



# All India Institute of Medical Sciences Jodhpur

Admn/Prop/101/2021-AIIMS.JDH

Dated: - 15<sup>th</sup> February, 2022

**Subject:** Purchase of Electrophoresis Unit and Blotting System for “Regional Level Viral Research and Diagnostic Laboratory” VRDL Lab at AIIMS Jodhpur on proprietary basis - **Inviting comments thereon.**

The Institute is in the process of purchasing Electrophoresis Unit and Blotting System for “Regional Level Viral Research and Diagnostic Laboratory” VRDL Lab on proprietary basis from M/s Bio-Rad Laboratories (India) Private Limited and PAC certification by user are attached.

The above document are being uploaded for open information to submit subjection, comments, if any from any manufacturer regarding proprietary nature of the equipment within 21 days of issue giving reference Admn/Prop/101/2021-AIIMS.JDH. The comments should be received by office of Deputy Director (Administration), Medical College at AIIMS, Jodhpur on or before 07<sup>th</sup> March, 2022 upto 03:00 PM failing which it will be presumed that any other vendor is having no comment to offer and case will be decided on merits.

**Deputy Director (Administration)**

**Enclosed: Related documents enclosed.**

**PROPRIETARY CERTIFICATE**

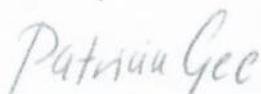
This is to certify that the **PROTEAN® i12™ IEF product line, p/n 1646000 and 1646001** are products of Bio-Rad Laboratories, Inc., 1000 Alfred Nobel Drive, Hercules, California 94547 USA, which are covered by the following US patents and related applications owned by Bio-Rad Laboratories, and foreign equivalents thereto:

U.S. Patent No. 5,632,877 (Rapid Assembly Electrophoresis Cell for Slab Gels), Issued 27 May 1997, Expires 27 May 2016

U.S. Patent No. 8,282,803 (Isoelectric Focusing Tray and Electrode assembly for Alternate Gel Strip Orientations), Issued 09 Oct 2012, Expires 05 Nov 2030

U.S. Patent No. 6,655,649 (Assembly for Casting and Use of an Isoelectric Focusing Strip), Issued 02 Dec 2003, Expires 11 Mar 2022

For Bio-Rad Laboratories Inc.



Authorized Signatory

Patricia Gee  
Regulatory Affairs Representative



**BIO-RAD**

**Bio-Rad  
Laboratories**

Life Science Group  
2000 Alfred Nobel Drive  
Hercules, California 94547  
Telephone: 510-741-1000  
Facsimile: 510-741-5800

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PROPRIETARY CERTIFICATE

This is to certify these items are products of Bio-Rad Laboratories Inc. 1000 Alfred Nobel Drive, Hercules, California 94547 USA.

**1704467**  
Mini-Sub® Cell GT  
Horizontal  
Electrophoresis  
System, 7 x 10 cm  
tray, with mini-gel  
caster

**1704469**  
Wide Mini-  
Sub® Cell GT  
Horizontal  
Electrophoresis  
System, 15 x 10 cm  
tray, with gel  
caster

These products are manufactured and sold exclusively by Bio-Rad Laboratories in the USA and worldwide.

Authorized Signatory

*Patricia Gee*

Patricia Gee  
Regulatory Affairs Representative  
Bio-Rad Laboratories Inc.  
Life Science Group  
Tel (510)741-6374

*G. Allen*

*[Signature]*

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**BIO-RAD**

**Bio-Rad  
Laboratories, Inc.**

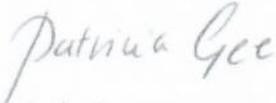
Life Science Group  
2000 Alfred Nobel Drive  
Hercules, California 94547  
Phone: 510-741-1000  
Fax: 510-741-5800

PROPRIETARY CERTIFICATE

This is to certify that **PowerPac™ Universal Power Supply p/n 164-5070** is a product of Bio-Rad Laboratories, Inc., 1000 Alfred Nobel Drive, Hercules, California 94547 USA, which is covered by the following US patents and related applications owned by Bio-Rad Laboratories, and foreign equivalents thereto:

U.S. Patent No. 7,324,354 (Wide Range Power Supply), Issued 29 Jan 2008, Expires 06 Jul 2026

For Bio-Rad Laboratories Inc.



Authorized Signatory

Patricia Gee  
Regulatory Affairs Representative



**PROPRIETARY CERTIFICATE**

This is to certify that **Trans-Blot® Turbo™ Transfer System p/n 170-4150** is a product of Bio-Rad Laboratories, Inc., 1000 Alfred Nobel Drive, Hercules, California 94547 USA, which is covered by the following US patents and related applications owned by Bio-Rad Laboratories, and foreign equivalents thereto:

U.S. Patent No. 8,075,755 (Polymeric Sorbent Sheets for Western Blotting), Issued 13 Dec 2011, Expires 16 Nov 2029

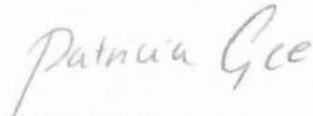
U.S. Patent No. 8,444,839 (Polymeric Sorbent Sheets for Western Blotting), Issued 21 May 2013, Expires 13 Dec 2027

U.S. Patent No. 8,192,601 (Electroblotting System), Issued 05 Jun 2012, Expires 03 Jan 2031

U.S. Patent No. 8,715,476 (Instrument for independent electrotransfer in multiple cassettes), Issued 06 May 2014, Expires 08 Dec 2030

U.S. Patent No. 8,357,278 (Electroblotting Cassette with Integrated Electrical Contacts and Rotary Locking Mechanism), Issued 22 Jan 2013, Expires 30 Aug 2031

For Bio-Rad Laboratories Inc.



Authorized Signatory

Patricia Gee  
Regulatory Affairs Representative



## Technical Specification, Electrophoresis Unit and Blotting System

**1<sup>st</sup> DIMENSION IEF SYSTEM:** The system should include following things

- System should include Individual Lane Control for running different samples, pH Gradients and focusing protocols on a single run.
- System should have touch screen/keypad User Interface for easy easily creating and editing protocols and setting up the program rapidly.
- System should include dedicated site for online data interpretation for Graphing data, comparing lanes, and generating reports.
- System should include USB Port to export data for storage and analysis
- System should include run mode flexibility- to run IPG strips gel Side Up, Gel Side Down and with cup loading configuration.
- System should have voltage 0–10,000 V, 1 V increments(50-10000V)
- Current range should be 0–100  $\mu$ A per lane, 1  $\mu$ A intervals
- Power range of 0–1 W per lane.
- System should have Peltier based cooling platform.
- Temperature range should be 10–25°C  $\pm$ 1.0°C @ max ambient 23°C 18–25°C  $\pm$ 1.0°C @ max ambient 31°C.
- Focusing trays should be made of polycarbonate for contaminant free process.
- System should accommodate IPG strip of length 7, 11, 13, 17, 18, and 24 cm.
- System should have display QVGA resolution (320 x 240) touch screen or mouse control.
- System should have ramping Step, linear, gradual, and hold voltage ramping for each focusing step. Hold mode as a final step to prevent diffusion when IEF is complete.
- System should have 2GB capacity for storing protocols.
- Data collection should be in .dat format.
- System should have following regulatory compliances:
- Safety EN 61010-1:2001, IEC 61010-1:2001 Use NRTL to test for compliance to UL61010-1:2004 and CAN/CSA C22.2 No. 61010-1-04
- EMC EN61326 (1997 w/A1:98) Class A FCC Code of Federal Regulations, Title 47, Part 15, Subpart B, Class A
- Other approvals RoHS/WEEE Research Materials to determine level of EFUP.
- Instrument should be supplied with positive and negative electrode assemblies, 7 cm, 11 cm, and 17 cm focusing trays with IPG strip retainers.
- Instrument should be supplied with 1 pack each of 7 cm, 11 cm, and 17 cm rehydration/equilibration trays



- Instrument should be supplied with 2 pairs of forceps, 2 packs of electrode wicks for gel-side down and gel-side up applications, mineral oil, 2 cleaning brushes, cleaning concentrate, 2 USB flash drives, 3 styluses.
- Instrument should be supplied with pH 3–10 ReadyStrip™ IPG strips in 7 cm, 11 cm, and 17 cm lengths, rehydration sample buffer, and instruction manual.

**SOFTWARE FOR 2D ANALYSIS:** The software should have following configurations

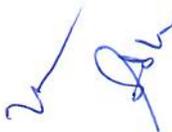
- Easy-to-use wizard-directed user interface
- Automated spot detection and matching, Sophisticated quantitation, Statistical analysis tools, Flexible visualization tools, Sample classification for comparative analysis, Gaussian modeling-based software is preferred.
- Sophisticated algorithms for Automatic Spot Detection & Quantification.
- Sypro ruby filter for auto recognition and removal of background speckles
- Simultaneous analysis of minimum fifteen gels and can be upgradable to unlimited images.
- User adjustable significance level and Boolean analysis by using different set and subset.
- Can be upgradable for multiplex gel normalization with normalization table feature.
- Gel land marking and automatic spot matching
- Sophisticated variable background removal to quantitate low abundance protein
- Can Export XML data and JPEG file format.

**Power Supply:** The power supply should include following things

- Should have four slot Power pack with LCD display
- Should have volt: 10-500V 1 V steps, Current: 0.01-2.5 A with 1mA step, Power: 1-500W
- Should have constant voltage, constant current or constant power
- Should have timer: 1min-99hr59min
- Should have volt-hour control 99000
- Pause /resume function
- Should have safety feature no load, load change, overload/short circuit detection
- Should have automatic recovery after power failure
- Should be programmable 9 methods with 9 steps.
- Should have Data transfer/archiving facility.
- Should have EN61010 safety.

**Western Blotting System:** The system should include following things

- FAST western blotting system with two separate cassettes, which can run four mini gel simultaneously and both cassettes can run at different time intervals with same protocol.
- Input power: 100–240 VAC, 276 VA, 50–60 Hz, 175 W max

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- USB port: Yes, input only, for firmware updates
- System should have Cooling fan and inbuilt Power supply
- User Interface: keypad button, 128 x 64-pixel monochrome display
- Programmable methods: Up to 25 user-defined
- Preprogrammed methods: Standard SD, 1.5 mm gels, High MW, Low MW, MixedMW,
- Should have user notifications like Audible alarm, Power fail during run, No-load detection, No cassette detection, End of run.
- Should be supply with transfer pack consumables (NC membrane, buffer, pads) for atleast 40 mini blots, Fastcast stainfree Acrylamide Kit 10% and 12% Solution Kit sufficient for 40-50 mini gels.

**Horizontal Electrophoresis System:** The system should include following things

- Quick separations — small DNA fragments separated within 15 minutes
- Optimal sample visualization — clear plastic construction for visual observation
- Leak-proof system — new electrode design prevents buffer leaks from the base
- Lid removal assistance — longer base tabs to add support for lid detachment, reducing buffer spillage
- Simple assembly — color-coded Quick Snap electrodes for correct alignment
- Intuitive setup — arrow on the cell base indicates the run direction, ensuring proper orientation
- Flexible replacement — individual Cell components can be replaced to keep your existing unit running smoothly and Versatile
- Accessory compatibility — UV-transparent gel trays, combs, and other accessories are compatible with new and old models
- UV-transparent trays — gel trays with a built-in fluorescent ruler provide clear measurement and easy imaging
- Wide comb variety — multichannel pipet-compatible combs, fixed-height drop-in combs, adjustable-height combs, and preparative combs are all available
- Gel casting — multiple options for hand casting in different gel sizes
- Ready Agarose compatible — ready-to-run Ready Agarose Precast Gels
- Should be having universal gel caster and casting gates also.
- Same buffer tank should accommodate different sizes of gel tray.
- Easy to replace electrode cassettes
- IEC 1010(EN 61010) Electrical safety certification.

**Mini DNA Gel Electrophoresis System**

Main Unit with buffer tank with single molding casted, UV Transparent Gel tray of sizes cm (W x L) 7 x 10 cm – 2qty, Gel caster, Casting gates, 8 well and 15 well comb. Can put minimum two combs and can run upto 30 samples

Base buffer volume, L ~0.27

Bromophenol blue dye migration rates (at 75 V) ~4.5 cm/hr

Should be supply with Power supply, 300 V, 400 mA, 75 W

- Output range (programmable)
- 10–300 V, fully adjustable in 1 V increments, 4–400 mA, fully adjustable
- Type of output: Constant current, Voltage or Power with automatic crossover

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- Timer: 1min-999 min, fully adjustable
- Display – LED
- Pause/resume run function
- Automatic recovery after power failure and Pause/Resume Function
- Safety features like No-load detection, rapid resistance change detection, ground leak detection, overload/short circuit detection, overvoltage protection, over temperature protection
- Operating temperature: 0 – 40degree C
- Safety Compliance - EN-61010, CE
- Easily stackable one upon other powerpack, backlit graphic LCD Display, 4 pair recessed banana jacks in parallel output.
- Conforms to CE standards for Emissions and Immunity class A, tested only at 230V; TUV EMC certification

**Compulsory Accessories and conditions:**

- 2KVA UPS with 30minute backup, Branded Suitable computer should provide with system.
- On site wet demonstration/training should provide.
- Warranty 5 Years

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