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Form B03

Scheduled Maintenance Work Order



Quantum Medical Solutions sdn bhd
transcending boundaries, transforming life

Format Ref: - QMS/TSD-022 Rev.01

Work Order No.	PWO365592	Schedule Month	June 2018
Work Order Date	01/06/2018	Completed Date	26/6/18
Clinic Name	Klinik Kesihatan Sri Medan	Clinic Code	JHR012
BE No.	JHNANE005	Distict	BATU PAHAT
BE Category	ANALYZERS, LABORATORY, HEM	WO Assigned to	Farhan
Ownership	<input type="checkbox"/> Existing Equipment	<input type="checkbox"/> Purchase	<input checked="" type="checkbox"/> New
BE Condition	<input checked="" type="checkbox"/> Active	<input type="checkbox"/> BER Proposed	
Work Order Type	<input checked="" type="checkbox"/> Preventive Maintenance (PM)	<input type="checkbox"/> Third Party Calibration (TPC)	
	<input type="checkbox"/> Routine Inspection (RI)	<input type="checkbox"/> Statutory Certification (SC)	

Reschedule Date	
-----------------	--

BE Third Party Calibration / Statutory Certification Details

Company Name	ma	Cal / Cert Date	ma
Contact Number		Cal / Cert Expiry Date	

Action Taken

☒ PM / RI job done as per checklist. Unit tested functioning good & ready to use.

☐ Corrective Maintenance / ☐ Breakdown

BE Sticker Availability : ☐ Yes / ☒ NA

Remarks:

Manufacturer : Windray

Modal : BC-305

Serial No : TH-73001867

Schedule Maintenance Execution Details

SI No	QMS Engineer / Technician Name	Date	Start Time	End Time
	Farhan	26/6/18	1200	1300

Customer Remarks

NA

Engineer / Technician Signature	Signature	Customer Signature
Name WONG YICK SIEN	Signature	Name
Date 26/6/2018	Signature	Designation
	Signature	Date
	Signature	Seal

NAJIB FARHAN B. ISMAIL
BIOMEDICAL ENGINEER
(012 396 7048)

Mur Atiqah bt Mohd Yusuf
Juruteknologi Makmal Perubatan U29
Klinik Kesihatan Sri Medan, Batu Pahat

For Internal Use

First Verification
QMS Circle Incharge

QUANTUM MEDICAL SOLUTIONS
RAZILA SINTI
BIOMEDICAL ENGINEER

Final Verification
QMS State Incharge



KEMENTERIAN KESIHATAN MALAYSIA

MEET Planned Preventive Maintenance Checklist
Analyzers, Laboratory, Hematology, Cell Counting, Automated (Medium)
BE CODE : ME-009

CHECKLIST NO:CL-015-000
REV.000

PART 1 ASSET DETAILS

WORK ORDER NO ▶ BE NO ▶ **JHNAME005**
MANUFACTURER ▶ **Nidrag** MODEL ▶ **BC 305**
FREQUENCY ▶ 6 MONTHLY (☒) 12 MONTHLY () PPM HOURS ▶ 2.00

PART 2 SPECIAL PRECAUTION

If there is evidence of body fluid contamination, submit the device for cleaning and decontamination before inspecting it.
Wear appropriate Personnel Protection Equipment (PPE) during work.
Wear grounded electrostatic wristband when handling PCB or electronic components.
Refer to the safety procedure for additional precautions and guidance as per manufacturer guidelines.
Make sure the test equipment used are duly calibrated.

PART 3 TEST APPARATUS

Tick (✓) where appropriate

NO	ASSET NO	DESCRIPTION	SERIAL NO	CALIBRATION DUE ON
	TEESAD004	ELECTRICAL SAFETY ANALYZER	3226906	9/10/18

PART 4 QUALITATIVE TASKS

Tick (✓) where appropriate

	PASS	FAIL	NA		PASS	FAIL	NA
1 Chassis - verify physical integrity, cleanliness and condition	(<input checked="" type="checkbox"/>)	()	()	11 Probes- Verify physical integrity	(<input checked="" type="checkbox"/>)	()	()
2 Mount/ Fasteners - verify physical integrity	()	()	(<input checked="" type="checkbox"/>)	12 Temperature system- verify proper operation	(<input checked="" type="checkbox"/>)	()	()
3 Power Cord - verify proper insulation and integrity	(<input checked="" type="checkbox"/>)	()	()	13 Fan/motor/compressor/pump- verify physical integrity and proper operation	(<input checked="" type="checkbox"/>)	()	()
4 Strain Relief - verify physical integrity at both ends of line cord	(<input checked="" type="checkbox"/>)	()	()	14 Initialization Process- Verify	(<input checked="" type="checkbox"/>)	()	()
5 Fittings/ Connectors - check all fittings/connectors	(<input checked="" type="checkbox"/>)	()	()	15 Printer - Verify physical operation.	(<input checked="" type="checkbox"/>)	()	()
6 Controls/Switches - verify proper operation of controls	(<input checked="" type="checkbox"/>)	()	()	16 User Setting - Verify Operation	(<input checked="" type="checkbox"/>)	()	()
7 Indicators/Displays- verify proper operation	(<input checked="" type="checkbox"/>)	()	()	17 User calibration - Verify Operation	(<input checked="" type="checkbox"/>)	()	()
8 Electrodes and Transducer -verify physical integrity	(<input checked="" type="checkbox"/>)	()	()	18 Self Diagnostic - Verify Operation	(<input checked="" type="checkbox"/>)	()	()
9 Hydraulics and Pneumatics System-verify physical integrity	(<input checked="" type="checkbox"/>)	()	()	19 Plate movement calibration - Verify Operation	(<input checked="" type="checkbox"/>)	()	()
10 Sensors- verify physical integrity	(<input checked="" type="checkbox"/>)	()	()				

PART 5 PREVENTIVE MAINTENANCE TASKS

Tick (✓) where appropriate

	DONE	NOT DONE **	NA		DONE	NOT DONE **	NA
1 Clean exterior and interior of the equipment	(<input checked="" type="checkbox"/>)	()	()	6 Clean measuring area	(<input checked="" type="checkbox"/>)	()	()
2 Inspect/clean interior of unit	(<input checked="" type="checkbox"/>)	()	()	7 Calibrate system parameter	(<input checked="" type="checkbox"/>)	()	()
3 Clean hydraulics and pneumatic system	(<input checked="" type="checkbox"/>)	()	()	8 Perform Post routine	(<input checked="" type="checkbox"/>)	()	()
4 Tubings - clean/ replace ***	(<input checked="" type="checkbox"/>)	()	()				
5 Clean sampling mechanism	(<input checked="" type="checkbox"/>)	()	()				

Notes:

* For all Parts, NA is defined as NOT APPLICABLE
** If you have ticked 'NOT DONE', then justify in Part 8
*** Choose Whichever Applicable



KEMENTERIAN KESIHATAN MALAYSIA
MEET Planned Preventive Maintenance Checklist
Analyzers, Laboratory, Hematology, Cell Counting, Automated, Medium
BE CODE : ME-009

CHECKLIST NO: CL-015-000 REV.000

WORK ORDER NO ▶

PART 6 QUANTITATIVE TASKS

Tick (✓) where appropriate

No	Description	Units / UOM	Set Values	Measured Values	Limit/Tolerance	PASS	FAIL	NA
	→ Please refer Supp report							

PART 7 ELECTRICAL SAFETY TEST

ELECTRICAL SAFETY TEST, (attach report)

Tick (✓) where appropriate

Standard use :



IEC 60601



IEC 61010



IEC 62353

Result :



PASS



FAIL



NA

PART 8 NOTES



CORRECTIVE MAINTENANCE REQUIRED



FUNCTIONING



NOT FUNCTIONING

WORK ORDER NO ▶

NEXT PPM DATE ▶ Dec 18

PPM has been performed in accordance to the checklist and the equipment is functioning to the intended purpose.

COMPLETED BY:

Farhan

DATE :

26/6/18



HISTOCENTER (M) SDN. BHD. (Company)

Kuala Lumpur Office: B-G-2, Jalan Dataran SD2, Dataran Sri Damansara, Bandar Sri Damansara, PJU 9, 52200 Kuala Lumpur, Malaysia.
Tel: 03-62771136, 62774616 Fax: 03-62771305 E-mail: histo@histocenter.com
Website: www.histocenter.com
(Registration Number with the Kementerian Kewangan: 357-00012506)
GST Registration No. : 000015794176

REPAIR CALL CARD		No 7250.
CUSTOMER :	INSTRUMENT : Hematology Analyzer	
Klinik kesihatan Sri Medan	MODEL NO. : B8-30s	
ADDRESS :	SERIAL NO. : TH-73001867	
Batu Pahat, Johor	PERSON IN CHARGE :	
	COMPLETION DATE : 26/6/2018	
	LOCATION :	
	CUSTOMER'S ORDER :	
<input type="checkbox"/> Installation <input type="checkbox"/> Commissioning <input type="checkbox"/> Warranty Repair <input type="checkbox"/> Paid Repair <input type="checkbox"/> Contract Service		
perform a full preventive maintenance for the above instrument.		
For detail please refer to the checklist attached		
Quantity	Part(s) Number	Parts Replaced / Supplied
1		wipe block
1		Isolation chamber

Customer acknowledged that this unit is operational and that the job has been satisfactorily completed

Nur Atiqah bt Mohd Yusuf
Juruteknologi Makmal Perubatan U29
Klinik Kesihatan Sri Medan, Batu Pahat

Customer's signature and company chop

DATE: 26/6/18

for HISTOCENTER (M) SDN BHD

Serviced by

**HISTOCENTER (M) SDN BHD
MACHINE MAINTENANCE CHECKLIST**

Preventive Maintenance Service For Mindray Hematology Analyzer

CUSTOMER : Klinik Kesihatan Sri Medan

MODEL: BC-30s

DATE : 26/6/2018

SERIAL NO: TH-73001867

CHECK LIST

Work Station

1. PC Assembly

PASS

FAIL

☒

☐

2. Printer

☒

☐

3. UPS

☒

☐

4. Reagent and Waste Tubing

☒

☐

Main Unit

CHECK

FAIL

Overview of Instrument Performance

1. Calibration & QC results

☒

☐

Test Results

☒

☐

Log File

☒

☐

Remark :

2. Analyzer Main Unit

CLEAN

REPLACED

Wipe Block (6 months)

☐

☒

Probe Wipe Clamp

☒

☐

Pinch Valve Tubing (BC-5150)

☒

☐

Waste Pump Tubing T68/T68 (BC-5150)

☒

☐

Isolation Chamber (12 months)

☐

☒

Check Valve

☒

☐

Air Filter (6 months)

☒

☐

Sampling Probe (12 months or 30000 times)

☒

☐

Waste Pump Filter Assembly

☒

☐

Diluent Filter with tube

☒

☐

WBC Bath

☒

☐

RBC Bath

☒

☐

**HISTOCENTER (M) SDN BHD
MACHINE MAINTENANCE CHECKLIST**

Preventive Maintenance Service For Mindray Hematology Analyzer

3 Software Maintenance

PASS

FAIL

Cleaning

☒☐

Maintenance

☒☐

Background

☒☐

Repeatability Test

☒☐

Carryover Test (When necessary)

☒☐

4 Software Version

V01.06.00.1979

Remarks:

For HISTOCENTER (M) SDN BHD

Nur Atiqah bt Mohd Yusof
Teknologi Makmal Persekitaran U29
Klinik Kesihatan Sri Medan, Johor Bahru

Customer :

Service by :

Date :

26/6/18

Date :

26/6/2018

Test Setup

Operator ID :
 Calibration Tech : DINA
 Calibration Date : 9/10/2017
 Firmware Version : 2.08.01
 Serial Number : 3226906
 Date & Time : 06/26/2018 & 12:31pm
 JOB Name :

DUT Information

Equipment Number : JHNANE005
 Serial Number : TH-73001867
 Manufacturer : Mindray
 Model : BC-30S
 Location : KK Sri Medan
 Other :

Template Information

Template Name : JHNANE005
 Pause after Power ON: NO
 Power ON delay: 2
 Test Speed: NORMAL
 Halt on Test Failure: YES
 Include Time: YES
 Insulation Resistance \ 500V
 Multi Enclosure Test : NO

Standard : IEC60601-1-2nd Ed
 Pause before Power O NO
 Power OFF delay: 0
 Test Mode: AUTO
 Multi PE Test: NO
 Multi Resstore: WORST/LAST
 Reverse Polarity: YES
 Classification: I

PLC Configuration-Applied part setup

AP Name AP Type AP Num

ESA615 Test Results

Test Name	Value	High Limits	Low Limits	Status
Protective Earth Resistance	0.162 Ohm	0.2	-	P
Insulation Resistance				P
Mains to Protective Earth	999 MOhm	-	-	P
Mains to Non-Earth Accessible Conductive Par	999 MOhm	-	-	P
Mains Voltage				P
Live to Neutral	240.3 V	-	-	P
Neutral to Earth	1.5 V	-	-	P
Live to Earth	241.2 V	-	-	P
Equipment Current	0.0 A	-	-	P
Earth Leakage Current				P
Normal Condition	13.8 uA-OI	500	-	P
Open Neutral	19.9 uA-OI	1000	-	P
Open Neutral- Reversed Mains	19.4 uA-OI	1000	-	P
Normal Condition- Reversed Mains	13.4 uA-OI	500	-	P
Enclosure Leakage Current				P

Normal Condition	0.9 μ A-OPI	100 -	P
Open Earth	1.0 μ A-OPI	500 -	P
Open Neutral	1.0 μ A-OPI	500 -	P
Open Neutral- Reversed Mains	0.9 μ A-OPI	500 -	P
Normal Condition- Reversed Mains	0.9 μ A-OPI	100 -	P
Open Earth- Reversed Mains	0.9 μ A-OPI	500 -	P



Signature

MOHD NAJIB FARHAN B. ISMAIL
 BIOMEDICAL ENGINEER
 (012-396 7048)
 QUANTUM MEDICAL SOLUTIONS SDN. BHD.

