



# भाकृअनुप - केन्द्रीय बारानी कृषि अनुसन्धान संस्थान

ICAR - Central Research Institute for Dryland Agriculture

संतोषनगर, सैदाबाद-पोस्ट हैदराबाद ५०००५९ Santoshnagar, Saidabad P.O. Hyderabad 500 059

040-24530161,24530163,24530224 Fax:040-24531802 www.crida.in Email : stores@crida.in



F. No: 9-1/(66)/2016/ST/NICRA

Date: 03.01.2017

**Sub:** Quotation is invited for Nitrogen Distillation System - Reg.

Dear Sir (s),

Quotations are invited for following item cited below:

S. No	Name of the Item
1	Nitrogen Distillation System (Specifications copy enclosed)

## TERMS & CONDITIONS

- The last date for submission of quotation is on or before **24-01-2017**. Rates offered shall be F.O.R. CRIDA, Hyderabad
- Quotations should be sent by post only in a sealed cover addressed to the Director, Central Research Institute for Dry land Agriculture, Santoshnagar, Saidabad Post, Hyderabad - 500 059. The cover containing quotation should invariably be super scribed. The quotations in person by hand will not be accepted.
  - Enquiry F. No: 9-1/(66)/2016/ST/NICRA**
  - Due on 24-01-2017**
  - For Nitrogen Distillation System**
- The quotation should remain open for acceptance for a period of 90 days from the date (due date).
- An earnest money of **Rs. 8,000/- (Rupees Eight thousand only)** should be deposited in the form of Demand Draft / Banker's Cheque in favour of 'ICAR Unit - CRIDA' payable at Hyderabad. The quotation will not be considered if earnest money is not deposited with the tenders.
- The earnest money would be refunded to all the unsuccessful bidders. For Successful bidders the earnest money would be refunded only after deposition the Security deposit/Performance Guarantee.
- An amount of 10% of total order value as Security Deposit (Performance Guarantee) in the form of DD/ PO/Bank Guarantee/FDR** is to be deposited by the successful Bidder only after receiving a communication from the Institute. In the event of non-deposition of the same within 15 days of the communication, the earnest money will be forfeited. In the event of any default of performance or conditions of supply, the security deposit will be forfeited.
- No advance payment/delivery against payment is permissible. However, the payment shall be arranged in 10 days from the date of submission of pre-receipted bill in triplicate along with stores.
- The rates should be quoted in Indian rupees (INR) net payable for each item for delivery at the Institute at the address given above (inclusive of all taxes, packing, forwarding, transport, insurance and excluding rebate/discount etc.)
- This Institute is not in a position to supply any 'D' or 'C' forms.
- While quoting the rates please mention the following:
  - Approximate time for supply of stores from the date of placing order.
  - Guarantee/Warranty/Expiry period
  - In case you have got any rate contract with the DGS&D, the same may be indicated
  - Any other condition

Quotation which do not conform to the above terms and conditions will not be considered. The Director, Central Research Institute for Dryland Agriculture, reserves the right to accept or reject any or all quotations without assigning any reasons thereof.

Yours Sincerely

(Er C V K N Rao)

Stores and Purchase Officer

\*\*\*\*\*  
Web Site: www.crida.in Email: stores@crida.in Phone:(040) 24530161, 24532077, 24532243, 2452265,24530157,24532099,24532577, Fax No. 91-040- 24531802

## **TECHNICAL SPECIFICATIONS**

### **Automatic Nitrogen/Protein Estimation System**

#### **A. Automatic Digestion System**

- Twenty Place 250 ml capacity PC Compatible Block Digestion System.
- Aluminum Block with Casted Aluminum Alloy Heaters ,
- Direct USB Port for PC/Laptop Connectivity without need of RS 232 / RS 485 Converter,
- Digital LCD display, Integrated auto sequencing time/temperature domain of 30 programs 12 sequencing steps,
- Advanced PC chart software performs Live graphical representation of time / temperature gradient,
- Live Schematic process flow feature, Live process view display of various stages with facility to print,
- Software enables multiple unit monitoring with multi user login feature,
- Software enables communication to optional Remote Control Module,
- Auto over temperature protection, Auto Sensor break protection, Auto Error Indication, 3 mtrs viton fume hose for diacid and triacid digestion,
- Inbuilt software program for micronutrient, macro nutrient, trace element, diacid and triacid analysis.
- Unit should be upgradeable to Data Logger Module & Auto Lift Module.
- Remote Control Module for wireless data monitoring, control and transfer,
- All essential accessories like Digestion Tubes 250 ml - 20 Nos, SS Insert Rack, Exhaust Manifold, Suction assembly for safe removal of acid fumes,
- Additional one set tubes & Insert Rack,
- Electrical Requirement: 230 V, 50 Hz AC Mains.

#### **B. Automatic Scrubber System**

- Three stage acid neutralization scrubber.
- Non corrosive centrifugal suction pump with inbuilt self priming feed pump for water recirculation,
- FRP Tank, Containers for Alkali and Water,
- Electrical Requirement: 230v/50Hz Mains.

#### **C. Automatic Distillation System**

- Auto sequencing Programmable Microprocessor based Distillation with inbuilt software, Colour Touch Screen high resolution TFT LCD Display, Large 4.3" screen
- Auto Intelligent run of programmable steps, Addition of Boric Acid, Dilution, KMNO<sub>4</sub> Addition for Available Nitrogen, Alkali Addition, Steam Processing, Residue Removal, Process over indication with alarm with inbuilt delay time features, Automatic Titration Connectivity feature for future up gradation, Aspiration of Receiver Residue.
- Flow diagram display to show live auto sequencing steps at each stage of process, Data table export to excel
- Facility to program and control distillate volume for determination of available nitrogen
- Auto sensing of "NO WATER" condition in condenser & steam generator with alarm & signal to alert user.
- Auto deactivation of operation after warning on no water condition in case of user non availability
- Enables Automatic monitoring and measuring of high temperature in distillate with sensor for auto warning signal and safety alarm to alert user to control distillate temperature. Continuously measured temperature is displayed digitally.
- Auto door open warning indication, Auto tube insert error indication. Auto deactivation of System on error diagnosis, Adjustable steam power, Auto online water saving mechanism, Auto reagent Level Sensor with Alarm for Reagents, Stainless steel non corrosive steam Generator
- Inbuilt Automatic Printer for direct print out of results without connecting to PC.
- Automatic calculation of results on input of titre value in terms of percentage of Protein/N<sub>2</sub>.
- Automatic water level monitoring & Peristaltic pump for reagents addition
- Electrical Requirement - 220 - 230V/50Hz.
- Company should have good performance track record of at least 10 years with references of users of similar equipment. The Supplier should be ISO certified, CE Certified to fulfill good laboratory practice norms of International Safety requirements to ensure quality standard with certified calibration. The original Manufacturers of laboratory equipments should have at least Rs. 1 crore per annum turnover in the past 3 years towards financial capability. The instrument shall strictly confirm to the specifications with relevant brochure. The company should be reputed supplier should not be blacklisted or should not have any adverse remarks in the past. Spares should be made available for minimum period of 10 years after the warranty period by the supplier.