

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.	PWO366043	Schedule Month	July 2018
Work Order Date	01/07/2018	Completed Date	10-7-18
Clinic Name	Klinik Kesihatan Sungai Rengit	Clinic Code	JHR047
BE No.	JHR008638	Distict	KOTA TINGGI
BE Category	Centrifuges, Tabletop, High-Speed,	WO Assigned to	KTG BME I
Ownership	<input checked="" type="checkbox"/> Existing Equipment	<input type="checkbox"/> Purchase	<input 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	NA
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BE Third Party Calibration / Statutory Certification Details			
Company Name	NA	Cal / Cert Date	NA
Contact Number	NA	Cal / Cert Expiry Date	NA

Action Taken <input checked="" type="checkbox"/> PM / RT job done as per checklist. Unit tested functioning good & ready to use. <input type="checkbox"/> Corrective Maintenance / <input type="checkbox"/> Breakdown BE Sticker Availability : <input checked="" type="checkbox"/> Yes / <input type="checkbox"/> NA Remarks:		Manufacturer : Hettich Model : Hematokit 210 Serial No : 0002005-02-86
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Schedule Maintenance Execution Details				
SI No	QMS Engineer / Technician Name	Date	Start Time	End Time
1	SHALWANA	10-7-18	1200	1230

Customer Remarks	NA
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Engineer / Technician Signature Name: MOORSHALWANA BINTI LATIP Designation: Biomedical Engineer Date: 16.7.18 Seal: Quantum Medical Solutions Sdn. Bhd. 012-3962428	Customer Signature Name: MASIK Designation: Perubatan U29 Date: 16.7.18 Seal: Klinik Kesihatan Sungai Rengit Pengarang
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For Internal Use

First Verification
QMS Circle Incharge

MUHD RAMADHAN B. TAMAR JAYA
 Biomedical Engineer
 Technical Service Department
 Quantum Medical Solutions Sdn. Bhd.
 Tel: +60 12-396 1697

Final Verification
QMS State Incharge



KEMENTERIAN KESIHATAN MALAYSIA

MEET Planned Preventive Maintenance Checklist
Centrifuge Tabletop, High Speed, Hematocritrifugators
BE CODE 10-779

CHECKLIST NO: CL-039-000
REV.000

PART 1 ASSET DETAILS

WORK ORDER NO ▶ PW0366043
MANUFACTURER ▶ Hettich
FREQUENCY ▶ 6 MONTHLY () 12 MONTHLY (✓)
BE NO ▶ JH2008038
MODEL ▶ Hematocrit 20
PPM HOURS ▶ 1.00

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
1.	TEESA-0110	ELECTRICAL SAFETY ANALYZER	324531	24/8/18
2	TEESA 0099	TACHOMETER	L1.310425	10/11/18
-	-	STOP WATCH	-	-

PART 4 QUALITATIVE TASKS

Tick (✓) where appropriate

	PASS	FAIL	NA
1 Chassis - verify physical integrity, cleanliness and condition	(✓) () ()		
2 Mount/ Fasteners - verify physical integrity	(✓) () ()		
3 Circuit Breaker/ Fuse - verify integrity of external circuit breaker and/or rating of external fuse	(✓) () ()		
4 Power Cord / cables - verify proper insulation and integrity	(✓) () ()		
5 Strain Relief - verify physical integrity at both ends of line cord	(✓) () ()		
6 Controls/ Switches - verify proper operation of controls	(✓) () ()		
7 Indicators/ Displays - verify proper illumination and operation	(✓) () ()		
8 Rotor Fixing Nuts - Verify integrity	(✓) () ()		
9 Chamber - Verify physical integrity	(✓) () ()		
10 Carbon Brush - Verify Integrity	(✓) () ()		

PART 5 PREVENTIVE MAINTENANCE TASKS

Tick (✓) where appropriate

	DONE	NOT DONE	NA
1 Clean exterior and interior of the equipment	(✓) () ()		

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
Centrifuges, Tabletop, High-Speed, Microhematocrit
BE CODE 10-779

CHECKLIST
REV.

WORK ORDER NO

PW036640 3

PART 6 QUANTITATIVE TASKS

Tick (✓) where appropriate

No	Description	Units / UOM	Set Values	Measured Values	Limit/Tolerance	PAS S	FAIL	NA
	Rotating speed	rpm	6000	6008	±10%	(/)	()	()
	Timer Accuracy	min	2	2		(/)	()	()

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

Mr



CORRECTIVE MAINTENANCE REQUIRED



FUNCTIONING



NOT FUNCTIONING

WORK ORDER NO

PW036640 3

NEXT PPM DATE

7/2019

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

COMPLETED BY:

Dr. NOORSHALWANA BINTI LATIP
Biomedical Engineer
Quantum Medical Solutions Sdn. Bhd.
012-3962428

DATE:

10.7.18

Test Setup

Operator ID :
 Calibration Tech : MOHANA
 Calibration Date : 24/8/2018
 Firmware Version : 2.08.01
 Serial Number : 3218071
 Date & Time : 10/07/2018 & 12:10pm
 JOB Name :

DUT Information

Equipment Number : JHR008638
 Serial Number :
 Manufacturer :
 Model :
 Location : KK SUNGAI RENGIT
 Other :

Template Information

Template Name :		Standard :	IEC60601-DIRECT
Pause after Power ON:	NO	Pause before Power OFF:	NO
Power ON delay:	2	Power OFF delay:	0
Test Speed:	NORMAL	Test Mode:	AUTO
Halt on Test Failure:	YES	Multi PE Test:	NO
Include Time:	YES	Multi Resstore:	WORST/LAST
Insulation Resistance Voltage	500V	Reverse Polarity:	YES
Multi Enclosure Test :	NO	Classification:	I

PLC Configuration-Applied part setup

AP Name	AP Type	AP Num
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ESA615 Test Results

Test Name	Value	High Limits	Low Limits	Status
Protective Earth Resistance	0.361 Ohm	0.2 -		F
Insulation Resistance				P
Mains to Protective Earth	49.0 MOhm	-		P
Mains to Non-Earth Accessible Conductive Part	999 MOhm	-		P
Mains Voltage				P
Live to Neutral	259.5 V	-		P
Neutral to Earth	5.4 V	-		P
Live to Earth	254.0 V	-		P
Equipment Current	0.0 A	-		P
Earth Leakage Current				P
Normal Condition	50.6 uA-OP	500 -		P
Open Neutral	58.9 uA-OP	1000 -		P
Open Neutral- Reversed Mains	27.4 uA-OP	1000 -		P
Normal Condition- Reversed Mains	15.4 uA-OP	500 -		P
Enclosure Leakage Current				P
Normal Condition	0.6 uA-OP	100 -		P
Open Earth	1.1 uA-OP	500 -		P
Open Neutral	0.7 uA-OP	500 -		P
Open Neutral- Reversed Mains	0.7 uA-OP	500 -		P
Normal Condition- Reversed Mains	0.6 uA-OP	100 -		P
Open Earth- Reversed Mains	0.7 uA-OP	500 -		P


 Signature