

NOTIS PEMBELIAN PERALATAN 2/09(RMK9)

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UNIVERSITI SAINS MALAYSIA
PUSAT PENGAJIAN SAINS PERUBATAN

Tarikh Buka : 15 Mac 2009

Tarikh Tutup : 29 Mac 2009

Bil.	Nama Alatan	Kuantiti
1.	<p>A) <u>Item</u> LIQUID NITROGEN TANK</p> <p>B) <u>Description</u> Liquid nitrogen tank for cryo storage of materials</p> <p>C) <u>Essential Features</u></p> <ul style="list-style-type: none">- constructed of aluminium- have dual handles on top for lifting tank- have pressure dispenser and dipper for small volume withdrawals- have roller base to hold tank- have pouring trolley <p>D) <u>Technical Specifications</u></p> <p>Capacity : 30 liters or more Static Holding Time (days) : 100 or more Neck Diameter (mm) : 50 or more</p> <p>E) <u>Essential Components & Accessories</u></p> <p>i) Main tank unit</p> <p>ii) Standard accessories (1 unit each) including :</p> <ol style="list-style-type: none">1) roller base2) gloves (1 pair)3) stainless steel delivery hoses (at least 1.5 metre long)4) adaptors for connecting standard hose5) dispensing lance with anti-splash shield6) stainless steel dipper / ladle7) safety relief valve assembly8) level measuring stick (0 – 100 cm or more)9) stainless steel basket for immersion of 0.5 – 2.0 ml cryovials <p>F) <u>Other Information & Instructions</u></p> <ul style="list-style-type: none">- The equipment should be installed and made fully functioning upon commissioning with operating manual provided.- Comprehensive training should be provided for operation, maintenance and troubleshooting.	1

	<ul style="list-style-type: none"> - Equipment supplied should be warranted against manufacturing defects (including spare parts replacement) for at least 12 months from date of commissioning. - The equipment must be brand new with proper serial number to prove it. - <u>Original</u> catalogues / brochures in English should be provided when submitting quotation. 	
2.	<p>A) <u>Item</u></p> <p>Hot Air Oven</p> <p>B) <u>Description</u></p> <p>Bench-top dual purpose oven with incubator functions for laboratory use.</p> <p>C) <u>Essential Features</u></p> <ul style="list-style-type: none"> - Must be capable of setting higher temperatures for oven or sterilizer use and lower temperatures for standard incubator usage. - Control system must consist of thermostat and independent overheat thermostat - Have microprocessor digital controller with LED display of temperature - Exterior constructed from steel sheet with powder coated paint - Interior chamber made of stainless steel <p>D) <u>Technical Specifications</u></p> <p>Capacity : 75 liters or more Temperature range : Ambient + 10 °C to 200 °C or more Temperature fluctuation : ± 0.25 °C or less at 37 °C Shelves : 2 or more Power requirements : 220 – 240 V/ 50 – 60 Hz</p> <p>E) <u>Essential Components & Accessories</u></p> <ol style="list-style-type: none"> i) Main unit ii) Standard accessories including shelves <p>F) <u>Other Information & Instructions</u></p> <ul style="list-style-type: none"> - The equipment should be installed and made fully functioning upon commissioning with operating and service manuals provided. - Comprehensive training should be provided for operation, maintenance and troubleshooting. - Equipment supplied should be warranted against manufacturing defects (including spare parts replacement) for at least 12 months from date of commissioning. - Free preventive maintenance service, at least 1 x 6 monthly during the warranty period. - The equipment must be brand new with proper serial number to prove it and must not be a reconditioned instrument. - <u>Original</u> catalogues / brochures in English should be provided when submitting quotation. 	1

3.

A) Item

Blood Rotater Machine (Type 1) – 2 units

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B) Description

Low profile roller unit for performing agitation of small tubes, blood products and Other containers in diagnostic and biological research laboratories

C) Essential Features

- consist of horizontal rollers for holding, agitating and mixing tubes
- can operate on benchtops, in high humidity, CO₂ incubators, ovens and in refrigerated units
- have motor and drive systems that generate little or no heat

D) Technical Specifications

Rollers : (i) Length : 10 inches or more
(ii) Number : 6 or more
(iii) Speed : can control within 1 – 30 rpm or more

Operating Temperature : 0 to 60 °C or more
Weight : 5 kg or less
Power requirements : 220 – 240 V/ 50 – 60 Hz

E) Essential Components & Accessories

- i) Main unit
- ii) Standard accessories

F) Other Information & Instructions

- The equipment should be installed and made fully functioning upon commissioning with operating manual provided.
- Comprehensive training should be provided for operation, maintenance and troubleshooting.
- Equipment supplied should be warranted against manufacturing defects (including spare parts replacement) for at least 12 months from date of commissioning.
- Free preventive maintenance service, at least 1 x 6 monthly during the warranty period.
- The equipment must be brand new with proper serial number to prove it and must not be a reconditioned instrument.
- Original catalogues / brochures in English should be provided when submitting quotation.

A) Item

Blood Rotater Machine (Type 2) – 1 unit

B) Description

High speed orbital rotator / shaker unit for mixing of small blood collection tubes, Microtubes and other containers in diagnostic and biological research laboratories

C) Essential Features

- able to shake and mix various sized tubes (1.5 ml, 2.0 ml, 15 ml) by slow to high speed circular shaking motions
- have continuous operation capability
- have interchangeable attachments for holding different size tubes
- can operate on benchtops, in high humidity and in refrigerated units
- have speed display

D) Technical Specifications

Speed range : 0 - 2000 rpm or more
 Orbital diameter : 4 mm or more
 Shaking weight (maximum) : 2 kg or more
 Operating temperature range : 5 °C or lower to 40 °C or more
 Power requirements : 220 – 240 V/ 50 – 60 Hz

E) Essential Components & Accessories

- Main unit
- Attachment accessories for holding Eppendorf type tubes (1.5 ml) and tubes with diameter of approximately 16 mm.

F) Other Information & Instructions

- The equipment should be installed and made fully functioning upon commissioning with operating manual provided.
- Comprehensive training should be provided for operation, maintenance and troubleshooting.
- Equipment supplied should be warranted against manufacturing defects (including spare parts replacement) for at least 12 months from date of commissioning.
- Free preventive maintenance service, at least 1 x 6 monthly during the warranty period.
- The equipment must be brand new with proper serial number to prove it and must not be a reconditioned instrument.
- Original catalogues / brochures in English should be provided when submitting quotation.

A) Item

Blood Rotater Machine (Type 3) – 1 unit

B) Description

Multi-function rotator unit for rocking and 3-D gyratory motion mixing of small blood collection tubes, flat flasks and other containers in diagnostic and biological research laboratories

C) Essential Features

- have large platform to accommodate a number of samples
- platform angle adjustable by hand
- have continuous operation capability
- can operate on benchtops, in high humidity, CO₂ incubators and in refrigerated units
- have digital speed control and built-in digital timer

D) Technical Specifications

	<p>Speed range : 5 – 70 rpm or more Angle of tilt : 3 – 12⁰ or more Platform dimension (W x L) : 350 x 350 mm or bigger Operating temperature range : 5⁰ C or lower to 40⁰ C or more Maximum load : 10 kg or more Power requirements : 220 – 240 V/ 50 – 60 Hz</p> <p>E) <u>Essential Components & Accessories</u> i) Main unit ii) Standard accessories</p> <p>F) <u>Other Information & Instructions</u> - The equipment should be installed and made fully functioning upon commissioning with operating manual provided. - Comprehensive training should be provided for operation, maintenance and troubleshooting. - Equipment supplied should be warranted against manufacturing defects (including spare parts replacement) for at least 12 months from date of commissioning. - Free preventive maintenance service, at least 1 x 6 monthly during the warranty period. - The equipment must be brand new with proper serial number to prove it and must not be a reconditioned instrument. - <u>Original</u> catalogues / brochures in English should be provided when submitting quotation.</p>	
<p>4.</p>	<p>FLAME PHOTOMETER</p> <p>DESCRIPTION</p> <p>Single channel flame photometers for use in clinical determinations of Na, K and Li.</p> <p>ESSENTIAL FEATURES</p> <p>Direct reading digital displayed in mmol/l.</p> <p>TECHNICAL SPECIFICATIONS</p> <ul style="list-style-type: none"> - Ranges: 120-160mmol/l Na; 0-10.0mmol/l K - Limits of detection: Na/K <=0.2ppm; Li <=0.25ppm - Specificity: Interference from Na/K and Li equal in concentration to test element will be <0.5% - Recorder output: Nominal 1.00V for a reading of 100.0 - Electrical supply: 240 V, 50-60 Hz - Air: Moisture and oil free. 6 liter/minute at 14psi. - Fuel: Propane, butane, natural gas or L.P.G. <p>OTHER REQUIREMENTS AND INSTRUCTIONS</p> <ul style="list-style-type: none"> - The equipment should be installed and made fully functioning. - All equipments must be brand new with proper serial 	<p>1</p>

	<ul style="list-style-type: none"> - Service and operating manual should be provided. - The equipment should be warranted against manufacturing defects for a period of at least 1 year from the date of commissioning. - Free preventive maintenance service for at least twice annually during warranty period. - Training should be provided on operation, maintenance and simple troubleshooting. - The price quoted must include government tax. 	
<p>5.</p>	<p>A. ITEM</p> <p>MICRO CENTRIFUGE</p> <p>B. DESCRIPTION</p> <p>Bench top mini micro-centrifuge which must comply with the following specifications:</p> <p>C. ESSENTIAL FEATURES</p> <p>Performance:</p> <ul style="list-style-type: none"> • Max speed of 14,500rpm, max ref of 14,000g • Able to spin 12 x1.5/2 ml tubes simultaneously in a single ring • Able to accelerate to max speed in less than 13 seconds and brake to a stop from maximum speed in 12 seconds or less • timer can be set up to 99 minutes continuous • Minimal sample heating should not be more than 12°C after 20min at max speed <p>General features</p> <ul style="list-style-type: none"> • Digital display of time and speed • programmable time and speed using key pad • able to switch display between rcf and rpm speed setting • separate short spin key to spin down samples without setting timer and speed • Low noise levels less than 60db at max speed • Brushless maintenance free drive • Automatic lid release at the end of a spin • Minimal sample heating of not more than 12^De after 20min at max speed • Built-in power supply <p>Safety features:</p> <ul style="list-style-type: none"> • Must follow safety standards set by IEC 1010-2-020 • Rotor should be made of black line anodized aluminum to ensure chemical resistance • Rotor must be autoclavable at 12= for 20min to completely eliminate any contaminating material. <p>Rotor</p> <ul style="list-style-type: none"> • Should have 45° fixed angle rotor • Rotor should accommodate 12x 1.5/2ml tubes simultaneously and must come complete with stainless steel. The use of the stainless steel lid will allow for 	<p>2</p>

	<p>positioning long, spin column tubes in the rotor</p> <ul style="list-style-type: none"> Adapters should be made available to accommodate 0.2ml, OA ml, 0.5ml tubes and 0.6ml microtainers. <p>E. ESSENTIAL COMPONENTS & ACCESSORIES</p> <p>Rotor</p> <ul style="list-style-type: none"> Should have 45° angle rotor Rotor should accommodate 12 x 1.5/2 ml tubes simultaneously and must complete with stainless steel Adapters should be made available to accommodate 0.2ml, 0.3ml, 0.5ml tubes and 0.6 micro containers. <p>F. STANDARD REQUIREMENTS & INSTRUCTIONS</p> <ol style="list-style-type: none"> Power: 240 V / 50 Hz All equipment must be brand new with a proper serial number to prove it and must not be a used or reconditioned instrument. The equipment should be supplied fully installed and made fully functioning. The equipment must be delivered, assembled and commissioned by the tenderer. Service and operating manuals, other necessary items for system operation and catalogues in English should be provided. The equipment should be warranted against manufacturing defects for 1 year from the date of commissioning. Comprehensive on-site training to be provided for operation, maintenance and trouble-shooting. Warranty of at least 1 year (including spare parts replacement) from date of commissioning and minimum two maintenance service during warranty period. 	
<p>6.</p>	<p>ITEM</p> <p>STEREO ZOOM MICROSCOPE</p> <p>B. DESCRIPTION</p> <p>Microscope unit which focus on the same point from slightly different angles with zoom magnification system that allows the specimen to be viewed in three dimensions.</p> <p>C. ESSENTIAL FEATURES</p> <ol style="list-style-type: none"> Designed Greenough optics, based on MTF (modulation transfer Function) analysis, for improved image flatness and contrast. Magnification range allows quick, comfortable observations of any given specimen at the most appropriate magnification. Should have anti-fungus features to protect internal housing of microscope unit. <p>D. TECHNICAL SPECIFICATIONS</p>	<p>1</p>

1. Objectives :

- At 0.67x - Total magnification 6.7X, Field of view 32.8mm
- At 1x - Total magnification 10X, Field of view 22mm
- At 2x - Total magnification 20X, Field of view 11mm
- At 3x - Total magnification 30X, Field of view 7.3mm
- At 4.5x - Total magnification 45X, Field of view 4.9mm
- Continues Zoom optics function with click stop function

. LED transmitted/reflected_Illuminator

- LED stands feature a thin design to keep sample positions low and to optimize operability.
- Simultaneously transmitted and reflected light are available
- LED light offers both long lifetime and constant color temperature at any intensity. Average LED life span: 6000 hrs

3. Digital Scientific-Grade CCD cameras for scientific applications

- 1/3. progressive scan CCD
- 1024 x 768 pixel resolution
- Up to 15 images per second
- IEEE 1394a interface
- Motion recording features in MPEG or avi file format
- Time Lapse Recording features
- No frame grabber required
- Usable with notebooks computer
- All camera parameters are adjustable via computer interface
- Shipped with Image Acquisition (DigiAcquis) for camera control
- Image acquisition functions
- Available TWAIN driver (DigiTwain)

4. Multimedia Imaging Workstation

- Intel® Pentium® D Processor with Dual Core Processing
- 1GB NECC Dual Channel DDR2 SDRAM Memory
- 120GB SATA II Hard Disk Drive
- 19" Flat Panel LCD Display Monitor
- 16X DVD+/-RW with Dual Layer write capabilities
- Genuine Windows® XP Home Edition
- Anti Virus Software
- Intergrated Audio with USB speakers
- USB Quietkey keyboard
- USB Optical mouse
- Intergrated Intel Graphics Display Accelerator
- Intergrated Fast Ethernet 10/100

E. ESSENTIAL ACCESSORIES

1. Power Cord
2. C-Mount
3. 6V30Watt Halogen Lamp supplied in 2 pcs
4. Immersion Oil 8cc
5. Dust Cover

	<p>6. Spare bulbs : at least 5 pcs. of halogen</p> <p>F. STANDARD REQUIREMENTS & INSTRUCTIONS</p> <ol style="list-style-type: none"> 1. Power requirement : 220-240v, 50-60Hz 2. Should provide dust cover for microscope unit and operation manual. 3. The equipment should be supplied fully installed and made fully functioning and calibrated. 4. All equipments must be brand new with proper serial number to prove it and must not be used or reconditioned instrument. 5. All services and operating manual and <u>original</u> catalogue should be provided. 6. The equipment should be warranted against manufacturing defects for 1 year from the date of commissioning inclusive of labor and parts replacement. 7. Training should be provided for operation maintenance, troubleshooting. 8. Free preventive maintenance service and calibration 1 x 6 monthly during warranty period. 9. The supplier has to give information regarding their servicing capabilities for the equipment quoted. 10. Price quoted must include government tax 	
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1) Pembekal yang berminat diminta menghantar sebutharga bersama butir-butir berikut kepada :

**Ketua Penolong Pendaftar
Bahagian Pentadbiran, Pusat Pengajian Sains Perubatan
Universiti Sains Malaysia, 16150 Kubang Kerian, Kelantan**

2) Tempoh sah laku sebutharga : 90 Hari

3) Tempoh penyerahan :

4) Jenis/Buatan :

5) Salinan Sijil Pendaftaran dengan Kementerian Kewangan dan Akuan Pendaftaran Pembekal Bumiputera

6) Pihak Universiti berhak menerima kesemua atau sebahagian dari sebutharga-sebutharga tersebut dan tidak terikat untuk menerima sebutharga yang termurah atau mana-mana sebutharga pun

Untuk sebarang pertanyaan sila hubungi : Pejabat Pentadbiran PPSP 09-7664007 / 09-7664124