



7th August 2024

To Whom It May Concern

Domestic Tender for Supply of Mixed bed Resin.

This is an RFQ (Request for Quote) for the Supply of Mixed bed resin as part of an open tender for the Centre for Nano Science and Engineering (CeNSE) at IISc, Bangalore.

CeNSE is a multidisciplinary research department at IISc that houses a 14,000 sq. ft. cleanroom and characterization facility used by 50 faculty members from various disciplines at IISc. CeNSE also runs a program called the Indian Nanoelectronics Users Program (INUP) which has allowed 4200 participants from more than 700 universities and institutes all over India to use the facilities at CeNSE. Consequently, any tool in CeNSE receives significant exposure to the scientific community at IISc and beyond. The vendors are requested to factor in the value of this exposure in their quotes. Details of existing facilities and the INUP program can be gleaned from: <http://nnfc.cense.iisc.ac.in/>
<http://www.mncf.cense.iisc.ac.in/>
<https://www.inup.cense.iisc.ac.in/>

Procedure

1. Vendors must submit a technical proposal and a commercial proposal in **two separate sealed envelopes**. Only vendors who meet the technical requirements will be considered for the commercial negotiation. **PLEASE MAKE SURE THE SITE VISIT IS DONE BEFORE SUBMITTING THE BID. ONLY BIDS FROM VENDORS WHO HAVE VISITED THE SITE WILL BE ENTERTAINED.**
2. **The deadline for submission of proposals is the 28th of August 2024, 5:30 pm Indian Standard Time.** Proposals should arrive at the Main office, GF-15, Centre for Nano Science and Engineering, Indian Institute of Science, Bangalore 560012, India, by the above deadline.
3. The decision of the purchase committee will be final.
4. The Bidder should belong to either class 1 or class 2 suppliers distinguished by their "local content" as defined by recent edits to GFR. They should mention clearly which class they belong to in the cover letter and should provide all the required supporting documents.
 - a) Class 1 supplier: Goods and services should have local content equal to or more than 50%.
 - b) Class 2 supplier: Goods and services should have local content equal to or more than 20 % and less than 50%.
5. Bidders offering imported products will fall under the category of non-local suppliers. They cannot claim themselves as Class-1 local suppliers/Class-2 local suppliers by claiming services such as transportation, insurance, installation, commissioning, training, and other sales service support like AMC/CMC, etc., as local value addition.



6. Quote should come only from Indian Original Equipment Manufacturer (OEM) or their Indian authorized distributor.
7. The quotations should be on FOR-IISc Bangalore basis in INR only.
8. MSMEs can seek an exemption to some qualification criteria. IISc follows GFR2017 for such details.
9. Bidders offering imported products must submit an authorized letter of OEM with a particular tender name and address.
10. The bidder should have local vendor support for installation.
11. Purchase preference as defined by the recent edits to GFR (within the “margin of purchase preference”) will be given to the Class-1 supplier.
12. The technical proposal should contain a compliance table with 5 columns. The first column must list the technical requirements, in the order that they are given in the technical configuration below. The second column should describe your compliance in a “Yes” or “No” response. If “No” the third column should provide the extent of the deviation (please provide quantitative responses). The fourth column should state the reasons for the deviation, if any. The fourth column should also contain the make and model of the components/parts to be used in the installation.
13. Any additional capabilities or technical details that you would like to bring to the attention of the purchase committee can be listed at the end of the technical table.
14. In the commercial bid, please provide the itemized cost of the different subsystems, along with possible breakups.
15. Provide itemized cost for required spares for 2 years of operation. Please note, the cleanroom is expected to be operational 24x7 and breakdowns should be minimal or nil.
16. As an additional option, provide the cost of an annual maintenance contract (AMC) for 1-year, post-warranty. The AMC must cover 1 scheduled and 1 emergency visit per year. The AMC cost must also include an itemized list of spares that are essential for the scheduled visits.
17. The RFQ must include references to 3 previous installations, preferably in India. Please provide the names and contact addresses of the referees, so that the committee can contact them independently.
18. The offer shall be valid at least 90 Days from the date of opening of the commercial bid.
19. Any questions can be directed to Mr. Gajendra M, Centre for Nano Science and Engineering, Indian Institute of Science, Bangalore 560012, India. (gajendram@iisc.ac.in)

Thanking you,

Shankar Kumar Selvaraja, Ph.D.
Associate Professor
Centre for Nano Science and Engineering Indian Institute
of Science, Bangalore, India 560012.
E-mail: shankarks@iisc.ac.in



Sl No	Item	Description
1	Mixed Bed resin	NR-30 MEG PPQ is a 1:1 chemical equivalent of C-361 MEG PPQ (H) and A-464 MEG PPQ (OH). These resins are produced using selected starting resins and are processed to have very low TOC leachables, boron and dynamic sodium levels for use in the semiconductor market along with a very quick rinse up.
2	Quantity	500 liters
3	Chemical Properties	Functional Groups: Sulfonic Acid, Trimethylamine Ionic Form (as shipped) : Hydrogen / Hydroxide mix Moisture Content: 51% max. (H form cation) / 59% max. (Cl form anion) Exchange Capacity: 2.0 meq/ml min. (H form cation) / 1.0 meq/ml min. (OH form anion) Conversion: Cation 99% minimum (H form) Anion 94% minimum (OH form) Impurities: TOC (15 bed volumes of rinse): ≤10 ppb maximum above the influent Kinetics: 18 megohm
4	Physical properties	Particle Screen Sizing: + 16 Mesh: 5.0% maximum - 50 Mesh: 0.5% maximum Effective Size (Approximate): 0.40 - 0.60 mm Whole Beads (%): 95 minimum
5	Operating Conditions	Operating pH Range: 1 to 14 Service Flow Rate: Demineralization 1 to 4 gpm/ft ³ Maximum Operating Temperature: 140 oF
6	The product should pass the following analysis	

	Analysis–Metals Extraction		Projected Water Quality	
	Cation Resin Extraction analysis	Anion Resin Extraction analysis	Mixed Resin ⁽¹⁾	Mixed Resin obtainable ⁽²⁾
	µg / g of resin	µg / g of resin	ppt	ppt
Al	< 0.5	< 0.5	<5	1
B	---	---	<50	5-25
Ca	< 7.0	< 7.0	<5	0.5, 1
Cu	< 0.5	< 0.5	<2	0.5, 1
Cr	---	---	<2	0.5, 1
Fe	≤ 10.0	≤ 1.0	<2	0.5, 1
Mg	< 1.0	< 1.0	<2	1
Na	< 7.0	< 7.0	<5	0.5, 1
Ni	---	---	<2	0.5, 1
Pb	---	---	<5	1
Ti	---	---	<2	0.5, 1
Zn	≤ 0.5	≤ 0.5	<2	0.5, 1