ALL INDIA INSTITUTE OF MEDICAL SCIENCES
ANSARI NAGAR, NEW DELHI- 29
STORES SECTION (DO)

Ref. No. 02/SO(DO)/NMR/PAC/22-23/FSC-I **Date:** 04.01.2023

Subject : Purchase of **Electronics and Console for the existing 700MHz NMR Spectrometer on proprietary basis - inviting comments thereon.**

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On specific requirement of Deptt. of NMR, Store Section (DO) is in the process of procurement of **Electronics and Console for the existing 700MHz NMR Spectrometer on proprietary basis** from M/s Bruker Switzerland AG. (Through M/s Bruker India Scientific Pvt.Ltd). Following documents have been uploaded.

1. Technical Specification duly signed by TSEC.
2. Departmental PAC Certificate
3. PAC cum compatibility Certificate (By the firm)
4. Performa Invoice from principle/authorized distributor M/s Bruker Switzerland AG.
5. Manufacturer's Authorization Certificate in favour of M/s Bruker India Scientific Pvt.Ltd
6. GEM non availability Certificate.
7. Declaration regarding Make in India.
8. Land Border Declaration.

Now, in view of the above, the said proposal is uploaded on AIIMS website for period of 15 days with the view to invite objections w.r.t. proprietary nature of the product from the OEC's or their authorized distributors. The comments/objections if any should be received in office of Store Officer (FSC), Store Section (DO), Animal House Building, Near Biotechnology Building at AIIMS on or before 19/01/2023 upto 12:30 P.M. failing which it will be presumed that any other vendor is having no comment to offer and case will be decided purely on merit.

3/1/23

STORES OFFICER (FSC)

Department of NMR
All India Institute of Medical Sciences,
New Delhi- 110 029

(15)

Technical specifications for Electronics and console for the existing 700 MHz NMR spectrometer

Technical Specifications	
(i) Spectrometer Console	a. The console should have three independent RF-channels with best frequency and phase resolution; fast switching time for all parameters without any hidden delays along with its importance in the quality of the spectra. Electronics should have compatibility to add three channel Cryoprobe (1H/13C/15N) for future upgrade. The configuration and band-width of each channel has to be specified in the quotation.
	b. Broad band frequency synthesizer should be present for each channel
	c. Each channel should have frequency, phase and amplitude shaping capabilities with simultaneous switching of the parameters possible in <12.5ns.
	d. Waveform generators (for pulse shaping) should be present for all channels
	e. Amplitude, phase and composite pulse decoupling generator
	f. Pre-amplifiers for nuclei and filters for noise reduction
	g. High-power linear broadband amplifiers (100 W or better for ^{1}H channel and 500 W or better for X and Y) should provide the shortest possible pulse-widths. The specifications including (but not limited to) power (Wattage), frequency range, duty cycle, maximum pulse duration should be stated in the quotation.
	h. The three-channel spectrometer should have two/three receivers. It should be capable of handling/executing for simultaneous acquisition of three one dimensional or combination of two 2D dimensional experiments in two/three receiver mode.
	i. Transmitter controllers should be provided for each channel.
	j. ADC 16 bit or better with highest possible dynamic range and sampling rate should be quoted.
	k. Preamplifier for multinuclear observation, 2H-lock, all necessary filters for noise and artifact reduction; Digital lock control unit and digital lock receiver; deuterium amplifier with integrated lock switch for automatic gradient (room temperature) shimming and shim control boards.
	l. All the accessories, software and hardware to perform automated and manual shimming should be included in the quotation.

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Technical specifications for Electronics and console for the existing 700 MHz NMR spectrometer (contd..)

Technical Specifications	
	m. Deuterium Lock channel should be compatible with gradients and automated shimming hardware. The system should be controlled by computer.
	n. Magnetic field z-axis gradient unit (50G or more gradient strength that can be generated with a minimum of 10 A external gradient amplifier) for the control for execution of gradient spectroscopy, gradient shimming, generation of pulsed field gradient (PFG) of desired shape and intensity, high quality PFG based solvent suppression, coherence selection and DOSY experiments etc.
	o. Variable temperature unit having broad temperature operational range of -150°C to +150 °C or better. A suitable control unit for high temperature of the order of 300 deg C is desirable) along with low temperature accessories.
	p. The temperature accuracy should be +/- 0.01 °C or better and temperature stability should be +/- 1 K or better.
	q. Digital quadrature detection, ethernet based communication and control system for bi-directional connection to the host computer.
(ii) Probes	The vendor should describe all the available probes with them. The following probes should be quoted. However, they can quote the other probes under the optional accessories.
(ii) A. Liquid/solution state 5 mm room-temperature NMR probe	a. High resolution Double Resonance 5 mm variable temperature 700 MHz solution state probe compatible with the existing magnet system. It should be equipped with single axis Z-gradient coils for execution of gradient spectroscopy, gradient shimming generation of pulsed field gradient (PGF) of desired shape; high quality PFG based solvent suppression, coherence selection and DOSY experiments etc. Also specify the other possible nuclei. Since aqueous samples will be analyzed, is highly desirable that this probe should have with better sensitivity of 1H (preferably in inverse mode).
	b. Desired values of Signal /Noise for nuclei should be : ^{1}H sensitivity ≥500:1 (0.1% ethylbenzene) or better ^{13}C sensitivity ≥440:1 (10% ethyl benzene) or better ^{31}P sensitivity ≥200:1 (0.0485M TPP) or better ^{15}N sensitivity ≥50:1 (90% formamide) or better

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Technical specifications for Electronics and console for the existing 700 MHz NMR spectrometer (contd..)

Technical Specifications	
	c. The probe(s) should be fitted with a 2H lock channel and it should also have an automatic tuning and matching accessory.
	d. Appropriate amplifiers and RF sources should be quoted in the electronics section to match this probe. The minimum operational temperature range for the probe should be -150°C to +150 °C or better and it should include all consumables, accessories and controllers for low and high temperature operations.
	e. The following should be specified and supporting specification sheet along with one representative spectrum with parameter details that has been recorded on this type of probe should be included in the quote (i) 90° Pulse widths and power for ^{1}H, ^{31}P, ^{13}C, ^{15}N. (ii) Suitable power amplifiers have to be included in the electronics for operation of the probes.
(ii) B. Liquid/solution state 5 mm room temperature triple resonance NMR probe	a. The 5mm room temperature probe, should be compatible with 700 MHz NMR spectrometer. It should be capable of performing ^{1}H NMR observation while irradiating the ^{15}N and ^{13}C and applying pulsed field gradients. It should capable of executing gradient spectroscopy, gradient shimming generation of pulsed field gradient (PGF) of desired shape; high quality PFG based solvent suppression, coherence selection and DOSY experiments etc. It should have Auto tuning and matching accessory.
	b. Desired values of Signal /Noise for nuclei should be : ^{1}H sensitivity ≥ 1700:1 (0.1% ethylbenzene) or better Variable temperature range: -150 to +150 °C Z-Gradient Gradient strength >0.5 T/m (max current 10
(iii) Data storage/software/peripherals	a. Latest high performance state of the art LINUX/Windows based workstations for the operation of NMR spectrometer complete with pre-loaded software/data cards for data acquisition, processing and analyses including tools/software for complete automation of data acquisition and peripherals including LCD monitors, printers should be quoted. Compatibility for both Windows and Linux is desirable for controlling NMR data acquisition and processing RAM minimum of 16 GB, HDD minimum of 2TB, DVD +/-RW DL Drive, HP USB Laser Mouse
	b. All required hardware and software related documents, manuals, installation CDs/DVDs, cables, connectors, etc. should be provided.

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Technical specifications for Electronics and console for the existing 700 MHz NMR spectrometer (contd..)

Technical Specifications	
(iii) Data storage/software/peripheral (contd..)	c. The NMR softwares should be state-of-the-art, most comprehensive. A minimum of 5 processing licenses should be included in the quote. The software should be capable of all up-to-date heteronuclear multi-dimensional NMR experiments including latest experiments for acquisition and reconstruction from sparse data and multi-dimensional NMR spectroscopy. It should be capable of handling/executing dual receiver/triple experiments under simultaneous acquisition in dual/triple receiver mode. NMR data acquisition and processing of 1D, 2D, 3D, 4D and 5D data files. Menu guided acquisition setup of 1D and 2D experiments with NMR literature library, automation interface, relaxation analysis (T1/T2), integration of 1D and 2D spectra, deconvolution of 1D and 2D spectra, spectrum simulation software, interactive and automatic multiplet analysis, NMR Data Interpretation and processing of Non Uniformly Sampled (NUS) data for 2D spectra. The software should include the following: Acquisition, processing, plotting, multiplet analysis, deconvolution, automation, spectral binning, quantitation, multivariate statistical analysis, data reductionalgorithms like principal component analysis PCA), reference library for the identification and concentration determination for the compounds, DOSY experiments along with software assisted structure elucidation and confirmation.
	d. Package should include all the latest pulse sequences for multi-dimensional NMR experiments available with the vendor. Please provide list of pulse sequences available for ready use.
(iv) Essential accessories (part of tender, should be quoted)	a. A compatible, low noise, 3 HP scroll type (oil and moisture free) air compressor compatible with the instrument with an additional (min of 90L) S.S. buffer tank, auto-drain valveand one active alumina based pressure swing dryer with suitable connectors fittings and filters. The compressor should be capable of uninterrupted operation 24X7 basis.
	b. A compatible online UPS (capacity 10 KVA or more) with isolation transformer, 15 KVA voltage stabilizer and appropriate battery bank that is capable of providing backup to the whole system for a period of 1 hour

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Technical specifications for Electronics and console for the existing 700 MHz NMR spectrometer (contd..)

Technical Specifications	
(v) Consumables and Accessories	a. One set of standard reference standards should be provided for full operational qualification and instrument performance verification (viz. line-shape, sensitivity, resolution, pulse calibration, water suppression, unlabelled lysosome samples, etc.
	b. NMR tubes 5mm-500 numbers
	c. A set of 5 spinners (for 5mm solution probe)
	d. Nitrogen refilling set
(vi) Installation, service and support	a. The system should be integrated with the existing 700 MHz Magnet
	b. The installation (including accessories) should be carried out by the vendor.
	c. The compressor(s), UPS and the other third party accessories should be installed and the necessary integration for the smooth operation of the 700 MHz spectrometer should be carried out by the vendor.
	d. The site should be inspected (prior to the bid)
	e. On-site training should be provided to personnel for smooth operation and maintenance of the complete system. The training should be for a minimum period of 4 weeks (after the installation: two weeks; after 4 months of installation: two weeks)
(vii) Service &Warranty	a. Five years complete comprehensive warranty (all parts and labor included) with spares included from the date of installation excluding magnet and its accessories. The warranty should include all parts of the NMR spectrometer (excluding magnet) and the accessories supplied including UPS, batteries and compressor.
	b. A 5 years' contract for supply of liquid helium
	c. A 5 years' contract for supply of liquid nitrogen (through third party, if vendor is not able to supply)
	d. The rate contract for the supply of liquid Helium and liquid Nitrogen Refilling should be quoted in Indian Rupees per liter of liquid Helium and per liter of liquid Nitrogen along with the tender.

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Technical specifications for Electronics and console for the existing 700 MHz NMR spectrometer (contd..)

Technical Specifications	
(vii) Service &Warranty (contd..)	d. The firm will be paid as per actual consumption of these items by the Institute once in 3 months. If the rate for these two item comes down during the course of the warranty period as well after this period, the benefit of lower price should be passed on to the Institute. Since the refilling of liquid Helium and liquid Nitrogen is with the manufacturer of the NMR spectrometer, in the event the magnet quenches due to non-refilling of these items, it is the responsibility of the firm to charge the magnet at their own expense and the liquid Helium and liquid Nitrogen necessary for charging also has to be borne by the firm.
	e. Post warranty AMC for 5 years for the whole system including UPS should be provided from 6th year onwards (after the warranty period). This should be quoted in **Indian rupees.**
	f. Additionally, please quote CMC (comprehensive maintenance contract) for the entire NMR spectrometer and accessories being supplied (including computer, UPS, batteries, compressor) from 6th year onwards (after the warranty period). This should also be quoted in **Indian rupees.**
	g. Any software upgrade (pulse sequence and processing) or new software (pulse sequence and processing) that are released during the warranty periods should be given to the user free of cost.
(viii) Optional Features	a. Cryo/cold/chill probe to handle microgram sample quantities of 5 mm diameter. Also provide 3 mm NMR tubes with suitable spinners.
	b. Other probes compatible with the system and available with the vendor.
	c. 16.4 Tesla superconducting magnet
	d. softwares for spectral data processing (chenomx), multivariate and statistical analysis
(x) General requirements	a. The vendor should have experience with Change of Electronics and console for NMR spectrometers of M/s Agilent Technologies while retaining the magnet in atleast 2 reputed government/private labs (latest list of users of the said instrument should be provided) in India and provide documentary evidence of the same.
	b. The vendor should provide documentary evidence of 700 MHz NMR spectrometer installations in India.
	c. A detailed list of on-site installation requirements has to be provided by the vendor.

Department of NMR
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New Delhi- 110 029

Technical specifications for Electronics and console for the existing 700 MHz NMR spectrometer (contd..)

Technical Specifications	
(xi) Down Time Clause	During the warranty and AMC/CMC period, the desired uptime of 95% of 365 days (24 hrs basis) should be ensured. In case the down time exceeds the 5% limit, there will be an extension of the warranty period by double the excess down time period.
(xii)	State clearly the power requirements, heat dissipation in each room, AC requirement for all accessories, temperature, humidity and dust and other environmental hazards and variations.
(xiii)	All the necessary interconnecting interfaces, cables, modules and other hardware and software to fully integrate the system for completion to fully operational status.
(xiv)	COMPONENTS SUPPLIED FROM LOCAL SOURCES ARE TO BE QUOTED IN INDIAN CURRENCY
(xv)	All the technical details, parameters of various specifications quoted has to be supported by printed original brochures, without which the bid will not be considered.
(xvi)	The vendor should submit separately a compliance sheet for all the above points of the tender. Please follow the same numbering system. The compliance material should also be given in a CD. **Please make sure that this CD DOES NOT contain any financial bid information.**
(xvii)	**The technical bid and the financial bid should be separate**

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ALL INDIA INSTITUE OF MEDICAL SCIENCES
ANSARI NAGAR, NEW DELHI 110029

Proprietary Article Certificate (PAC) (Machinery & Equipment)

(i) **The indented goods are manufactured by** M/s Bruker

(ii) **Item Name:** Electronics and console for the existing 700 MHz NMR spectrometer

(iii) **Model No:** 700 MHz Electronics and console compatible with the existing Agilent magnet

(iv) Vital Technical Performance Parameters required which makes the requirement proprietary

Each channel acting as transmitter and receiver enabling running simultaneously a number of 1D experiments runs depends upon number of channels. This is essential and important for biofluid and high degradable substances. Accurate Sample Temperature determination and regulation with NMR Thermometer based on solvent as many samples are temperature sensitive.

(v) No other make or model is acceptable for the following reasons

M/s Bruker is the only vendor with expertise to carry out change of electronics and console for existing Agilent NMR magnets in India without any compatibility issues. They have already carried out such installations of electronics and console for 8 NMR magnets in India. They are also the only ones who have installations of 700 MHz NMR spectrometers in India and have the spares and service centres for 700 MHz MR systems.

It is certified that market survey has been done and found that no other manufacturer is manufacturing similar/equivalent specifications which can fulfill the vital requirements of end user.

Prof. Ritu Misra
(Representative, DGHS)

Dr. Siddharth
(Representative, MS)

Dr. Poonam Rana
(External Expert)

Dr. N. Thirupathi
(External Expert)

Prof. T. Velpandian
(Member)

Prof. Rama Jayasundar
(Chairperson)
(Head, Department of NMR)

Prof. S. Senthil Kumaran
(Member)

Dr. Virendra Kumar
(Faculty-in-Charge, Stores)

Mr. Pawan Kumar
(Officer-in-Charge NMR Spectrometer)

Dr. Uma Sharma
(Member-Secretary)

Enclosure (4)

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BRUKER

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July 12, 2021

To
Head
Department of NMR,
All India Institute of Medical Sciences (AIIMS),
Ansari Nagar,
New Delhi 0- 110029
India

Proprietary Certificate

Tender Ref: GEM/2021/B/1151910 Dated: 31.03.21
for procurement of Electronics and Console for the existing 700 MHz NMR Spectrometer

Dear Madam

We would like to bring to your notice the following facts pertaining to the Reference subject Tender:

- NMR Spectrometer is a highly sophisticated analytical instrument which requires exceptional skill sets, and it is currently not manufactured in India.
- Bruker Switzerland AG is a reputed manufacturer of the NMR spectrometers from last 55 years and we have evolved as highly reliable manufacturers across globe with manufacturing facilities in Switzerland and Germany
- Bruker India Scientific Pvt Ltd is the Subsidiary of Bruker Switzerland AG and are responsible for providing sales and after sales service including application support to our Indian customers.
- We have a total 458 NMR installation base (frequency range starts from 200MHz to 800MHz).

To the best of our knowledge we are the only company to have carried out changes of electronic and console installations successfully for existing Agilent (old: Varian) NMR magnets in India. We have done five such installations. The list of some of the institutions for whom we have undertaken such change of electronics and console are given below.

i. CIPLA Ltd, Mumbai (500MHz)
ii. Wockhardt Research Center, Mumbai (400MHz)
iii. GVK Biosciences, Pvt. Ltd., Hyderabad (400MHz)
iv. Syngene International Ltd., Bangalore (500MHz)
v. Dr. Reddy's Institute of Life Sciences, Hyderabad (400MHz)

We have also received three more orders for change of electronics and console for the Agilent NMR magnets in 2021 making such change of electronics and console installations in India eight in number.

vi. FMC India Pvt Ltd., Hyderabad (500MHz)
vii. Aurobindo Pharma, Hyderabad (500MHz)
viii. Integral Biosciences, Noida (400MHz)

BRUKER

I would also like to mention that Bruker is the only firm in India to have 700MHz NMR spectrometers and a good service base for the same in India. The following eleven institutions, do have a 700 MHz NMR spectrometer from Bruker installed, some with room temperarture liquids probes, some with CryoProbes and some with solids accessories.

- IISc Bangalore
- TIFR, Mumbai
- National Institute of Immunology, Delhi
- IICT Hyderabad
- IISER Bhopal
- NCL, Pune
- IISER Trivandrum
- TIFR, Hyderabad
- Bose Institute, Kolkata
- NISER Bhubaneswar
- IISER Berhampur

The following features of the 700 MHz Avance NEO electronics are unique and proprietary to Bruker:

a. Each channel (TRX1200) is acting as transmitter and receiver therefore number of 1D experiments runs simultaneously depends upon number of channels. It is essential and important for Biofluid and high degradable substances.
b. Accurate Sample Temperature determination and regulation with NMR Thermometer. This measurement is performed based on solvent as compared to external sensor
c. CMC-assist, supporting NMR Data Interpretation during acquisition for simple molecules

Sincerely yours,
Bruker Switzerland AG

Bruker Switzerland AG
Industriestrasse 26
CH-8117 Fällanden

Urs Widmer
Sales Manager MRS

(22)

Quotation
No. 22190635
Date: 09.08.2022

BRUKER

Sold-To-Party
Head
Department of NMR,
All India Institute of Medical Sciences (AIIMS),
Ansari Nagar East, Gautam Nagar
110029 New Delhi
India

Attn: Prof. Rama Jayasundar

Information

Your customer no.	500003	Contact person	Bhawani Joshi
Your reference no./Date	AV4700Console-AIIMS/09.06.2022	Telephone	+919335921222
		Email	bhawani.joshi@bruker.com
Valid until	09.09.2022	End User	All India Inst. of Medical Sciences AIIMS
Delivery time	6-7months after receipt of LC		
Incoterms	CIP New Delhi		
Payment terms	BB-INT Systems L/C		

Item	Material/Description	Quantity	Unit price USD	Amount USD

Procurement of Electronics and Console for the existing 700 MHZ NMR Spectrometer (Using Agilent Magnet: 1870914 MAGNETSYSTEM ASP 700/54 MAGNEX)

Supply from Switzerland

30 AV4700C 1 PC

NMR CONSOLE AVANCE NEO 700 MHZ

The AVANCE NEO system console electronics is housed within a stainless steel one bay or double bay cabinet for 19-inch format units providing RF shielding with highest immunity against DVB-T, ATSC, ISDB-T, etc. The cabinet offers enough space to accommodate various units like Bruker RF amplifiers etc.

The system console incorporates a state-of-the-art Ethernet ROUTER providing up to 14 TCP/IP based Ethernet ports for internal and external spectrometer devices such as sample changers, CryoProbe platforms, magnet control and monitoring equipment, Solid State NMR accessories, etc. It is equipped with a Bruker Power Distribution Unit (PDU) to enable software controlled console power-up and power-down via TopSpin.

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(23)

Quotation no.: 22190635

BRUKER

Item	Material/Description	Quantity	Unit price USD	Amount USD

A dedicated system control unit (SCU) containing an embedded processing CPU with 1TB hard disk drive allows versatile and flexible spectrometer control. It controls the overall timing of system for all RF channels, gradient channels, real time pulses, triggers, etc. Each RF channel provides a fully broad banded transmit and a fully broad banded receive channel (transceiver TRX1200).

Bruker system characteristics (AQS):
- 80 MHz system clock, 12.5ns timing resolution
- Synchronicity on all channels within 12.5ns
- Gradient control for all Bruker gradient amplifiers
- Up to 8 RF channels
- Up to 4 trigger inputs with 12.5ns resolution
- Up to 4 real time output controls with 12.5ns resolution

Bruker Smart Magnet System (BSMS) supports:
- Ultra-stable, ultra-low noise B0 current source (ELCB)
- 2G Digital NMR Lock for 2H and/or 19F nuclei (L-TRX)
- Bruker Shim current sources (SCB20)
- Bruker SmartVT control for up to 4 independent VT channels
- Bruker SmartCoolers (e.g. BCU-I)
- Bruker Low Temperature accessories (e.g. LN2 Exchanger)
- Bruker High Temperature equipment (e.g. BVTE3900)
- Bruker High Resolution gradient amplifiers (e.g. GAB/2)
- Bruker RT Shim Systems and BST Upperparts

Bruker preamplifier system (HPPR) supports:
- Up to 8 RF preamplifiers
- Fully Multi-receive, no extra wiring/components
- Touch screen based human machine interface
- Accurate tuning and matching with factory calibrated preamplifiers
- Fully integrated automatic tuning and matching with ATM probes
- Probe identification (PICS) interface

MAS rotor synchronization pre-configured
- AH0095 required for further trigger and real-time control options

40 AH0074 1 PC

NITROGEN REFILL KIT PFA TUBE

Nitrogen refill kit with corrugated PFA tube for low pressure dewars up to 1.5 bar.

Features:
- For all Bruker magnet systems (4 K)

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Item	Material/Description	Quantity	Unit price USD	Amount USD

- Corrugated plastic tube with 3 m length
- Perfluoroalkoxy alkane or PFA belongs to the family of Fluoropolymers
- Short silicon tubes for magnet turret connection for 13 and 18.5 mm

50 AH0087 1 PC

N2 VT GAS Separator

Membrane VT gas separator for production of >98% N2 gas from compressed air.

Requires higher volumes of compressed air than standard installation
Feed air must be dry and free of oil and dust

60 AH3002 1 PC

SHIM SYSTEM BOSS-3 SB PLUG

Bruker Standard Bore (SB) Magnet System high performance Matrix Orthogonal Shim System (BOSS-3 SB). Designed for optimum homogeneity at low current and with low heat dissipation.

Features:
- 36 Matrix Shim Gradients
- B0 coil
- PT100 temperature sensor
- Identification coding (ID)

70 AH3007 1 PC

SHIM UPPERPART BST SB

Bruker Standard Bore (SB) Magnet System Sample Transfer (BST) for NMR sample insertion and ejection (SB Spinner supported).

Features:
- Built-in sample-up sensor
- Built-in sample spinning/sample-down sensor
- Prepared for shim system cooling

80 AH0243 2 PC

Shim Current Board (SCB20)

SCB20 is a high precision, ultra-stable shim current board.

Features
- 20 shim current sources
- 20Bit digital resolution each
- Shim current range +/- 1A each

Depending on shim system type two units might be necessary

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Item	Material/Description	Quantity	Unit price USD	Amount USD

Compatible with all Bruker Orthogonal and Matrix shim systems (e.g. BOSS-3)

90 AH1206 1 PC

BSMS GAB/2 for Z Gradients

GAB/2 is a fast single channel gradient amplifier board prepared for pulsed field gradient shimming (TopShim) and single axis GRAdient enhanced SPectroscopy (GRASP).

Its design offers offset-free operation without the need of blanking pulses.

Features:
- 10A max.
- 16Bit resolution
- Pulslength up to 50ms per second
- Built-in pre-emphasis

TopShim uses lineshape optimization (see JMR 182(1), 38-48, 2006)
XYZ-gradient operation requires three GAB/2 units (see AH1204)

100 AH1015 1 PC

VT Control Unit (BSVT)

The Bruker SmartVT (BSVT) is a highly integrated gas flow system to control NMR sample lift (inject/eject) and VT temperatures within the probe.

Features:
- Digital temperature sensor resolution better than 5 mK
- Excellent temperature stability of about 10 mK/K (*)
- Supports various temperature sensors (e.g. thermocouple T or E, PT100)
- Mass-flow based VT gas flow control and monitoring, up to 3000 l/h
- Built-in sample freeze protection together with CryoProbes
- Up to 4 independent heater channels (e.g. Flow probes)
- High Temperature NMR ready (> 300°C with HT NMR probes)
- Supports SmartCoolers (BCU) and LN2 Low Temperature accessories
- Easy sample insertion with different kinds of spinner (ceramic, KEL-F, etc.).
- NMR Thermometer: accurate in-tube sample temperature determination

(*) e.g. SmartProbe, depends on environment and probe type

110 BH3072 1 PC

BSMS 2H Lock RF Unit (L-TRX)

The L-TRX is a highly integrated 2H lock RF transceiver (transmit and receive) unit with incorporated 5W RF amplifier for field lock operation on deuterated solvents.

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Item	Material/Description	Quantity	Unit price USD	Amount USD

Features:
- Versatile DDS based 2H frequency RF generation
- Fast and accurate gradient shimming on 2H using TopShim
- Easy and reliable locking with complex deuterated solvents and this even in automation with e.g. Pyridine-d5
- NMR Thermometer: accurate in-tube sample temperature determination

Can be extended with 19F lock RF unit (BH1230) for 19F lock operation

120 BH2075 4 PC

RF CHANNEL (TRX1200)

The TRX1200 is a highly integrated NMR RF transceiver (transmit and receive) unit with built-in pulse program engine (Sequencer, NCO/DDS, Shapes, etc.).

Features:
- 5 to 1200 MHz (transmit and receive)
- 12.5ns timing resolution
- 12.5ns simultaneous setting of amplitude & phase & frequency
- 1GB sequencer waveform memory
- 1852 MHz high intermediate frequency (IF)
- up to 7.5 MHz spectral width
- digital resolution (effective dynamic range)
  > 17 Bit (SWH < 5 MHz)
  > 19 Bit (SWH < 1 MHz)
  > 23 Bit (SWH < 6 kHz)
- 240 MSPS / 16 Bit ADC, Digital Down Converter (DDC)
- 960 MSPS DAC, Digital Up Converter (DUC)

130 BH3401 1 PC

RF Amplifier BLABBH2H500/100/150

The BLABBH2H500/100/150 is a linear triple channel high RF power amplifier for X-nuclei, 1H (and 19F), and 2H observe and decoupling. It incorporates a fast deuterium 2H lock switch to enable fast switching between 2H decoupling and 2H lock operations.
It has a built-in ethernet interfaced, computer controlled RF amplifier safety with forward/reflected RF power monitoring and diagnostics.

Frequency ranges of BLABBH2H500/100150 models are

Model	BB-Channel	H-Channel	2H-Channel
200-600	15-600MHz (A1)	180-600 MHz (A2)	30-92 MHz(A3)
700-900	15-600MHz (B1)	650-900 MHz (B2)	105-140 MHz (B3)
950-1000	15-600MHz (C1)	890-1000 MHz (C2)	145-155 MHz(C3)

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Item	Material/Description	Quantity	Unit price USD	Amount USD

Features:
- RF power A1: Min. 500W RF peak power (max. 50W CW)
  A2: Min. 100W RF peak power (max. 25W CW)
  A3: Min. 150W RF peak power (max. 15W CW)
  B1: Min. 500W RF peak power (max. 50W CW)
  B2: Min. 100W RF peak power (max. 25W CW)
  B3: Min. 250W RF peak power (max. 25W CW)
  C1: Min. 500W RF peak power (max. 50W CW)
  C2: Min. 100W RF peak power (max. 25W CW)
  C3: Min. 250W RF peak power (max. 25W CW)
- Pulse program controlled blanking

140 BH3420 1 PC

RF Amplifier BLABB500

The BLABB500 is a linear single channel high RF power amplifier for X-nuclei observe and decoupling. It provides two identical RF outputs connecting to different preamplifiers when appropriate (no manual re-wiring).
It has a built-in ethernet interfaced, computer controlled RF amplifier safety with forward/reflected RF power monitoring and diagnostics.

Frequency range of BLABB500 model is:

Model	BB-Channel
200-600	15-600MHz

Features:
- RF power: Min. 500W RF peak power (max. 50W CW)
- Pulse program controlled blanking

Note:
- for NMR instruments up to 1.2 GHz
- covers all X-nuclei within the frequency range

150 BH0264 1 PC

HPPR HPLNA 1H Preamplifier

The HPLNA 1H is a highly linear, low noise, GaAs FET transistor technology based preamplifier for 1H and 19F observe, 1H and 19F decoupling and 19F lock operation.

Features:
- Ultralow ~1.0dB system noise figure
- Max. 4kW peak power RF capability
- Active transmit/receive switch
- Built-in RF power detector

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Item	Material/Description	Quantity	Unit price USD	Amount USD

- Factory calibrated for accurate tuning and matching

160 BH0243 1 PC

HPPR 2H Preamplifier

The HPPR 2H is a linear, low noise, GaAs FET transistor technology based preamplifier for 2H observe, 2H decoupling and 2H lock operation.

Features:
- Very low ~1.4dB system noise figure
- Max. 500W peak power RF capability
- Active transmit/receive switch
- Fast, pulse program controlled mode switching
- Built-in RF router for 2H lock and 2H observe
- Factory calibrated for accurate tuning and matching

No external filters required

170 BH0267 1 PC

HPPR HPLNA XBB31P 2H PASS Preamplifier

The HPLNA XBB31P 2HP is a highly linear, low noise, GaAs FET transistor technology based preamplifier for observe and decoupling of nuclei from 57Fe up to 31P with built-in 1H Stop RF filter.

Features:
- Ultralow ~1dB system noise figure
- Max. 4kW peak power RF capability
- Active transmit/receive switch
- Built-in RF power detector
- Factory calibrated for accurate tuning and matching

Designed for broad banded Solid State NMR probes
>= 700 MHz: Also for broad banded High Resolution NMR probes

180 BH1247 1 PC

HPPR 13C+15N Preamplifier Package

This preamplifier package provides two linear, low noise, GaAs FET transistor technology based preamplifiers for 13C/79Br and 15N observe and decoupling operation.

Features (each):
- Very low ~1.4dB system noise figure
- Max. 500W peak power RF capability
- Active transmit/receive switch
- Factory calibrated for accurate tuning and matching

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Item	Material/Description	Quantity	Unit price USD	Amount USD

No external filters required

190 PCWIN 2 PC

NMR Workstation (WINDOWS)

Configured NMR Workstation for AVANCE NEO NMR spectrometer series.

Features (*):
- Intel Xeon E5-1620v4 (up to 3.8 GHz), Quad Core
- 16GB DDR4-2133 (2x8 GB) RAM
- NVIDIA Quadro K620 2 GB GFX graphics card
- 2TB 7200 RPM SATA HDD
- Integrated Intel I-218 Gbit LAN (SPECT)
- Intel Ethernet I210-T1 PCIe NIC (NET)
- 9.5 mm Slim SuperMulti DVDRW 1st ODD
- USB US-Keyboard and USB mouse
- Preinstalled Windows 10 (64 Bit) and TopSpin 4.x (w/o license)

(*) Configuration can change without prior notice

200 AP2521 2 PC

NMR WS MONITOR 24" LCD

24" TFT Monitor for NMR Workstations.

210 SHTS000-04 1 PC

TopSpin 4.x Basic license

TopSpin4 NMR Software - Acquisition and Processing License.

This software offers the full operating capability for spectrometer control, data acquisition (arbitrary dimensions) and processing (1D, 2D, 3D, 4D / nD) . capability for NMR data for WINDOWS, LINUX or MAC.

Features:
- NMR acquisition in arbitrary dmensions, with guided acquisition setup
- NMRGuide for training of users in use of 1D and 2D, 132 experiments with NMR literature library
- IconNMR automation interface
- NMR data processing (1D, 2D, 3D, 4D and 5D)
- Processing of Non Uniformly Sampled (NUS) data for 2D spectra (basic version)
- Integration and deconvolution of NMR spectra
- NMRSIM and DAISY for experiment simulation and 1D and 2D spectra prediction
- Relaxation analysis (T1/T2), solid state lineshape analysis
- TopSpin integrated structure editor

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Item	Material/Description	Quantity	Unit price USD	Amount USD
	# License key only (software available for download from our webserver)			
	TOTAL PACKAGE PRICE ITEM 10 - 210			**689.675,00**
220	PA3152_BB/H_Z	1 PC	67.049,79	67.049,79
	PROBE BBO 5mm BB/1H			
	X-nuclei optimized 5mm double resonance broad banded BBO probe designed for X-nuclei observation with 1H decoupling and for 1H observation. The X-nuclei range corresponds to the broad band (BB) range 31P-109Ag. Multipurpose probe for X and 1H detection. Features: - Designed for X-nuclei (BB) observation - BB range: 31P-109Ag - 1H decoupling and observation - 2H lock - Z-gradient with 5 G/A*cm - Automated Tuning & Matching (2G ATM) - VT range: -150°C to +150°C - VT gas: Nitrogen # Automatic probe recognition (PICS) # Extended delivery time at: # - 400, 800 and 850 MHz			
230	PA3132_TI/CN_Z	1 PC	69.705,36	69.705,36
	PROBE TXI 5mm 1H/13C/15N			
	1H optimized 5mm triple resonance TXI probe designed for 1H observation with 13C and/or 15N decoupling. Features: - Designed for 1H observation - 13C and/or 15N decoupling - 2H lock - Z-gradient with 5 G/A*cm - Automated Tuning & Matching (2G ATM) - VT range: -150°C to +150°C - VT gas: Nitrogen # Automatic probe recognition (PICS) # Extended delivery time at: # - 400, 850, 950 and 1000 MHz			

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Item	Material/Description	Quantity	Unit price USD	Amount USD
240	AH0039 BSVT Adaptor Type-T (standard probes) TC-T VT Adapter for NMR probes with Thermocouple type 'T' temperature sensors. Features: - Probe Thermocouple type T interface (2x) - Probe heater interface - Probe heater safety sensor interface # For Standard Temperature NMR probes (up to 200°C) # Not required for iProbes (built-in VTA)	1 PC	1.814,94	1.814,94
250	AH3050_50A 5mm SB SPINNER (POM) 'A' Type A POM 5 mm standard bore (SB) spinner for high resolution (hr) liquids NMR tubes. For hr applications up to 1 GHz. Features: - Sample temperature range: 0°C ... +80°C - For high quality spinning applications - To be used with high precision NMR tubes - Not recommended for CryoProbes # Spinner material is Polyoxymethylene (POM)	5 PC	195,06	975,31
260	AH0016 VT GAS COOLER (BCU-I) The SmartCooler (BCU-I) is a chiller for VT gas cooling of NMR probes. Achievable temperature within the probe depends on probe and selected VT gas flow but may be as low as ~0 °C. Features: - VT gas temperature about -40 °C (at the end of the transferline) - Up to 3000 litre per hour # Requires dry VT gas with at least -50 °C (at 1 bar) dew point temperature	1 PC	10.106,43	10.106,43
270	AH0021 LN2 Evaporator for low VT (SS) Liquid Nitrogen Evaporator (LN2 Evaporator) accessory for very Low Temperature NMR applications. Allows to achieve very low temperatures down to about -120 °C depending on	1 PC	8.292,48	8.292,48

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Item	Material/Description	Quantity	Unit price USD	Amount USD
	probehead. Features: - Evaporator - Flexible stainless steel transferline - 25 litre LN2 dewar # Includes VT adapter for BSVT based consoles			
275	Z172600 LABSCAPE ESSENCE NMR TUBES/CAPS 5.0MM	5 PC	203,18	1.015,90
277	1811010 PRINTER HP LASER A4 B/W	1 PC	722,80	722,80
278	SHA000A-04 AMIX 4 Basic License (ACA) Basic license for AMIX 4. Permits extensive exploration of NMR and LC-MS data - Academic * Special focus on handling of large numbers of data * metabolomics with integrated statistical analysis * build-up and usage of spectra bases * handling of existing databases like BBIOREFCODE + Supports Codemeter(preferred) and FlelxLM Licensing # For windows workstations only # Software supplied via download	1 PC	3.886,32	3.886,32
280	SHU900A Dynamic Center license (ACA) Dynamics Center Software License, Academic	1 PC	1.165,40	1.165,40
290	SHME1393A Soft Mnova BrukerChemistSuite ACANom.PY Perpetual (PY) Software License Bruker Chemist Suite - for academic desktop - Nominated license type. Package contains a PY license for the following Mnova plug-ins: - NMR (visualize, process, analyze and report your 1D and 2D NMR data) - NMR Predict (Accurate prediction of NMR spectra from structure) - Verify (Structure verification based on NMr and/or LC/GC/MS data) - qNMR (Quantitative NMR analysis tool) - IUPAC Name (Generate the IUPAC name from a moleculear structure) - MS (Process, analyze and report LC-MS and GC-MS data) - ElVis (Visualize, process, analyze and report electronic and	1 PC	1.029,75	1.029,75

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Item	Material/Description	Quantity	Unit price USD	Amount USD
	vibrational data) - DB MyData (storage of molecular structures, NMR and LC-MS and GC-MS analytical data) - TopSpin Browser (enhanced data browser to min/search/browse/filter and previsualize, then open all types of Bruker NMR raw data in an Mnova environment # Bruker Chemist Suite is exclusive to Bruker customers			
300	X_NMR_Z Accessory NMR Floating license for off line processing for users License is available free of cost at Bruker site for Govt Institute/University	5 PC	1,00	5,00
410	WARRANTY EXT FACT FACTORY WARRANTY EXTENSION Yearly extended coverage after standard warranty expiration includes any repair needed to get the system back up and running . All parts, site visits and labor & travel costs related to hardware failure are covered. Description of the service provided in the ANNEX: SCOPE OF SERVICE Scope: Electronics, Probe (Two), ATM and BCU	4 PC	60.876,01	243.504,02

Net	USD	1.098.948,50
Percentage Discount	-28,00%	-307.705,60
Net incl. discount	USD	791.242,90
Freight		3.500,00
Insurance		1.500,00
Packing		1.500,00
Total net	USD	797.742,90

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Item	Material/Description	Quantity	Amount USD
	Optional		
330	MSASC700SB MAGNET SYSTEM ASCEND 700 MHz SB Superconducting magnet system in persistent mode with low loss cryostat technology for minimum helium and nitrogen consumption. Magnet system with built-in Electromagnetic Disturbance Suppression (EDS) using a proprietary technology for an efficient suppression of external disturbances (typically up to 99 %) like subways, railway lines and trams, corridor traffic, elevators, power lines or outside vehicular traffic. Features: - Standard Bore type (SB) with 54 mm bore size - Operating field 16.44 T - Very high field stability with a guaranteed drift rate of <10 ppb/hr - Extreme small fringe field in vertical and horizontal direction - Cryo shim system with 9 orthogonal shims - Excellent helium hold time - Helium flow system with one-way check valve for safe operation - Helium level measurement system - Alarm functions for low helium level (MICS) - Low nitrogen consumption with the upgrade possibility for BNL - Nitrogen flow system with one-way check valve for safe operation - Nitrogen level sensor with direct display function # Helium flow system to connect directly a helium recovery system # Upgrade to different vibration damping accessories possible	1 PC	1.463.094,68
340	AH3013 MAGNET STAND ASCEND Type 'F' API	1 PC	29.161,81

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Item	Material/Description	Quantity	Unit price USD	Amount USD
	Magnet stand to support Bruker superconducting magnet systems in an upright position. Air piston isolator system (API). Features: -TMC MaxDamp Gimbal piston isolators - Double chamber with high performance damping effect in vertical and horizontal direction - Gas pressure of 3.3 to 5.5 bar required - Control switch for activating/de-activating - Compatible with different passive and active vibration isolation posts - Compatible with devices for the installation of tilting protection # Floor velocity tolerance level according to VDI 2038 (2013) and Amick/Gordon SPIE 5933 for sensitive laboratory instruments following the Nano-C curve for vertical and horizontal vibrations (see also Bruker site planning manuals)			
350	AH0070 HELIUM TRANSFERLINE Helium transfer line for standard ceiling height. Features: - For all Bruker Ascend and USPLUS magnet systems (4 K) - 10 mm diameter - Short arm with 708 mm - Long arm on the transport dewar 1508 mm - Bendable part in between 2060 mm	1 PC	3.718,01	
360	PA2415_TC/CN_UZ CryoProbe (He) TCI 5mm (N15 preamp)	1 PC	241.928,56	

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Item	Material/Description	Quantity	Unit price USD	Amount USD

1H optimized 5mm triple resonance TCI CryoProbe designed for 1H observation with 13C and/or 15N decoupling and for 13C observation with 1H decoupling due to superior sensitivity on 13C.
Probe includes cooled preamplifiers for 1H, 13C, 15N and 2H.

Features:
- Designed for 1H observation
- 13C and 15N decoupling (triple or double)
- Designed for 13C observe with 1H decoupling
- 2H lock
- Z-gradient with 6 G/A*cm
- Automated Tuning & Matching (2G ATM)
- VT range: -40°C to +150°C
- VT gas: Nitrogen

Automatic probe recognition (PICS)
Required but not included:
- BOSS-3 Shim System
- Cryo platform
- BCU II for applications below 0°C
Extended delivery time

370 BH1410 1 PC 133.131,20

CryoPlatform (water cooled)
CU/5 based He CryoPlatform basic system supporting HR NMR He CryoProbes.

Package includes:
- Cryo Cooling Unit/5 (CU/5)
- Water cooled indoor He-compressor
- Cooling water monitoring kit
- 6 meter indoor He-flexline set with sound insulation
- Transferline support set to absorb vibrations
- Mounting system for He CryoProbe
- He gas bottle adaptor with 10 meter flexible line

Only applicable on initial system order together with a console
Optional air cooled He compressors (BH0412, BH0414)
#
Provided by the customer:
- Cooling water for ~8.5 kW heat dissipation, for water cooled He compressors only
- He gas grade 6 (purity 99.9999 %), typically 50 liter / 200 bar He gas bottle
#
Regular maintenance required for coldhead, vacuum pump and adsorber
- not covered by the He CryoProbe warranty, must be purchased separately

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Item	Material/Description	Quantity	Unit price USD	Amount USD
380	BH0412 CryoPlatform upgrade to air-cooled Outdoor air cooled instead of water cooled He-compressor. Includes additional 10 meter outdoor He-Flexline set. # Applicable only in combination with BH1410 or BH1410-01	1 PC	15.805,72	
390	AH3051_30 3mm SB SPINNER (PCTFE) KEL-F (PCTFE) 3 mm standard bore (SB) spinner for high resolution (hr) liquids NMR. For hr applications up to 1 GHz. Features: - Sample temperature range: -40°C ... +120°C - Recommended for hr liquids CryoProbes # Spinner material is Polychlorotrifluoroethylene (PCTFE)	1 PC	561,41	
400	Z172598 LABSCAPE ESSENCE NMR TUBES/CAPS 3.0MM	1 PC	213,87	

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Item	Material/Description	Quantity	Unit price USD	Amount USD

TERMS AND CONDITIONS
Our terms and conditions of sale apply. These can be found at:
https://www.bruker.com/fileadmin/user_upload/8-PDF-Docs/AboutUs/TermsConditions/TC-Bruker_Switzerland_AG__CH_-ENGLISH.pdf

TRADEMARKS
Bruker owned trademarks can be found via www.bruker.com/trademarks.

GENERAL STATEMENT
Unless set forth otherwise in the quotation, all sales are made EXW factory, Incoterms 2010 and Buyer shall pay all freight, duties, cartage and handling. Title and risk of loss or damage shall pass from Seller to Buyer upon Seller's putting the material purchased hereunder in good condition into the possession of a common carrier, such carrier acting as Buyer's agent. If delivered to a foreign country, the goods will be shipped to the port of entry. Customs clearance and onward transportation to the final destination is the customer's responsibility. Any customs duty, local taxes, expenses for clearing and inland transportation of the goods are on buyer's account.

PRICES
All prices are, if not explicitly stated, net prices.

PAYMENTS
100% LC at sight, 75% on shipment, 25% on acceptance
Beneficiary: Bruker Switzerland AG, Industriestrasse 26, CH - 8117 Faellanden (Switzerland)

IN CASE OF L/C:
Amount payable against original airwaybill issued to your bank.
L/C to be opened with our bank:
Bank Clearing No. 4835
Currency. US Dollar
Account: 718700-32-1
IBAN: CH24 0483 5071 8700 3200 1
SWIFT/BIC: CRESCHZZ80A
CREDIT SUISSE AG, 8070 Zurich, Switzerland

IN CASE OF PRE-PAYMENT:
Pre-payment by transfer to our account:
Account: 718700-32-1
IBAN: CH24 0483 5071 8700 3200 1
SWIFT/BIC: CRESCHZZ80A
CREDIT SUISSE AG, 8070 Zurich, Switzerland

or advance bank draft issued to:
Bruker Switzerland AG, Industriestr. 26, 8117-Fallanden, Switzerland
Buyer's and seller's name and address is mandatory to be stated on the bank draft. Buyer's

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Item	Material/Description	Quantity	Unit price USD	Amount USD

address is to be marked as "remitter:"

ORDER PROCESS
Please indicate our quotation number and send your signed order to Bruker Switzerland AG, Industriestraße 26, 8117 Fällanden, Switzerland or in advance via Fax to +41 44 825 9550 or via E-Mail to sales.ch@bruker.com, provided a written order is received within 10 working days. Please provide the desired operating system, if applicable. For software not provided on hardware, please request the appropriate license via https://www.bruker.com/de/nmr_license_requests.html and download the software via https://www.bruker.com/de/service/support-upgrades/software-downloads.html.

COUNTRY OF ORIGIN
Switzerland. The offered items are subject to export control. An end-user certificate will be required.

AGENCY COMMISSION
no agency commission included in the prices.

INCO TERMS® 2010
CIP Destination

DELIVERY
Unless stated otherwise, the normal mode of transport is by air freight (Please accept our own forwarders. They are experienced in handling our delicate equipment). The stated delivery time after receipt of L/C or pre-payment or down-payment is based on standard production times. Delivery time can vary depending on production capacities at the time of order. Customized items will have longer delivery times. If delivery is delayed upon customer request, arising costs will be invoiced to the customer. We reserve the right to perform partial deliveries, provided that the delivered parts are functioning units. We are continuously improving our products and reserve the right to make available the latest validated versions in system hard- and software as well as computer at the time of delivery. If IncoTerms ® 2010 EXW are in effect, the effective shipping and packing costs will be invoiced to the customer.

IN CASE OF A CONSOLE OR ACCESSORY QUOTATION
Since the offered equipment is not a complete system, it is assumed that all parts utilized from a previous spectrometer (i.e. magnet, transmitters, probes, etc.) are in perfect working condition. Any repair or replacement of such material is not included in this offer and will have to be paid for extra. The overall performance depends on the performance of already existing material. Therefore neither Bruker Switzerland AG nor Bruker India Scientific can accept any performance guarantee. The spectrometer console will be complemented with equipment for testing purposes in our works as required. Tests will be performed according to our ATP (acceptance test procedures).

ITEMS TO BE PROVIDED BY THE CUSTOMER
In the case of a system (Magnet + Console + Accessories) customer must provide:

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Item	Material/Description	Quantity	Unit price USD	Amount USD

1. Adequate quantity of liquid nitrogen and liquid Helium (according to magnet specification sheet) at the time of installation.
2. Two nitrogen and one Helium gas cylinders at the time of installation
3. Regular supply of liquid helium and weekly supply of liquid nitrogen after installation.
4. Clean and uninterrupted mains power using an on-line UPS.
5. Air conditioning of the room with control accuracy of +/- 1°C.
6. Liquid nitrogen dewars during installation. These will be also required for routine liquid nitrogen filling every week after installation.
7. Maintain a proper record of liquid nitrogen filling of the magnet on a weekly basis.
8. Monitor liquid helium level and report any irregularities immediately to the nearest Bruker service center.
9. Liquid helium should be refilled when the helium level reaches 40%.
Note: after installation the magnet may come for a refill earlier because a freshly charged magnet takes time to cool down and stabilise.
10. A frame or Hook for the installation of magnet. Capacity should be as per Magnet Specification. If it is not available at site then freight charges and GST (service) will be extra for the movement of A frame from the available source to NMR site

In the case of a console only (Console + Accessories) customer must provide:
a. Clean and uninterrupted mains power using an on-line UPS.
b. Air conditioning of the room with control accuracy of +/- 1°C.
c. Air compressor and air dryer of adequate capacity.

ACCEPTANCE/INSTALLATION
Installation by Bruker is included. Operation means including power, liquid helium, helium according specification as well as nitrogen are provided by the customer at the latter's expense. We expect that the laboratory as well as all access ways are prepared according to our site-planning recommendations. Installation will commence after we receive a written notification by the buyer that the proposed installation site is ready and that all utilities required for the operation of the NMR spectrometer are available. We shall assume no responsibility if the installation gets delayed due to reasons that are not under our control. Acceptance of Bruker goods, if applicable, is done via Bruker ISO process. Goods with longer delivery times (than the basis system) will be accepted after their delivery and demonstration of their performance. These goods do not delay acceptance of the basis system. We expect that the new console, if applicable, is to be installed with the functioning magnet system and no relocation of the magnet system (no de-energizing of the magnet) is to be performed. We expect that the liquid helium level is at minimum 75%. Goods to be reused, in particular the magnet system, can affect the achievable specifications. We assume that all to be reused items are fully functional. Published specifications of probeheads in this quotation are valid only for concurrently delivered hardware. Magnet systems, preamplifiers and shim systems of older generations might have limiting factors on these specifications. For the installation as well as acceptance of HPLC- and LC-NMR systems customers have to provide solvents for chromatography as well as deuterated solvents for NMR spectroscopy (dependent on type of LC-NMR interface). For installation, if applicable, a worktable, nitrogen gas supply as well as means of organic solvent handling must be provided by the customer. Details cf. Installation Requirement Document.

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Item	Material/Description	Quantity	Unit price USD	Amount USD

Installation of NMR system depends upon site readiness as per site requirement, availability of liquid Helium and other factors. Based on specification of system, it requires minimum 6-7weeks, if all conditions are as per specification.

Note:
1. Acceptance of the system is performed according to Bruker ISO acceptance process. Warranty starts with the acceptance or with the use of the system by the customer - whatever occurs first. Training by application specialists will only start after acceptance.

2. Acceptance of accessories/items quoted with a specific extended delivery time compared to the basic system will be performed after their respective delivery by demonstration of specifications according to the standard applicable ISO test procedure(s). These parts will not hold up acceptance of the basic system. Demonstration of specifications for these items will start warranty; at the same time payment becomes due for these.

3. System installations: in case that the installation of a system by a Bruker engineer is impossible within 3 months of delivery
- on end user request e.g. because the lab is still under construction,
- or because of any reason not under Bruker's control and not a case of force majeure, prohibiting the instrument to be brought to the installation location and/or to perform the installation,
- or because the installation location selected by the customer is unsuitable since it does not fulfill the installation requirements as defined in the installation requirements document (Site Planning) then acceptance will occur automatically 3 months after the contractually agreed delivery date and full payment for the instrument thereby becomes irrevocably due. This applies also in case when the delivery was postponed for one of the above stated reasons from the contractually defined delivery date. The one year instrument warranty will then end automatically 15 months after this date. Bruker will still install the system under such circumstances provided that the problem(s) delaying the installation has/ have been satisfactorily solved within 18 months starting from the contractual delivery date. In case the installation should include the provision of cryogens by Bruker, Bruker will still supply these cryogens but any increases of list prices of the cryogens after 3 month of the contractual delivery date will be invoiced by Bruker and will be borne by the purchaser.

4. If a contractually defined shipment date has to be delayed on end user request and if the system therefore needs to be stored until a delivery is possible then usual storage cost for suitable storage will be borne by the purchaser.
We confirm that service and spares for the NMR spectrometer will be available for 10 years from the date of supply.

WARRANTY
Warranty against defects in material or workmanship for a period of sixty months from the date of installation or 62 months from the date of shipment whichever comes first. In case that mounting and commissioning cannot be carried out by the Seller due to reasons the Buyer is

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Item	Material/Description	Quantity	Unit price USD	Amount USD

responsible for and in consequence thereof the acceptance protocol cannot be signed within 3 months after delivery, the equipment is to be regarded as accepted and the warranty period commences.

Excluded from warranty are glassware and parts subject to wear and tear inluding damage of probehead due to spilage of chemicals and or due to mishandling. Customer has to clear warranty items, if any, from customs at his expense. Problems in the magnet due to non/irregular filling of liquid nitrogen/liq helium are not covered under warranty. Any damage /quench of the magnet caused by the non/irregular filling of liquid nitrogen or Force-Majeur is not covered by warranty. In case of a magnet damage due to negligence and Force-Majeur the customer bears all costs for parts, utilities and labour.

Our engineer will troubleshoot the NMR at the earliest (possibly within 72 working hours after receipt of your request by email). If a defective board can be replaced with one from our stock in India, the same will be done within 4 working days. If any electronic board is found defective and not available in our stock in India, then a request will be made to our Principals for an urgent airlifting of the board. Generally, our principals, depending on the nature of the item, will airfreight the same within 7 working days. As mentioned above, parts will be sent to the customer address and clearing and transport the same from Indian customs is the responsibility of the Institute during warranty period.

The spectrometer will use the existing magnet system (1870914 MAGNETSYSTEM ASP 700/54 MAGNEX, Stand, and Helium Transfer line. Magnet should be in working condition at the time of upgrade of the console therefore cryogen filling should be as per specification by the Institute. Warranty does not cover the existing 700MHz magnet. In case of any magnet defect, Bruker can't take any responsibility

TRAINING
Basic operator training will be provided by the engineer during the time of installation; if such installation in this quote is included. Participation in a Bruker operator and / or maintenance course in Europe can be arranged at extra cost.

TERMS AND CONDITIONS OF EXPORT
Customer understands that exports and re-exports of Bruker products and any related software, technical data, service, or technical assistance (individually, an "Item" and, collectively, the "Items") are subject to U.S. and foreign trade controls, customs and economic sanctions laws, regulations, rules and orders (collectively, "Export Control Laws"). In addition to any other remedy it may have, Bruker may suspend and/or cancel the export, delivery, installation, and/or any maintenance or repair service of any Item if (a) Bruker has not received all export-related documentation requested by Bruker, including end-user certificates, (b) Bruker has not received the governmental approvals that Bruker deems to be required, or (c) Bruker believes that such activity may violate any Export Control Laws or Bruker's own compliance policies. Customer shall only use the Items for non-military, peaceful purposes. Customer shall not export, re-export or otherwise transfer or provide any Item in contravention of any Export Control Law or any end-user certificate provided by Customer, including to an embargoed or otherwise sanctioned

Bruker Switzerland AG
Division Biospin
Industriestrasse 26
CH-8117 Fällanden (Switzerland)
Tel.: +41 (0)44 825 91 11
Fax : +41 (0)44 825 96 96
VAT Nr. CHE-101.138.357 MWST

Quotation no.: 22190635

Item	Material/Description	Quantity	Unit price USD	Amount USD

country. Customer must notify Bruker before providing any technical data to Bruker that is controlled under any Export Control Law. Bruker will not be liable to Customer for any loss or expense if Customer fails to comply with any Export Control Law. Customer shall indemnify Bruker for all losses, costs, claims, damages and expenses (including attorney fees and expenses) arising from Customer's violation or alleged violation of any Export Control Law. Return shipments are to be sent through Zurich Airport / Switzerland. Packaging containers made from solid wood must bare an internationally recognized mark (IPPC).

COVID-19 Clause
The parties are aware that the COVID-19 virus has been declared a pandemic by the World Health Organisation and acknowledge that the Supplier, either directly or indirectly, may be prevented, delayed or caused to incur increased costs as a result of such circumstances (including without limitation those caused by labour shortages or unavailability or restricted availability of materials, goods, credit or services affecting the Supplier or its sub-contractors). Provided the Supplier (Bruker): (i) promptly notifies the Customer of the circumstance, and thereafter from time to time at reasonable intervals provide updates as to the status of such circumstance; (ii) has taken, and continues to take, reasonable precautions, due care and measures to mitigate the effect of such circumstances on its ability to perform its obligations, then the Customer agrees to grant the Supplier such extra time and extraordinary additional freight costs reasonably requested and evidenced by the Supplier.

HSN code of NMR spectrometer, 90278900

Quotation only valid when signed by a Bruker representative.

Bruker Switzerland AG
Division Biospin
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Tel.: +41 (0)44 825 91 11
Fax.: +41 (0)44 825 96 96
VAT Nr. CHE-101.138.357 MWST

(44)

Quotation No. 22198686

Date: 09.08.2022

BRUKER

Sold-To-Party
Head
Department of NMR,
All India Institute of Medical Sciences (AIIMS), Ansari Nagar East, Gautam Nagar
110029 New Delhi
India
Attn: Prof. Rama Jayasundar

Information

Your customer no.	1206545	Contact person	Bhawani Joshi
Your reference no./Date	AV4700Console-AIIMS-Local Items/25.07.2022	Telephone	+919335921222
		Email	bhawani.joshi@bruker.com
Valid until	09.09.2022	End User	All India Institute of Medical Scie
Delivery time	Delivery onsite after site ready		
Incoterms	DDP Delivered at place		
Payment terms	Net due in 30 days		

Item	Material/Description	Quantity	Unit price INR	Amount INR

Local Items for Electronics and Console for the existing 700 MHz NMR Spectrometer (Using Agilent Magnet: 1870914 MAGNETSYSTEM ASP 700/54 MAGNEX)

Supply from India

10	LPI-NMR-013-MRS AIR COMPRESSOR Noise Free 3HP Scroll Air compressor including Dryer and One Buffer Tank (capacity 90 liter) with one-year standard warranty	1 PC	
20	LPI-NMR-005-MRS UPS 10 KVA On-line UPS with SMF batteries (One-hour backup) suitable for BRUKER NMR system with one-year standard warranty (supports for NMR console and PC) with 15KVA Voltage stabilizer	1 PC	
30	LPI-NMR-018-SLS NITROGEN CONTAINER	1 PC	

Bruker India Scientific Pvt Ltd
Unit Number 609, 6th floor, West Wing,
Satellite Gazebo, Guru Hargovindji Marg,
Andheri Ghatkopar Road,
Andheri East, Mumbai 400093
TEL: +91 22 6112 8813
FAX: +91 22 6112 8830
CIN : U33100MH1985PTC035138
PAN : AAACB2346K
TAN : MUMB11605G
GSTN: 27AAACB2346K1ZR

Bank of America
A Wing, One BKC, 'G' Block, Bandra Kurla Complex, Bandra east, Mumbai 400051, Maharashtra, India
Bankers MICR Code : 400032002
Account No. : 520573155015
NEFT IFSC Code : BOFA0MM6205
RTGS IFSC Code : BOFA0MM6205
Account Type : Current

Authorized Signatory
Bruker India Scientific Pvt Ltd

Quotation no.: 22198686

Item	Material/Description	Quantity	Unit price INR	Amount INR
	50-liter liquid nitrogen Dewar (No. 4) and Transfer line (No. 1) for topping up liquid N2 into Bruker NMR magnet with one-year standard warranty from the date of supply			
40	LPI-NMR-009-MRS GENERAL SUPPLIES Four Years additional warranty on Air compressor, UPS and Voltage Stablizer	1 PC		
50	LPI-NMR-009-MRS GENERAL SUPPLIES Additional 1 User License of Chenomx NMR	1 PC		

Net		INR	2.479.950,00
IGST		18,00%	446.391,00
Gross		INR	2.926.341,00

Bruker India Scientific Pvt Ltd
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PAN : AAACB2346K
TAN : MUMB11605G
GSTN: 27AAACB2346K1ZR

Bank of America
A Wing, One BKC, 'G' Block, Bandra Kurla Complex, Bandra east, Mumbai 400051, Maharashtra, India
Bankers MICR Code : 400032002
Account No. : 620573155015
NEFT IFSC Code : BOFA 0MM6205
RTGS IFSC Code : BOFA 0MM6205
Account Type : Current

Authorized Signatory
Bruker India Scientific Pvt Ltd

Quotation no.: 22198686

BRUKER

Item	Material/Description	Quantity	Amount INR
	Optional		
60	LPI-NMR-009-MRS CAMC 6th Year from Date of Acceptance: CAMC (Parts+Service) applicable for Item 30-290 of Quotation-Q-22190635 (GST is not included)	1 PC	4.666.531,00
70	LPI-NMR-009-MRS GENERAL SUPPLIES 7th Year from Date of Acceptance: CAMC (Parts+Service) applicable for Item 30-290 of Quotation-Q-22190635 (GST is not included)	1 PC	5.086.519,00
80	LPI-NMR-009-MRS GENERAL SUPPLIES 8th Year from Date of Acceptance: CAMC (Parts+Service) applicable for Item 30-290 of Quotation-Q-22190635 (GST is not included)	1 PC	5.544.306,00
90	LPI-NMR-009-MRS GENERAL SUPPLIES 9th Year from Date of Acceptance: CAMC (Parts+Service) applicable for Item 30-290 of Quotation-Q-22190635 (GST is not included)	1 PC	6.043.293,00
100	LPI-NMR-009-MRS GENERAL SUPPLIES 10th Year from Date of Acceptance: CAMC (Parts+Service) applicable for Item 30-290 of Quotation-Q-22190635 (GST is not included)	1 PC	6.587.190,00
110	LPI-NMR-009-MRS GENERAL SUPPLIES CAMC (Parts+Service) from 2nd to 5th Year for Cryoprobe and Cryoprobe Maintenance	1 PC	15.998.818,00

Bruker India Scientific Pvt Ltd
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Andheri Ghatkopar Road,
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CIN : U33100MH1985PTC035138
PAN : AAACB2346K
TAN : MUMB11505G
GSTN: 27AAACB2346K1ZR

Bank of America
A Wing, One BKC, 'G' Block, Bandra Kurla Complex, Bandra east, Mumbai 400051, Maharashtra, India
Bankers MICR Code : 400032002
Account No : 820573155015
NEFT IFSC Code : BOFA 0MM6205
RTGS IFSC Code : BOFA 0MM6205
Account Type : Current

Authorized Signatory
Bruker India Scientific Pvt Ltd

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Quotation no.: 22198686

Item	Material/Description	Quantity	Unit price INR	Amount INR

TERMS AND CONDITIONS

Order of above items should be in the name of Bruker India Scientific Pvt. Ltd.

I/we hereby certify that my/our registration certificate under the BST Act 1959 is in force on the date on which the sales of goods specified in this bill/cash memorandum is made by me/us and the transaction of sales covered by this bill/cash memorandum has been effected by me/us in the regular course of my/our business

PAYMENT within 30days from the Date of DELIVERY

Bank Details for DD/Wire Transfer:

Bank Name: Bank of America
Account No: 73155015
NEFT IFSC Code: BOFA0MM6205
RTGS IFSC Code: BOFA0MM6205
GST Registration Number: 27AAACB2346K1ZR
Central Excise Registration Number: 27801209874C
Service Tax Registration Number: AAACB2346KST001
Sales Tax / VAT / CST Registration Number: 27801209874V

Terms:

1. For the transport of above Materials to NMR Lab, necessary road transport documents should be provided from the University/Institute.
2. PAYMENT within 30days from the date of installation
3. For 3rd Party Items, No PBG will be given for the payment as per company policy.
4. Above tax rate as per Government Rule. It can be change as per Government notification.
5. Delivery of the local material will depend upon completion of NMR site and arrival of NMR in the Institute/University.
6. For the installation of Magnet, Institute should arrange A frame/Tripod/hook as per weight of the magnet (mentioned in Magnet specification sheet).
7. Cost of Tripod service and transport to NMR Lab will be INR83,000 (GST extra as applicable) and it should be paid extra along with the PO of local items.

Bruker India Scientific Pvt Ltd
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FAX +91 22 6112 8830
CIN U33100MH1985PTC035138
PAN AAACB2346K
TAN MUMB11605G
GSTN: 27AAACB2346K1ZR

Bank of America
A Wing, One BKC, 'G' Block, Bandra Kurla Complex, Bandra east, Mumbai 400051, Maharashtra, India
Bankers MICR Code : 400032002
Account No. : 620573155015
NEFT IFSC Code : BOFA 0MM6205
RTGS IFSC Code : BOFA 0MM6205
Account Type : Current

Authorized Signatory
Bruker India Scientific Pvt Ltd

Quotation no.: 22198686

Item	Material/Description	Quantity	Unit price INR	Amount INR

NOTE : All correspondence to be sent to the below address

Bruker India Scientific Pvt Ltd
Unit Number 609, 6th floor, West Wing,
Satellite Gazebo, Guru Hargovindji Marg,
Andheri Ghatkopar Road,
Andheri East, Mumbai 400093

Bruker India Scientific Pvt Ltd
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CIN : U33100MH1985PTC035138
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TAN : MUMB11605G
GSTN: 27AAACB2346K1ZR

Bank of America
A Wing, One BKC, 'G' Block, Bandra Kurla Complex, Bandra east, Mumbai 400051, Maharashtra, India
Bankers MICR Code : 400032002
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NEFT IFSC Code : BOFA 0MM6205
RTGS IFSC Code : BOFA 0MM6205
Account Type : Current

Authorized Signatory
Bruker India Scientific Pvt Ltd

Quotation
No. 22198699
Date: 09.08.2022

Sold-To-Party
Head
Department of NMR,
All India Institute of Medical Sciences (AIIMS), Ansari Nagar East, Gautam Nagar
110029 New Delhi
India
Attn: Prof. Rama Jayasundar

Information

Your customer no.	1206545	Contact person	Bhawani Joshi
Your reference no./Date	AV4700Console-AIIMS-Cryogen/2 5.07.2022	Telephone	+919335921222
		Email	bhawani.joshi@bruker.com
Valid until	09.09.2022	End User	All India Institute of Medical Scie
Delivery time	As per Magnet Requirements		
Incoterms	DDP Delivered at place		
Payment terms	Net due in 30 days		

Item	Material/Description	Quantity	Unit price INR	Amount INR

Cryogens for Refilling of 600MHz NMR Magnet: Electronics and Console for the existing 700 MHz NMR Spectrometer (Using Agilent Magnet: 1870914 MAGNETSYSTEM ASP 700/54 MAGNEX)

Supply from India

10	LPI-NMR-009-MRS GENERAL SUPPLIES 5 Years Supply of Liquid Helium for 700MHz Magnet from the date of Installation of Electronics (150 days Helium Hold Time) Volume: 2,000L	1 PC		
20	LPI-NMR-009-MRS GENERAL SUPPLIES 5 Years Supply of Liquid Nitrogen for 700MHz Magnet from the date of Installation of Electronics Volume: 20,000L	1 PC		

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PAN . AAACB2346K
TAN . MUMB11605G
GSTN: 27AAACB2346K1ZR

Bank of America
A Wing, One BKC, 'G' Block, Bandra Kurla Complex, Bandra east, Mumbai 400051, Maharashtra, India
Bankers MICR Code : 400032002
Account No. : 620573155015
NEFT IFSC Code : BOFA 0MM6205
RTGS IFSC Code : BOFA 0MM6205
Account Type : Current

Authorized Signatory
Bruker India Scientific Pvt Ltd

Quotation no.: 22198699

BRUKER

Item	Material/Description	Quantity	Unit price INR	Amount INR
	Net		INR	8.353.847,00
	IGST		18,00%	1.503.692,46
	Gross		INR	9.857.539,46

Bruker India Scientific Pvt Ltd
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Satellite Gazebo, Guru Hargovindji Marg,
Andheri Ghatkopar Road,
Andheri East, Mumbai 400093
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FAX +91 22 6112 8830
CIN : U33100MH1985PTC035138
PAN : AAACB2346K
TAN : MUMB11605G
GSTN: 27AAACB2346K1ZR

Bank of America
A Wing, One BKC, 'G' Block, Bandra Kurla Complex, Bandra east, Mumbai 400051, Maharashtra, India
Bankers MICR Code : 400032002
Account No : 620573155015
NEFT IFSC Code : BOFA 0MM6205
RTGS IFSC Code : BOFA 0MM6205
Account Type : Current

Authorized Signatory
Bruker India Scientific Pvt Ltd

Quotation no.: 22198699

Item	Material/Description	Quantity	Amount INR

TERMS AND CONDITIONS

1.PRICE

Quoted prices do not include GST or any other local sales, use or similar taxes, which Buyer shall additionally be liable to pay. Accordingly, in addition to the prices specified on the clause 2, the amount of any applicable GST, Local sales, use and/or similar taxes will appear as separate items on the invoice and will be paid by Buyer unless prior to shipment Seller receives an appropriate tax exemption certificate from Buyer.

2.BILLING & PAYMENT TERM

PAYMENT within 30days from the Date of DELIVERY. Since Magnet requires filling after regular interval as per magnet specification. Therefore, invoice will be generated after every filling during contract period

Mode of Payment: Wire Transfer/Demand Draft
i.Bank Name: Bank of America NA, BKC Branch,
ii.Account Type: Current Account
iii.Account No: 620573155015
iv.IFSC Code: BOFA0MM6205

3.PURCHASE ORDER

Order to be placed on
Bruker India Scientific Pvt Ltd
Unit No 609,6th Floor, West Wing, Satellite Gazebo Guru Hargovindji Marg,
Andheri Ghatkopar Road; Andheri East, Mumbai – 400093

4.DELIVERY

Delivery for refilling of Magnet will be based on Magnet Helium/Nitrogen Level and Specification.

5.DURATION OF CONTRACT PERIOD

Duration is mentioned in Page no 1 of the quotation.

6.RESPONSIBILITIES

All services are to be performed in good faith, but no responsibility can be assumed for delays under the situation of Acts of the God, Damages caused due to rats/rodents, decrees or acts of Government, Epidemics, Natural calamities, strikes, delays of transportation/interruption of business of either party or other causes beyond our control.

7.COMMUNICATIONS

All the communication should be sent either in the form of email or letter to below address.
BRUKER INDIA SCIENTIFIC PVT LTD
Unit No. 609, Satellite Gazebo, Andheri Ghatkopar Road, Chakala , Andheri East, Mumbai – 400093

8.EXCLUSIONS

The following are expressly not covered under this contract:

Quotation no.: 22198699

BRUKER

Item	Material/Description	Quantity	Amount INR

a.Anything comes under FORCE MAJEURE as defined in Clause 4 of General Standard T&C
b.Any service required by a failure resulting from actions by someone other than our personnel or our contractors
c.Any service required by (1) your failure to fulfill your responsibilities under the contract; (2) the failure of anyone other than us or our service contractor to comply with our instructions or recommendations; (3) any alteration or improper storage, handling, use or maintenance of any part of the magnet by anyone other than us or our service contractor; and (4) anything external to the Covered Equipment, including building deficiency, power surge, fluctuation or failure, and air conditioner failure.
d.Magnet Quench due to the following conditions
•Metal objects attracted to the magnet
•If liquid nitrogen is not filled into the liquid N2 dewar of magnet every week. For magnets with sensor, 100% level should be achieved. For for magnets without Sensor overflow should be achieved.
•If, room in not well ventilated/air conditioned.
•If due precautions are not taken during high and low temperature experiments on the NMR.

OUR OTHER GENERAL STANDARD TERMS AND CONDITIONS

1)GENERAL TERMS
•All quotations, shipments and services given and made by Bruker India are governed solely by the conditions and terms set forth in this quotation.
•No additions to or modifications of any of the provisions upon the face or reverse of this form shall be binding upon BRUKER INDIA unless made in writing and signed by a duly authorized representative.
•In absence of written acceptance of these terms and conditions, an acceptance of any goods or services, shipped or provided by BRUKER INDIA based on a purchase order received from purchaser shall constitute an acceptance of these terms and conditions. The terms and conditions herein shall prevail as against the terms and conditions of any purchase order.
•The rights and obligations of the parties shall be governed in all respects by the laws of Govt of India and the parties shall submit themselves to the jurisdiction of the said country.
•BRUKER INDIA shall retain copyright, trademark, patent and proprietary rights in all drawings, technical information and know-how. Purchaser agrees not to disclose to third parties any information gained from BRUKER INDIA without BRUKER INDIA prior written consent. In the event Purchaser breaches any of the conditions set forth herein including payment term, in addition to any other remedy BRUKER INDIA may have, it may discontinue all service to purchaser, and all guarantees and contracts shall be terminated without notice if BRUKER INDIA may choose to do so.
•Documentation such as Software Listings, detailed Drawings and other documentation normally not distributed may only be provided by BRUKER INDIA on the condition that the receiver of such documentation sign a Confidentiality Contract.
•Clerical errors and mistakes of fact are subject to correction by BRUKER INDIA at any time.

2)LIMITATION OF LIABILITY
Reasonable care must be used to avoid hazards. BRUKER INDIA expressly disclaims

Bruker India Scientific Pvt Ltd
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CIN : U33100MH1985PTC035138
PAN : AAACB2346K
TAN : MUMB11605G
GSTN: 27AAACB2346K1ZR

Bank of America
A Wing, One BKC, 'G' Block, Bandra Kurla Complex, Bandra east, Mumbai 400051, Maharashtra, India
Bankers MICR Code : 400032002
Account No. : 620573155015
NEFT IFSC Code : BOFA 0MM6205
RTGS IFSC Code : BOFA 0MM6205
Account Type : Current

Authorized Signatory
Bruker India Scientific Pvt Ltd

Item	Material/Description	Quantity	Amount INR

responsibility for loss or damage caused by use of its products other than in accordance with proper operating procedures. IN NO EVENT SHALL BRUKER INDIA BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL OR RESULTING LOSS OR DAMAGE OF ANY KIND, HOWSOEVER CAUSED. BRUKER INDIALIABILITY FOR DAMAGES SHALL NOT EXCEED PAYMENT, IF ANY RECEIVED BY BRUKER INDIA FOR THE UNIT OR PRODUCT OR SERVICE FURNISHED OR TO BE FURNISHED, AS THE CASE MAY BE, WHICH IS THE SUBJECT TO CLAIM OR DISPUTE. All obligations of BRUKER INDIA under this contract shall cease in the event its products or parts have been subject to accident, abuse, alteration, misuse or neglect, or which have not been operated and maintained in accordance with proper operating procedures. No action, regardless of form, arising out of, or in any way connected with, the products or services furnished or to be furnished by BRUKER INDIA may be brought by the Buyer more than THREE MONTHS after the cause of action has accrued.

3)ARBITRATION

If any difference and disputes between the parties herein or successors or assignees thereof, regarding the Agreement. Its interpretations and renewals thereof then the dispute or differences, if any, shall be referred to two arbitrators, one to be appointed by each party in dispute to an Umpire to be appointed by the arbitrators before entering upon the reference and every such reference shall be governed in accordance with the provisions of the Arbitration and Reconciliation Act 1996 or any modification or re-enactment thereof for the time being in force in India and the awards arising out of such arbitration proceedings shall be binding on the parties. The parties shall bear the costs of arbitration equally and the arbitration proceedings shall be conducted in Mumbai.

4)FORCE MAJEURE:

BRUKER shall not be liable for failure to perform occasioned by strikes, lockouts, labor difficulties, riots, inability or difficulty in obtaining or procuring supplies, labor or transportation, End of product life, fires, storms, floods, earthquakes, explosions, accidents, acts of God, interference by civil or military authorities, whether legal or de facto, acts of the public enemy, war, rebellion, insurrection, sabotage, embargoes, orders given priority by any public authority or any other cause beyond the reasonable control of BRUKER INDIA.

5)JURISDICTION

The parties hereto unconditionally and irrevocably agree to submit to the exclusive jurisdiction of the Competent Courts in Mumbai only regarding any question or matter arising out of this contract and any other documents that may be executed by the parties hereto or any of them in pursuance hereof or arising here from.

6)CONFIDENTIALITY OF INFORMATION

These terms and conditions, the quotation and other related documents shall neither be passed on or communicated (directly or indirectly) to third parties nor copied unless Bruker explicitly agrees in writing BRUKER INDIA and our service contractor will hold in confidence and not disclose any information we obtain by means which is designated by you as confidential or proprietary. We and our service contractor will use reasonable efforts to protect against any such disclosure

Bruker India Scientific Pvt Ltd
Unit Number 609, 6th floor, West Wing,
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Andheri Ghatkopar Road,
Andheri East, Mumbai 400093
TEL +91 22 6112 8813
FAX +91 22 6112 8830
CIN : U33100MH1985PTC035133
PAN : AAACB2346K
TAN : MUMB11605G
GSTN: 27AAACB2346K1ZR

Bank of America
A Wing, One BKC, 'G' Block, Bandra Kurla Complex, Bandra east, Mumbai 400051, Maharashtra, India
Bankers MICR Code : 400032002
Account No. : 620573155015
NEFT IFSC Code : BOFA 0MM6205
RTGS IFSC Code : BOFA 0MM6205
Account Type : Current

Authorized Signatory
Bruker India Scientific Pvt Ltd

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Quotation no.: 22198699

BRUKER

Item	Material/Description	Quantity	Amount INR

7)COMPLIANCE WITH FCPA
Customer hereby represents and warrants that it will follow the country FCPA or other equivalent regulations as per the applicable law in India.

8)ASSIGNMENT: -
The BRUKER shall be entitled to Assign in whole or in part of this Contract / Agreement/ the obligations under this Agreement/Order to its successors, assignees or Affiliates

9)COVID-19 Clause

The parties are aware that the COVID-19 virus has been declared a pandemic by the World Health Organisation and acknowledge that the Supplier, either directly or indirectly, may be prevented, delayed or caused to incur increased costs as a result of such circumstances (including without limitation those caused by labour shortages or unavailability or restricted availability of materials, goods, credit or services affecting the Supplier or its sub-contractors). Provided the Supplier: (i) promptly notifies the Customer of the circumstance, and thereafter from time to time at reasonable intervals provide updates as to the status of such circumstance; (ii) has taken, and continues to take, reasonable precautions, due care and measures to mitigate the effect of such circumstances on its ability to perform its obligations, then the Customer agrees to grant the Supplier such extra time and extraordinary additional freight costs reasonably requested and evidenced by the Supplier."

For BRUKER INDIA SCIENTIFIC PVT LTD

NOTE : All correspondence to be sent to the below address
Bruker India Scientific Pvt Ltd
Unit Number 609, 6th floor, West Wing,
Satellite Gazebo, Guru Hargovindji Marg,
Andheri Ghatkopar Road,
Andheri East, Mumbai 400093

Authorized Signatory
Bruker India Scientific Pvt Ltd

(58)

BRUKER

Bruker Switzerland AG
Industriestrasse 26
8117 Fällanden, Switzerland
Phone +41 44 825 9111
Fax +41 44 825 9696
www.bruker.com

Urs Widmer
Phone: +41 44 825 91 11
Fax: +41 44 825 96 96
e-mail: sales.ch@bruker.com

July 12, 2021

To
Head
Department of NMR,
All India Institute of Medical Sciences (AIIMS),
Ansari Nagar,
New Delhi 0- 110029
India

Authorization Certificate

Tender Ref: GEM/2021/B/1151910 Dated: 31.03.21 for procurement of Electronics and Console for the existing 700 MHZ NMR Spectrometer

We **Bruker Switzerland AG**, who are established and reputable manufacturers of **NMR Spectrometer** having factories at **Industriestrasse 26, 8117 Faellanden, Switzerland** do hereby authorize **Dr. Bhawani Shankar Joshi, BRUKER INDIA SCIENTIFIC PVT LTD, Unit Number 609, 6th floor, West Wing, Satellite Gazebo, Guru Hargovindji Marg, Andheri Ghatkopar Road, Andheri East, Mumbai 400093, India** to submit a bid, negotiate and receive the order from you against your tender enquiry.
No company or firm or individual other than M/s **BRUKER INDIA SCIENTIFIC PVT LTD, Unit Number 609, 6th floor, West Wing, Satellite Gazebo, Guru Hargovindji Marg, Andheri Ghatkopar Road, Andheri East, Mumbai 400093, India** is authorised to bid, and conclude the contract in regard to this business.

Sincerely yours,
Bruker Switzerland AG

Bruker Switzerland AG
Industriestrasse 26
CH-8117 Fällanden

Urs Widmer
Global Sales Coordinator NMR

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Report ID: GEM/GARPTS/07092022/T352T9TA0PS9
Report Name: Electronics and Console for the existing 700Mhz NMR Spectrometer
Generated By: Puran Chand Bhatt , Department of Health and Family Welfare , Ministry of Health and Family Welfare

Generated On: 07/09/2022
Valid till: 07/10/2022

GeM Availability Report and Past Transaction Summary

GeM Availability Report and past transaction summary report is generated based on the specifications searched by the Buyer. The specification may be modified appropriately for searching relevant categories on GeM. Buyer may navigate to GeM category page by clicking on the category link to view category specifications and products/services available in the category.

Order Count and Order Value displayed is on a cumulative basis since GeM inception.

1. Search String: Electronics and Console for the existing 700Mhz NMR Spectrometer

Search type: Product

Search Result: Category not available on GeM for the text string searched by the buyer.

This is a one-time requirement hence new category creation is not proposed / or requirement is recurring but request for new category creation will be submitted separately post generation of GeMARPTS.

Rama Jayasundar 07/9/22

Prof. Dr. Rama Jayasundar
Professor & Head
Department of N.M.R.
All India Institute of Medical Sciences
New Delhi-110029

07/09/2022

Dr. S. Senthil Kumaran
Professor
Department of N.M.R.
All India Institute of Medical Sciences
New Delhi-110029

Virendra. 7/9/2022

Dr. VIRENDRA KUMAR
Additional Professor
Deptt. of N.M.R.
All India Institute of Medical Sciences
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Bruker India Scientific Pvt. Ltd.

Unit Number 609, 6th floor, West Wing,
Satellite Gazebo, Guru Hargovindji Marg,
Andheri Ghatkopar Road,
Andheri East, Mumbai 400093
www.bruker.com

To

Head
Department of NMR,
All India Institute of Medical Sciences (AIIMS),
Ansari Nagar East, Gautam Nagar
110029 New Delhi
India
Attn: Prof. Rama Jayasundar

Date: 05.09.2022

Salesperson:
Dr. B S Joshi
Senior Sales Manager
bhawani.joshi@bruker.com
+91 93359 21222

Procurement of Electronics and Console for the existing 700 MHZ NMR Spectrometer (Using Agilent Magnet: 1870914 MAGNETSYSTEM ASP 700/54 MAGNEX)

Sub: Land Border Certificate

Dear Sir

I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and hereby certify that this bidder is from **Switzerland** and has been registered with the Competent Authority. I also certify that this bidder fulfills all the requirements in this regard and is eligible to be considered.

Yours faithfully

BRUKER INDIA SCIENTIFIC PVT. LTD. MUMBAI

Place: Mumbai
Date: Sept05, 2022

Certified.

Rama Jayasundar 07/9/22

7/9/22

Umasharma 7/9/22

07/09