

# INSTALLATION QUALIFICATION

For

**AUTOMATED HEMATOLOGY ANALYZER** 

**MODEL: BC 3000 PLUS** 

AGAPPE DIAGNOSTICS LTD.

ADL/DO/SER/IOP/0069/21-22

AGAPPE DIAGNOSTICS LTD. 150 9001:2015 | EN 150 13485:2016 CERTIFIED COMPANY | CIN : U24239MH1998PLC115413

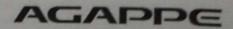
CORPORATE OFFICE / REAGENT PLANT Agappe Hills, Pattimattom (PO), Dist. Ernakulam, Kerala - 683 562, India. Tel: +91 484 286 7000 | Email: agappe@agappe.in

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# AGAPPE DIAGNOSTICS LTD. 150 9001:2015 [EN 150 13485:2016 CERTIFIED COMPANY] CIN: UZ4239MH1998PLC115413

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DELHI OFFICE DSM 540, 5° Floor, DLF Tower, Shivaji Marg, New Dehi - 110 G15, India, Tel: +91 11 4558 8416 | Email: delhioffice&agappe.in



# I. APPROVAL OF THE INSTALLATION QUALIFICATION PROCEDURE

Both SHREE PATH LAB, REWARI and AGAPPE DIAGNOSTICS LTD are jointly responsible for the installation of BC 3000 PLUS with serial number RJ-99128744 at "Shree Path Lab, 1st Floor, Ratan Ultrasound Centre, Opposite Government Girls School, Circular Road, Rewari" as per the attached INSTALLATION Qualification Protocol.

Protocol Performed By: Representative of AGAPPE DIAGNOSTICS LTD.

Name	:	SURAJ KUMAR	Signature	: 5
Designation	:	Manager - Customer Service		
Title Company	:	AGAPPE DIAGNOSTICS LTD	Date	: 25/AUG/2020

Validation Team from SHREE PATH LAB, REWARI

Name	: Dricand tour	Signature: Qui
Designation	Dr. Kamal Kant M.B.B.S., M.D. DMC - 58271	
Department	: Shree Path Lab	Date : 25/08/2-20

### **Customer Authorizations:**

Name:

Karr Dr. Kamal Kant M.B.B.S., M.D. DMC - 58271

: INSTALLATION QUALIFICATION

Site

Reward

Date

AGAPPE DIAGNOSTICS LTD. 150 9001:2015 [EN 150 13485:2016 CERTIFIED COMPANY] CIN: U24239MH1998PLC115413

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Red Cross Bhavan, Ne:26 Race Course Road, 50 001. Tel: +91 50 2228 8258





### II. INSTRUCTIONS

- An authorized AGAPPE DIAGNOSTICS LTD. representative will check and enter the specific data as outlined in the Installation Qualification. Each result will be noted and dated.
- 2. The concerned employees of **SHREE PATH LAB, REWARI** will verify each result and sign in each page. The member of the validation team will carry this out.
- 3. ALL deviations from the acceptance criteria detailed in this document will be noted in the COMMENTS section at the end of the IQ protocol. All resolution to such problems will also be noted in the COMMENTS section, and must be resolved prior to issuance of a SYSTEM CERTIFICATION.

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BANGALORE OFFICE 5-6, II\* Floor, Red Cross Bharran, Ne:26 Race Course Road, Bangalore - 560 001. Tel: +91 80 2228 8288 Email: bangaloreoffic eshapama is



### III. SCOPE

This Installation Qualification protocol will be performed on the BC 3000 PLUS at SHREE PATH LAB, REWARI. This Installation protocol will define the documentation that will be used to evaluate the instruments installation in accordance with the manufacturer's specifications and intended use. Successful completion of this protocol will verify that the instrument identified has been installed in accordance with the intended usage.

Trained, knowledgeable personnel will perform qualification studies. Any exceptional conditions encountered during the qualification studies will be identified for review. Exceptional conditions will be investigated and the appropriate course of action determined. All documents will be initialed and dated.

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### **INSTALLATION QUALIFICATION**

A. Instrument Identification

Verified Date: 25/AUG/2020

Model Name

: BC 3000 PLUS

Serial Number: RJ-99128744

Following is a list of accessories /consumables verified:

S No.	Component	Present (Yes/No)	Verified By	Comments
01	Analyzer Main unit	Yes	SURAJ KUMAR	ОК
02	Power cord	Yes	SURAJ KUMAR	ОК
03	Waste can	Yes	SURAJ KUMAR	ОК
04	Diluent Connector	Yes	SURAJ KUMAR	ОК
05	Lyse connector tube	Yes	SURAJ KUMAR	ОК
06	Rinse connector tube	Yes	SURAJ KUMAR	ОК
07	Waste tube	Yes	SURAJ KUMAR	ОК
08	Pre – dilution cups	Yes	SURAJ KUMAR	ОК
09	Paper roll	Yes	SURAJ KUMAR	ОК
10	Air filter	Yes	SURAJ KUMAR	ОК

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### 1. INSTALLATION CHECKS

Purpose: To make sure that the instrument is received with all the major components necessary for operation

S No.	Component	(Yes/No)	Verified By	Comments
1	Major components and accessories are present	Yes	SURAJ KUMAR	ОК
2	There is no physical damage to the components	Yes	SURAJ KUMAR	ОК
3	Ambient temperature is available	Yes	SURAJ KUMAR	ОК
4	Instrument is installed in the table leveled properly	Yes	SURAJ KUMAR	ОК
5	Power supply is correct	Yes	SURAJ KUMAR	ОК
6	Electric connections are tight, weatherproof & earthed	Yes	SURAJ KUMAR	ОК
7	Analyzer unit installed as per the manufacturers recommendations	Yes	SURAJ KUMAR	ОК

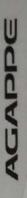
### Summary:

The information is recorded against each data and the deviations if any is justified / explained properly.

Acceptance criteria:

**PARAMETER** 

PASS





# 2. INSTRUMENT INSTALLATION

Date of Installation : 25/AUG/2020

Installed by

: SURAJ KUMAR

S No.	Parameter	Done by	Comments
01	Installation of the main unit	SURAJ KUMAR	Ж
02	Connecting the lyze tubing	SURAJ KUMAR	ò
03	Connecting the Diluent tubing	SURAJ KUMAR	OK
04	Connecting the Rinse tubing	SURAJ KUMAR	OK
05	Connecting the waste tubing	SURAJ KUMAR	ОК
90	Releasing the sample probe tie	SURAJ KUMAR	Ж
07	Connecting the earth wire	SURAJ KUMAR	OK

Acceptance criteria System should be "Ready" after daily maintenance without any error

PARAMETER

PASS

FAIL

Parameter values for verification: System found "Ready" after daily maintenance

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DELH OFFICE DSM S-Q. S\* Floor, DLF Tower, Shivaji Marg. New Delh - 116 Ols, milka Tra. - on 11 4509 Satol, Fransi delinieffe excess



### 3. Startup check

Purpose: To make the instrument READY for operation

Summary: Instrument checks functioning of different parts of the instrument automatically; if there is an error code, initialize the system and follow corrective action instructions provided for the error message.

#### Procedure:

- Check the room temperature and switch on the Air Conditioner
- Check the UPS.
- Switch on the BC 3000 plus system by pressing the main switch.
- Wait for the instrument to get ready after initialization
- The machine is ready for next step if it displays "READY" on the Status Area
- If not, initialize by pressing the initialize again after solving the error displayed
- Follow instructions provided for the error message

### Acceptance criteria:

No error Messages displayed

PARAMETER

PASS

Parameter values for verification: No Error Messages

### 4. Priming

Purpose: To check the internal tubing's and flow of liquids

S No	Activity	Done By	Date
01	Do wash using the maintenance screen	SURAJ KUMAR	25/AUG/2020

### Acceptance criteria:

- No error message or air bubbles in the internal tubing's
- All the dilutor working well without air bubbles / leakage

PARAMETER

PASS

FÁIL

Parameter values for verification:

No Error Messages

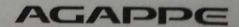
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DSM 540, 5° Floor, DLF Tower, Shivaji Marg, New Deihi - 110 015, India. Tel: +91 11 4558 8416 | Email: delhioffice@agappe.in





### VI. SYSTEM CERTIFICATION

Study data has determined that the system described in this document either meets all criteria outline in this Installation Qualification Protocol, or exceptional conditions have been identified and documentation included. Exceptional conditions, if any, have been addressed. The system is ready for Operational Qualification.

Report Performed By: AGAPPE DIAGNOSTICS LTD. Representative

Name

: SURAJ KUMAR

Designation

: Manager - Customer Service

Signature

Company

: AGAPPE DIAGNOSTICS LTD.

Date

: 25/AUG/2020

Customer Authorizations: SHREE PATH LAB, REWARI

Name

Dokamed Kalit

Designation

: Dr. Kamal Kant M.B.B.S., M.D.

Company

DMC - 58271 Shree Path Lab Signature

Date

: (PKent)

AGAPPE DIAGNOSTICS LTD. 150 9001:2015 [EN 150 13485:2016 CERTIFIED COMPANY | CIN : U24239MH1998PLC115413

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# **OPERATIONAL QUALIFICATION**

For

**AUTOMATED HEMATOLOGY ANALYZER** 

**MODEL: BC 3000 PLUS** 

AGAPPE DIAGNOSTICS LTD.

ADL/DO/SER/IOP/0069/21-22

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# APPROVAL OF THE OPERATIONAL QUALIFICATION PROCEDURE

Both SHREE PATH LAB, REWARI and AGAPPE DIAGNOSTICS LTD are jointly responsible for the installation of BC 3000 PLUS with serial number RJ-99128744 at "Shree Path Lab, 1st Floor, Ratan Ultrasound Centre, Opposite Government Girls School, Circular Road, Rewari" as per the attached OPERATIONAL Qualification protocol.

Protocol Performed By: Representative of AGAPPE DIAGNOSTICS LTD.

Name	:	SURAJ KUMAR	Signature :
Designation	:	Manager - Customer Service	
Title Company	:	AGAPPE DIAGNOSTICS LTD	Date : 25/AUG/2020

Validation Team from SHREE PATH LAB, REWARI

Name	Dr. Kamal Kant	Signature: Occur
Designation	M.B.B.S., M.D. DMC - 53271 Shree Path Lab	
Department	: He maitology	Date : 25/08/2020

### **Customer Authorizations:**

Dr. Kamal Kant

Name: Dr kamal kake M.B.B.S., M.D.

DMC - 58271

Title : OPERATIONAL QUALIFICATIONS hree Pathignative

Site :

Rewan

Date

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### II. INSTRUCTIONS

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### III. SCOPE

This Operational Qualification protocol will be performed on the BC 3000 PLUS, Serial No. RJ-99128744 at SHREE PATH LAB, REWARI. This Installation protocol will define the documentation that will be used to evaluate the instruments installation in accordance with the manufacturer's specifications and intended use. Successful completion of this protocol will verify that the instrument identified has been installed in accordance with the intended usage.

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### IV. OPERATIONAL QUALIFICATION

A. Instrument Identification

Verified Date: 25/AUG/2020

**Model Name** 

: BC 3000 PLUS

**Serial Number** 

: RJ-99128744

B. Following is a list of tests to be performed and verified:

Test No.	Test Name	Test purpose	Verified By and date
01	Start up	To make the equipment ready for operation	SURAJ KUMAR 25/AUG/2020
02	Daily maintenance	To clean appropriate modules	SURAJ KUMAR 25/AUG/2020
03	Calibration	To calibrate the system	SURAJ KUMAR 25/AUG/2020
04	QC check	To confirm that the system is calibrated and working within specifications	SURAJ KUMAR 25/AUG/2020
05	Reproducibility check	To check the precision [CV %] after calibration	SURAJ KUMAR 25/AUG/2020
06	Sample programming and Analysis	To run the samples	SURAJ KUMAR 25/AUG/2020
07	Shut down procedure	To shut down the system	SURAJ KUMAR 25/AUG/2020

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Test 01: Starting the system

Purpose: To make the instrument READY for operation

### Summary:

Instrument checks functioning of different parts of the instrument automatically; if there is an error code, initialize the system and follow corrective action instructions provided for the error message.

#### Procedure:

- Check the room temperature and switch on the Air Conditioner
- Check the UPS.
- Switch on the BC 3000 plus system by pressing the main switch.
- Wait for the instrument to get ready after initialization
- The machine is ready for next step if it displays "READY" on the Status Area
- If not, initialize by pressing the initialize again after solving the error displayed
- Follow instructions provided for the error message

Acceptance criteria: System to display READY status

**PARAMETER** 

**PASS** 

FAIL

Parameter values for verification: "READY" on Status Area





Test 02: Daily Maintenance

Purpose: To clean appropriate modules so as per the daily maintenance protocol

Method:

Refer detailed procedure for Daily Maintenance

S No.	Activity	Done by	Date
01	Empty waste container	SURAJ KUMAR	25/AUG/2020
02	Check Diluents	SURAJ KUMAR	25/AUG/2020
03	Check Lyse	SURAJ KUMAR	25/AUG/2020
04	Check Rinse	SURAJ KUMAR	25/AUG/2020
05	Clean Wipe Block	SURAJ KUMAR	25/AUG/2020
06	Clean out side area	SURAJ KUMAR	25/AUG/2020
07	Load supplies and remove outdated and empty reagents	SURAJ KUMAR	25/AUG/2020
08	Check startup screen	SURAJ KUMAR	25/AUG/2020
09	Perform Quality Control	SURAJ KUMAR	25/AUG/2020

Acceptance criteria: System should be "Ready" after daily maintenance without any error

**PARAMETER** 

**PASS** 

Parameter values for verification: System found "Ready" after daily maintenance

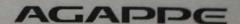
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Test: 5: Calibration of the system

Purpose: To calibrate the system\*

#### Procedure:

S No.	Activity	Done By	Date
01	Preparation of the calibration material	SURAJ KUMAR	25/AUG/2020
02	Performing Calibration with calibration programming screen	SURAJ KUMAR	25/AUG/2020

Acceptance criteria: "Calibration Successful" should come on screen

**PARAMETER** 

PASS

FAIL

Parameter values for verification:

A The system is pre calibrated and the calibration details are displayed on the screen. We recommend on site calibration once in a year

### Test 7: QC check

Purpose: To confirm that systems, reagents and consumables are acceptable & working within specifications for each assay used.

#### Procedure:

S No	Activity	Done By	Date
01	Preparing control material	SURAJ KUMAR	25/AUG/2020
02	Creating QC file	SURAJ KUMAR	25/AUG/2020
03	QC sample programming and analysis	SURAJ KUMAR	25/AUG/2020

Acceptance criteria: QC results within specified limits mentioned on the control product insert

**PARAMETER** 

PASS

Parameter values for verification: QC values within ± 2SD

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Test 08: Reproducibility Check

Purpose: To check the reproducibility of instrument

S No.	Activity	Done By	Date
01	Preparing control material/ sample	SURAJ KUMAR	25/AUG/2020
02	Running triplicates	SURAJ KUMAR	25/AUG/2020

Acceptance criteria: Results CV within specified limits

**PARAMETER** 

PASS

FAIL

Parameter values for verification: CV% within the limits

Test 09: Sample programming and Analysis

Purpose: To run the samples

Procedure:

S No.	Activity	Done By	Date
01	Preparing and Processing of samples	SURAJ KUMAR	25/AUG/2020
02	Programming samples	SURAJ KUMAR	25/AUG/2020
03	Aspirating the samples	SURAJ KUMAR	25/AUG/2020
04	Viewing samples in process	SURAJ KUMAR	25/AUG/2020
05	Review results: Monitoring results	SURAJ KUMAR	25/AUG/2020

Acceptance criteria: Samples Analysis without any error

**PARAMETER** 

**PASS** 

Parameter values for verification: Sample analysis without any error

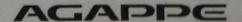
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Test 10: Shut down

Purpose: To shut down the system

Procedure:

S No.	Activity	Done By	Date
01	Preparing the system for shut down	SURAJ KUMAR	25/AUG/2020
02	Following the on screen instructions	SURAJ KUMAR	25/AUG/2020
03	Switch off the instrument when prompted	SURAJ KUMAR	25/AUG/2020

Acceptance criteria: Shut down without any error

**PARAMETER** 

PASS

FAIL

Parameter values for verification:

Shut down without any error

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### C. Operational procedure:

### a. Certificate of Training

### **Technician Training**

This certifies that the technicians have received basic user training in the following categories for the system described in this Operational Qualification.

S No.	Training program	Initials	Date
1.	Instrument Setup	ОК	25/AUG/2020
2.	System Operation	ОК	25/AUG/2020
3.	Basic trouble shooting and Maintenance	ОК	25/AUG/2020

### 2. Operator Training

The users responsible for the operation of this equipment have been trained in the proper usage of the system. Training focused on the basic operation and maintenance of the system.

S No.	Operators	Department	Initials	Date
1	Prem Singh	Hemadology	92	25/08/2020
2	Marish kuman	Нетаногоду	nx_	25/08/2020
3				
4				

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### ACAPPE



### VI. SYSTEM CERTIFICATION

Study data has determined that the system described in this document either meets all criteria outline in this Operational Qualification Protocol, or exceptional conditions have been identified and documentation included. Exceptional conditions, if any, have been addressed. The system is ready for Performance Qualification.

Report Performed By: AGAPPE DIAGNOSTICS LTD. Representative

Name

: SURAJ KUMAR

Designation

: Manager - Customer Service

Signature

Company

: AGAPPE DIAGNOSTICS LTD.

Date

: 25/AUG/2020

Customer Authorizations: SHREE PATH LAB, REWARI

Name

: Dricemal Kenh

Designation

Dr. Kamal Kant

M.B.B.S., M.D.

Company

DMC - 58271 Shree Path Lab Signature

Date

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# PERFORMANCE QUALIFICATION

For

**AUTOMATED HEMATOLOGY ANALYZER** 

**MODEL: BC 3000 PLUS** 

AGAPPE DIAGNOSTICS LTD.

ADL/DO/SER/IOP/0069/21-22

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# APPROVAL OF THE PERFORMANCE QUALIFICATION PROCEDURE

Both SHREE PATH LAB, REWARI and AGAPPE DIAGNOSTICS LTD are jointly responsible for the installation of BC 3000 PLUS with serial number RJ-99128744 at "Shree Path Lab, 1st Floor, Ratan Ultrasound Centre, Opposite Government Girls School, Circular Road, Rewari" as per the attached PERFORMANCE Qualification protocol.

Protocol Performed By: Representative of AGAPPE DIAGNOSTICS LTD.

Name	: SURAJ KUMAR	Signature:
Designation	: Manager - Customer Service	
Title Company	: AGAPPE DIAGNOSTICS LTD	Date : 25/AUG/2020

Validation Team from SHREE PATH LAB, REWARI

Name	Dr Keimal Kant	Signature: Picur
Designation	: M.B.B.S., M.D. DMC - 58271	
Department	: Hematology	Date : 25/08/2020

**Customer Authorizations:** 

Dr. Kamal Kant

M.B.B.S., M.D.

DMC - 58271 Shree Path Lab

: PERFORMACNE QUALIFICATION Title

Drikermal Kerkt

Site

Name:

: Rewari

Date

Signature : 25/04/2020

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### II. INSTRUCTIONS

- 1. An authorized AGAPPE DIAGNOSTICS LTD. representative will check and enter the specific data as outlined in the Performance Qualification. Each result will be noted and dated.
- 2. The concerned employees of SHREE PATH LAB, REWARI verify each result and sign in each page. The member of the validation team will carry this out.
- 3. ALL deviations from the acceptance criteria detailed in this document will be noted in the COMMENTS section at the end of the PQ protocol. All resolution to such problems will also be noted in the COMMENTS section and must be resolved prior to issuance of a SYSTEM CERTIFICATION.

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### III. SCOPE

This Performance Qualification protocol will be performed on the BC 3000 PLUS at SHREE PATH LAB, REWARI. This Performance protocol will define the documentation that will be used to evaluate the instruments installation in accordance with the manufacturer's specifications and intended use. Successful completion of this protocol will verify that the instrument identified has been installed in accordance with the intended usage.

Trained, knowledgeable personnel will perform qualification studies. Any exceptional conditions encountered during the qualification studies will be identified for review. Exceptional conditions will be investigated and the appropriate course of action determined. All documents will be initialed and dated.

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Verified Date: 25/AUG/2020

# PERFORMANCE QUALIFICATION

A. Instrument Identification

1. Model Name : BC 3000 PLUS

B. Serial Number: RJ-99128744

Following is a list of tests to be performed and verified

Test No.	Test Name	Test purpose		Verified By and da	ate
01	Start up	To make the equipment ready for operation		SURAJ KUMAR	25/AUG/2020
03			WBC≤0.3	SURAJ KUMAR	25/AUG/2020
		T 1 1 1	RBC≤0.03	SURAJ KUMAR	25/AUG/2020
	Back ground Count	To check the background	PLT≤10	SURAJ KUMAR	25/AUG/2020
			HB≤1	SURAJ KUMAR	25/AUG/2020
			HCT≤0.5	SURAJ KUMAR	25/AUG/2020
04	Inventory of reagents /consumables	To check the reagent		SURAJ KUMAR	25/AUG/2020
05	Calibration Check	To calibrate the system when required		SURAJ KUMAR	25/AUG/2020
06	QC check	To confirm that system and reagents are acceptable and working within specifications		SURAJ KUMAR	25/AUG/2020
			WBC≤ 2%	SURAJ KUMAR	25/AUG/2020
		To check the	RBC≤ 2%	SURAJ KUMAR	25/AUG/2020
07	Reproducibility check	precision	PLT≤ 4%	SURAJ KUMAR	25/AUG/2020
		[CV %]	HB≤ 1.5%	SURAJ KUMAR	25/AUG/2020
			MCV≤ 1.0%	SURAJ KUMAR	25/AUG/2020
08	Sample programming and Analysis	To run the samples		SURAJ KUMAR	25/AUG/2020
09	Shut down procedure	To shut down	the system	SURAJ KUMAR	25/AUG/2020

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### Test 01: Starting the system

**Purpose** 

: To make the instrument READY for operation

Summary

Instrument checks functioning of different parts of the instrument automatically; if there is an error code, initialize the system and follow corrective action instructions provided for the error message.

#### Procedure:

- · Check the room temperature and switch on the Air Conditioner
- Check the UPS.
- Switch on the BC 3000 plus system by pressing the main switch.
- Wait for the instrument to get ready after initialization
- The machine is ready for next step if it displays "READY" on the Status Area
- If not, initialize by pressing the initialize again after solving the error displayed
- · Follow instructions provided for the error message

Acceptance criteria: System to display "READY" status

PARAMETER

PASS

FΔII

Parameter values for verification: "READY" on Status Area

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### Test 02: Daily Maintenance

Purpose: To clean appropriate modules so as per the daily maintenance protocol.

Method:

Refer detailed procedure for Daily Maintenance

S No.	Activity	Done by	Date
01	Empty waste container	SURAJ KUMAR	25/AUG/2020
02	Check Diluents	SURAJ KUMAR	25/AUG/2020
03	Check Lyse	SURAJ KUMAR	25/AUG/2020
04	Check Rinse	SURAJ KUMAR	25/AUG/2020
05	Clean Wipe Block	SURAJ KUMAR	25/AUG/2020
06	Clean out side area	SURAJ KUMAR	25/AUG/2020
07	Load supplies and remove outdated and empty reagents	SURAJ KUMAR	25/AUG/2020
08	Check startup screen	SURAJ KUMAR	25/AUG/2020
09	Perform Quality Control	SURAJ KUMAR	25/AUG/2020

Acceptance criteria: System should be "Ready" after daily maintenance without any error

PARAMETER PASS

Parameter values for verification: System found "Ready" after daily maintenance

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Tel: +91 22 4300 8000 | Email: mumbaioffice@agappe.in

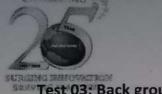
EQUIPMENT PLANT X/588-CB, Block No. 32, KINFRA Small Industrial Park, Nellad, Cochin, Kerala, India - 686 721. Tel: +91 484 276 7477.

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Test 03: Back ground Count

Purpose: To check the relative background of installed BC 3000 plus

#### Procedure:

S No.	Act	ivity	Done By	Date	
01		WBC			
	Checking the blank pulse	RBC	SURAJ KUMAR	25/AUG/2020	
		PLT			
	1000	HGB			
		НСТ			

### Acceptance criteria:

No error Messages displayed

All reagents should show acceptance

PARAMETER

PASS

FAIL

Parameter values for verification: No Error Messages

Test 04: Inventory of reagents / Consumables

Purpose: To check the quality of reagents

S No	Activity Diluent Rinse	Done By	
01	Diluent	SURAJ KUMAR	25/AUG/2020
02	Rinse	SURAJ KUMAR	25/AUG/2020
03	Lyse	SURAJ KUMAR	25/AUG/2020

### Acceptance criteria:

No cloudiness or background abnormal message

All reagents should show acceptance

**PARAMETER** 

PASS

Parameter values for verification:

No Error Messages

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Test 03: Calibration of the system

Purpose: To calibrate the system

#### Procedure:

S No.	Activity	Done By	Date
01	Preparation of the cal material	SURAJ KUMAR	25/AUG/2020
02	Performing Calibration with calibration programming screen	SURAJ KUMAR	25/AUG/2020

Acceptance criteria: Calibration data shows concordance values in triplicate measurement

**PARAMETER** 

PASS

Parameter values for verification: No error message in the printout

Test 04: QC check

Purpose: To confirm that systems, reagents and consumables are acceptable & working within specifications for each assay used.

### Procedure:

S No.	Activity	Done By	Date
01	Preparing control material	SURAJ KUMAR	25/AUG/2020
02	Creating QC file	SURAJ KUMAR	25/AUG/2020
03	QC sample programming and analysis	SURAJ KUMAR	25/AUG/2020

Acceptance criteria: QC results within specified limits mentioned on the control product

insert

**PARAMETER** 

**PASS** 

FAIL

Parameter values for verification: QC values within ± 2SD

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**KOLKATA OFFICE** 406, Merlin Matrix, Piot No-10, Block-ON, Sector V, Salt Lake City, Kolkata - 700 091. Tel: +91 33 4003 0451 | Email: kolkattaoflicegjagappe in

MUMBAI (REGISTERED OFFICE) 401 & 402, 4" Floor, Jaisingh Business Centre, 119, DELHI OFFICE DSM 540, 5° Floor, DLF Tower, Shivaji Marg, New Deihi - 110 015, India.

-6, II\* Floor, Red Cross Bhavan, No.26 Race Course Ro





# **Test 05: Reproducibility Check**

Purpose: To check the reproducibility of instrument

S No.	Activity	Done By	Date
01	Preparing control material/ sample	SURAJ KUMAR	25/AUG/2020
02	Running triplicates	SURAJ KUMAR	25/AUG/2020

Acceptance criteria: Results CV within specified limits

**PARAMETER** 

PASS

FAIL

Parameter values for verification: CV% within the limits

Test 06: Sample programming and Analysis

Purpose: To run the samples

Procedure:

S No.	Activity	Done By	Date
01	Preparing and Processing of samples	SURAJ KUMAR	25/AUG/2020
02	Programming samples	SURAJ KUMAR	25/AUG/2020
03	Aspirating the samples	SURAJ KUMAR	25/AUG/2020
04	Viewing samples in process	SURAJ KUMAR	25/AUG/2020
05	Review results: Monitoring results	SURAJ KUMAR	25/AUG/2020

Acceptance criteria: Samples Analysis without any error

**PARAMETER** 

**PASS** 

Parameter values for verification: Sample analysis without any error

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Tel: + 91 484 286 7000 | Email: agappe@agappe.in

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Test 07: Shut down

Purpose: To shut down the system

Procedure:

S No.	Activity	Done By	Date
01	Preparing the system for shut down	SURAJ KUMAR	25/AUG/2020
02	Following the on screen instructions	SURAJ KUMAR	25/AUG/2020
03	Switch off the instrument when prompted	SURAJ KUMAR	25/AUG/2020

Acceptance criteria: Shut down without any error

**PARAMETER** 

PASS

FAIL

Parameter values for verification: Shut down without any error

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Teb -91 22 4300 8000 | Email: mumbaioffice@agappe.in

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#### C. Operational procedure:

### a. Certificate of Training

### 1. Technician Training

This certifies that the technicians have received basic user training in the following categories for the system described in this Operational Qualification.

S No.	Training program	Initials	Date
1.	Instrument Setup	ОК	25/AUG/2020
2.	System Operation	ОК	25/AUG/2020
3.	Basic trouble shooting and Maintenance	ОК	25/AUG/2020

### 2. Operator Training

The users responsible for the operation of this equipment have been trained in the proper usage of the system. Training focused on the basic operation and maintenance of the system.

S No.	Operators	Department	Initials	Date
1	Prem Singly	hematology	B	25/08/2000
2	Marist Kermer	Item city 1057	m	25/08/2020
3				
4				

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EQUIPMENT PLANT X/588-CB, Block No. 12, KINFRA Small Industrial Park.

Nellad, Cochin, Kerala, India - 686 721. Tel: +91 484 276 7477.

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### VI. SYSTEM CERTIFICATION

Study data has determined that the system described in this document either meets all criteria outline in this Performance Qualification Protocol, or exceptional conditions have been identified and documentation included. Exceptional conditions, if any, have been addressed. The system is ready for Performance Qualification.

Report Performed By: AGAPPE DIAGNOSTICS LTD. Representative

Name

: SURAJ KUMAR

Designation

: Manager - Customer Service

Signature

Company

: AGAPPE DIAGNOSTICS LTD.

Date

: 25/AUG/2020

Customer Authorizations: SHREE PATH LAB, REWARI

Name

Dr. Kamal Kart

Designation

Dr. Kamal Kant

M.B.B.S., M.D.

Company

DMC - 58271

Shree Path Lab

Signature

Date

AGAPPE DIAGNOSTICS LTD. ISO 9001:2015 [EN ISO 13485:2016 CERTIFIED COMPANY] CIN: UZ4239MH1998PLC115413

X/588-CB, Block No. 32, KINFRA Small Industrial Park,

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**EQUIPMENT PLANT** 





ADL/DO/MS/C/0248/21-22

# **CERTIFICATE OF CALIBRATION**

**Customer Name** 

: Shree Path Lab

Address of the customer

: Opposite Government Girls School, Circular Road, Rewari

Instrument Model

: BC 3000 Plus - 3 Part Hematology Analyzer

Serial No.

: RJ-99128744

Date of Installation

: 25/08/2020

Date of Calibration

: 03/01/2022

This is to certify that the above-mentioned product has been calibrated for CBC parameters (WBC, RBC, HGB, MCV, PLT) according to the standard operating procedure given by the MINDRAY

The reference instruments used for value assignment are managed by the traceability system in Shenzhen Mindray Bio - Medical Electronics Co., Ltd, and these are traceable to the International Standards such as ICSH/WHO, NCCLS.

For Agappe Diagnostics Ltd.,

**Authorized Signatory** 

**Designation: Manager Customer Service** 

Name: Suraj Kumar

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# DETAILS OF CONTROL RUN

Instrument Model

: BC 3000 PLUS - 3 Part Hematology Analyzer

Serial No

: RJ-99128744

Date of Control Run

: 07/05/2022

Control Used

: D-checkod

Lot No

: 1:01.201

Expiry

: 05/06/2022

The results of repeatability test are summarized in the following table. Refer the attached control sheets for details.

Sample No	WBC K/µL	RBC M/µL	HGB g/dL	MCV fL	PLT K/μL
1	2.4	2.57	7.2	75.8	86
2	7.4	4.66	14.5	83.3	240
3	16.2	5.61	18.0	84.2	501
Instrument Mean	7.17	4.25	12.20	81.07	226
Range	0.2-99.9	0.20-8.00	10-250	40-150	10-999
CV %	2.5.1.	27.	1.5-1.	0.5-1.	

This is to certify that the above-mentioned product has been calibrated for CBC parameters (WBC, RBC, HGB, MCV, PLT) according to the standard operating procedure given by the Mindray

The control run after calibration shows good repeatability and precision

Next Calibration due on 02/07/2022

For Agappe Diagnostics Ltd.,

Authorized Signatory

Name: Suraj Kumar

Designation: Manager Customer Service

AGAPPE DIAGNOSTICS LTD. 150 9001:2015 | EN 150 13485:2016 CERTIFIED COMPANY | CIN: 1124239MH1998PLC115413

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# SHREE PATH LAB, REWARI

### **EQAS CAPA CHECKLIST**

Date and time: 12 /04 / 2012

EQAS sample detail:- -AIMS 60,AS 152-K

Result detail: - ALL RESULTS ARE ACCEPTABLE EXCEPT
VALUE OF WELL COUNT OF SAMPLE-1.

Outlier detail:- Allms GRAS SAMPLE 183-K. NO TRANSCRIPTIONAL REPORTAL THE PORTAL THE PORTAL THE RESULT CUBMICSION ON THE PORTAL THE RESULTS FOUND IN ACCEPTABLE RANGE FACEPT WERE COUNT OF SAMPL-1.

### Root cause analysis checklist:-

1.	Check for typographical error	ok
2.	Check instrument print for flag or alarm	ox
3.	Check technical staff status	ok
4.	IQC status for any outlier	ok
5.	Sample run procedure step according to SOP	010
6.	Storage condition of EQAS sample	ok
7.	IQC send for outlier parameter to verify current status	ak
8.	IQC result interpretation	ok

### Analysis comment:-

CHECKLIST COMPLETED AND A KANDOM

SAMPLE BEATT OUTSIDE LAB FOR VEKIFICATIONS. RESULT

WAS FOUND OUT TO REL INTISFACTORY.

# Corrective action taken and preventive action:-

HEMATOLOGY MANALYSER BC-3000 PLUS CALIBRATED

AND JAC SAMPLE KESULT VEKIFICATION DINE

FOR CURRENT STATUS.

Follow up status:-

IQC TO BE MONITOR FOR ACH CHIFT OR ANY OUTLIER.

Deparment in-charge

Technical Staff

Prepared by

Approved by





### PROFICIENCY TESTING REPORT

### ISHTM-AIIMS EXTERNAL QUALITY ASSURANCE PROGRAMME





Duration of stability testing - minimum upto 8 days at ambient temp. after dispatch of specimens

**EQAP CODE No. :** 4249 **Distribution No.:** 154-K Month/Year: January/2022

**Instrument ID:** RJ-99128744

Name & Contact No. of PT Co-ordinator: Dr. Seema Tyagi (Prof.), Hematology, AIIMS, Delhi,

Tel: 9013085730, E-Mail: accuracy2000@gmail.com Date of issue & status of the report: 28-03-2022[Final].

### **CBC** and Retic Assessment

				Among Lab (Accuracy Testing)				With	Within Lab (Precision Testing)				
Test Parameters	S.No.	Your Result 1		Your Results Sum of 2 Value	Consensus result sum of 2 values (Assigned Value)	Uncertainty		Results		Uncertainty of Assigned Values	Z Score		
WBC x10³/μl	1	7.7	7.5	15.2	16.96	0.0760	-0.93	0.2	0.17	0.0130	0.20		
RBC x10 <sup>6</sup> /μl	1	4.08	4.07	8.15	8.89	0.0130	-2.38	0.01	0.04	0.0030	-0.58		
Hb g/dl	1	11.5	11.3	22.8	21.9	0.0310	1.21	0.2	0.1	0.0090	0.67		
НСТ%	1	31.7	31.4	63.1	71.7	0.1730	-1.97	0.3	0.4	0.0270	-0.27		
MCV-fl	1	77.9	77.1	155	161.8	0.3460	<b>-0.</b> 77	0.8	0.2	0.0220	2.02		
MCH-Pg	1	28.2	27.6	55.8	49.3	0.0870	3.10	0.6	0.2	0.0160	1.80		
MCHC-g/dl	1	36.2	35.9	72.1	60.9	0.1530	2.91	0.3	0.3	0.0190	0.00		
Plt. x10³/μl	1	355	336	691	811	3.57	-1.37	19	10	0.70	0.87		
Retic %	2	1.1	0.7	1.8	7	0.16	-1.12	0.4	0.3	0.02	0.45		

### P.S. Assesment

		YOUR REPORT	CONSENSUS REPORT			
DLC%	2	Nrbcs=8.00 , Poly=50.00 L=15.00, E=4.00, Mono/Promono= , B1=3.00 P.M.=2.00, Mye=6.00, Meta=18.00, Other=	Poly: 55 - 69, Myelo: 4 - 10, Meta: 4 - 9; Lympho/Promyelo: 1 - 10; Blast/nRBC/Eos/Baso/Mono: 0 - 5			
RBC Morphology	3	NORMOCYTIC NORMOCHROMIC	Predominantly: Normocytic/Normochromic; Moderate: Anisocytosis, Microcytosis, Hypochromia; Mild: Macrocytosis, Poikilocytosis			
Diagnosis		CHROINC MYELOID LEUKEMIA- CHRONIC PHASE	Chronic Myeloid Leukemia ( CML )			

#### **COMBINED DATA VALUES OF TOTAL PARTICIPANTS**

Test neverences	S.No.	Total participants covered in the current dist. 154K	Total No. responded	% of Labs with Z Score 0-2		% of Labs with Z Score 2-3		% of Labs with Z Score >3	
rest parameters				Among labs	Within lab	Among labs	Within lab	Among labs	Within lab
WBC x10³/μl	1	268	266	83.46	87.97	4.14	4.51	12.4	7.52
RBC x10 <sup>6</sup> /μl	1	268	268	87.31	91.04	7.46	3.36	5.23	5.6
Hb g/dl	1	268	268	89.55	91.79	6.34	4.1	4.11	4.11
HCT%	1	268	2 <mark>65</mark>	92.83	91.32	3.77	3.4	3.4	5.28
MCV-fl	1	268	264	93.94	94.32	1.52	2.65	4.54	3.03
MCH-Pg	1	268	264	89.02	<mark>9</mark> 0.91	6.82	3.41	4.16	5.68
MCHC-g/dl	1	268	265	92.83	91.32	4.15	4.53	3.02	4.15
Plt. x10³/μl	1	268	265	92.83	89.43	3.4	5.66	3.77	4.91
ReticCount%	2	268	268	92.16	83.96	3.36	6.34	4.48	9.7
PS Assessment	3	268	233	Satisfactory	:85.03%, Bo	rderline Sat	.: :12.35%, U	Insatisfactor	y:2.62%

#### \*Comments:

1). Among Lab (EQA): Results acceptable.

2). Within Lab (IQA): Precision acceptable.

**Note-1: EQA** (External Quality Assurance) : Your Performance among various of participating labs in PT, to determine the accuracy of your results.

**IQA** (Internal Quality Assurance): Your Performance of comparison of two consecutive measurement values within your lab to test the precision of your autoanalyzer.

**Note-2:** Z score among & within lab were calculated, as per to ISO/IEC 13528:2015 standard. Z score among lab (EQA)= (Your Result Sum of two values - Consensus Result sum of two values)/(Normalised IQR)

Z score within lab (IQA)= (Your Result Difference of two values - Consensus Result difference of two values)/(Normalised IQR)

IQR = Quartile 3 - Quartile 1 of participant data, Normalised IQR = 0.7413 x IQR

Note-3: Z score 0 to  $\pm 2$ : Acceptable, Z score  $\pm 2$  to  $\pm 3$ : Warning Signal, Z score  $> \pm 3$ : Unacceptable [As per ISO/IEC 13528:2015 standard]

**Note-4:** Z score value between "0 to  $\pm 2$ " are texted in green colour. Z score value between " $\pm 2$  to  $\pm 3$ " are texted in orange colour. Z score value  $> \pm 3$  are texted in red colour.

**Note-5:** Homogeneity and stability testing of PT sample were done as per ISO 13528:2015 standard. To pass homogeneity test, between sample SD (Ss) should be smaller than the check value (0.3\*SDPA). To pass the stability test, average difference in measurement values of first and last day sample  $(\bar{x}-\bar{y})$  should be smaller than the check value (0.3\*SDPA).

Note-6: ISHTM-AIIMS-EQAP does not subcontract any task of its scheme

Note-7: Participants are free to use methods/analyzer of their own choice.

**Note-8:** Proficiency testing (PT) samples are sent quarterly to each participant.

**Note-9:** All the necessary details regarding design and implementation of PT, are provided in the instruction sheet as well as on programme's website www.ishtmaiimseqap.com.

Report authorized by,

Dr. Seema Tyagi (Prof.)

PT Co-ordinator: ISHTM-AIIMS-EQAP

Department of Hematology, AIIMS, New Delhi

-----End Of Report-----