**PURCHASE ORDER**

**BATAAN STATE UNIVERSITY**

**Supplier:** INSTRUMIX SUPPLIER, INC.
**Address:** Unit 443/434 Gland Pasong Tamo Tower 2210 Don Chino Roces Avenue,
Makati City
**E-mail Address:** hscsmm@instrumixonline.com
**Telex No:** (02) 812-0010
**TIN:** 000-124-893-000

**Date:** April 15, 2015
**Mode of Procurement:** Public Bidding

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**Stock No.** | **Unit** | **Item Description** | **QTY.** | **Unit Cost** | **Amount**
--- | --- | --- | --- | --- | ---
1 | loc | UV-Vis SPECTROPHOTO-METER | 1 | 6,330,000.00 | 6,330,000.00

**Hardware Specification**

- Photometric System
  - Double-beam optics
  - Czerny-Turner mounting
  - Double Monochromator
  - Le-Ray high grade biased holographic grating Detector
  - R-928 Photomultiplier

**Light Source:**

- 50 W halogen lamp, deuterium lamp, light source is adjustable built-in

**Spectral Range:** 165-1,400 nm

**Wavelength Accuracy:** ±0.1 nm (655.3 nm), ±0.3 nm (all range)

**Wavelength Reproducibility:** ±0.05 nm

**Wavelength Scanning Speed:**
- Wavelength sweep rate: about 14,000 nm/min
- Wavelength scan rate: about 4000 to 0.5 nm/min

**Wavelength setting:**
- At 1 nm units for scan start and scan end wavelengths, and 0.1 nm units for other wavelengths
- lamp interchange wavelength
- Auto switching synchronized with wavelength, switching range selectable between 290 and 370 nm (0.1 nm units)

**Spectral Bandwidth:**
- 0.1/0.2/0.5/1/2/5 nm, 3/4/6 (low stray-light mode)

**Resolution:** 0.1 nm

**Spectral Line:**
- Max. 0.00005% (220 nm, NaI)
- Max. 0.00002% (340, 370 nm, NaN02)
- Max. 1% (196 nm, KCl)

**Photometric Modes:** Absorbance (Abs.), Transmittance (%), Reflectance (%)

**Energy (E):**

**Photometric Range:** Absorbance: -8.5 to 0.5 Abs

**Transmittance, Reflectance:** 0 to 100,000%

**Photometric Accuracy:**
- ±0.002 Abs (0.5 Abs)
- ±0.003Abs (1 Abs)
- ±0.006Abs (2 Abs)
- ±0.03% T

**Measured using NIST 930D / NIST 1930 or equivalent filter**

**Photometric Reproducibility:**
- ±0.001 Abs (0.5 Abs)
- ±0.002 Abs (1 Abs)
- ±0.003 Abs (2 Abs)

**Noise Level:** 0.00005 Abs RMS (500 nm)

**Baseline Flatness:**
- ±0.0004 Abs (200-860 nm), 1 hour after light source is turned ON

**Baseline Stability:**
- Within ±0.0003 Abs (% 700 nm), 1 hour after light source is turned ON

**Sample Compartment:**
- Internal dimensions: 150 x 260 x 140 mm
- Distance between light beams: 100 mm
- Maximum optical path length of cell: 100 mm

**Dimensions:**
- 450 x 360 x 250 mm

**Weight:** 5.6 kg

**Operating Temperature:** 15 °C to 35 °C

amount to be forwarded...
**PURCHASE ORDER**

**BATAAN STATE UNIVERSITY**

**Supplier:** INSTRUMIX SUPPLIER, INC.

**Address:** Unit 443/43 Cityland Pasong Tamo Tower 2210 Don Chino Roces Avenue,

**City:** Makati City

**E-mail address:** ilsecmm@instrumixonline.com

**Telefax No.:** (02) 812-6010

**TIN:** 000-124-839-000

**P. O. No.:** 15-04-449

**Date:** April 15, 2015

**Mode of Procurement:** Public Bidding

**Place of Deliveries:** Main Campus - Research Office

<table>
<thead>
<tr>
<th>STOCK NO.</th>
<th>ITEM DESCRIPTION</th>
<th>QTY.</th>
<th>UNIT COST</th>
<th>AMOUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Operating Humidity</td>
<td></td>
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<tr>
<td></td>
<td>* 30% to 80% (no condensation, less than 70% above 30% °C)</td>
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<td></td>
<td>Power Requirements</td>
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<tr>
<td></td>
<td>* 100-240 VAC, 50/60 Hz</td>
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<td></td>
<td>* Power Consumption: 170VA</td>
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</tbody>
</table>

**SOFTWARE SPECIFICATION**

**UVProbe Software**

**Operating System**

* Window 7 Professional/Vista Business (32 bit) Data Acquisition Modes Spectrum, Photometric (quantitation), and Kinetics (time course)

**General**

* Multitasking (possible to execute data processing while measurement is being performed)
* Customizable measurement screen layout (wavelengths, data)
* Display font and font size, color, displayed number of digits
* GLP/GMP compliant (security, history)
* Real-time concentration display

**Spectrum Mode**

* Comparison/interactive processing of multiple spectra (Note 2)
* Storage of all processed data with original data set including a history of all manipulation
* Spectrum enlargement/shrinking and auto scale
* Automatic interlink with spectral data processing
* Annotation on spectrum screen

**Data Processing in Spectrum Mode**

* Normalization, Point Plot, peak/valley detection, area calculation
* 1st - 4th derivatives, smoothing, reciprocal, square root, natural logs, Abs, Int, conversion, exponential conversion, and Kubelka-Munk conversion

**Photometric (Quantitation) Mode**

* Comparison/interactive processing of multiple time course data (Note 2)
* Single or double-wavelength measurement (difference or ratio) Simultaneous display of time-course data, enzyme table and graphs
* Enzyme kinetics calculations (for single- or multi-cell) Michaelis-Menten calculations and graph creation (Michaelis-Menten, Lineweaver-Burk, Hanes, Woolf, Eadie-Hofstee), Dixon plot, Hill plot
* Integrated management of sample information including original data, sample weight and dilution factors, etc.
* Event recording such as addition of reagents during measurement

**Report Generator**

* Preview and print functions for customized formats
* Layout and editing templates
* Quick printing using report templates
* Auto printing (spectrum mode)
* Multi-page printout
* Insertion of data, time, text, and drawing objects including lines, circles and rectangles
* Insertion of spectral/quantitative data, method and history
* Specification of graph line thickness (for each module), font style and size

**Delivery Term:** 60 days

**Payment Term:** 15-30 days after delivery and acceptance

**Amount Brought Forward:** 6,330,000.00
# PURCHASE ORDER

**BATAAN STATE UNIVERSITY**

**P.O. No.:** 15-04-449  
**Date:** April 15, 2015  
**Mode of Procurement:** Public Bidding

**Supplier:** INSTRUMIX SUPPLIER, INC.  
**Address:** Unit 443/434 Cityland Pasong Tamo Tower 2210 Don Chino Roces Avenue, Makati City  
**E-mail Address:** iscomm@instrumixonline.com  
**Telefax No.:** (02) 812-0010  
**TIN:** 010-124-403-000

**Gentlemen:**  
Please furnish this office the following articles subject to the terms and conditions contained herein:

**Place of Deliver:** Bataan State University Main Campus I - Research Office  
**Date of Deliver:**  
**Delivery Term:** 60 days  
**Payment Term:** 15-30 days after full delivery and acceptance

<table>
<thead>
<tr>
<th>STOCK NO.</th>
<th>UNIT</th>
<th>ITEM DESCRIPTION</th>
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<th>UNIT COST</th>
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</thead>
<tbody>
<tr>
<td>6330.000.00</td>
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</table>

**FLUORESCENCE SPECTROMETER AND ACCESSORIES**

**HARDWARE SPECIFICATION**

**Light Source:** 150W Xenon lamp, Ozone resolving type lamp housing  
**Excitation and Emission Monochromators:** Concave, blazed holographic grating, F/2.5, 1200 grooves/mm.  
**Measuring Wavelength Range:** Measuring Wavelength Range  
**Spectral Bandwidth:** 6-step selection of 1.5, 3, 5, 10, 15 and 20 nm. [5nm bandwidth is available for half sample height on the excitation side only]  
**Wavelength Scale:** 220-900nm  
**Wavelength Accuracy:** ±0.5nm

**Light Source Compensation:** Dynode feedback system with monochromatic light monitoring  
**Sensitivity:** The S/N ratio is 150 or higher for a human line of distilled water (350nm excitation wavelength, 5nm spectral bandwidth, and 2 second response for 99% of the full scale)  
**Wavelength Scanning:** 7-step selection of survey (about 5500nm/min). Super (about 3000nm/min), Very Fast, Medium, Slow, Very Slow.  
**Wavelength Sweeping Speed:** About 20,000nm/min  
**Response:** 8-step selection of 0.02, 0.03, 0.1, 0.25, 0.5, 2, 4 and 8 seconds for 98% of the full scale  
**Sensitivity:** 2-step of HIGH and LOW. (The sensitivity of HIGH is about 50 times that of LOW)  
**Interface:** RS-232C interface, interface for auto sampler, and interface for stepper unit.
<table>
<thead>
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<th>AMOUNT</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>Dimensions and Weight: 667W x 530D x 2701 mm; 43 kg</td>
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<td>6,330,000.00</td>
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<td>Power Requirement: 100, 120, 220, 240V, 50/60Hz; 400VA</td>
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<td>Operational Temperature Range: 15-35° C</td>
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<td>Operational Temperature Range: 40-60% (Below 70% with temperature higher than 30°C)</td>
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<td>SOFTWARE SPECIFICATION</td>
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<td></td>
<td>Measurement: Reflection, Emission and synchronous spectrum measurement, time-course measurement, quantitation, automatic search of optimal excitation and emission wavelengths, PopUp Scan™</td>
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<td>Data Processing: Arithmetic calculation between spectra and between a spectrum and a constant, smoothing, 1st through 4th derivatives, 1/Y, logarithmic conversion, data printout (with or without activity value computation), peak pick, point pick, area calculation, averaging (in quantitation), generation of calibration curves of 1st through 3rd order.</td>
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<td>Filming: Save, recall and delete of data. Conversion into ASCII and DIP formats</td>
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<td></td>
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<td>Data Output: Automatic scale adjustment, readout of data at user-specified point, data printout (preview function provided), selection of colors and types of curves</td>
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<td>Maintenance: Automatic monitoring of signal-to-noise ratio, monitoring of the run time of light</td>
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<td>User Interface: Speedbox (assign icons for commonly used menu commands)</td>
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<td>Other Function: Data Exchange via clipboard, auto response control, automatic shutter</td>
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<td>PC Instruments: IBM PC/AT or 100% compatible 1440 or higher CPU; 8 Mbyte or larger main memory. Operates on MS Windows version 3.1 or higher</td>
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<td></td>
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<td>Accessories and consumables</td>
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<td>Spectroscopy Cells</td>
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<td>The cell available include macro, semi-micro and ultra-micro with a range of different light paths, flow-through cells and cells for magnetic stirrers. All of the cells are suitable for any fluorescence Spectrophotometer which accommodates cells with a cuvet height of 15mm.</td>
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<td>Front Surface Accessory</td>
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<td>The Front Surface Accessory is ideal for analyzing films, papers, powders and other flat samples. The sample may be placed in the accessory directly or held in the powder holder that has a synthetic fused silica window. Ultra small volumes or viscous samples such as oils, opaque and turbid samples may be measured via powder holder or cuvettes.</td>
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<td>LC Flow Cell</td>
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<td>The LC flow cell for high sensitivity liquid chromatography is a good means of expanding the utility of the LC 45 or LC 55. Providing laboratories with an alternative to a dedicated LC Fluorescence detector. The twin monochromators of the system enable accurate wavelength selection for maximum selectivity and sensitivity.</td>
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<td>Plate Reader Accessory</td>
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<td>The Plate Reader Accessory is a sensitive and easy-to-use way to measure fluorescence based assays in multiwell plates. Controlled from the LS 55, it is able to use a wide range of UV and Visible wavelengths ensuring the detection of virtually all fluorescent dyes used in for bio assays. Two programs are included in EL WinLab for the Plate Reader. One allows the user to create flexible wavelength programs for single end-point and kinetic analysis. The other allows the measurement of flat samples such as gels and presents data as a 3D image. In addition, an optional plugin program allows the user to collect up to 100 spectra per well.</td>
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</tbody>
</table>

*NOTE: INCLUSION OF TRAINING (LOCAL and INTERNATIONAL) amount to be forwarded...*
### PURCHASE ORDER

**BATAAN STATE UNIVERSITY**

**Supplier:** INSTRUMENT SUPPLIER, INC.  
**Address:** Unit 443/434 Cityland Pasong Tanong Tower 2210 Don Chino Roces Avenue, Malate City  
**E-mail Address:** hsc032@instuxonline.com  
**Telefax No.:** (02) 812-0010  
**TIN:** 000-124-893-000

**Date:** April 15, 2015  
**Mode of Procurement:** Public Bidding

**Place of Delivery:** Rizal, Main Campus - Research Office  
**Delivery Term:** 60 days  
**Payment Term:** 15-30 days after full delivery and acceptance

**STOCK NO.** | **UNIT** | **ITEM DESCRIPTION** | **QTY.** | **UNIT COST** | **AMOUNT**  
---|---|---|---|---|---

**MASS SPECTROPHOTO-METER**

**HARDWARE:**  
- Vacuum Pumps: (nitrogen) air-cooled turbomolecular pump with minimum pumping speed 200 liter per second with 2.5 to 2.9 m/sec (50-60 Hz) rotary vane pumps.  
- Vacuum Gauge: Standard single wide range  
- Pump-Down Time: 255L/sec turbomolecular pump: < 3min. For air/water: < 90 min for quantitative stability  
- EI- Voltage: 10-100ev  
- Analyzer: Monolithic Hyperbolic Quadrupole (100℃ - 300℃)

**TEST** | **AMOUNT** | **DETECTION LIMITS (S/N)**  
---|---|---

EI Full Scan | 1µg of OctaFlouroNaphthalene (OFN) | 180:1 RMS  
Positive Cl full scan | 100µg of Benophenone | 300:1 RMS  
Negative Cl full scan | 1µg OFN | 450:1 RMS

**PERFORMANCE:**  
- Mass Range: 1.0 to 1050 u (amu)/s  
- Scan rate: Fully variable up to 12,500 amu/s  
- Scanning Sensitivity: 0.1 u (amu)  
- High-Performance Selected Ion Monitoring (SIM) and Full Scan  
- Auto SIM: Auto tune program for E.I., P.I., N.C.I

**ACCESSORIES:**  
1. Micro Syringes 5µl and 25µl (3 each)  
2. Gas Cylinders: The equipment should be provided with oxygen, nitrogen, hydrogen and air cylinders along with regulators, connectivity copper pipes and valves through local suppliers.

**COLUMNS:**  
- FS-capped DB-5MS, 30m x 0.25mm ID X 0.25 µm or equivalent  
- 60m X 0.32mm X 1µm DB-5MS column (or equivalent) with 1mm X 0.25mm deactivated fused silica transfer line  
- GC column, 30m X 0.32mm X 3.0µm DB-1 fused silica capillary column or equivalent

**HEART CUT:** Cut across to another column to find trace levels in a complex matrix.

**AMOUNT TO BE FORWARDED:**  
6,330,000.00
## PURCHASE ORDER
### BATANGAS STATE UNIVERSITY

**Supplier:** INSTRUMIX SUPPLIER, INC.  
**Address:** Unit 443/434 Cityland Pasong Tamo Tower 2210 Don Chino Roces Avenue, Makati City  
**E-mail Address:** hlscomm@instrumixonline.com  
**Telefax No.:** (02) 812-0010  
**TIN:** 000-124-893-000

**Date:** April 15, 2015  
**Mode of Procurement:** Public Bidding  
**Procurement:** Upgrading of Research Laboratory

### Gentlemen:

Please furnish this office the following articles subject to the terms and conditions contained herein:

**Place of Delivery:** BatStateU Main Campus - Research Office  
**Date of Delivery:**  
**Payment Term:** 15-30 days after full delivery and acceptance  
**Delivery Term:** 80 days

<table>
<thead>
<tr>
<th>STOCK NO.</th>
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</tr>
</thead>
</table>
|           |      | Backflush: Eliminate later/post-run peaks. Shorten cycle times, eliminate sample carryover, less column usage & lower detector maintenance cost. Splitting of column outlet as per requirement to send all peaks to multiple detectors, to obtain more information during each run. (Find peaks of interest in unknowns.  
Modulate (New): Send fraction of effluent to 2nd column for few seconds a time  
*NOTE: INCLUSION OF TRAINING (LOCAL and INTERNATIONAL)* |
|           |      |                  |      |           | 6,330,000.00 |

(Total Amount in Six Million Three Hundred Thirty Thousand Pesos Only)  
**Peso:** 6,330,000.00

In case of failure to make the full delivery within the time specified above, a penalty of one-tenth (1/10) of one (1) percent for every day of delay shall be imposed.

Very truly yours,

[Signature]

**Authorized Officer:**  
DR. VIRNO A. BONAUDO

**Date:** April 15, 2015

**Conforms:**  
[Signature]

**INSTRUMIX SUPPLIER, INC.**  
Signature over Printed Name of Supplier

**Funds Available:**  
LOLITA M. ATIENZA  
Director for Finance/Accountant III

**ALOBS No.:** D-15-03-140  
**Amount:** 32,420,000.00  
**Fund Source:** MDS/101 (Cont. Appro.) (Research)