



# Scheduled Maintenance Work Order

Work Order No	n/a pwo 405095	Scheduled Month	January 2019
Work Order Date	n/a 01/01/2019	Completed Date	18/1/2019
Clinic Name	k.k GUNUNG RAPAT	Clinic Code	PRK 031
BE No	PRK006585	District	KINTA
BE Category	HEMATOLOGY ANALYSER(M)	WO Assigned to	NEER AZARUL
Ownership	<input checked="" type="checkbox"/> Existing Equipment	<input type="checkbox"/> MEET Equipment	
BE Condition	<input type="checkbox"/> Under Warranty	<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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## BE Third Party Calibration / Statutory Certification Details

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

## Action Taken

PPM COMPLETED AS PER CHECKLIST.

Manufacturer: SUSUMEX  
 Model: XP100  
 S/N: A1265  
 Purchase Date: 16/7/2012  
 Kewpa No: JKN PRK1059201/14/12  
 202

## Schedule Maintenance Execution Details

SI No	QMS Engineer / Technician Name	Date	Start Time	End Time
1	NOOR AZARUL	18/1/2019	14:30	16:30

## Customer Remarks

\* UNIT HAS BEEN LOCATED AT K.K GUNUNG RAPAT.

## Engineer / Technician Signature

Name: NOOR AZARUL B AHAMAD  
 PERAK LAB SPECIALIST  
 Quantum Medical Solution Sdn. Bhd.  
 No 10 B, Persiaan Greentown 4d  
 Greentown Avenue, 30450 Ipoh, Perak  
 Tel/fax : 05-2461991 Hp : 012-39648013

Date: 18/1/2019

## Customer Signature

Name: SURAYA BINTI MAT ALI  
 Designation: JURUTEKNOLOGI MAKMAL PERUBATAN U24  
 Date:   
 Seal:

For Internal Use only

First Verification  
QMS Circle InchargeFinal Verification  
QMS State Incharge

ID. BLANK CHECK

Date 18/01/2019  
Time 16:22  
Mode

WBC  $0.1 \times 10^9/\mu\text{L}$   
RBC  $0.00 \times 10^6/\mu\text{L}$   
HGB 0.0 g/dL  
HCT 0.0 %  
MCV --- fL  
MCH --- pg  
MCHC --- g/dL  
PLT  $0 \times 10^9/\mu\text{L}$   
LYM% --- %  
MXD% --- %  
NEUT% --- %  
LYM# ---  $\times 10^3/\mu\text{L}$   
MXD# ---  $\times 10^3/\mu\text{L}$   
NEUT# ---  $\times 10^3/\mu\text{L}$   
RDW-SD --- fL  
RDW-CV --- %  
PDW --- fL  
MPV --- fL  
P-LCR --- %  
PCT --- %

File 2  
LotID 90050822  
Exp. 2019/04/13  
Date 18/01/2019  
Time 16:28

WBC  $7.5 \times 10^9/\mu\text{L}$   
RBC  $4.33 \times 10^6/\mu\text{L}$   
HGB 12.4 g/dL  
HCT 33.2 %  
MCV 76.7 fL  
MCH 28.6 pg  
MCHC 37.3 g/dL  
PLT  $212 \times 10^9/\mu\text{L}$   
LYM% 29.5 %  
MXD% 11.2 %  
NEUT% 59.3 %  
LYM#  $2.2 \times 10^3/\mu\text{L}$   
MXD#  $0.8 \times 10^3/\mu\text{L}$   
NEUT#  $4.5 \times 10^3/\mu\text{L}$   
W-SMV 61.2 fL  
W-LMV 192.7 fL  
RDW-SD 35.7 fL  
RDW-CV 11.2 %  
PDW 9.2 fL  
MPV 10.0 fL  
P-LCR 21.0 %  
PCT 0.21 %

Operator

ID. QC01  
Date 18/01/2019  
Time 16:25  
Mode QC

WBC  $3.3 \times 10^9/\mu\text{L}$   
RBC  $2.37 \times 10^6/\mu\text{L}$   
HGB 5.9 g/dL  
HCT 16.5 %  
MCV 69.6 fL  
MCH 24.9 pg  
MCHC 35.8 g/dL  
PLT  $56 \times 10^9/\mu\text{L}$   
LYM% 20.9 %  
MXD% 9.8 %  
NEUT% 69.3 %  
LYM#  $0.7 \times 10^3/\mu\text{L}$   
MXD#  $0.3 \times 10^3/\mu\text{L}$   
NEUT#  $2.3 \times 10^3/\mu\text{L}$   
RDW-SD 36.3 fL  
RDW-CV 12.7 %  
PDW 8.4 fL  
MPV 9.6 fL  
P-LCR 17.6 %  
PCT 0.05 %

File 3  
LotID 90040823  
Exp. 2019/04/13  
Date 18/01/2019  
Time 16:30

WBC  $18.5 \times 10^9/\mu\text{L}$   
RBC  $5.36 \times 10^6/\mu\text{L}$   
HGB 16.7 g/dL  
HCT 44.4 %  
MCV 82.8 fL  
MCH 31.2 pg  
MCHC 37.6 g/dL  
PLT  $492 \times 10^9/\mu\text{L}$   
LYM% 33.6 %  
MXD% 15.5 %  
NEUT% 50.9 %  
LYM#  $6.2 \times 10^3/\mu\text{L}$   
MXD#  $2.9 \times 10^3/\mu\text{L}$   
NEUT#  $9.4 \times 10^3/\mu\text{L}$   
W-SMV 62.0 fL  
W-LMV 193.2 fL  
RDW-SD 35.8 fL  
RDW-CV 10.9 %  
PDW 9.2 fL  
MPV 10.0 fL  
P-LCR 20.7 %  
PCT 0.49 %



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 ▶ *210 1020 405295* BE NO ▶ *PRK 006585*  
MANUFACTURER ▶ *gusmex* MODEL ▶ *xpico*  
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
	<i>210 1020</i>	ELECTRICAL SAFETY ANALYZER	<i>210 1020</i>	

**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 ***	( / )	( )	( )				
5 Clean sampling mechanism	( / )	( )	( )				

Notes:

\* For all Parts, NA is defined as NOT APPLICABLE

\*\* If you have ticked 'NOT DONE', then justify in Part 8

\*\*\* Choose Whichever Applicable

 <b>KEMENTERIAN KESIHATAN MALAYSIA</b> MEET Planned Preventive Maintenance Checklist Analyzers, Laboratory, Hematology, Cell Counting, Automated (Medium) BE CODE : ME-009		CHECKLIST NO: CL-015-000 REV.000																																																																																																												
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<div style="position: relative;"> <div style="position: absolute; top: 0; right: 0; font-size: 0.8em;">Tick (✓) where appropriate</div> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>No</th> <th>Description</th> <th>Units / UOM</th> <th>Set Values</th> <th>Measured Values</th> <th>Limit/Tolerance</th> <th>PASS</th> <th>FAIL</th> <th>NA</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Backlog check - RFTG</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2.</td> <td>QC TEST - RFTG</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table> </div>			No	Description	Units / UOM	Set Values	Measured Values	Limit/Tolerance	PASS	FAIL	NA	1.	Backlog check - RFTG								2.	QC TEST - RFTG																																																																																								
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ELECTRICAL SAFETY TEST, (attach report) Tick (✓) where appropriate Standard use : <div style="display: flex; justify-content: space-between;"> <div>Result :</div> <div> <input type="checkbox"/> IEC 60601             <input type="checkbox"/> IEC 61010             <input type="checkbox"/> IEC 62353         </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div><input type="checkbox"/> PASS</div> <div><input type="checkbox"/> FAIL</div> <div><input checked="" type="checkbox"/> NA</div> </div>																																																																																																														
<b>PART 8 NOTES</b>																																																																																																														
*not applicable for electrical safety test due to unit running under software 8086																																																																																																														
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PPM has been performed in accordance to the checklist and the equipment is functioning to the intended purpose.

CORRECTIVE MAINTENANCE REQUIRED ☐     
 FUNCTIONING ☒     
 NOT FUNCTIONING ☐

WORK ORDER NO. 18/12/2019     
 NEXT PPM DATE July 18