ANNEX II + III: TECHNICAL SPECIFICATIONS + TECHNICAL OFFER

Contract title: Supply of equipment for relevant institutions within the SoHo System in Serbia

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Columns 1-2 should be completed by the contracting authority
Columns 3-4 should be completed by the tenderer
Column 5 is reserved for the evaluation committee

Annex III - the contractor's technical offer

The tenderers are requested to complete the template on the next pages:

- Column 2 is completed by the contracting authority shows the required specifications (not to be modified by the tenderer),
- Column 3 is to be filled in by the tenderer and must detail what is offered (for example the words ‘compliant’ or ‘yes’ are not sufficient)
- Column 4 allows the tenderer to make comments on its proposed supply and to make eventual references to the documentation

The eventual documentation supplied should clearly indicate (highlight, mark) the models offered and the options included, if any, so that the evaluators can see the exact configuration. Offers that do not permit to identify precisely the models and the specifications may be rejected by the evaluation committee.

The offer must be clear enough to allow the evaluators to make an easy comparison between the requested specifications and the offered specifications.

Unless otherwise specified, the requirements in these Technical Specifications are presented as a minimum standard which the offered goods must meet.

LOT 1 - Support Equipment for Blood Safety and Organ Establishment

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
1.1	**EEG MONITOR** **Quantity: 9**			

	• Isolated power supply
	  o Number of bipolar channels: 32
	  o 16-bit analogue-to-digital conversion
	  o Processor: CPU 2.16 GHz
	  o Operating system: XP Professional/Windows 7 or equivalent
	  o Network: LAN
	  o Display: Touch screen 19 inch
	  o Screen resolution: 1280x1024
	  o Integrated audio speakers
	  o Hard disk capacity: 250 GB
	  o Input/output ports: 4 USB ports
	  o Firmware ports
	  o P / S2 mouse and keyboard ports
	  o VGA ports
	  o Ability to monitor ECG signal, respiration and temperature
	  o Amplifier
	  o Total number of input channels:
	• 35 (minimum 32 EEG channels)
	  o 23 monopole AC inputs (EEGs)
	  o 9 bipolar AC or DC (EEG / Poly)
	  o 1 DC high-level input
		Manufacturer's name:
		
		Product type, model:
		
		Specifications:		

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	○ 1 SpO2 ○ Marking a Patient Event ○ Input impedance: > 100MΩ ○ Differential input impedance > 40MΩ ○ CMRR > 110dB / 50Hz ○ HW channel characteristic: DC Offset Tolerance ± 2200mV; Max. input voltage ± 5mV; Frequency range 0.16-500 Hz ○ Polygraph and EEG electrodes with touch guard ○ Passive wrist extension to patient (optional) ○ Fluorescent label for amplifier ○ An integrated depiction of the patient side impedance ○ Unblock function on all EEG and polygraph channels ○ Computer connection: LAN Ethernet type ○ Incorporated UTP cable to connect to amplifier-computer ○ Base for the preamplifier ○ Sampling frequency: min. 2000-125 Hz ○ Sampling resolution: min 16bit ○ Filtering and voltage sensitivity: regulated by the software ○ Mains filter: 50Hz			

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	○ Anti-aliasing filter - cut off frequency: 500 Hz ○ Wheel strollers for the accommodation of the device ○ Digital video camera for day and night recording ○ Camera mount for mounting on monitor carts ○ Program support: • Microsoft Office 2010 (Word, Excel, Outlook, Power Point) or equivalent • The ability to export / import data into EDF and ASCII • The ability to read the results on any MS Windows compatible PC • Archiving to a CD or DVD media • Accessibility to cloud storage ○ EEG signal recording program ○ EEG signal reading program ○ IP EEG Server - remote analysis of recorded EEG finds over the Internet ○ Patient and Record Database Management Program (ODBC Compatibility) ○ Unlimited number of possible edits ○ Unlimited number of displayed channels on the screen ○ Additional mark-up of the event by a doctor who is watching the			

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	footage o Subsequent event marking on the recording while recording o Continuous electrode impedance check o Software's Calibrating Polygraph Signals (Inclination / Offset Conversions) o Marking events generated by a patient in Serbian language o Measurement of the height, period and frequency of the part of the EEG wave o EEG program support o Amplitude Integrated Encephalogram (AIE) or Equivalent o Total Band Power or equivalent o Absolute Band Power or Equal o Relative Band Power or Equivalent o Envelope or equivalent o Frequency Ratios (Alpha / Delta, etc.) or equivalent o Generic (e.g. SaO2, pulse) or equivalent o Peak Frequency or Equivalent o Spectral Edge or equivalent o Spectral Entropy or Equivalent o Spectrogram or equivalent o Inter Burst Interval or Equal			

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	○ Burst Rate or Equivalent ○ Burst Suppression Ratio or Equivalent ○ Provision of upgrade conditions - trend display software ○ Amplitude Integrated Encephalogram (AIE) or Equivalent ○ Wireless Wi-Fi (802.11) 32 or 64 channel amplifier (including 9 bipolar channels) and SpO2 input. The amplifier must have internal memory to ensure signal recording and when the amplifier exits the recording station range • EEG accessories: ○ EEG cup electrode, 12 pcs ○ Adapter for Hook Plug on Amplifier, 1 pc ○ EEG gel, 1 pc ○ Abrasive liquid, 1 pc ○ Needles (2 pcs) and gel applicator (1 pc)			
1.2	**MOBILE DIGITAL TCD DEVICE FOR MONITORING AND DETECTION OF EMBOLY** **Quantity: 5**			
	• Digital Doppler • Portable TCD device with a touch screen, 17"diagonal, minimum resolution of			

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	1920x1080 • The screen can be used as a tablet • Detachable wireless keypad • Doppler channels: 2 • Spectral windows: 9 • Measured speed: 1200 cm / s • Integrated CO2 module • Remote control • Simultaneous management and Windows operating interface or similar and Doppler device • Export findings to ASCII mode • Exports of raw data • The remote control behaves like a computer mouse • The software runs under Windows 8 operating system • Probe holder • Internal DWD-RW • 6 USB ports • HD 750 GB minimum • LAN (Ethernet) Interface: 10/100/1000 Mbit • Doppler frequencies: 1, 2, 2 + 2.5 MHz PW; 4, 8 MHz PW / CW; 16 MHz PW • Probes (manual): 2 MHz, 1 pcs • Doppler M-Mod: Minimum 8000 depth "Gates"; Audio playback; Continuous shooting of the spectrum • Min. 8 analog inputs			

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	• Min. 4 analog outputs • Routine Search Software • Binary Monitoring Software (2-channel) • Unilateral monitoring software (1-channel) • Software for automatic differentiation of emboli • Evoke Flow testing software • CO2 measurement software • DICOM software • Complete patient databases and reading findings on any PC compatible PC • Open License (Unprotected) Software for Work and Analysis on Any and Limitless Number of Windows-Based Computers Accessories: • Monitoring set with mandatory features: • Two (2) separate 2MHz monitoring probes and two (2) multiple frequency probes (2 + 2.5 MHz) for monitoring and differentiating the emboli • Optional 2MHz compatible magnetic resonance probes • Two (2) special fasteners for monitoring probes • Weight without probe maximum 100 g • The headband can be fastened to three different positions • For head sizes ranging from 55 to 75 cm • The tape is made of biocompatible			

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	plastics • Laser printer • Housing stroller			
1.3	**AUTOMATED SYSTEM FOR BLOOD GROUP SEROLOGY TESTING (throughput min. 150 mandatory tests/hour)** **Quantity: 1**			
	• Analysis section with all the necessary parts and standards for its installation • Data processing section containing: PC with MS Windows compatible operational system, printer, LCD monitor, interface to the HOST computer system • Fully automated Start-up, End Wash and Shut-down • Agglutination method on micro plates • Results automatically calculated safety checks on each result. Results editing with password protected. Manual data input • Clot and bubble detection • Pipetting and dispensing liquid system pressure sensors • Malfunctions flagged • Availability for working with user-defined reagents for ABO typing, • Rh typing and Kell typing. • Testing parameters: A, B, O blood types, Rh blood types, Kell blood type;			

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	• Irregular antibody screening performed by IAT to determined clinical significant antibodies (including LISS/Coombs solid phase,method). • Samples throughput: 150 samples/ hour • Automatic recognition of plasma/serum or blood cells, • Automatic clot detection for plasma/serum. • Raw data storage: Availability as color digital images of the agglutination plates, the view of each agglutination pattern as a single well or microplate overview on screen. The images should be stored on hard drive or DVD, or printed out.			

Installation and other services for Lot No1

Specifications Required		Specifications Offered	Notes, remarks, ref to documentation	Evaluation Committee's notes YES/NO
Installation	Installation performed by contractor or authorised service provider; All the equipment must include all necessary parts and standards for its installation			
Testing	Testing of all basic function on a set of producer's standard samples commonly used for the corresponding instrument.			
Education	Theoretical education about basic functions of instrument, software and maintenance in Serbian or interpretation should be provided for 2 doctors and 3 technicians during 5 days performed by a manufacturer's licensed instructor no sooner than 1 month before installation.			
Start-up Training	Practical start-up training for 5 end users after installation and testing in all basic functions of the instrument on set of standard samples, commonly used for the corresponding instrument . Duration of training 1 day.			
Manuals	Instruction manual in Serbian			
Certificates and documentation	CE mark; Certificates conform to standards as specified in EU Directive 2002/98/EC; GMP (Good Manufacturing Practice)documentation; all in English language.			

Specifications Required		Specifications Offered	Notes, remarks, ref to documentation	Evaluation Committee's notes YES/NO
Warranty	365 days after provisional acceptance in accordance with the conditions laid down in Article 32 of the General Conditions.			

Annex II + III: Technical Specifications + Technical Offer - part II – Place of delivery/Acceptance

Item	ARTICLE	Place of acceptance
Item 1-3	**All items**	EQUIPMENT FOR TRANSFUSION AND TRANSPLATATION ESTABLISHMENT ***For the Transfusion Establishment, exact number the place of acceptances is 1:*** ***1. Blood Transfusion Institute of Serbia, Sveti Sava str.39, 11000 Belgrade*** ***For the Transplantation Establishment, exact number of the place of acceptances is 5:*** ***1. University Clinical Center of Serbia, Pasterova str. 2, 11000 Belgrade;*** ***2. University Clinical Center Nis, Bulevar Dr Zorana Djindjica str.48, 18000 Nis;*** ***3. Clinical Center of Vojvodina, Hajduk Veljkova str. 1-9, 21000 Novi Sad;*** ***4. University Children's Clinic, Tiršova str.10, 11000 Belgrade;*** ***5. Military Medical Academy, Crnotravska str. 17, 11000 Belgrade.***
