



# InSight DB Quick User Guide

#### **Out of Hours Telephone Support**

Tel: 01204 695 045

Mon-Fri 5pm-8pm Weekends & Bank Holidays 9am-1pm (Excluding Christmas Day, Boxing Day & New Years Day)

**QUANTUM VET DIAGNOSTICS** 



# Contents

## Page No

- 3. Quality Control
- 3. Preparing the QC material
- 4. Login in to the system
- 4. Running a QC sample
- 6. Running a Sample
- Running an Emergency (STAT) sample
- 11. Maintenance
- 15. Maintenance Schedule
- 16. Reagent positioning
- 17. List of common result errors and actions



# **Preparing the QC reagent**

- 1. Remove vial from the refrigerator and allow to warm at room temperature for 5 minutes
- 2. Carefully open and remove the bung from a vial of serum and a vial of serum diluent.



While holding the serum vial steady on the bench,

carefully pour all the diluent into the serum vial. Do not shake excess diluent out of the diluent vial, as this has been accounted for in the dispense.

- 4. Close the serum vial, swirl gently -DO NOT shake. Let the vial stand on bench for 20 minutes then swirl again and gently invert 10 times.
- 5. The control is now reconstituted and ready to be analysed or frozen for prolonged storage.

#### QC Storage:

Store at 2-8°C before and after reconstitution. Reconstituted control may be stored at -20°C. Using a clean pipette dispense the remaining QC material into 4 separate serum tubes, LABELLED WITH DATE AND LOT NUMBER, and freeze for later use.

Thaw frozen controls quickly using warm water (37°C), invert gently after thawing. QC Stability:

Open vial reconstituted stability is up to 10 days if stored at 2-8°C, or 2-3 weeks if stored at - 20°C once reconstituted.

Frozen controls must be used within 8 hours of thawing.



## Login to System

#### Windows

- Username: Quantum
- Password: Quantum

### Analyser operating system

Login ID: Admin

Password: 123

## Running a QC sample

CUSTOMER		SCHEDU	ILE	Quantum Vet Diagnostic
PARAMETER	Lab ID Check date F QC 01/11/2018 •	Patient ID Sample ID Position	Style Animal Type	Cuvette LIS Dilute
QC.	Sample Work list	Concentration Middle	3 463 SN	QC Lot
SCHEDULE	T4 GLUC CREA CHOL	CK ALT PHOS TBil	AST UREA	4 Next ID
REPORT	TP         AMY           CA         BILE	5     GGT     ALP       UCREA     FRUC	ALB RTbil	Save & Modify
STATISTICS	PHB UPRO			
MAINTENANCE				Сору
				Delete
EXIT				Reagent Check
VERSION Logs		Administrator	Operator:Admin	01/11/2018 PM 01:03:53

- 1. Click on Schedule
- 2. Click on the QC tab
- 3. Select appropriate QC level Woodley Mid level QC is <Middle>
- 4. Select appropriate QC Lot
- 5. Select desired parameters



CUSTOMER	SCHEDULE	Quantum Vet Diagnostics
PARAMETER	Lab ID Check date Patient ID Sample ID Position Style Animal Type Cuvette QC 01/11/2018  Sample Work list Calibration QC 1	
QC.	Concentration Middle  QC Lot 463SN	New worklist
SCHEDULE	T4     GLUC     CK     ALT     AST       CREA     CHOL     PHOS     TBil     UREA	
REPORT	TP         AMY         GGT         ALP         ALB           CA         BILE         UCREA         FRUC         RTbil	Save & Modify
STATISTICS	PHB UPRO	
MAINTENANCE		
		Delete
EXIT		2 Reagent Check
VERSION Logs	Administrator Operator:Admin 01/11/2018 PM	01:06:05

- 1. Place QC material into sampel cup and position on sample tray, ensure sample position in tray matches sample position on screen.
- 2. Click Reagent check

CUSTOMER		SCHEDULE	Quartum Vet Disgnostics
	Reagents volume check dialog		
PARAMETER	© R1 Position C R2 Posi	tion Reagent Check	Start Return
	No. Items Position Volume emain volu	mTest Numbe Test number Prompt	
QC.	1 Diluent 1 12.1	40	
	2 GLUC 9 200 13.1	65 1	
	3 CK 21 120 14.1	117 1	
SCHEDULE	4 ALT 15 150 13.2	87 1	2 12 12 10 0 0 5 7 x
	5 AST 19 150 11.9	79 1	YAZ - Ros 4
	6 CREA 11 100 12.6	126 1	YNL 3
REPORT	7 CHOL 8 200 13.0	65 1 18	UREA 2
	8 PHOS 17 140 10.3	73 1	Pl Position TP 1
	9 TBil 6 200 12.7	63 1	SV Control Control
STATISTICS	10 UREA 3 140 10.6	75 1 20 1	SV R2 Position 40
STATISTICS	11 TP 2 200 11.8	59 1 21	Insufficient 39
	12 AMY 14 200 14.6	72 1	
	13 GGT 23 200 14.3	71 1 22	199
MAINTENANCE	14 ALP 13 200 11.8	58 1 23	7 <sup>1</sup> N 37
	15 ALB 7 200 12.6	63 1	36
	16 CA 5 200 11.8	59 1	25 35
RUN MONITOR	17 T4 24 180 4.5	25 1	26
			27 00 0 00 33
			20 29 30 31 32
EXIT			
	Lamp is stabilizing	T:37.0 P:59.1	
VERSION Logs	19:36 minutes	Administrator Operator:	Admin 01/11/2018 PM 01:06:59

- 1. Run reagent check if reagents have been changed or topped up
- 2. OR Click start.



#### Running a patient sample

#### Ensure all caps removed from reagent bottles



- 1. If not already displaying, click on the sample tab.
- 2. Input patient unique identifier into Patient ID field.
- 3. Ensure patient sample is in the correct cup position.
- 4. Sample style will automatically default to cup.
- 5. Choose correct animal species from the drop-down box.





- 1. Select appropriate tests required, this can be either from profiles
- 2. Or individual test parameters. In the case of a mistake clicking the field again will remove highlighted tests.

	0	. U				
CUSTOMER	_		SCHEDU	LE		
PARAMETER	Lab ID         Check date           35         24/09/2018         -	Patient ID 123456	Sample ID Cup	Style Animal Type	Cuvette	
	Sample Work list	Calibration	ac.			New worklist
QC.	T4 24[25]	AMY 14	ALB 7	UREA 3[4]	CA 5	
	тві б	CHOL 8	9[10]	TP 2	ALP 13	Next ID
SCHEDULE	FRUC 28	ALT 15[16]	PHOS 17[18]	AST 19[20]	CK 21[22]	
	GGT 23	BILE 26[27]	CREA 11[12]			
REPORT						Save & Modify
STATISTICS						Сору
MAINTENANCE						
RUN MONITOR	1					Reagent Check
	(GHP					
EXIT						Sample scan
VERSION Logs			Administrator	Operator:Admin	24/09/2018 PM	04:30:51

- 1. Once all tests are input click Save and Modify
- 2. Click next ID to input additional tests

CUSTOMER					S	CHED	ULE				
PARAMETER	Lab ID Che 36 24/09/2 Sample	eck date 2018 - Work list	Pa	ntient ID 2	Sample ID	Cup 2 -	Style cup	Animal Ty Dog	pe Cuvet	LIS	
QC.	T4	24[25]	AMY	14	ALB	7	UREA	3[4]	CA	6	New worklist
SCHEDULE	TBil	6 28	CHOL	8 15[16]	GLUC PHOS	9[10] 17[18]	TP AST	2 19[20]	ALP CK	13 2 21[22]	Next ID
REPORT	GGT	23	BILE	26[27]	CREA	11[12]				, C	Save & Modify
STATISTICS											Сору
MAINTENANCE											
RUN MONITOR											Reagent Chec
EXIT	GHP	_									Sample scan
VERSION Logs					Adminis	trator	Oper	rator:Admin		24/09/2018 PN	04:32:03



				(							
CUSTOMER						SCHED	ULE				Quantum Mer Diagnost
	Lab ID	Check da	.e	Patient	ID Samp	le ID Cup	Styl	e Animal Typ	e Cuvette	LIS	Dilute
PARAMETER	San	Wor	k list	Calibration	of oc						
QC.	Sa	ample ID. Cup	Style	Animal Type	Patient ID	QC Lot	1	2 3	4 5	6	New worklist
SCHEDULE	2	7 2	cup	Dog	3445		PHOS			=	
											Cours & Manufiér
REPORT											Save & Modify
STATISTICS											Сору
MAINTENANCE											Delete
RUN MONITOR											Reagent Check
EXIT	•	m								,	Sample scan
VERSION Logs					Adr	ninistrator	0	perator:Admin	21	8/09/2018 PN	A 03:45:06
🗿 ⋵ 🚞	0.	<u> </u>							E	N - P @	.atl (+) 15:45 28/09/2018

1. Click the worklist tab to see the completed worklist

- 1. Double click the individual patient line to enter additional patient information
- 2. ie name...

CUSTOMER	SCHEDULE	Ousnburn Viv Disgreatio
PARAMETER	Lab ID Check date Patient ID Sample ID Cup Style Animal Type Cuvette LS 6 28/09/2018  12334  6  1  Cup  Dog  30  LS	Dilute
QC.	1 Sample ID Cup Style Animal Type Patient ID QC Lot 1 2 3 4 5 6	New worklist
SCHEDULE	2 Sample ID = 6 Patient information input column Patient ID 12334 Sample ID 6	
REPORT	Age Collect date 28/09/2018 -	Save & Modify
STATISTICS	Remark	Сору
MAINTENANCE	Save	Delete
RUN MONITOR		Reagent Check
EXIT	e,	Sample scan
VERSION Logs	Administrator Operator:Admin 28/09/2018 PM	03:46:10
💿 逡 📜	1 D. 🤗 🚯 - El 🖉 P. M. R.	all 15:46 28/09/2018

3. Remarks eg. Haemolysed sample



- 1. Click on reagent check to make analyser recheck remaining reagent volumes for the selected tests, useful if reagent bottles have been changed
- 2. OR click Start to begin analysis of samples

CUSTOMER	SCHEDU	LE
	Reagents volume check dialog	And Annual Terms Toronto
PARAMETER	© R1 Position C R2 Position 1 Reage	nt Check Start Return
	No. Items Position Volume emain volun est Numberest numbe Prompt	
QC.	1 Diluent 1 11.0 36	
	2 TP 2 200 10.8 54 1	
	3 CHOL 8 200 13.8 69 1	
SCHEDULE	4 ALP 13 200 1.9 9 1	
	5 GLUC 9 200 14.1 70 2	
	6 TBil 6 300 5.1 17 1	
	7 AMY 14 200 2.0 9 1	A A A A A A A A A A A A A A A A A A A
REPORT	8 ALB 7 240 10.0 41 1	18 SOAG R1 Position UREA 2
	9 UREA 3 200 10.3 51 1	
	10 CA 5 200 14.4 71 1	20 R2 Position 40
STATISTICS	11 ALT 15 150 10.8 71 2	
	12 PHOS 17 140 1.7 11 1	21 Insufficient 39
	13 CREA 11 100 13.5 134 1	22 38
MAINTENANCE		23
		- 24 36
		- 25 35
		- 28 34
RONMONITOR		27 28 20 24 32 33
		-
EXIT		- ·
	T:37.0 P:55.2	
VERSION Logs	Administrator	Operator:Admin 24/09/2018 PM 04:32:42

Wait for all tests to complete and

- 1. All tests finished message will appear, click OK
- 2. Click Return when analyser has finished cleaning the cuvettes.







#### Maintenance

To ensure reliability, good performance and service life of the system, regular maintenance is required.

#### Method and instruction for operating and maintaining

1) Perform Initialisation after power on.

2) Check and make sure the pump pipe is at the bottom of the DI water container, and can

pump enough water for analysis. Empty waste and ensure waste pipe is inside the waste

container

3) return reagent carousel to fridge after shutdown.

4) Check whether the probe is blocked or not periodically by clicking Maintenance→ Motion

detection.



AMETER			
oc.		Daily Maintenance	Service maintenance
		Ready to test	Parameters setting
HEDULE	Initialization	Water fill	Instrument Settings
EPORT		Cuvettes cleaning	Motion detection
FISTICS	Lamp Control	Cuvette Abs check	A/D value detection
ITENANCE			Temperature pressure
MONITOR			

Then you can see the following interface:

Function testing dialog		
Valve Check	Pump and syringe check column	Sensor check
Internal probe wash Trough valve	Cleanout pump Pumpback water Mixer motor	Waste Distilled water
CRU wash		
Syringe	Lamp Control	C Off
Scan Barcode		
Start	Stop	Return

Please click Reagent valve, Needle valve, Water valve respectively, if no water comes out from Reagent/ sample needle, insert fine wire to remove clog.

8)If you find that wash unit does not drain the cuvettes completely or no water is injected in, please contact support.

9) A flaw or stain on the light-pass surface of the cuvettes will influence the measurement of absorbency, please replace it with a new one.

10) Run QC material regularly to ensure system is working in specification.

11) Do not switch the instrument power on and off frequently, it should cause damage to the power module.

12) Stabilized voltage supply should be used when the net voltage is not steady or on the low side.

14) Cap the reagent bottles in the disk when the instrument is in the idle status and uncap it

before test.

15) Check the electrical valves under the menu of "Motion Detection" of "Maintenance" regularly.

Unction testing dialog Valve Check	Pump and syringe check column	Sensor check
Internal probe wash	Cleanout pump Pumpback water	Waste
CRU wash	Lamp Control	Distilled water
Syringe Scan Barcode	C On	○ Off
Start	Stop	Return

Please click Reagent valve, Needle valve, Water valve respectively, if the sound "pa" can be

heard, then the valves are in good condition; otherwise, please contact support.

16) Click "Mixer motor" to check if mix needle is rotating, otherwise contact support.

17) Do not press "SPACE" and "Enter" on computer keyboard during testing; otherwise, test will stop immediately.



#### Weekly Maintenance

Cuvette clean cycle

- 1. Access maintenance options from main menu
- 2. Select Cuvette & Probe Cleaning

CUSTOMER		MAINTENANCE		
PARAMETER				
QC.			Service mainter	ance
SCHEDULE		Ready to test	Parameters se	ting
REPORT	Initialization	Water fill	Instrument Sett	ings
STATISTICS		Cuvettes & Probe cleaning	Motion detect	ion
MAINTENANCE	Larry Control	Cuvette Abs check	A/D value dete	e
RUN MONITOR				
EXIT				
VERSION Logs		Administrator	Operator:Admin	08/10/2020 AM 10:44:40

- 3. Ensure Volume is set to 250ul and Soaking time is set to 6 mins
- 4. Place full bottle of Cleaning solution in position 40.
- 5. Click on Washing.
- 6. The analyser will now begin to fill each reaction cuvette with 250ul of cleaning solution, this will remain in the cuvettes for approximately 6 mins, after this the analyser will empty and rinse the cuvettes. The full process takes approximately 20mins.
- 7. At the end of the process the analyser is ready to test samples without any further preparation.

CUSTOMER	MAINTENANCE
PARAMETER	
QC.	Coverties webling dulog
SCHEDULE	Washing all be covertes Washing all the covertes washing all the covertes the cover
REPORT	Volume Detergent postion Scaling time Washing
STATISTICS	20     (200 350)ul     40     0     minutes     dion       Watching times     5     Detropert Pos     40     Clear     action
MAINTENANCE	Return Plane p
RUN MONITOR	
EXIT	
VERSION Logs	Administrator Operator Admin 08/10/2029 AM 10.47.08



## Tubing decontamination – Monthly maintenance

To protect the water supply lines from the build-up of bacterial contamination they should be decontaminated monthly:

1. Empty the water supply tank and leave a small amount of 1:1 dilution of weak bleach and water in the bottom, swirl gently to coat inside of tank with bleach.

2. Prepare a separate container with 1I of a 1:1 dilution of Weak Bleach and water in it. Put the pickup/ transfer tubing from the water supply tank into the tank containing the weak bleach solution.

3. In the Maintenance screen, select Ready to Test:

CUSTOMER		MAINTENANCE		
PARAMETER				
QC.		Daily Maintenance	Service maintenance	
SCHEDULE		Ready to test	Parameters setting	
REPORT	Initialization	Water fill	Instrument Settings	
STATISTICS		Cuvettes & Probe cleaning	A/D value detection	
MAINTENANCE	Lamp Contro	Cuvette Abs check	Temperature pressure	
RUN MONITOR				
EXIT				E
VERSION Logs	Quantum Vet Diagnostics Lab Insig	nt DB Administrator	Operator:Technician	07/09/2020 PM 02:25:58
Type here to	search O 🗮	😑 📻 💼 🕘 🗲 🖻	(1)	∧ 🛥 📾 🧖 ⊄× 14:25

Repeat three times to distribute bleach throughout the analyser, leave to soak for 15 minutes

4. Thoroughly rinse the original water tank with water, then with deionised water. Refill with deionised water then put the pickup tubing in

5. Run Ready to Test 5 times to ensure all the bleach is removed from the system



# DB Control & Maintenance Log

MONTH:....

REVIEWED BY:	
DATE:	

## **Quality Control**

Weekly Procedures	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5
QC tested by:					

NOTE: Process a QC at least once a week, compare your results with results printed on the WML control data sheet.

In the event of a QC failure 1. Reprocess the sample 2. If still out of limits, repeat with a fresh QC 3. Inform your Woodley Sales Representative or Woodley Equipment Company Technical Support on 01204 695045 and press option 1.

#### Maintenance

Daily procedures	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
												Mor	ning [	Duties																	
Install refrigerated reagents																															
Replenish system water																															
Empty liquid waste																															
Run Initialisation/ Ready to Test																															
Evening Duties																															
Remove reagents to fridge																															
Exit Software/ Water Fill																															
Switch off analyser /PC																															
Remove condensation																															

Weekly Procedures	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5
Clean cuvettes (quick user guide)					
Check Cuvettes					

Monthly Procedure	
Tubing decontamination (see quick user guide)	

This maintenance log is not intended to indicate when a procedure should be undertaken; it is a record of when it has been undertaken. To confirm that a procedure has been completed please initial the appropriate box. If you require assistance with any of the above procedures please contact your Woodley Equipment Company Sales Representative or Woodley Equipment Company Technical Support on 01204 669033 and press option 1



# Replenishing the reagents.

- Reagent bottles can be changed anytime between runs whenever the system is idol.
- Take care that the same lot number or reagents is in use or there may need to be a factor change
- If a new bottle of reagents is installed always run <Reagent Check> before beginning the batch start, this will allow the system to update the inventory.

Position	Reagent	
1	Diluent – DI water	
2	Total Protein	
3	Urea R1	
4	Urea R2	
5	Calcium	
6	Total Bilirubin	
7	Albumin	
8	Cholesterol	
9	Glucose R1	
10	Glucose R2	
11	Creatinine R1	
12	Creatinine R2	
13	ALP	
14	Amylase	
15	ALT R1	
16	ALT R2	
17	Phos R1	
18	Phos R2	
19	AST R1	
20	AST R2	
21	CK R1	
22	CK R2	
23	GGT	
24	T4 R1	
25	T4 R2	
26	Bile Acids R1	
27	Bile Acids R2	
28	Fructosamine	
29		
30		
31		
32		
33	Urine Creatinine R1	
34	Urine Creatinine R2	
35	Urine Protein	
36		
37		
38		
39		
40	Wash solution	



# Result flags and meanings

Result Flag	Description	Meaning and Action
R1L	Insufficient R1 reagent	Sample probe has detected reagent R1 shortage. Check and replenish R1 reagent
R2L	Insufficient R2 reagent	Sample probe has detected reagent R2 shortage Check and replenish R2 reagent
SL	Insufficient sample	Sample probe has detected sample shortage. Check and replenish the sample.
RR	Retest results	Analyser will automatically retest this result- This happens if the result has triggered pre-set limits for a re-test.
RC	Results from retest	This is the result of a retested parameter
AD	Results from a diluted sample	Initial result triggered a dilution and retesting. This is the final multiplied retested result, ie the result that should be reported
RR-R1L	Retest results but insufficient R1 reagent	Retest was triggered but there was insufficient R1 to complete the test. Check and replenish R1 reagent
RR-R2L	Retest results but insufficient R2 reagent	Retest was triggered but there was insufficient R2 to complete the test. Check and replenish R2 reagent
RR-SL	Retest results but insufficient sample	Retest was triggered but there was insufficient sample to complete the test. Check and replenish the sample.
LIN	Results above limit of linearity	Each test has an upper limit that it can reliably measure up to. This flag means that the limit is exceeded. The analyser will automatically perform a dilution and perform a retest, the result of this test will be flagged with AD – see above.
LIN1	The Reaction curve has substrate exhaustion	The reaction curve is not straight because the amount of analyte in the sample is too high for the reagent to reliably measure the value. The sample will be automatically diluted and retested, the result of this test will be flagged with AD – see above.
LIN2	LIN2 is for Kinetic assay. The test absorbance higher than limit value when reaction is increasing and test absorbance lower then limit value when reaction is decreasing.	The reaction curve is too steep because the amount of analyte in the sample is too high for the reagent to reliably measure the value. The sample will be automatically diluted and retested, the result of this test will be flagged with AD – see above.
AD-R1L	Diluted retest but insufficient R1 reagent	Automatic dilution was triggered but there was insufficient R1 to complete the test. Check and replenish R1 reagent
AD-R2L	Diluted retest but insufficient R2 reagent	Automatic dilution was triggered but there was insufficient R2 to complete the test. Check and replenish R2 reagent
AD-SL	Diluted retest but insufficient sample	Automatic dilution was triggered but there was insufficient sample to complete the test. Check and replenish sample.



RGT-L	Reagent blank value is lower than setup limit	The analyser has detected that the starting colour of reagent is wrong, please contact customer support.
RGT-H	Reagent blank value is higher than setup limit	The analyser has detected that the starting colour of reagent is wrong, please contact customer support.

