

DETAILED SPECIFICATIONS FOR THE LABORATORY EQUIPMENT

No.	Quantity/ Unit	Description	Unit Price (In Pesos)	Total Price (In Pesos)
1.	1 unit	<p>ICP-OES (INDUCTIVELY COUPLED PLASMA – OPTICAL EMISSION SPECTROMETRY)</p> <p>ICP-OES Vertical Dual View (VDV) Spectrometer</p> <ul style="list-style-type: none"> • ICP-OES with vertical dual view (VDV) plasma that provides the benefits of conventional dual view with the advantage of a vertical torch and fast wavelength acquisition. • consists of a purged echelle polychromator with patented chip III CCD sealed detector for true simultaneous performance across the wavelength range of 150 nm to 810 nm. • Includes a fitted 5 channel peristaltic pump, a high efficiency spray concentric glass nebulizer and glass double-pass spray chamber directly connected to a single piece easy fit quartz torch with 1.8 mm ID injector. <p>RF Generator</p> <ul style="list-style-type: none"> • 20-35 MHz Solid State, maintenance free, water cooled RF generator. • Power output of 1500W in 10W increments. • Coupling efficiency of more than 75%. Power output stability is typically better than 0.1% when tested in a lab with stable environmental conditions. <p>Optical System</p> <ul style="list-style-type: none"> • Vertical dual view pre-optics allow axial and radial plasma viewing from the vertical torch. With Cooled Cone Interface (CCI) • 253 mm focal length polychromator • feature a CaF2 prism cross disperser and echelle grating (113.3 lines/ mm) creating an echellogram of 70 orders projected onto the single CCD detector. <p>Gas controls</p> <ul style="list-style-type: none"> • All plasma related gas flows are computer controlled, using high precision mass flow controllers: <ul style="list-style-type: none"> ○ Plasma gas 8-20 L/min in 0.5 L/min increments, default setting 12 L/min ○ Auxiliary gas 0-2.0 L/min in 0.1 L/min increments, default setting 1.0 L/min ○ Nebulizer gas 0-1.5 L/min in 0.05 L/min increments, default setting 0.7 L/min • Make up gas 0-2.0 L/min in 0.1 L/min increments (used for optional accessories) 	6,700,000.00	6,700,000.00

- Option gas (argon/oxygen blend), added as percent of auxiliary gas (0-2.0L/min) via software (used for some organic solvent applications)

Performance

- Typical warm up time - Warm up time from standby mode of <20 minutes from plasma ignition.
- Stray light - Stray light elimination via baffles and optical design to less than 1 ppmeffective As signal at 193.696 nm from 10, 000 ppm Ca.
- Signal stability - Typically stable to less than 1% RSD over 8 hours without internal standardization or any form of drift correction. Typical resolution
- The typical resolution achieved by the ICP OES 5800 and 5900 for a selection of elements and wavelengths.
- Element Wavelength (nm) Resolution (pm)
 - As 188.980 < 6.5
 - Mo 202.032 < 7
 - Zn 213.857 < 7.5
 - Pb 220.353 < 7.5
 - Cr 267.716 < 9.5
 - Cu 327.395 < 13
 - Ba 614.171 <

Accessories:

- ICP-OES easy fit DV Torch
- Spare one piece 5110 DV quartz torch with 1.8 mm ID injector with extended outer tube with slot for radial viewing.
- SPS 4 Autosampler
 - ICP OES SPS 4 autosampler must be compatible with current AA, MPAES and ICP-OES spectrometers.
 - The ICP OES SPS 4 autosampler must also provide a launching pad for a number of additional options that further improve the quality of analytical results and reduce running costs.
 - SPS 4 base unit including single port wash reservoir kit 250 x Polypropylene 50ml sample tubes
 - 250 x Polypropylene 16.5ml, 17mm o.d. x 130mm tubes 4 x Solvaflex grey/grey 3 bridged PVC peri pump tubes Power supply AC-DC switching
 - 2m USB cable
 - 4 x Sample racks. 60 position for 16mm od

tubes. Sample probe kit 0.8 mm

- ID Fluoroplastic sleeved probe 1 standards rack 34 position
- Autosampler user manual

Recirculating Chiller for AAS/ICP-OES

- Chiller is fitted with a turbine pump
- Temperature control to +0.1oC.
- Large dual displays present actual temperature and flow rates simultaneously. Highly recommended for us where ambient temperatures vary widely and/or exceed 30oC.

Inclusions:

- Add external inlet duct adapter
- Pump tubing, PVC, white/white tabs, for acidic samples (pk/12 tubes)
- Pump tubing, PVC, blue/blue tabs, for acidic waste (pk/12 tubes)
- Pump tubing, PVC, black/black tabs, for MSIS (pk/12 tubes)
- Pump tubing, PVC, black/white tabs, for MSIS (pk/12 tubes)

PC with Printer

- desktop computer compatible the equipment,
 - Operating System (Windows 10 Professional 64-bit operating system, x64-based processor 64 Bit operating system Intel(R) Core (TM) i5-7400 CPU @ 3.00 GHz 3.00 GHz, 4.00 GB)
- Exhaust System and Ductworks
- Argon Gas Line (maximum of 10 meters)
- UPS 10 KVA
- Argon Regulator
- Wavelength Calibration Solution (100mL, 5ppm)
- Dehumidifier

2.	1 unit	<p>Water Purification System</p> <p>AC/DC input: 230 V AC, 50 - 60 Hz Parameter: 160 L/day max. usage (water) 27 kg operating weight (59.52 lb) 8 L/hr flow rate</p> <p>Dimension: 71.3 cm (28.07 in.) × 41.3 cm (16.25 in.) × 58.1 cm (22.87 in.)</p> <p>Input: feed water nature potable tap water Output: product water quality: type 1 water (18.2 MΩ·cm) product water quality: type 3 water (RO water) Conductivity: <2000 μS/cm at 25 °C (water output)</p>	1,470,000.00	1,470,000.00
3.	1 unit	<p>Microscope</p> <ul style="list-style-type: none"> • Colour temperature 6000K • Dimension 320mm x 180 x 365mm • Eye distance (max) 75 • Eye distance (min) 5 • Optical system Finite (DIN) • Rotation of tube 360° Yes • Tube Binocular • Tube angle 30° • Illumination 3W LED (Durchlicht) • Transmitting Illumination LED • Input voltage 240V <p>Optics</p> <ul style="list-style-type: none"> • Field of view 1,800 cm • Magnification 10 • Objective 4x / 10x / 40x /100x • Gross weight 6 kg • Net weight 4,988 kg • 4-fold lens revolving unit • Siedentopf 30° inclined, 360° rotatable • Dioptr compensation one-sided (for binocular and trinocular models) 	150,000.00	150,000.00



Price Validity	:	45 calendar days from receipt of bid
Installation	:	To be conducted by the supplier's installation team
Training	:	Training for two (2) end-users in ICP OES Manufacturing Facility Training on-site on simple operation and troubleshooting to be conducted by the Manufacturer's Application Chemist
Installation Application Specialist	:	To be done on-site by factory trained Service Engineers and
Service Guarantee	:	With after sales service
Warranty	:	1 year warranty
Taxes	:	VAT Inclusive