

## 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.	PWO365723	Schedule Month	June 2018
Work Order Date	01/06/2018	Completed Date	4/7/18
Clinic Name	Klinik Kesihatan Batu Pahat	Clinic Code	JHR003
BE No.	JHR000008	Distict	BATU PAHAT
BE Category	Analyzers, Laboratory, Hematology,	WO Assigned to	Fahar
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	
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<b>BE Third Party Calibration / Statutory Certification Details</b>			
Company Name		Cal / Cert Date	
Contact Number		Cal / Cert Expiry Date	
<b>Action Taken</b>		Manufacturer: Sybmex	
<input checked="" type="checkbox"/> PM / RI job done as per checklist. Unit tested functioning good & ready to use.		Modal: XT-1801	
<input type="checkbox"/> Corrective Maintenance / <input type="checkbox"/> Breakdown		Serial No: 15556	
BE Sticker Availability: <input checked="" type="checkbox"/> Yes / <input type="checkbox"/> NA			
Remarks:			

<b>Schedule Maintenance Execution Details</b>				
SI No	QMS Engineer / Technician Name	Date	Start Time	End Time
	Fahar	4/7/18	1400	1600

Customer Remarks
NA

<b>Engineer / Technician Signature</b>		<b>Customer Signature</b>	
Name	MOHD NAJIB FARHAN B. ISMAIL	Name	AFIZA BINTI ABD. AZIZ
Date	4/7/18	Designation	Juruteknologi Makmal Perubatan U32 (KUP)
	BIOMEDICAL ENGINEER	Date	Klinik Kesihatan Batu Pahat
	QUANTUM MEDICAL SOLUTIONS SDN. BHD.	Seal	4/7/18

For Internal Use

Quantum Medical Solutions  
RAZILA BINTI MISKAR  
BIOMEDICAL ENGINEER

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-015-000  
REV.000

**PART 1 ASSET DETAILS**

WORK ORDER NO ▶ PWO 365723 BE NO ▶ JH000008  
MANUFACTURER ▶ Sysmax MODEL ▶ X4-1800i  
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
	TEE3A090	ELECTRICAL SAFETY ANALYZER	3226A06	9/6/18

**PART 4 QUALITATIVE TASKS**

Tick ( / ) where appropriate

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

**PART 5 PREVENTIVE MAINTENANCE TASKS**

Tick ( / ) where appropriate

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

\* 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

## 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 19

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

COMPLETED BY:

Farker  
4/12/16

DATE :



## Test Setup

Operator ID :  
 Calibration Tech : DINA  
 Calibration Date : 9/10/2017  
 Firmware Version : 2.08.01  
 Serial Number : 3226906  
 Date & Time : 07/04/2017 & 15:01  
 JOB Name :

## DUT Information

Equipment Number : JHR000008  
 Serial Number : 15556  
 Manufacturer : SYSMEX  
 Model : XT-1800i  
 Location : KK BP  
 Other :

## Template Information

Template Name : JHR000008  
 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	0.100 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	236.2 V	-	-	P
Neutral to Earth	2.3 V	-	-	P
Live to Earth	235.0 V	-	-	P
Equipment Current	0.0 A	-	-	P
Earth Leakage Current				P
Normal Condition	14.3 uA-OI	500 -		P
Open Neutral	20.0 uA-OI	1000 -		P
Open Neutral- Reversed Mains	21.1 uA-OI	1000 -		P
Normal Condition- Reversed Mains	14.5 uA-OI	500 -		P
Enclosure Leakage Current				P



Normal Condition	0.1 $\mu$ A-OPI	100 -	P
Open Earth	14.5 $\mu$ A-OI	500 -	P
Open Neutral	0.2 $\mu$ A-OPI	500 -	P
Open Neutral- Reversed Mains	0.1 $\mu$ A-OPI	500 -	P
Normal Condition- Reversed Mains	0.6 $\mu$ A-OPI	100 -	P
Open Earth- Reversed Mains	0.8 $\mu$ A-OPI	500 -	P

LM

Signature

WORLD NARCOTICS BOARD  
BIRMINGHAM, ALABAMA  
JULY 24, 1968  
QUANTUM MEDICAL CORPORATION, INC.

