



Telephone :

EN

Department of Civil Engineering

Indian Institute of Technology, Madras

I.I.T.P.O., MADRAS - 600 036.

Ref. No.

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Date : 4.7.14.

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Dear Sirs,

DUE DATE : 16.7.14.

1. Quotations are invited in duplicate for the various items shown below / ~~overleaf~~ / enclosed list.
2. The Quotations duly sealed and superscribed on the envelope with the reference No. and due date, should be addressed to the undersigned so as to reach him on or before the due date stipulated above.
3. The Quotations should be valid for sixty days from the due date and the period of delivery required should also be clearly indicated.
4. If the item is under DGS & D Rate contract. Rate Contract Number and the price must be mentioned. It may also please be indicated whether the supply can be made direct to us at the Rate contract price. If so, please send copy of the R.C. (Please note that we are not Direct Demanding Officers)
5. Relevant literature pertaining to the items quoted with full specifications (and drawing, if any) should be sent along with the Quotations, wherever applicable samples if called for, should be submitted free of charges, and collected back at the supplier's expenses.
6. Local Firms : Quotations should be for free delivery to this Institute. If Quotations are for Ex-Godown, delivery charges should be indicated separately.
7. Firms Outside Chennai : Quotations should be for F.O.R. Chennai. If F.O.R. consignor station, freight charges by passenger train / lorry transport must be indicated. If-Ex-Godown, packing, forwarding and freight charges must be indicated.
8. The rate of Sales / General Taxes and the percentage of such other taxes legally leviable and intended to be claimed should be distinctly shown along with the price quoted. Where this is not done, no claim for Sales / General Taxes will be admitted at any stage and on any ground whatsoever. The taxes leviable should take into consideration that we are entitled to have Concessional Sales Tax applicable to Non-Government Educational Institutions run with no profit motive for which a concession. Sales Tax Certificates will be issued at the time of final settlement of the bill.
9. Goods should be supplied carriage paid and insured.
10. Goods shall not be supplied without an official supply order.
11. Payment : Every attempt will be made to make payment within 30 days from the date of receipt of bill / acceptance of goods, whichever is later.

Details as per enclosed list. ✓

o/c.

Yours faithfully

For HEAD OF THE DEPT.

*Strike out whichever is not applicable.

Specifications for Microwave Assisted Sample Preparation System

System should be designed and manufactured under ISO-9001 and should comply with most of international regulatory, safety and compatibility requirement.

S. No	Parameters	Specification
1	Microwave Oven	<ul style="list-style-type: none"> 1. Capacity to digest soil, plant and sludge samples. 2. System must deliver unpulsed microwave energy output for precise reaction control and must have a self-adaptive microwave field. 3. System must recognize vessel positions and adapt the microwave field density according to the filling state of the samples. 4. System must have a directed multimode cavity. 5. To ensure user safety during handling, vessels must be cooled inside the oven and the use of external cooling devices like water baths are not acceptable. 6. System should have a LCD capacitive touch screen.
2	Rotors	<ul style="list-style-type: none"> 1. Must have a light weight rotor construction with 12 or more positions with fast digestion of more than 10 samples. 2. The rotors must have a lid for protection of cavity and a Hall sensor for rotor identification and rotor lid detection must be available.
3	Sensor	<ul style="list-style-type: none"> 1. Should have IR temperature sensor for remote/non-invasive measurement of temperature at all the vessel positions with programs based on temperature programming for sample digestion. 2. There should not be any electronic plugs/sockets inside the oven cavity, to prevent corrosion.
4	Vessel and Others	<ul style="list-style-type: none"> 1. Pressure-activated venting vessels must be available for digesting high sample amounts, preferably 2 or more than 2 grams. 2. Vessel must be HF-resistant. 3. The pressure vessels must be supported by metal tubes and fiber-reinforced polymer support tubes are not allowed. 4. Maximum operation temperature should be 250°C or more 5. All vessels should have hand tightening closure. 6. System should have controlled release of over pressure. 7. Each pressure vessel must be individually tested and delivered with pressure test certificate. 8. An annual maintenance contract (AMC) for two years after the warranty period of the instrument will be preferred. 9. System should be able to operate without computer. 10. Computer also has to be provided for data collection and taking printout.

General Terms and Conditions:

System should be installed by company professional and thorough technical training to be provided in analyzing and troubleshooting.

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