MEMBEKAL, MENGHANTAR, MENGUJI DAN MENTAULIAH PERALATAN PERUBATAN BAGI SATU (1) UNIT HAEMATOLOGY ANALYZER SYSMEX (CLOSED SYSTEM) FOR FBC UNTUK JABATAN PATOLOGI, HOSPITAL SIBU, SARAWAK BAGI TAHUN 2014

NO. SEBUTHARGA: HS/Q081/2014

NO.	SPECIFICATION	QTY	COMPLIANCE TO REQUIREMENTS: YES / NO	COMMENTS / PROPOSED SPECIFICATION
1.0	The supplier has to provide 1 unit of "Fully Automated Haematology Analyzer 5 Parts Differential" with Closed Mode System and option to upgrade with Sample Loader (Auto Sampler).			
2.0	The supplier shall provide analyser which can measure/calculate the following parameters.			
2.1	Must be able to measure RBC, WBC and PLT using absolute counting method.			
2.2	Must be able to measure HCT			
2.3	Must be able to calculate RBC indices automatically which includes MCV, MCH and MCHC.			
2.4	Must be able to give both RDW-SD and RDW-CV parameters in which RDW-SD is an essential tool for Thlassaemia screening.			
2.5	Must be able to measure HGB using non-cyanide reagents.			
2.6	Must be able to give separate Neutrophil counts (NEUT% & NEUT#) which is essential for diagnosis of inflammation specific to bacterial infection.			
2.7	Must be able to give separate Lymphocyte counts (LYMPH% & LYMPH#) which is essential for diagnosis of viral infection.			
2.8	Must be able to give separate Monocyte counts (MONO% & MONO#).			
2.9	Must be able to give separate Eosinophil counts (EO% & EO#).			
2.10	Must be able to give separate Basophil counts (BASO% & BASO#).			
2.11	Must be able to calculate PLT indices automatically which includes PDW, MPV, P-LCR and PCT which is essential for thrombocytopenia screening.			
2.12	Able to detect immature WBC which includes promyelocytes, metamyelocytes and myelocytes (IG% & IG#).			
3.0	The supplier shall provide analyzer with a technology which able to detect cell size information, internal cell structure and RNA/DNA information of each particles.			

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4.0	Supplier shall provide the analyzer's performance which includes CV, Linearity and carry cover. The required performance characteristics are:			
4.1	**Linear ranges:-**			
4.1.1	WBC : 0 - 400 x 10^3/µL			
4.1.2	RBC : 0 - 8.0 x 10^6/µL			
4.1.3	PLT : 0 - 5000 x 10^3/µL			
4.1.4	HB : 0 - 25.0 g/dL			
4.2	**Precision:-**			
4.2.1	WBC : CV not more than 3.0%			
4.2.2	HB : CV not more than 1.5%			
4.2.3	RBC : CV not more than 1.5%			
4.2.4	HCT : CV not more than 1.5%			
4.2.5	MCV : CV not more than 1.5%			
4.2.6	MCHC : CV not more than 2.0%			
4.2.7	PLT : CV not more than 4.0%			
5.0	The units must have software to control the analyzer. The software must be user-friendly, upgradable, contains sufficient information to help user to validate the sample. The data of patient can be viewed individually and collectively and can be stored at least **10,000 sample data including scattergram and histogram**. This patient's data can be printed directly from the software.			
6.0	The software must also have a section of QC monitoring with LJ Chart and should be able to alert the user on any outlier's result.			
7.0	The analyzer shall have the capability for real time On-line quality control (QC) program.			

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8.0	The software should be able to transmit sample's result, scattergram, histogram and flagging information into the current LIS system. It must be able to track patient's delta check.			
9.0	The units must have the capability to be upgraded with a Sample Loader (Auto Sampler)			
10.0	Sample Mode must be closed mode. This is to protect samples comes into contact with operator.			
11.0	Sample volume			
11.1	Small sample volume (20 uL) in all modes			
12.0	Throughput:-			
12.1	Full Blood Count - at least 60 samples/hour			
13.0	Analyzer Power Requirement.			
13.1	AC100 to 240V (50 / 60 Hz)			
14.0	The analyser shall be supplied with a 15 minute UPS			
15.0	User can choose random discrete mode for analysis: i) CBC ii) CBC + DIFF			
16.0	**LAIN-LAIN SYARAT YANG BERKAITAN (OTHER REQUIREMENTS)**			
16.1	Shelf Life			
16.1.1	The shelf life of reagent must be at least six (6) months (except QC material) from the date the reagent is delivered to the user. Failing this the user has the right to			

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	reject the shipment and demand immediate replacement			
16.2	Stability of the Reagnet			
16.2.1	Suppliers are required to provide data on the stability of their reagent under different temperatures as well as recommended temperatures and conditions for transport and storage to ensure optimal performance under prevailing conditions in Malaysia.			
16.2.2	Recommended storage temperature must be clearly marked on the outside of every pack of reagent and on every box of reagent.			
16.2.3	The reagent must be stable until the expiry date. Otherwise, the user has the right to return the reagent. The supplier then shall provide replacement reagent.			
16.3	Labeling			
16.3.1	The label on the box is printed in water proof ink or any other acceptable technique and should not be easily detached.			
16.3.2	The label on each individual box shall state following:- ⌑ Item Name ⌑ Manufacturer and Country of origin ⌑ Lot Number ⌑ Storage conditions ⌑ Manufacturing date ⌑ Expiry Date			
16.4	Packing Materials			
16.4.1	Packing material used must be able to maintain the optimal			

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	temperatures throughout the journey.			
16.5	Breakdown and service support			
16.5.1	1 Year instrument warranty should be provided with at least two (2) free Preventive Maintenance Services			
16.5.2	Supplier shall bear the cost and be responsible for the shipment, transportation and installation of the equipment			
16.5.3	Supplier shall do free calibration for the analyzer during warranty period			
16.5.4	Supplier shall provide list of engineers and application specialist involved in maintaining the analyzer.			
16.5.5	Supplier shall provide placement list for the offered model.			
16.5.6	Supplier shall provide external quality program (EQA) for the offered model			
16.6	Training			
16.6.1	Supplier shall provide Training and support to staff on reagent preparation, storage and resolve and problem related to reagent performance or analyzer performance without any extra cost.			
16.6.2	The objective of training is to ensure that staffs are trained so as to enable them of effectively carry out the tests. The supplier must conduct refresher training at leat once a year.			

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16.7	Place of delivery			
16.7.1	Jabatan Patologi Hospital Sibu, Isolation Lab			
17.0	Warranty Agreement			
17.1	ONE (1) year from the date of testing and commissioning against manufacturer's defect including the accessories			
17.2	2 times free PPM (Preventive Maintenance) within warranty period			
17.3	Breakdown respond time should be within 48 hours during warranty period			
18.0	Service			
18.1	Must be able to offer local support with repair & service centre in Sarawak			
18.2	Supplier have to provide at least two (2) copies of Operation Manuals in both soft and hard copy during testing and commissioning.			
18.3	Supplier has to provide at least two (2) copies of Instructions for use, manuals with Troubleshoot Guide, Article Numbers Catalogue and ordering information.			
19.0	Training			
19.1	2x On site training by application specialist and factory trained personnel on operation, clinical applications, running self-test and basic trouble shooting			
20.0	Other			
20.1	Performance test and electrical safety test (if applicable) must be performed on-site during T&C and warranty PPM. A comprehensive report must be given and signed by both end-user and BEMS personal on the spot.			
20.2	Electrical power cable (if applicable) must be of IEC standard and with strain relief on both ends of line. Modified power cable is not accepted.			
20.3	The vendor must inform end- user, Unit Perolehan & hospital support service (BEMS/FEMS/eFEMS) at least one (1) week before the T&C and warranty PPM date.			