



Indian Cardamom Research Institute
SPICES BOARD
(Government of India)
(Ministry of Commerce and Industry)
Myladumpara
Kailasanadu P.O.,
Idukki District - 685 553
Kerala

भारतीय इलायची अनुसंधान संस्थान
स्पाइसेस बोर्ड
(भारत सरकार)
(वाणिज्य एवं उद्योग मंत्रालय)
मैलाडुंपारा,
कैलासनाड पी.ओ.
इडुक्की जिला - 685 553
केरल
No.Myl-ICRI/AGR/LTA/1/11-12/
21st September 2011

QUOTATION NOTICE

Sub: Purchase of Lab Equipments -Inviting Quotations -Reg.

Sealed competitive quotations are invited from suppliers of reputed brands for the supply of Lab Equipments as per the specifications mentioned in the Annexure 1-8 The proposal for supply of equipment with all necessary accessories and spares, as detailed in the specification, should give break up cost, excise, duty/sales tax/VAT,packing and forwarding charges, freight charges, insurances etc., (as applicable) along with brochure and terms and conditions. The quotation shall be super scribed as "Quotation for Lab equipments, due by 17/10/11" and sent to the Director (Research), Indian Cardamom Research Institute, Spices Board, Myladumpara, Kailasanadu P.O, Idukki Dist, Kerala. PIN 685553

Late quotations will not be accepted

Last date and time for the receipt of quotations (17.10.11) 5.30pm

Date and time of opening of the quotations 18.10.11 (10.00am)

Quotation shall contain the details like guarantee/warranty periods, after sales service details, delivery period, the customer list including name of contact persons with telephone no:/email id etc. Onsite training personnel, if required, is to be conducted immediately after installation of the equipments. The quotations should be submitted at its lowest rate along with statement of compliance to the annexure I-8. Clarification if any can be had from Scientist, Agronomy and Soil Science, ICRI, Spices Board, Myladumpara. Rate for 5 years comprehensive warranty may also be quoted separately.

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Website: www.indianspices.com

As Indian Cardamom Research Institute is registered with the Department of Scientific and Industrial Research (DSIR) for the purposes of availing customs duty exemption in terms of Government Notification No. 51/96- Customs dated 23 July, 1996 and Excise duty exemption in terms of Government Notification No. 10/97-Central Excise dated 1 March, 1997 as amended from time to time, the price may be quoted in foreign currencies also (Ref: No. TU/V /RG-DCE(520)/2010 dated 11.10.2010)

The Director (Research), reserves the right to reject any or all quotation without assigning any reasons thereof

M.R. *[Signature]* 21/9/11
Director (Research)





ANNEXURE I

SPECIFICATION FOR MOISTURE ANALYZER

Application:

1. For moisture determination in laboratory

Features:

1. Heating element: halogen
2. Display accuracy for balance: 0.001 g
3. Repeatability (reproducibility)RSD 0.02%
4. Size of weighing pan minimum: 90 mm
5. Readability for moisture content 0.01% (moisture or dry content in %, dry weight in g)
6. Capacity for balance 54g, Min.
7. Temperature range 50-200°C
8. Adjustment increments 1° with automatic Temperature programs (Certified)

ANNEXURE- II



SPECIFICATION FOR HOMOGENIZER

Applications

1. Homogenizing
2. Sample preparation
3. Dissolving

Features

1. Volume range 1ml to 2l
2. Speed range max. - 24000 rpm
3. Speed display LED
4. Speed control
5. Voltage: 220 – 240

ANNEXURE III

SPECIFICATION FOR VORTEX MIXTURE



Applications

1. Vortex
2. Shaker (tubes, Erlenmeyer flasks etc.)

Features

1. Type of movement orbital
2. Speed range 0 - 2500 rpm
3. Operating mode continuous operation & Touch function
4. Interchangeable attachments and 6 inserts
5. Weight 4 kg
6. Voltage 200 - 240



ANNEXURE IV

SPECIFICATION FOR KJEDAHAL WITH MONIER-WILLIAM APPARATUS

Applications :

1. Nitrogen, protein, sulfur dioxide, phenol and volatile acids determination
2. Recovery Rate $\geq 99.5\%$
3. Reproducibility (RSD) $\leq \pm 1\%$
4. Detection limit ≥ 0.1 mg nitrogen
5. 230V 50/60 Hz

Safety features:

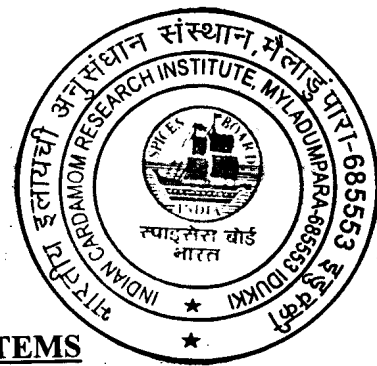
1. Protective door with sensor
2. Sample tube detector
3. Service door sensor
4. Cooling water flow sensor

Control:

1. LC display
2. Storage of methods
3. Alkali or acid addition
4. Glass splash protector
5. Cooling water control
6. Storage of distillation time
7. Electronic regulation of steam output (160 ml / 5 Min)

Accessories:

1. 500 ml sample tubes (with adaptors)
2. Tubes Holders
3. Tanks 10 L (water and alkali)
4. SO₂ determination apparatus



ANNEXURE V

SPECIFICATION FOR INFRARED DIGESTION SYSTEMS

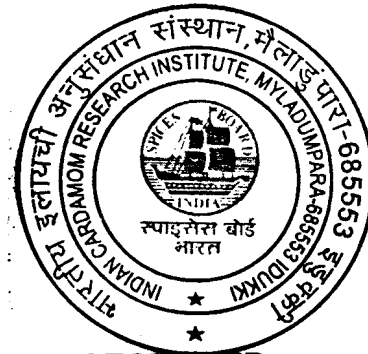
Applications:

1. For quick digestion of samples for analyzing Nitrogen, protein,

Features

LC display

1. Temperature control
2. Programmable temperature (increasing steps and cool-down)
3. Acid fumes traps
4. Temperature range 70–580 °C
5. Min. number of samples 6 (300 & 500 ml tubes)
6. V 220 –240, 50/60 Hz



ANNEXURE VI

SPECIFICATION FOR DOUBLE-BEAM UV-VIS SPECTROPHOTOMETER

Applications

Estimation and quantification of chemical and biological samples

Features

1. Measurement at user-selected fixed wavelength
2. Quantitation by K factor method (coefficient entry)
3. Photometric modes: T%, Abs
4. Tabulated data can be saved to and loaded from a USB memory device
5. Automatic printout of data
6. Data saved to a USB memory device can be displayed using PC based software
7. PC should have dual processor and 4GB Ram (DDR-3)

Spectral measurement

8. Photometric modes: Abs, T%, E
9. Scan range: 190 to 1100 nm
10. Y-axis recording range : Abs – 4 to 4
11. T%, E – 400 to 400
12. Scan speeds: High, medium, low, super-low speed
13. Number of repeat scans: 1 to 99
14. Nucleic acid quantitation
15. Quantitation of DNA or proteins can be conducted using the absorbance values at 260 nm/230 nm or 260 nm/280 nm
16. Protein quantitation
 - Lowry method
 - BCA method (method using Bicinchoninic Acid)
 - CBB method (method using Coomassie Brilliant Blue G-Biuret method)

Scanning property

17. Measurement modes: Abs, T%, E (Measurement time: 1 to 9999 sec/min)
18. Measures time course changes in Abs, T%, E or energy

Supported Accessories and Software

19. Capable for upgrading to various accessories like Multi cell sample compartment, Temperature controlled cell holder, Peltier Temperature control unit etc.,

ANNEXURE VII



DATALOGGER

1. Program execution rate of up to 1 Hz with 12-bit analog to digital conversions
2. Temperature compensated real-time clock and Gas Discharge Tube protected inputs
3. Data values stored in tables with a time stamp and record number. Final storage of 128,000 data points in the table-based memory structure.
4. Battery-backed SRAM and clock that ensure data, programs, and accurate time are maintained while a data logger is disconnected from the main power source.
5. Support for Pakbus protocol and SDI 12 Interface support
6. 5 Analog inputs and 2 Pulse inputs & 2 Digital I/O Ports with Auto ranging facility
7. Two Switched excitation voltages outputs.
8. Current drain/power ~0.2mA
9. Analog voltage accuracy +/- (0.25% of reading) with Analog Voltage Resolution 0.6mV.
10. Temperature Range -40 to 50 C and Current drain/power ~0.2mA

AIR TEMP & RH SENSOR

Temperature

- Measurement Range: -40° to +60°C
- Temperature Accuracy: -30°C - +60°C: ±0.2°C
- Output: 0 - 1 VDC

Relative Humidity

- Operating range: 0 to 100% RH
- Accuracy @23°C: ±1.5% RH
- Output: 0 - 1 VDC
- Typical Long-Term Stability: Better than ±1% RH per year

General

- Supply Voltage: 3.5 to 50 VDC and Current Consumption: < 4 mA
- Diameter: 0.6" (15.25 mm) and Length: 6.6" (168 mm)
- Housing Material: Polycarbonate

ENCLOSURE

1. 12" x 14" Enclosure suitable for datalogger with a power supply and one or more peripherals
2. NEMA 4X Enclosures
3. Non Corrosive, white with UV stabilized
4. Cable entry options One sealable conduit

POWERSUPPLY

1. Voltage Regulator for Charging the battery from Solar Panel and giving voltage to Datalogger
2. SMF Battery 12V, 7.2 AH
3. Solar Panel of 10Watts

ANNEXURE - VIII

SPECIFICATION FOR DIGITAL FLAME PHOTOMETER(Micro Controller Based)

Applications

1. Estimation of Na, K, Li, and Ca in a single aspiration of sample.

Features

1. Storage facility for set-up of frequently used measurements and results.
2. date wise and batch wise up to 700 results
3. Facility for re-standardization with single standard
4. Four line, 20 character LCD readout.
5. Built-in real time clock for date and time of analysis.
6. Oil free air compressor with built-in air regulator and moisture filter.
7. Reproducibility: - +/- 1% of Full scale.
8. Accuracy: - +/-2% of full scale.
9. Fuel Gas:- LPG
10. RS-232 computer interface.

