041318 (previous visit 16JAN14 - WO-00041181)- UMC St. Radboud - Geert Groteplein Zuid Nr. 30, Centrale Ontvangst Goederen, Nijmegen, Nederland. LX10004347302-A Firmware: 2.3.9 DSP: 3.17.0 Was IS2.3.182 (July 2013 Christine Heylen U/G software) now is xPONENT 3.1.971 Dell Optiplex 760 Service Tag : 5FGT94J. E-mail : Gepke.Visser@labgk.umcn.nl Ms. Gepke Visser Tel:+31 24 361 5358 E-mail : Yvonne.vanBerkel@Radboudumc.nl E-mail : Sylvie.Hendriks@labgk.umcn.nl E-mail : J.Linders@labgk.umcn.nl Problem Description : "Repair Service on LX100 Instrument - CAL2 fail on xPONENT 3.1.971 system" Checked with Rhodemeyne dye - spot on PMT - hitting fine. RP1 Volts = 1000V Checked electrical connections from PMT to Analogue Board - NFF - OK. Optimise RED laser optics - DD side screw to improve Peak shape & CL1/CL2 Stripe. Optimise GREEN laser optics 15mm Lens - Side & 4mm Lens vertical screw to improve cluster shape. Use Lxr Maintenance to check connectivity of LX100 & XYP - No disconnects or 30minutes Laser Warmups experienced. Check ALL valves - Tested - OK. \*Please make Sanitise solution from thin domestic household bleach (Sodium Hypochlorite <5%) 20% Volume / 80% fresh DI Water to prevent clogs. - only make enough for one weeks use. The same also applies for your reagents (xcept 20L sheath box - Check expiry date). Determine Flowrate = 11.2ml @ Sheath Pressure=7.757psi. Manufacturing (org)=7.6psi adjusted Flowrate = 11.0ml @ Sheath Pressure=7.610psi. DD Temp=24.175 Deg C Red laser power= 8.08 mW Red laser time = 6789547s Green laser power= 13.4 mW (Coherent 215M Type) - replaced NEW 3rd April 2013 Green laser time = 1567220s Split = 36.0us CALs & CONs - Events/S >250 TO 550 in <30s -PASS. Stability seen. Optical Verification:- Lots used for testing. CAL1 (B29568) CAL2 (B32945) CON1 (B32469) CON2 (B32470) Verification (Final) - PASS. PEAK=9649 %CV's: DD=10.19 (Tol<16) CL1=3.54 (Tol<6) CL2=3.34 (Tol<7.5) RP1=6.74 (Tol<10) MEAN: DD=10529.49 CL1=3395.77 CL2=3507.61 RP1=3793.71 47Plex beads are hitting left of centre in regions - OK. Probe height adjusted for Greiner Mylar bed uPlate 2 discs, Checked with Millipore filter bed update -3 discs used to setup probe height for CALibrations/ CONTROLS & Assay use. Checked with AMP - CALs & VERs (CONs) including Fluidics 1 & 2 - PASS. Run Twice. Review results-OK. Basic Instruction given to the customer on "how to look after the Luminex". Travel = 1.5hour Labour = 4hoursJe

### Parts

Serial No	Item No	Description	Quantity	Price	Extended Price
	TRAVEL	Travel for On-Site Field Service	55.00	1.00	0.00
	LABOR	Labor Charges	4.00	191.00	0.00



# Luminex® F.S. Report

09:40am - 14:00pm

Incident #: TASK # 215784

**Customer** UMC St. Radboud  
**Name:** Geert Grooteplein Zuid N°30  
**Address:** LM I Laboratorium Medische Immunologie  
M379 03-165, 6525GA Nijmegen  
**Contact:** Ms. Geerke Visser  
+31 24 361 5358

**Instrument**  
☒ LX100 ☐ XYP ☐ SDS ☐ HTS  
**S/N:** LX10004347307-A **Firmware:** 2.3.9  
**DSP:** 3.17.0 **Software:** IS 2.3.132 **PC Model:** Dell Optiplex 760

**Call Type**  
☒ Service ☒ P.M. ☐ Install ☐ Recertification

**Call Category**  
☐ Warranty ☐ P.O. ☒ SLA

☐ Platinum  
☐ Gold +  
☒ Gold  
☐ Silver  
☐ Bronze

## Problem

Description: PM Service to LX100 Instrument

Declog Cuvette - Wipe is dragging a little indicating extra cleaning.  
Please Sanitize instrument with Thin Bleach (2.5% Sodium Hypochlorite)  
20% Vol / 80% Vol fresh DI Water - Make enough for only 1 Week use.  
Probe height adjusted ~ 2mm low adjusted 3 dots #12 location on  
Multi-pore filter bed NPlate. Long waste tubing made to 2nd Container

## Optics Alignment Verification

**DD Temp:** 24.392° (C) **Sheath Pressure:** 7.478 psi  
**Laser Time (IS) Green:** 287144 **Red:** 5509491  
**Flow Rate (2 min.):** 11.0 ml @ Sheath = 7.478 psi

## LOT #'S

**CAL 1** B29568  
**CAL 2** B29570  
**CON 1** B29570  
**CON 2** B29571

## Classification Results

	DD	CL1	CL2	RP1
CV (Initial/if required)	-	-	-	-
Mean (Initial/if required)	-	-	-	-
CV (Final)	9.29	3.49	3.45	7.00
Mean (Final)	10802.78	3424.21	3527.10	3623.54

## Control 1 Results

Region	A1	A2	B1	B2	C1	C2	D1
1	10,033.00	10.40	734.59	4.82	214.97	5.00	1.84
2	10,045.00	10.70	65.85	6.88	68.94	6.56	1.00
3	10,894.00	8.18	22,689.07	4.49	5,457.37	4.87	5.20
4	9,635.00	11.60	2,254.57	4.67	17,972.42	4.73	18.32
5	9,1659.00	11.10	230.02	4.97	5,712.95	4.47	7.29

## Control 2 Results

Region	1	2	3	4
A1	28.75	191.82	1,934.70	16,031.07
A2	22.10	10.02	5.99	5.66

## Resolution

Action Taken: Replace PM Consumables

Declog Cuvette. Determine flowrate = 11.6ml @ Sheath = 8.196 psi  
Red Laser Power = 8.09 mW, Green Laser Power = 13.9 mW  
CAL's & CON's - Quality > 250 to 550 in < 30s - PASS  
Verification (final) - PASS Split = 32.000 psi  
47 Plex beads are hitting left of centre in regions - OK  
Use customers beads & IS 23 - CAL's & CON's - as above - PASS

## Parts

S/N	Description/Part #	Cost
64-50011-00-001	PM Kit (12 months)	
83-10015-00-022	5" Sample Tube	
L100-CAL1	CAL1 (B28587)	
86-10021-00-013	Anti tamperproof label	
Time to Repair: <u>4 1/2 hrs</u>		<b>Labor</b>
Travel (miles/cost):		<b>Travel</b>
		<b>Total Cost</b>

JEREMY WHITE  
Field Service Representative (Print)

Jeremy White  
Field Service Representative

y.v. BERNHARDT  
Customer Signature

22<sup>nd</sup> May 2013  
Date

22-05-13  
Date



# Luminex® F.S. Report

## Customer

Name: UMC St. Radboud  
Geestgroeplein Zuid N° 30  
LJMT M 379, 03-165 Huispost 469  
Address: 6525GA Nijmegen  
Contact: Ms Geepke Visser  
+31 24 361 5358

## Instrument

☒ LX100 ☐ XYP ☐ SDS ☐ HTS  
S/N: LX10004347302A Firmware: 2.3.9  
DSP: 3.17.0 Software: IS 2.3.182 PC Model: Dell Optiplex 760

Incident #: TASK # 21

## Call Type

☒ Service ☐ P.M. ☐ Install ☐ Recertification

## Call Category

☐ Warranty ☐ P.O. ☒ SLA

☐ Platinum  
☐ Gold +  
☒ Gold  
☐ Silver  
☐ Bronze

## Problem

Description: Low bead count / CAL2 failure on LX100 instrument  
Probe height 4mm too low on multipass full bed plate  
- 3 discs used to setup Probe height  
CON2 - Fail on MEAN Values - Low  
Use Customer's beads & IS 2.3 PC - as right - Passed

## Resolution

Action Taken: Declog Con2  
Determine flow rate = 10.8ml @ Head = 7.5psi  
Red laser Power = 8.09mW, Green laser Power = 12.9mW - New 13.6mW  
CAL2 - Checked Spot on PMT - round OK, RFI Volts = 1000 change  
gain Settings responds. coherent Compass 2ISM-15 Head 'old' spw 43935  
replaced NEW. Focal turn + 3  
Optics All Screws. Red Side on cal2 had a ghost stripe.  
Sanitize instrument @ head of 0.1M NaOH leave parked overnight  
CAL's & CON's - Empty's > 250 to 550 in 30s - Pass Final  
Verification (initial) - PASS. CON2 fails. Verification (Final) - Pass  
Parts 47 Plex beads are hitting left of Centre in regions - OK Split = 31-2us

## TSB

01. ☒
02. ☒
03. ☒
04. ☒
05. ☒
06. ☒
07. ☒
08. ☒
09. ☐
10. ☐
11. ☐
12. ☐
13. ☐
14. ☐
15. ☐
16. ☐
17. ☐
18. ☐
19. ☐
20. ☐
21. ☐
22. ☐
23. ☐
24. ☐
25. ☐
26. ☐
27. ☐
28. ☐
29. ☐
30. ☐
31. ☐
32. ☐
33. ☐
34. ☐
35. ☐
36. ☐
37. ☐
38. ☐
39. ☐
40. ☐

## Optics Alignment Verification

DD Temp: 23.070° (C) Sheath Pressure: 7.845psi  
Laser Time (IS) Green: 10491883 Red: 5233163  
Flow Rate (2 min.): 11.0 ml @ Head = 7.845psi

## LOT #'S

CAL 1 B28587  
CAL 2 B28366  
CON 1 B29570  
CON 2 B28823

PEAK = 9798 → 9704

## Classification Results

	DD	CL1	CL2	RP1
CV (Initial/if required)	10.43	3.82	2.92	7.83
Mean (Initial/if required)	10451.02	3468.73	3556.31	3683.24
CV (Final)	10.35	3.64	3.38	6.86
Mean (Final)	10494.90	3427.77	3535.46	3631.08

## Control 1 Results

Region	A1	A2	B1	B2	C1	C2	D1
1	9,652.00	11.49	743.78	5.48	714.72	5.65	1.09
2	9,650.00	11.25	67.79	6.66	68.81	6.57	1.21
3	10,466.00	8.71	22,918.24	4.73	5,418.95	4.92	4.91
4	9,264.00	11.55	2,277.82	4.60	17,998.94	4.41	18.30
5	9,638.00	11.63	234.00	5.79	5,725.92	4.66	7.03

## Control 2 Results

Region	1	2	3	4
A1	28.89	191.82	1,947.72	16,109.27
A2	22.93	10.31	6.66	6.25

S/N	Description/Part #	Cost
90-10001-00-008	Declog Wire.	
11-25090	Align R/Sphere (B28824)	
L100-CON1	CON1 (B29570)	
L100-CON2	CON2 (B28823)	
87-10051-00-013	Coherent 2ISM laser Head.	
L100-CAL1	S/N: LDP.1100353.112811	
L100-CAL2	CAL1 (B28587)	
	CAL2 (B28366)	
Time to Repair: <u>1 1/4 hr</u>		<b>Labor</b>
Travel (miles/cost):		<b>Travel</b>
Travel Time: <u>1 1/4 hr</u>		
		<b>Total Cost</b>

JEREMY WHITE  
Field Service Representative (Print)

Jeremy White  
Field Service Representative

Customer Signature

3/4 April 2013  
Date

4-4-2013  
Date



# Luminex® F.S. Report

## Customer

Name: UMC St. Radboud  
Geert Groenkeplein Zuid N° 30  
Laboratorium Medische Immunologie  
M379.03.165, 65259A Nijmegen  
 Address:  
 Contact: Ms. Geepke Visser

## Instrument

☒ LX100 ☐ XYP ☐ SDS ☐ HTS  
 S/N: LX10004347302-A Firmware: 2.3.9  
 DSP: 3.17.0 Software: TS 2.3.182 PC Model: Dell Optiplex 760

Incident #: TASK #203441

## Call Type

☒ Service ☐ P.M. ☐ Install ☐ Recertification

## Call Category

☐ Warranty ☐ P.O. ☒ SLA

☐ Platinum  
☐ Gold +  
☐ Gold  
☐ Silver  
☒ Bronze

## Problem

Description: Drip from Sample Probe on LX100 instrument  
Test Instrument as is condition - Big drip seen & Water Pistol jet  
fanning down from the Probe 'old' p/p 62-00001-00-169 01-16-11  
replaced 27<sup>th</sup> Mar 2011 5:01 replace with New Sample Valve Retrofit Kit  
CAL's & CON's - delay, DD Peak low - nothing events - Sample Value fails  
drips seen from Coil Assy. Checked All fluidic Paths - B.f. Value tested  
OK. \*Sanitise Solution - Thin Bleach (<5% Sodium chl. ide) 20% Volume

## Resolution

Action Taken: Re-log cuvette - OK. Valve & Switches - OK  
SD Unit CAS Bus cable fitted to SD Unit & LX100 - v2.0.5-B  
Determine flowrate - OK. Friday 12 OCT 12 - Sanitise Instrument for Week-end  
Red Laser Power = 8.09 mW, Green Laser Power = 12.9 mW (checked)  
Replace PM Consumables - Sonicate Syringe Valve clean before  
replacement of New #2 Sample Valve Retrofit Kit. Loop Value moves  
CAL's & CON's - Events/s >250 to 550 in <30s - Pass - Stability seen.  
Verification (Anne) - Pass. 47 Flex beads are hitting left of Centre in regions  
split = 3u4ms. Probe height setup for Millipore full bed plate - Solids.  
 Parts: CAL's & CON's - using Customer's beads & IS23PC - as above - PASSED

## Optics Alignment Verification

DD Temp: 24.826 ° (C) Sheath Pressure: 7.551 psi  
 Laser Time (IS) Green: 9544205 Red: 4270670  
 Flow Rate (2 min.): 11.0 ml @ Sheath = 7.551 psi

## LOT #'S

CAL 1 B27945  
 CAL 2 B26215  
 CON 1 B27452  
 CON 2 B28078

## Classification Results

	DD	CL1	CL2	RP1
CV (Initial/if required)	-	-	-	-
Mean (Initial/if required)	-	-	-	-
CV (Final)	10.88	3.46	2.26	7.79
Mean (Final)	10447.82	3424.38	3502.89	3726.24

## Control 1 Results

Region	A1	A2	B1	B2	C1	C2	D1
1	9,647.00	12.15	734.37	4.16	217.13	4.13	1.86
2	9,634.00	12.34	64.83	6.55	69.52	6.39	1.72
3	10,881.00	9.76	22,706.85	4.10	5,492.18	3.67	4.77
4	9,257.00	13.42	2,255.03	4.27	18,037.41	3.81	13.91
5	9,632.00	13.58	230.14	5.12	5,763.07	4.20	6.16

## Control 2 Results

Region	1	2	3	4
A1	30.50	196.65	1,990.91	16,453.07
A2	21.47	10.22	7.23	6.73

## TSB

01.☒  
 02.☒  
 03.☒  
 04.☒  
 05.☒  
 06.☒  
 07.☒  
 08.☒  
 09.☐  
 10.☒  
 11.☒  
 12.☒  
 13.☒  
 14.☒  
 15.☐  
 16.☒  
 17.☐  
 18.☒  
 19.☒  
 20.☒  
 21.☐  
 22.☐  
 23.☒  
 24.☒  
 25.☒  
 26.☒  
 27.☐  
 28.☐  
 29.☐  
 30.☐  
 31.☒  
 32.☐  
 33.☐  
 34.☐  
 35.☐  
 36.☐  
 37.☐  
 38.☐  
 39.☐  
 40.☐

S/N	Description/Part #	Cost
64-50021-00-001	Sample Valve retrofit kit. 01-26-12 - defective - 12 OCT 12	\$10.00
64-50011-00-001	PM kit (12 month)	
64-50021-00-001	Sample Valve retrofit kit #2 07-06-11	
Time to Repair: <u>10 1/2 hrs</u>		<u>Labor</u>
Travel (miles/cost):		<u>Travel</u>
		<u>Total Cost</u>

Field Service Representative (Print)

Field Service Representative

Customer Signature

Date

Date

# Luminex® F.S. Report

09:00 - 14:45 p-

Incident #: TASK # 193533

Customer UMC St. Radboud.

Instrument

Name: Laboratorium Medische Immunologie ☒ LX100 ☐ XYP ☐ SDS ☐ HTS

Call Type

☒ Service ☒ P.M. ☐ Install ☐ Recertification

Address: Geer Groenplein Zuid 3, 6525GH Nijmegen S/N: LX10004347302-A Firmware: 2.3.9

Contact: Ms. Giepke Visser DSP: 3.17.0 Software: IS 2.3.182 PC Model: Dell optiplex 760 ☐ Warranty ☐ P.O. ☒ SLA

Call Category

☐ Platinum  
☐ Gold +  
☐ Gold  
☐ Silver  
☒ Bronze

## Problem

Description: PM Service to LX100 Instrument

## Resolution

Action Taken: Replace PM Consumables

Probe height checked Millipore folks bed p plate  
Use Customers beads @ IS 2.3 PC-CAL's & CON's  
- as Right - PASS

## TSB

01. ☒
02. ☒
03. ☒
04. ☒
05. ☒
06. ☒
07. ☒
08. ☒
09. ☐
10. ☐
11. ☐
12. ☐
13. ☐
14. ☐
15. ☐
16. ☐
17. ☐
18. ☐
19. ☐
20. ☐
21. ☐
22. ☐
23. ☐
24. ☐
25. ☐
26. ☐
27. ☐
28. ☐
29. ☐
30. ☐
31. ☐
32. ☐
33. ☐
34. ☐
35. ☐
36. ☐
37. ☐
38. ☐
39. ☐
40. ☐

Dealog Curvette. Determine flowrate = 11.0 ml @ 8hect = 7.595 psi  
Red laser Power = 9.09 mW, Green laser Power = 14.7 mW  
CAL's & CON's - Events/s > 250 to 550 in < 30 s - PASS  
However CON1, R2 - B2 (CL1 %CV = 7.21) & C2 (CL2 %CV = 9.45)  
Verification (initial) - PASS. Optimize Red & Green Optics.  
CAL's & CON's - as above - PASS. Verification (FINAL) - PASS  
47 Plex beads are hitting left of Centre in regions. - OK.

Split = 34.400 ns

## Parts

S/N	Description/Part #	Cost
64-50011-00-001	PM Kit (12 month)	
400-CAL2	CAL2 (B26966)	
86-10021-00-013	Anti-Tamper proof label	
Time to Repair: <u>5.34 hrs</u>		<b>Labor</b>
Travel (miles/cost):		<b>Travel</b>
		<b>Total Cost</b>

JEREMY WHITE  
Field Service Representative (Print)

Jeremy White  
Field Service Representative

16 MAY 2012  
Date

Customer Signature

16-5-12  
Date

## Optics Alignment Verification

## LOT #'S

DD Temp: 24.175° (C) Sheath Pressure: 7.595 psi

Laser Time (IS) Green: 8900428 Red: 3626893

Flow Rate (2 min.): 11.0 ml @ 8hect = 7.595 psi

CAL 1 B27148

CAL 2 B26966

CON 1 B27149

CON 2 B27150

PEAK = 9971 → 9307 Classification Results

	DD	CL1	CL2	RP1
CV (Initial/if required)	10.10	3.03	2.26	8.99
Mean (Initial/if required)	10411.92	3333.16	3516.32	3624.72
CV (Final)	10.49	3.61	2.40	7.05
Mean (Final)	10467.10	3263.62	3493.38	3654.35

## Control 1 Results

Region	A1	A2	B1	B2	C1	C2	D1
1	10,035.00	12.16	743.53	4.76	219.69	4.41	1.27
2	9,651.00	12.48	65.61	6.95	70.48	7.25	1.21
3	10,479.00	9.64	23,028.82	4.39	5,566.46	4.46	3.93
4	9,267.00	13.28	2,287.27	5.06	12,188.29	4.46	12.88
5	9,264.00	13.03	231.46	4.92	5,782.48	4.03	5.31

## Control 2 Results

Region	1	2	3	4
A1	29.30	193.28	1,954.86	16,157.81
A2	21.25	9.81	6.63	6.40



# Luminex® F.S. Report 09:30am - 16:00pm

Incident #: TASK # 168625

**Customer**  
Name: UMC ST. RADBOUD  
Geert Grooteplein Zuid Nr 30,  
Address: Centrale Ontvangst Groenen  
Contact: Ms. Gaby Derksen / Ms. Ans Linders

**Instrument**  
☒ LX100 ☐ XYP ☐ SDS ☐ HTS

**Call Type**  
☒ Service ☐ P.M. ☐ Install ☐ Recertification

S/N: LX10004347302-A Firmware: 2.3.9  
DSP: 3.17.0 Software: IS 2.3.182 PC Model: Dell Optiplex 760

**Call Category**  
☐ Warranty ☒ P.O. ☐ SLA

☐ Platinum  
☐ Gold +  
☐ Gold  
☐ Silver  
☐ Bronze

## Problem

Description: CON 1 fails on LX100 Instrument.

No Squirts of liquid exiting Waste tubing on WASH.  
Fuse F7 - OK. Backflush Valve (Black) is Stopped with Corrosion  
dirt. - replaced New Retrofit B.f. Valve (TSB100-026)  
\* Please Sanitize instruments with Thin domestic household bleach  
(Sodium Hypochlorite <5%) 20% Volume / 80% Volume Fresh Dist  
WATER to prevent clogs. Dried Sheath Solts Seen on Syringe Valve indicating  
a Blockage.

## Optics Alignment Verification

DD Temp: 24.175° (C) Sheath Pressure: 7.551 psi  
Laser Time (IS) Green: 7060871 Red: 1387336  
Flow Rate (2 min.): 11.0 ml @ 7.551 psi

## LOT #'S

CAL 1 B19650  
CAL 2 B20429  
CON 1 B19927  
CON 2 B19606

PEAK = 9724.7 → 9710 Classification Results

	DD	CL1	CL2	RP1
CV (Initial/if required)	10.98	6.55	6.30	9.28
Mean (Initial/if required)	10364.60	3568.39	3649.98	3291.45
CV (Final)	9.61	2.96	3.14	7.74
Mean (Final)	10630.22	3526.92	3587.11	3583.09

## Control 1 Results

Region	A1	A2	B1	B2	C1	C2	D1
1	10,025.00	10.90	738.39	4.69	213.69	4.79	2.70
2	9,638.00	11.14	66.75	6.69	68.62	7.10	3.02
3	10,873.00	8.33	23,395.68	3.99	5,530.02	4.25	5.43
4	9,638.00	12.54	2,322.06	4.10	18,041.47	3.97	14.94
5	9,638.00	11.88	232.54	4.49	5,905.03	4.01	7.36

Control 2 Results	Region	1	2	3	4
	A1	30.44	189.36	1,949.22	16,734.78
	A2	24.99	11.51	7.97	7.64

## Resolution

Action Taken: Probe height Setup  
Re-log Corvette for multiple filter plate  
Determine flowrate = 12.0ml @ Sheath Pressure = 8.372 psi  
Red laser Power = 9.08 mW, Green laser Power = 14.3mW  
CAL's & CON's - Events/s >250 to 500 in ~45s.  
Verification (Initial) - Fail on CL1 & CV (Tol <6) &  
RP1 Mean too low (Tol MIN = 3438). Reporter Signal was fluctuating  
hence RP1 Volts = 810 - 844. Optimized Red & Green laser Optics.  
Verification (Final) - Pass CAL's & CON's - Events/s >250 to 550 in <30s.  
47 Plex beads are hitting left of Centre in Regions.  
Parts CAL's & CON's using Customer beads at IS 2.3 PC - as above - Passes

S/N	Description/Part #	Cost
64-50008-00-001	Assy Retrofit Lee (B.f.) Backflush Valve (TSB026)	\$850-
L100-CON1	CON1 (B19927)	\$0-
L100-CAL2	CAL2 (B20429)	\$0-
86-10021-00-013	Anti-Tamper proof labels	
Time to Repair:	6 1/2 hrs	Labor
Travel (miles/cost):	Travel Time: 1 hr	Travel
		Total Cost

JEREMY WHITE  
Field Service Representative (Print)

Jeremy White  
Field Service Representative

[Signature]  
Customer Signature

18 February 2011  
Date  
18 Feb. 2011  
Date



# Luminex® F.S. Report

08:30 am - 17:30 ~

Incident #: Task # 174832

Customer Name: UMC ST. RADBOUD  
GERT GROEPEN BUID, NR 30

Instrument  
☒ LX100 ☐ XYP ☐ SDS ☐ HTS

Call Type  
☒ Service ☒ P.M. ☐ Install ☐ Recertification

Address: 6525 GA Nijmegen

S/N: LX10004347302-A Firmware: 2.3.9

Contact: Ms. Geppke Visser.

DSP: 3.17.0 Software: IS 2.3.182 PC Model: Dell optiplex 760.

Call Category  
☐ Warranty ☐ P.O. ☒ SLA

☐ Platinum  
☐ Gold +  
☐ Gold  
☐ Silver  
☒ Bronze

## Problem

Description: PM Service to LX100 Instrument.

Dried Sheath Salts Seen on Syringe Pump Valve weep hole indicating a clog or Blockage. leave site by bleed at Ah.

Drop seen going to Sample Needle- replace Sample Valve 3 (by TSB100-031)

Please sanitize instrument then domestic household bleach (Sodium Hypochlorite < 5%) 20% Volume / 80% Volume Fresh DI Water - only make enough for one weeks use.

## Resolution

Action Taken: Replace PM Consumables

## TSB

- 01. ☒
- 02. ☒
- 03. ☒
- 04. ☒
- 05. ☒
- 06. ☒
- 07. ☒
- 08. ☒
- 09. ☐
- 10. ☒
- 11. ☒
- 12. ☒
- 13. ☒
- 14. ☒
- 15. ☐
- 16. ☒
- 17. ☐
- 18. ☒
- 19. ☒
- 20. ☒
- 21. ☐
- 22. ☐
- 23. ☒
- 24. ☒
- 25. ☒
- 26. ☒
- 27. ☐
- 28. ☐
- 29. ☐
- 30. ☐
- 31. ☒
- 32. ☒
- 33. ☐
- 34. ☐
- 35. ☐
- 36. ☐
- 37. ☐
- 38. ☐
- 39. ☐
- 40. ☐

Declog Cuvette. Determine flowrate - OK. Split = 34.4 µs

Red laser Power = 9.09 mW, Green laser Power = 14.2 mW

CAI's & CON's - 2 ready/s > 250 to 500 m < 30s. Verification (initial) Pass

CON 1- fault % CV's (C2) = 15.52 & B2 = 9.64. Sanitize Instrument.

Optimize Red laser DD (Side to Side) & C2 dichroic, Green Laser (Side to Side & Vertical split). CAI's & CON's - as above - ALL PASSED.

Verification (Final) - Pass. 47 Peak beads are hitting left of Centre in region CAI's & CON's using Customer's beads - as above - PASS on IS2.38

Parts Basic Instruction given to Customer on how to look after the Luminex

## Optics Alignment Verification

## LOT #'S

DD Temp: 24.392° (C) Sheath Pressure: 7.551 psi

Laser Time (IS) Green: 7483869 Red: 2210334

Flow Rate (2 min.): 11.0 ml @ Sheath = 7.551 psi

CAL 1 B21094

CAL 2 B21338

CON 1 B20770

CON 2 B21339

PEAK = 9858 → 9890

## Classification Results

	DD	CL1	CL2	RP1
CV (Initial/if required)	9.80	3.22	2.65	8.07
Mean (Initial/if required)	10574.53	3505.81	3560.92	3805.26
CV (Final)	9.36	3.26	3.33	7.75
Mean (Final)	10697.07	3525.76	3565.67	3796.44

## Control 1 Results

Region	A1	A2	B1	B2	C1	C2	D1
1	9.642.00	11.51	739.99	4.60	215.79	5.03	0.99
2	9.643.00	10.75	66.98	6.54	69.69	7.24	0.97
3	10.468.00	8.62	23,375.90	4.17	5541.57	4.29	4.34
4	9.264.00	12.60	2,327.51	4.50	18,103.54	4.16	14.68
5	9.126.00	12.06	234.13	4.58	5,932.92	4.04	6.89

## Control 2 Results

Region	1	2	3	4
A1	30.22	189.75	1,849.92	16,326.19
A2	22.03	11.04	8.20	7.52

S/N	Description/Part #	Cost
64-50011-00-001	PM K.t (12month)	
64-50021-00-001	Sample Valve 3 wam Retrofit Kit TSB100-031	\$397.60
L100-CAI2	CAL 2 (B21338)	
L100-CON2	CON 2 (B20501)	
L100-CON1	CON 1 (B20770)	
86-10021-00-013	Anti Tamper-proof Label	
Time to Repair:	8.5 hr	Labor
Travel (miles/cost):	Travel Time: 1 hr	Travel
		Total Cost

JEREMY WHITE  
Field Service Representative (Print)

Jeremy M White  
Field Service Representative

Customer Signature

27 MAY 11  
Date

27-5:11  
Date

# Luminex® F.S. Report

## Customer

Name: UML ST RADBOUD  
Address: NIJMEGEN  
Contact: C. VAN DEN BERG

## Instrument

☒ LX100 ☐ XYP ☐ SDS ☐ HTS  
S/N: LX10004347302 Firmware: 2.3.9  
DSP: 3.17 Software: 152.3 PC Model: GEN

Incident #: 145105

## Call Type

☒ Service ☐ P.M. ☐ Install ☐ Recertification

## Call Category

☐ Warranty ☒ P.O. ☐ SLA

☐ Platinum  
☐ Gold +  
☐ Gold  
☐ Silver  
☐ Bronze

## Problem

Description: RE

NOT PASSING CON1

\* OLD TIME (IS): 527377

## Optics Alignment Verification

DD Temp: 22.8 °(C) Sheath Pressure: 8.1  
Laser Time (IS) Green: 5273535 Red: \* 0  
Flow Rate (2 min.): 11.0 ml

## LOT #'S

CAL 1 B13023  
CAL 2 B12908  
CON 1 A6582  
CON 2 A6935

## Classification Results

	DD	CL1	CL2	RP1
CV (Initial/if required)	<u>9.60</u>	<u>4.23</u>	<u>4.78</u>	<u>7.76</u>
Mean (Initial/if required)	<u>10741</u>	<u>3546</u>	<u>3599</u>	<u>3656</u>
CV (Final)	<u>9.51</u>	<u>4.85</u>	<u>5.32</u>	<u>7.90</u>
Mean (Final)	<u>10574</u>	<u>3578</u>	<u>3602</u>	<u>3685</u>

## Control 1 Results

Region	A1	A2	B1	B2	C1	C2	D1
1	<u>9645</u>	<u>11.39</u>	<u>659</u>	<u>5.02</u>	<u>212</u>	<u>4.97</u>	<u>1.41</u>
2	<u>9645</u>	<u>11.32</u>	<u>61.51</u>	<u>6.78</u>	<u>68.31</u>	<u>6.19</u>	<u>0.93</u>
3	<u>10454</u>	<u>9.36</u>	<u>22016</u>	<u>4.27</u>	<u>5670</u>	<u>4.49</u>	<u>7.32</u>
4	<u>9625</u>	<u>12.72</u>	<u>2329</u>	<u>4.49</u>	<u>18487</u>	<u>4.77</u>	<u>10.55</u>
5	<u>9644</u>	<u>11.41</u>	<u>203</u>	<u>4.91</u>	<u>6022</u>	<u>4.23</u>	<u>6.55</u>

## Control 2 Results

Region	1	2	3	4
A1	<u>30.79</u>	<u>193</u>	<u>1971</u>	<u>16587</u>
A2	<u>21.67</u>	<u>10.31</u>	<u>7.67</u>	<u>7.29</u>

## Resolution

Action Taken: \_\_\_\_\_

TESTED INSTRUMENT, PERFORMED

A/D AUTO OFFSET AS SOME CHANNELS WERE "0"

PERFORMED CALS / VERIFICATION / CONS:

ALL VALUE'S ARE WITHIN SPEC.

## TSB

01.  
02.  
03.  
04.  
05.  
06.  
07.  
08.  
09.  
10.  
11.  
12.  
13.  
14.  
15.  
16.  
17.  
18.  
19.  
20.  
21.  
22.  
23.  
24.  
25.  
26.  
27.  
28.  
29.  
30.  
31.  
32.  
33.  
34.  
35.  
36.  
37.  
38.  
39.  
40.

## Parts

S/N	Description/Part #	Cost
Time to Repair: <u>2 HRS.</u>	<u>Labor</u>	
Travel (miles/cost): <u>\$125</u>	Travel Time: <u>4 HRS</u>	<u>Travel</u>
	<u>Total Cost</u>	

Kris de Boer  
Field Service Representative (Print)

[Signature]  
Field Service Representative

06-Jan-2010  
Date

[Signature]  
Customer Signature

6-1-2010  
Date

Yellow-F.S. Manager

Pink-F.S. Engineer



## Pink-F 9 5



# Luminex® F.S. Report

**Customer**  
Name: UMC St Radboud

Address: Geert Grooteplein Zuid 30

Contact: Nijmegen - Nederland

## Instrument

☒ LX100 ☐ XYP ☐ SDS ☐ HTS

S/N: 1X1000434732

Firmware: 2.3.9

DSP: 3.1.0 Software: IS2.3

PC Model: X-model

Incident #: 11/17/09

## Call Type

☒ Service ☐ P.M. ☐ Install ☐ Recertification

## Call Category

☐ Warranty ☒ P.O. ☐ SLA

☐ Platinum  
☐ Gold +  
☐ Gold  
☐ Silver  
☒ Bronze

## Problem

Description:

NO PASS control 2

Perform in order user a PM-  
maintenance

See Agreement NO SLA 2296 / Ending date 22-3-2010

## Resolution

Action Taken:

Perform PM maintenance  
Perform Global check and alignment  
Global Laser optics

During Final test with IS 2.3 NO PASS  
control 2

Perform Replaced Red Laser, Alignment  
Red Laser optics  
can't finished it, changing the lab 17:30

## Parts

S/N	Description/Part #	Cost
64-50001-00-00	PM-Kit	
69-10000-00-001	Red Laser / 9020	407.20
Time to Repair: 7 (PM: 4, Laser: 2, Pre: 1)		Labor 450.-
Travel (miles/cost):		Travel
Travel Time: 4		

Total Cost: 857.20

Udo H. W. W. W.  
Field Service Representative (Print)

Shamir  
Field Service Representative

5 Jan 2010  
Date

Customer Signature

Date 5 Jan 2010

Yellow-F.S. Manager

Pink-F.S. Engineer

## Optics Alignment Verification

DD Temp: 24.2°C Sheath Pressure: 0.2  
Laser Time (IS) Green: 5254699 Red: 054699  
Flow Rate (2 min.): 11 ml

## LOT #'S

CAL 1 A 7117  
CAL 2 A 6894  
CON 1 B 13271  
CON 2 B 13092

## Classification Results

	DD	CL1	CL2	RP1
CV (Initial/if required)	<u>0.9</u>	<u>3.4</u>	<u>3.7</u>	<u>0.6</u>
Mean (Initial/if required)	<u>10012.7</u>	<u>3553.5</u>	<u>3640.7</u>	<u>3452.4</u>
CV (Final)	<u>9.6</u>	<u>3.4</u>	<u>3.7</u>	<u>0.6</u>
Mean (Final)	<u>10460.9</u>	<u>3555.0</u>	<u>3692.6</u>	<u>3563.3</u>

## Control 1 Results

Region	A1	A2	B1	B2	C1	C2	D1
1							
2							
3							
4							
5							

## Control 2 Results

Region	1	2	3	4
A1	<u>32.0</u>	<u>190.7</u>	<u>1.916.9</u>	<u>16.294.9</u>
A2	<u>22.60</u>	<u>10.75</u>	<u>2.21</u>	<u>6.411</u>





# Luminex® F.S. Report

## Customer

Name: Umc St Radboard 2ndokust  
 Address: Green Green place 30  
 Contact: Hyndgen

## Instrument

Model: XLX100 ☐ XYP ☐ SDS ☐ HTS  
 S/N: LX100043/732 Firmware: 2.3.9  
 DSP: 317-0 Software: 1523 PC Model: Dell 760

Incident #: 150606

## Call Type

☒ Service ☐ P.M. ☐ Install ☐ Recertification

## Call Category

☐ Warranty ☐ P.O. ☐ SLA

☐ Platinum  
☐ Gold +  
☐ Gold  
☐ Silver  
☒ Bronze

## Problem

Description: No events/second during calibration Run with user probe and 152.3 software, clog in probe probe was not clean

## Resolution

Action Taken: Perform Run calibration with user software and probe. Re clean and check the probe Run with several calibrations and controls, Run Verification all pass within spec Run with clean wing/user probe and 152.3, all pass

## TSB

01.  
02.  
03.  
04.  
05.  
06.  
07.  
08.  
09.  
10.  
11.  
12.  
13.  
14.  
15.  
16.  
17.  
18.  
19.  
20.  
21.  
22.  
23.  
24.  
25.  
26.  
27.  
28.  
29.  
30.  
31.  
32.  
33.  
34.  
35.  
36.  
37.  
38.  
39.  
40.

## Optics Alignment Verification

DD Temp: 23.9 °C Sheath Pressure: 0.2  
 Laser Time (IS) Green: 570246 Red: 420911  
 Flow Rate (2 min.): 11 ml

## LOT #'S

CAL 1 B14 605  
 CAL 2 D14 605  
 CON 1 B14  
 CON 2 B14

## Classification Results

	DD	CL1	CL2	RP1
CV (Initial/if required)	<u>9.1</u>	<u>4.0</u>	<u>4.9</u>	<u>7.9</u>
Mean (Initial/if required)	<u>10009.1</u>	<u>3742.1</u>	<u>3670.0</u>	<u>3551.1</u>
CV (Final)				
Mean (Final)				

## Control 1 Results

Region	A1	A2	B1	B2	C1	C2	D1
1	<u>10.053</u>	<u>10.466</u>	<u>1.3</u>	<u>5.3</u>	<u>200.92</u>	<u>5.5</u>	<u>0.9</u>
2	<u>10.075</u>	<u>10.662</u>	<u>9</u>	<u>6.0</u>	<u>67.00</u>	<u>6.7</u>	<u>0.9</u>
3	<u>10.005</u>	<u>10.522</u>	<u>33.0</u>	<u>4.5</u>	<u>5.619</u>	<u>4.9</u>	<u>7.6</u>
4	<u>9.646</u>	<u>10.023</u>	<u>359.0</u>	<u>4.9</u>	<u>10.232</u>	<u>4.9</u>	<u>10.2</u>
5	<u>10.031</u>	<u>10.120</u>	<u>7.2</u>	<u>5.4</u>	<u>5.947</u>	<u>4.0</u>	<u>7.2</u>

## Control 2 Results

Region	1	2	3	4
A1	<u>30.4</u>	<u>195.0</u>	<u>1965.85</u>	<u>16.644.2</u>
A2	<u>2.110</u>	<u>10.0</u>	<u>7.11</u>	<u>6.5</u>

## Parts

S/N	Description/Part #	Cost
Time to Repair: <u>4</u>		Labor
Travel (miles/cost):	Travel Time: <u>3</u>	Travel
Total Cost		

Herbert W. Wynn  
 Field Service Representative (Print)

Field Service Representative

Customer Signature

Date

Date

13-March 2010

13-4-2010







# Luminex® F.S. Report

A434

Incident #: 108578

## Customer

Name: UMC ST RADBOUW

Address: NIJMEGEN

Contact: DR. VAN DEN BERG

## Instrument

☒ LX100 ☐ XYP ☐ SDS ☐ HTS

S/N: LX10004347302 Firmware: 2.5.9

DSP: 3.17 Software: 2.3 PC Model: RETAIL

## Call Type

☐ Service ☐ P.M. ☐ Install ☒ Recertification

## Call Category

☐ Warranty ☒ P.O. ☐ SLA

- ☐ Platinum  
☐ Gold +  
☐ Gold  
☐ Silver  
☐ Bronze

## Problem

Description: RECERT REQUESTED

## Resolution

Action Taken: REPLACED Q-DISCONNECT COUPLING + LEFT EXTRA AS SPARE AT CUSTOMER REQUEST

ALIGNED GREEN LASER/CHANGED SPLIT 24.045  
PERFORMED CALS/VERIFICATION/CONS: 33.645  
ALL VALUES ARE WITHIN SPEC.

## TSB

01. ☐
02. ☐
03. ☐
04. ☐
05. ☐
06. ☐
07. ☐
08. ☐
09. ☐
10. ☐
11. ☐
12. ☐
13. ☐
14. ☐
15. ☐
16. ☒
17. ☐
18. ☐
19. ☐
20. ☐
21. ☐
22. ☐
23. ☐
24. ☐
25. ☐
26. ☐
27. ☐
28. ☐
29. ☐
30. ☐
31. ☐
32. ☐
33. ☐
34. ☐
35. ☐
36. ☐
37. ☐
38. ☐
39. ☐
40. ☐

## Optics Alignment Verification

DD Temp: 24.6 °(C) Sheath Pressure: 7.6  
Laser Time (IS) Green: 3395442 Red: 3395442  
Flow Rate (2 min.): 11.0 ml

## LOT #'S

CAL 1 K6020  
CAL 2 A5991  
CON 1 A5922  
CON 2 A5923

## Classification Results

	DD	CL1	CL2	RP1
CV (Initial/if required)	8.73	3.91	4.05	8.32
Mean (Initial/if required)	10588	3778	3770	3397
CV (Final)	8.73	4.36	4.56	8.34
Mean (Final)	10675	3938	3502	3417

## Control 1 Results

Region	A1	A2	B1	B2	C1	C2	D1
1	10431	9.04	714.34	5.19	145.70	5.49	2.49
2	10072	9.24	639.2	6.42	165.54	7.10	2.23
3	10883	7.70	7240.4	4.14	529.3	4.89	8.11
4	9247	10.91	2333	3.95	1785.2	3.97	22.56
5	9665	10.79	222.38	4.97	575.8	4.68	10.41

## Control 2 Results

Region	1	2	3	4
A1	29.26	179.11	109.8	16.258
A2	22.59	10.54	7.53	7.97

## Parts

S/N	Description/Part #	Cost
83-10071-00-026	Q-DISC TUBE END BLUE RX	
83-10071-00-027	" GREEN IX	
83-10071-00-028	" ORANGE IX	
Time to Repair: 2		Labor
Travel (miles/cost):		Travel
		Total Cost

Kris de Boer  
Field Service Representative (Print)

Field Service Representative

13 MAY-2008  
Date

Customer Signature

13-5-08  
Pink-F.S. Engineer

