

**QUALITY EVALUATION LABORATORY**  
**SPICES BOARD COCHIN**

**QEL-1/Qtn/soxhlet/2011**

**03.08.2011**

**QUOTATION NOTICE**

1. Sealed competitive quotations are invited for supply of - '**Automatic soxhlet Extraction Apparatus**' at the Quality Evaluation Laboratory, Spices Board, Cochin 25, as per the specifications attached.
2. The proposal should include all costs including taxes for the item as per the specifications attached in annexure 1.
3. The sealed cover containing the quotation, super scribed as "**Quotation for Automatic soxhlet Extraction Apparatus - Due on 25- 08 – 2011**", should be submitted to **The Senior Scientist, Quality Evaluation Laboratory, Spices Board, Sugandha Bhavan, NH By-pass, P.B No.2277, Palarivattom P.O., Kochi -682 025.**
4. Late quotations will not be considered. The quotations will be opened in the presence of bidders or their authorized representatives present at the venue, in time.

Last date & time for the receipt of quotations	<b>25 - 08- 2011 (5 PM)</b>
Date & time of opening the quotations	<b>26- 08-2011 (11:00 AM)</b>

5. The Quotation should give detailed specifications of the items on offer, guarantee/warranty period, after sales service details, etc.
6. The quotation should be submitted at along with statement of compliance with technical specification. Clarification if any, can be had from The Senior Scientist (QC), Quality Evaluation Laboratory, Spices Board, Cochin 25, at e-mail - [sbqelkochi@gmail.com](mailto:sbqelkochi@gmail.com)
7. Full payment will be made only after satisfactory completion of the work at the site.
9. The Spices Board reserves the right to accept the quotation in full or in part or to reject without assigning any reason.

  
**SENIOR SCIENTIST (QC)**

Encl. annexure-No. I

# Automatic Soxhlet Extraction Apparatus

Annexure- I

## TECHNICAL SPECIFICATIONS

### Automatic Soxhlet Apparatus

A system capable of performing automated Soxhlet extraction for Spices and Spice Products, with the following technical specifications:

- 1 Completely automated, unattended operation after loading samples.
  - 2 Heating range - 20°C to 280°C in about 10 minutes
  - 3 Extraction time - up to 60 minutes minimum
  - 4 Separate timer functions for each extraction step for good repeatability
  - 5 Capable of handling at least 6 samples simultaneously in one batch run
  - 6 Thimble sizes capable of handling sample sizes of 2 - 15 gm.
  - 7 Capable of handling the following solvents: Ethylene Dichloride, Methylene Dichloride, Diethyl Ether
  - 8 Extraction solvent volume at least 150 - 200 ml
  - 9 Appropriate condensers should be available for all samples for optimum extraction
  - 10 Recirculating chilled water (5 - 30°C) circulator for condensers
  - 11 Typical solvent recovery of at least 80%
  - 12 Official approvals of AOAC / ASTA / ISO Methods for Spices
  - 13 Demonstrable repeatability of at least 1 % RSD
- The system should be leak-proof, electric shock resistant, and should have all safety measures to handle unforeseen problems like leak and temperature overshoot (please specify full details)

### Accessories

- 1 All spares and accessories required for maintaining the entire Soxhlet Extraction System for a period of 5 years should be quoted. Itemized breakup list of the spares should be provided.
- 2 Set of thimbles for 200 extractions should be provided

### Terms and Conditions

- 1 A complete compliance statement, stating the status of compliance with each point in the technical specification, should necessarily accompany the quotation.
- 2 Complete warranty information should be provided (Comprehensive warranty for 5 years)
- 3 Complete users for the quoted model list in India, with contact addresses, emails and phone numbers should be provided