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	n/o PWO465003	Scheduled Month	January 2019
Work Order Date	n/o 01/01/2019	Completed Date	17/1/2019
Clinic Name	k/e TANJUNG RAMBUTAN	Clinic Code	PRK038
BE No	PRK001171	District	KINTA
BE Category	HEMATOLOGY ANALYZER (M)	WO Assigned to	NOOR AZARUL
Ownership	☒ Existing Equipment	☐ MEET Equipment	
BE Condition	☐ Under Warranty	☐ BER Proposed	
Work Order Type	☒ Preventive Maintenance (PM)	☐ Third Party Calibration (TPC)	
	☐ Routine Inspection (RI)	☐ Statutory Certification (SC)	

Reschedule Date	

BE Third Party Calibration / Statutory Certification Details

Company Name	n/o	Cal / Cert Date	n/o
Contact Number	n/o	Cal / Cert Expiry Date	n/o

Action Taken

PPM COMPLETED AS PER CHECKLIST.

Manufacturer : SYSMEX
Model : KX21
S/N : P6483
Purchase Date : 1/1/2000
Kewpa No: KKM/SKN/PKB/KK/02-03-07/H/10/21

Schedule Maintenance Execution Details

Sl No	QMS Engineer / Technician Name	Date	Start Time	End Time
1	AZARUL	17/1/2019	11:30	13:30

Customer Remarks
* QC MATERIAL VOLUME INSUFFICIENT TO RUN QC TEST

Engineer / Technician Signature	Customer Signature
Name	Name
Date 17/1/2019	Designation
NOOR AZARUL B AHAMAD PERAK LAB SPECIALIST Quantum Medical Solution Sdn. Bhd No 10 B, Persiaan Greentown 4c Greentown Avenue, 30450 Ipoh, Perak Tel/fax : 05-2461991 Hp : 012-3964801	Date Seal M. SHAFIQ Juruteknologi Makmal Perubatan Klinik Kesihatan Tg. Rambutan 31250 Tg. Rambutan

For Internal Use only

First Verification
QMS Circle Incharge

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-015-003
REV.000

PART 1 ASSET DETAILS

WORK ORDER NO	► n/a PW0465003	BE NO	► PRKCC1171
MANUFACTURER	► SYSMEX	MODEL	► KX21
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
	n/a	ELECTRICAL SAFETY ANALYZER	n/a	

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	Cables - verify integrity	(/)	( )	( )
4	AC Plug / Power Cord- verify Proper Insulation and integrity	(/)	( )	( )
5	Strain Relief - verify physical integrity at both ends of line cord	(/)	( )	( )
6	Fittings/ Connectors - check all fittings/connectors	(/)	( )	( )
7	Controls/Switches - verify proper operation of controls	(/)	( )	( )
8	Indicators /Displays - Verify Proper illumination and Operation	(/)	( )	( )
9	Plunger & Syringe Motor drive - Verify physical integrity and operation	(/)	( )	( )
10	Printer - Verify Operation	(/)	( )	( )
11	Rolling Pump tubing -Verify Physical Integrity	(/)	( )	( )
12	Solenoid Valve- Verify Operation	(/)	( )	( )
13	Vaccum and Pressure Pump -Verify Physical Integrity	(/)	( )	( )
a.	Vaccum =0.0333mpa (actual) Displaying 0.0320mpa	( )	( )	(/)
b.	Vaccum =0.05mpa (actual) Displaying 0.051mpa	( )	( )	(/)
14	Sample Probe - Verify Integrity	(/)	( )	( )
15	Controller Board - Verify Physical Integrity	(/)	( )	( )

PART 5 PREVENTIVE MAINTENANCE TASKS

Tick (√) where appropriate

		DONE	NOT DONE **	NA
1	Inspect / Clean exterior and interior of the equipment	(/)	( )	( )
2	Transducer Clean and Verify integrity	(/)	( )	( )
3	PPM Kits - Replace if needed	(/)	( )	( )
4	Power on Self Test (POST) -Verify Operation	(/)	( )	( )
5	Fan Filter -Clean and replace if needed	(/)	( )	( )
6	Aperture Plates - Clean and Check Condition	(/)	( )	( )
7	Diluent Syringe,Sample Syringe,Sample aspiration Probe- Clean and Check Condition	(/)	( )	( )
8	Run Auto Clean	(/)	( )	( )
9	SRV -Clean and Check Condition	(/)	( )	( )
10	Run daily Shutdown	(/)	( )	( )
11	Sample Aspiration Probe - Clean and Check Condition	(/)	( )	( )
12	Pinch Valve and Lyse pump tubing - Clean and Replace if Necessary	(/)	( )	( )
13	Waste Champer - Clean and Check Condition	(/)	( )	( )
14	Close Sample holder - Clean and Check Condition	( )	( )	(/)

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

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WORK ORDER NO ► N/A PWO 465003.

PART 6 QUANTITATIVE TASKS

Tick (√) where appropriate

No	Description	Units / UOM	Set Values	Measured Values	Limit/Tolerance	PASS	FAIL	NA
	1 Background Check							
	1.1 WBC	$x10^3$/uL	0.0	0.1	≤0.3	(/)	( )	( )
	1.2 RBC	$x10^6$ /uL	0.00	0.00	≤0.02	(/)	( )	( )
	1.3 HGB	g/dL	0.0	0.0	≤0.1	(/)	( )	( )
	1.4 PLT	$x10^3$/uL	0	0	≤10	(/)	( )	( )
	2 Pressure/Vacuum Check							
	2.1 Pressure 0.5kg/cm^2	kg/cm^2	0.50	0.53	0.4-0.6	(/)	( )	( )
	2.2 Vacuum 250mmHg	mmHg	250	256	230-270	(/)	( )	( )
	3 Run QC Test and attach printout							
	a High level					( )	( )	(/)
	b Medium Level					( )	( )	(/)
	c Low Level					( )	( )	(/)
	4 Run Precision Check					(/)	( )	( )

PART 7 ELECTRICAL SAFETY TEST

ELECTRICAL SAFETY TEST, (attach report) *NOT APPLICABLE FOR ELECTRICAL SAFETY TEST DUE TO UNIT REMAIN UNDER SOFTWARE BASE.*

Tick (√) where appropriate

Standard use : Result :

☐ IEC 60601 ☐ IEC 61010 ☐ IEC 62353 ☐ PASS ☐ FAIL ☒ NA

PART 8 NOTES

Part 5 : Item 3

As needed Maintenance

Please indicate the part number, description of PPM Kit and any repair work to be carried out (if any) :

1. Clean/Replace air filter - Replace at least once a year (part no. 443 - 2477 - 4)
2. Replace waste tubing (part no. 442 - 5340 - 413)
3. Check/Replace Dirty Tubing - Replace at least once a year (part no. 442-5055-413)
4. Check/Replace shaft fixture no. 60 and shaft no. 276

☐ CORRECTIVE MAINTENANCE REQUIRED ☒ FUNCTIONING ☐ NOT FUNCTIONING

WORK ORDER NO ► N/A NEXT PPM DATE ► JUN 2019

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

COMPLETED BY:

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Greentown Avenue, 30450 Ipoh, Perak
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DATE : 17/1/2019