



InSight V5R

Quick Reference Guide

Quick Reference Guide Contents

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1. InSight V5R Functions Buttons

Diagram illustrating the InSight V5R Functions Buttons and their corresponding actions:

- Main Menu/settings**: Points to the Home icon.
- Analyse a sample**: Points to the Sample Analysis button.
- Review previous results**: Points to the Review button.
- Run QC, enter QC values and review QC**: Points to the QC button.
- Change Reagent**: Points to the Reagent Management button.

The interface is divided into two main sections:

- Patient information area**: Contains fields for Sample ID (56), Animal Name, Species (Dog), Mode (WB-CBC+DIFF+Retic), Run Time (02-15-2023 11:59:50), Age, and Sex.
- Function buttons**: Includes Previous, next, Next Sample, Validate, Print, Sample Info, Custom Para, Comm, Research Results, and Edit Result.

The **Analysis results area** displays a table of results and histograms:

Para.	Result	Unit	Para.	Result	Unit	Flag Message
WBC	↑ 146.61	10 ⁹ /L	RBC	↓ 4.13	10 ¹² /L	Leucocytosis
Neu%	73.5	%	HGB	↑ 159	g/L	Neutrophilia
Mon%	↓ 2.7	%	HCT	↓ 20.9	%	Monocytosis
Lym%	↑ 14.6	%	MCV	50.5	fL	Eosinophilia
Eos%	6.0	%	MCH	↑ 38.5	pg	Basophilia
Bas%	1.2	%	MCHC	↑ 763	g/L	Anemia
Neu#	↑ 107.76	10 ⁹ /L	RDW-CV	↓ 15.7	%	Thrombocytosis
Lym#	3.96	10 ⁹ /L	RDW-SD	37.0	fL	
Mon#	↑ 24.34	10 ⁹ /L	Retic#	0.0135	10 ¹² /L	
Eos#	↑ 8.80	10 ⁹ /L	Retic%	0.33	%	
Bas#	↑ 1.75	10 ⁹ /L	PLT	↑ 837	10 ⁹ /L	
			MPV	↓ 7.6	fL	
			PDW	11.7	%	
			PCT	0.637	%	

Information of the next sample:

- Next Sample: 57
- Sample Count: [Value]
- Mode: WB-CBC+DIFF
- User: admin
- Date/Time: 2022/05/25 19:55:49

2. How to Run a Sample Using the InSight V5R

Use EDTA K3 anticoagulated blood collection tube

2. Fill 2/3's of the tube with blood
3. Ensure a background count and auto clean has been performed before analysis
4. Use the touch screen to select 'Sample Analysis' screen
5. Select 'Next Sample'
6. Enter Patient details including species, If testing Reticulocytes, ensure to select sample mode as CBC-DIFF-RETIC. press 'OK' to save
7. Thoroughly mix blood on roller mixer or by slowly inverting the tube 10 times
7. REMOVE SAMPLE CAP and place sample under the probe
8. Push the sampling trigger
9. Remove the sample when the analyser 'beeps'
9. Results will automatically display and print out once analysis is complete



3. How to Enter New QC Normal Ranges

When a new haematology vial is received please check the control lot number. If it is a new control batch (i.e. it has a different lot number & expiry date to previous vial) the new normal ranges need to be entered into the InSight V5R control file.

1. Select 'QUALITY CONTROL'
2. Select 'QC settings'
3. Select 'New'
4. Using the information supplied on the new QC assay sheet, enter the following information:
 - The new QC batch lot number (i.e. DH2408)
 - Expiry date (dd/mm/yyyy)
 - Target values and limits

Press 'Save' key to save QC information

5. Go into 'QC Analysis' ensure the correct file number for the current lot number of QC is selected.
6. Run the QC

NOTE: Keep QC vials refrigerated and allow at least 15 minutes to reach room temperature (18-30°C) before use. After sampling wipe the threads of both vial and cap with a lint free tissue. Replace cap and return to refrigerator for maximum open vial stability which is up to 14-28 days if stored at 2-8°C.

**If you require assistance, please contact your Woodley Equipment Sales Representative or Woodley Equipment Company Technical Support on
+44 (0)1204 669033 and press option 1.**

4. How to Run a QC

Woodley Equipment Company recommends a Quality Control (QC) should be analysed on the InSight V5R at the start of each working day.

Why Run a QC?

- To assess the quality and performance of the practice laboratory.
- To ensure that results generated by the InSight V5R are correct.
- QC monitors staff, equipment, reagents and result reporting.

Running A QC

1. Navigate to QC test screen by selecting 'QUALITY CONTROL'
2. Select QC Analysis
3. Ensure the correct file number for the current lot number of QC is selected
4. Ensure that the QC has been stored correctly, is in date and check that the vial lot number and expiry date correspond to those on screen. If a new batch, enter the new QC reference ranges.
5. Thoroughly mix blood by slowly inverting tube 10 times. DO NOT use a rotary mixer. Make sure the sample is warmed to room temperature.
6. REMOVE SAMPLE CAP and place QC sample under the probe
7. Press back plate to start analysis
8. Results will automatically display once analysis is complete
9. Check that the QC is within the ranges
10. Press 'QC Graph' to open Levey-Jennings graph screen
11. Sign the QC log sheet under the appropriate date and return QC to the fridge

NOTE: Keep QC vials refrigerated and allow at least 15 minutes to reach room temperature (18-30°C) before use. After sampling wipe the threads of both vial and cap with a lint free tissue. Replace cap and return to refrigerator for maximum open vial stability which is up to 14-28 days if stored at 2-8°C.

In the event of a QC failure 1. Reprocess the sample 2. If it's still out of limits, repeat with a fresh QC 3. Contact your Woodley Sales Representative or Woodley Equipment Company Technical Support on +44 (0)1204 669033 and press option 1.

5. How to Change a Reagent Pack

Changing reagents when error 'Insufficient reagent' shown

1. Remove the cap from the new reagent and connect reagent tubes from old reagent bottle to the new bottle.
2. Select 'Remove error'
3. Scan RFID card
4. The analyser will automatically prime reagents.

Changing reagents through the Reagent Management

1. Remove the cap from the new reagent and connect reagent tubes from old reagent bottle to the new bottle.
2. Select 'Reagent Management' tab at the top of the screen
3. Select 'Setup'
4. When indicated place RFID card on the RFID reader on the front of the analyser for each reagent bottle. (NOTE: the FDF-R AND DIL-F RF cards are smaller and attached to the side of the bottle)
5. Analyser will indicate that the reagent information has been set successfully
6. Select 'Replace' the analyser will prime the reagent/s and the consumption counters will be reset
7. After reagent change, run a Blank measurement to ensure no bubbles remain in the system

****Instrument waste can be safely disposed from the waste container into a sink if accompanied by running water**

6. Standby and Startup

Weekdays

Standby: The InSight V5R is automatically programmed to standby each day and does not need to be switched off manually

Wakeup/Start up cycle: Touch the screen to exit the standby mode and push the back plate to start the startup cycle.

Weekend

Shutdown: At the end of the week the InSight V5R needs to be shutdown. Select the 'Off' icon on the main screen. Click 'Yes' to perform shutdown. Analyser will prompt to place cleanser under probe. When prompted the analyser can be switched off at the back.

Startup Cycle: If the InSight V5R is powered off, firstly switch the power on at the back of the analyser. Login as user: admin password: admin
The analyser will automatically complete the startup cycle and a background count. Check that the background measurement is acceptable, then the system is ready to process a QC and then blood samples.

7. InSight V5R Haematology Result Flags

Flag Type		Flag information
WBC	Abnormal	Leucocytosis
		Leucopenia
		Neutrophilia
		Neutropenia
		Lymphocytosis
		Lymphopenia
		Monocytosis
		Eosinophilia
		Basophilia
	Suspicious	WBC abnormal
		Abnor. WBC scattergram
		Abnor. WBC histogram
		Left Shift?
		Immature Cell?
		RBC Lyse Resistant?
		Abn./Atypical Lym?
		Abnormal WBC Channel
		Abnormal DIFF Channel
RBC/HGB	Abnormal	Erythrocytosis
		Anisocytosis
		Macrocytosis
		Microcytosis
		Anaemia
		Hypochromia
	Suspicious	Abnor. RBC Distr.
		Dimorphologic

Flag Type		Flag information
		Iron Deficiency?
		HGB Abnor./Interfere?
		RBC Clump?
		Abnormal RBC Channel
		Abnormal HGB Channel
PLT	Abnormal	Thrombocytosis
		Thrombocytopenia
	Suspicious	Abnor. PLT Distr.
		PLT Clump?
Reticulocytes	Abnormal	Reticulocytosis
		Abnormal Reticulocyte Scattergram

If you require assistance or are unsure of any result or flags, please contact your Woodley Equipment Account Manager or Woodley Equipment Company Technical Support on 0044 (0)1204 669033 and press option 1.

06.24SMVer1

This document is a quick reference guide. For more comprehensive information please refer to your InSight V5R Operator's Manual

8. Haematology Sample Handling

Your InSight V5R haematology analyser can only produce results as good as the sample provided. Sample handling can be the limiting factor in producing accurate results. Check QC's regularly, if results are within range then any aberrant results often indicate improper sample handling.

Venipuncture: A quick non-traumatic venipuncture is critical. Use a 22 gauge needle or larger to minimise the likelihood of cell damage (haemolysis) and formation of clots. Avoid repositioning of the needle and/or excessive suction on the syringe. Fractious cats are likely to have platelet aggregates. If in doubt ***consult a blood film.***

Sample transfer: Immediately transfer the blood sample into an EDTA tube. Remove needle and slowly express the sample down the side of the tube to prevent haemolysis and clots. ***DO NOT*** use heparin tubes.

Sample volume: Fill the tube adequately (at least ½ full). Under filled blood tubes (incorrect ratio EDTA: Blood) will increase the EDTA concentration and can cause cell shrinkage leading to falsely decreased MCV and HCT.

Sample mixing: Thoroughly mix sample either on a mixer or 8-10 inversions by hand up until placing the tube in the sample holder (especially horses). Check the tube for clots prior to sampling, ***DO NOT*** test a clotted sample- take a repeat sample.

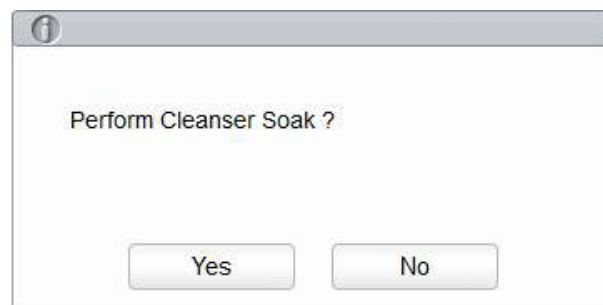
Time delay: Blood samples should be processed as soon as possible after collection. Platelets are affected by time delay as they have a short half life and can clump even in the presence of an anti-coagulant. Platelet counts performed after 4-6 hours should be considered suspect. Prolonged sample storage before processing especially when not refrigerated can lead to swelling of the RBC leading to a falsely elevated MCV. If there is a time delay between sample collection and testing store the sample 2-8°C. Excessive temperature can lead to cell autolysis (self breakdown).

9. How to Perform a Cleanser Soak

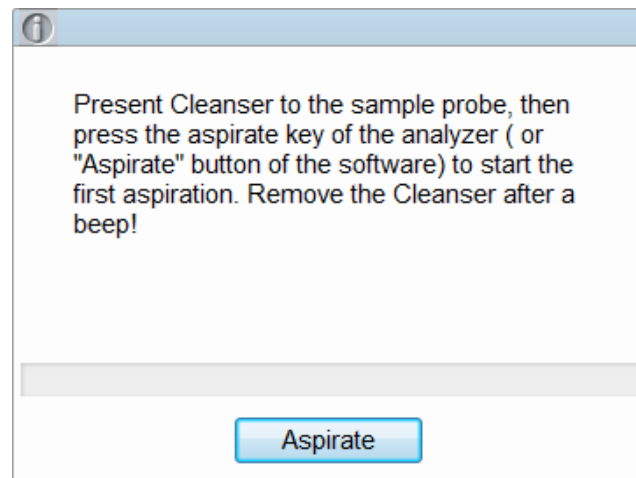
Cleanser Soak should be performed daily or when the background results exceed the range, bad differential results and if a clot remains in the system following other maintenance procedures. The analyser will prompt when the Cleanser soak is due. You may also be instructed to perform this by your Woodley Equipment Representative or by Woodley Equipment Technical Support when troubleshooting.

Select 'Service'

Maintenance- Cleanser Soak.



Select 'Yes' to perform Cleanser Soak



Present the Cleanser under the sample probe and press 'Aspirate'

The cleanser Soak will take 20minutes

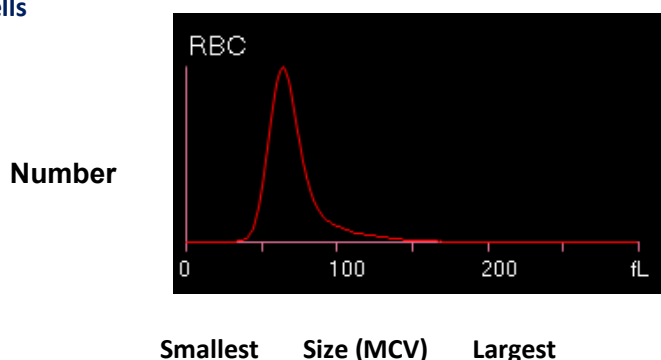
10. Interpreting Blood Cell Histograms

Histograms demonstrate the distribution of blood cell populations providing a graphic representation of cell size versus cell number. As cells pass through the aperture the different sized pulses generated by impedance changes are sorted and stored in the analyser memory. The memory creates a volumetric distribution histogram for each blood cell population (red blood cells, white blood cells and platelets). Histograms give a visual representation of cell size and number and although not considered to be diagnostic for any particular condition, they can be used to identify abnormal cell populations or sampling problems. They also work as a quality check when flags are produced to provide a useful tool to determine if further investigations, such as the viewing of a blood film are required. The user must be familiar with the appearance of normal histograms to make a useful assessment.

As each WBC passes through the flow cell, the laser beam shines through the cell and the light is scattered depending on the contents of the white cell.

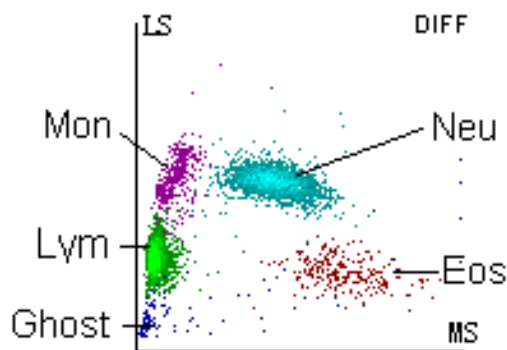
The sizes of the peaks vary depending on the frequency and size of each cell type. Therefore, it is possible to observe microcytic (small red cells) and macrocytic (large red cells) red blood cell populations from the size and position of the peaks.

Red Blood Cells

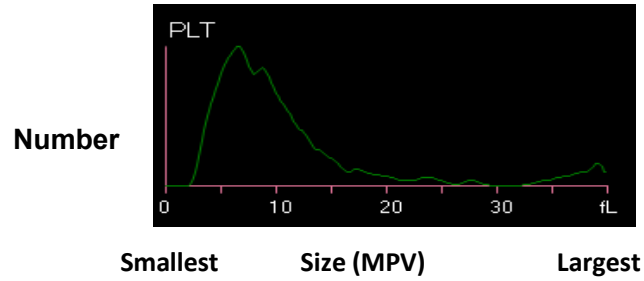


White Blood Cells

The intensity of scattered light reflects the blood cell size and intracellular density. The low-angle scattered light signal (LS) shows cell size, while the middle-angle (MS) and high-angle scattered light signal show intracellular information (nucleus and cytoplasm information). The optical detector receives this scattered light and converts it into electrical pulses.



Platelets



Platelet histograms can be used to determine the volume distribution of platelet populations. Thrombocytopenia is caused by either the failure of production or by increased consumption. Platelet distribution width (PDW) is increased in the latter group producing large platelets which are depicted on the right side of the histogram. Platelet histograms are also useful to assess if a thrombocytopenia is genuine or due to a sample quality problem such as aggregates. If platelets are aggregated an atypical picture is seen with uneven distribution.

11. InSight V5R Quality Control and Maintenance Log

MONTH:.....

REVIEWED BY:.....

DATE:.....

Quality Control

Daily QC Test	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
Normal QC tested by:																															

NOTE: Process a QC at the start of each working day , compare your results with results printed on the InSight V5R 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. Contact your Woodley Sales Representative or Woodley Equipment Company Technical Support on 0044 (0) 1204 669033

Maintenance

Daily procedure	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
Start up																															
Run background measurement																															
Cleanser Soak																															
Check Reagent levels and waste																															
Clean blood spills																															
Shutdown																															

Weekly Procedures	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5
Clean the probe					

Monthly	Date Performed & Initials
Clean Fluidics	

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.**

12. InSight V5R Maintenance Schedule

Maintenance Schedule	Maintenance
Daily Maintenance Customer Maintenance	Startup/wakeup cycle (Refer to section 6) Shut down/sleep mode (Refer to section 6) <ol style="list-style-type: none"> 1. Program for each evening 2. Perform manual shutdown at the weekend then switch off InSight V5R Visually check reagent levels Clean cover Blank Measurement Cleanser Soak
Weekly Maintenance Customer Maintenance	Clean Probe
Monthly Maintenance Customer Maintenance	Clean Fluidics
Yearly Maintenance Woodley Service Maintenance Please contact Woodley Equipment Company Ltd for information about a fully comprehensive service contract Tel: +44 (0) 1204 669033 Fax: +44 (0) 1204 669034 Email: sales@woodleyequipment.com	Full Service

NB: Refer to InSight V5R User Manual for detailed instructions of maintenance procedures.

13. WOODLEY EQUIPMENT COMPANY LTD

InSight V5R INSTALLATION & TRAINING DOCUMENTATION

Name of Practice:

Address:

Primary Contact:

Phone:

InSight V5R Instrument

Serial Number:

Software Version:

Installation and Training Topics

Name of Installer/Trainer:

Name of Trainee:

Date of Installation and Training:

The above mentioned trainee has undergone a period of formal training and has demonstrated competence in the following areas:

YES ✓

1. Instrument Overview

- | | | |
|----|---------------------------|-------|
| a. | Power supply | _____ |
| b. | Power switch | _____ |
| c. | LCD display screen | _____ |
| d. | Function buttons | _____ |
| e. | External connection ports | _____ |
| f. | Open side panel | _____ |
| g. | Reagent bottles | _____ |
| h. | Fluidic connections | _____ |
| i. | Waste | _____ |
| j. | Built in printer | _____ |

2. Instrument Operation

- | | | |
|----|---|-------|
| a. | Correct positioning & working temperature | _____ |
| b. | Startup/wakeup | _____ |

- c. Shutdown
- d. Background Measurement



- e. Reagents/RFID card
- f. Reagent levels
- g. Reagent expiry
- h. Priming
- i. Waste
- j. Print results

3. Instrument Menu

- a. Home
- b. Sample Analysis
- c. Review
- d. QC
- e. Reagent Management
- f. Setup
- g. Service
- h. Calibration

4. Sample processing

- a. Basic understanding of sampling process
- b. Correct sample material and volume
- c. Define species
- d. Define sample ID
- e. Sample mixing
- f. Setting sample mode (CBC, DIFF, RETIC)
- g. Remove the sample cap prior to processing
- h. Process a sample
- i. Access, review and print results
- j. Process a 'background' measurement
- k. Can identify testing errors & take appropriate action

5. Control processing

- a. Correct control material and assay sheet
- b. Run control samples in correct control bank
- c. Input reference ranges into control files
- d. Correct procedure in the event of a control failure
- e. Correct control storage (2-8°C, middle shelf)
- f. Take from fridge 20 minutes before processing
- g. Expiry date
- h. Open-vial stability time (14-28 days)
- i. Correct control preparation technique

- j. Wipe vial _____
- k. QC recommendations _____
- l. Importance of keeping control records _____



6. System Maintenance

- a. Auto clean _____
- b. Cleanser soak _____
- c. Clean Sample Probe _____
- d. Clean fluidics _____

7. System preparation for Service

- a. Preparing for shipment _____
- b. Pack instrument appropriately in InSight V5R box _____

8. Troubleshooting

- a. Demonstrate basic knowledge of potential sampling problems and system errors _____
- b. Troubleshooting accordingly _____

The trainee named above is deemed to be fully competent in the procedures described and able to complete InSight V5R tests

Signed Trainer:

Name in Full:

Signed Trainee:

Name in Full:

Date:

This completed and signed documentation serves as a certificate of InSight V5R installation and training