QUALITY EVALUATION LABORATORY

Spices Board, Cochin 682 025

TRAINING PROGRAMMES : 2024

Spices Board proposes to conduct the following training programmes on the analysis of spices and spice products during 2024. The training programmes will be held in the Quality Evaluation Laboratory (NABL accredited under ISO/IEC 17025:2017) of the Board located at Sugandha Bhavan, N.H. By-Pass, P.B.No.2277, Palarivattom. P.O, Cochin – 682 025 on the dates specified against each programme.

The programme is open to candidates, mainly sponsored by spice export units registered with the Board (having registration with manufacturing facilities) and candidates from private laboratories & other institutions. The training fee is Rs.14,160/ (Rs.12,000/-+18% GST) per programme/participant.

The number of participants in each programme will be limited to maximum SIX. The minimum qualification for the participant is graduation in science with experience in spice/spice products analysis. Selection will be made based on the qualification and experience. Preference will be given to the candidates sponsored by spice export/processing units.

Participants have to make their own arrangements for the travel and accommodation. However, working lunch, tea & snacks will be provided during the training period.

The training fee can be remitted online to Board's Bank Account using the payment link provided by us through SMS and e-mail for which the participant/institution shall provide the mobile number and e mail ID to which the payment link is to be sent . The nomination in the prescribed form (attached) along with the payment details should reach Scientist- C & Head, Quality Evaluation Laboratory, Spices Board, Sugandha Bhavan, N.H.By-Pass, P.B.No.2277, Palarivattom.P.O., Cochin- 682 025, within 10 days prior to the commencement of the programme. Applications submitted along with the training fee (fee once paid is non-refundable) only will be considered for the selection of participants.

SRILATHA C.M
SCIENTIST – C & QEL i/c

(*Hindi version follows*)

QUALITY EVALUATION LABORATORY
Spices Board, Cochin
REGISTRATION FORM

1	Training programme on GCMS/LCMS/MS analysis of Pesticide Residues in Spice & Spice Products	23rd to 27th September 2024	☐
2	Training programme on Physical Chemical analysis of Spices/Spice Products	21st to 25th October 2024	☐
3	Training programme on Microbiological Analysis of Spices/Spice Products.	21st to 25th October 2024	☐
4	Training programme on Analysis of Mycotoxins and illegal dyes in spices and spice products	04th to 08th November 2024	☐

Note: Please indicate the programme of choice with ✓ mark

Name and Address of the Unit/Institution:		
Registration number with Spices Board (If applicable):		
City:	**State:**	**Pin:**
Tel No.:	**Mob.No.:**	**E-mail:**
Details of the participant		
Name: Designation: Educational Qualification: Nature of experience:		
Payment details: Transaction ID No:		Date:

Separate registration form should be used for each programme per participant. The duly filled-in registration form along with the payment details of training fee (*Note: Payment of the training fee may please be remitted online to Board's Bank Account through payment link provided by Board*) should reach the following address at least 10 days before the commencement of each programme.

Scientist C and QEL I/c
Quality Evaluation Laboratory
Spices Board
Palarivattom P.O.
Cochin – 682025
Phone No.: 0484-2333610-16
e-mail: sathyancn.sb@govcontractor.in
e-mail: srilatha.cm@nic.in

Course content
GCMS/LCMS/MS ANALYSIS OF PESTICIDE RESIDUES IN SPICES/SPICE PRODUCTS

Day 1	Opening session
	Briefing on training material/general laboratory practices
	Introduction to Quality systems and laboratory safety
	Pesticide residue analysis using QuEChERS
	Weighing of QuEChERS reagents , GC-MS/MS
Day 2	Extraction and analysis of pesticides in spices by GC-MS/MS.
	Instrumentation in GC-MS/MS
	Weighing of QuEChERS reagents , LC-MS/MS
Day 3	Extraction and analysis of pesticides in spices by LC-MS/MS.Instrumentation in GC-MS/MS
	Instrumentation in LC-MS/MS
	Processing of results – GC-MS/MS
Day 4	Processing of results – LC-MS/MS
	Briefing on analysis of dithiocarbamate (DTC) residues
	DTC analysis by GC-MS (demonstration)
Day 5	Processing of results – DTC by GC-MS (Demonstartion)
	Method validation and measurement uncertainty0
	Visit to other laboratories
	Concluding session

Course content
PHYSICAL CHEMICAL ANALYSIS OF SPICES/SPICE PRODUCTS

Day 1	Opening session
	Briefing of ISO systems general laboratory practices and safety aspects
	Briefing and demonstration of sample preparation
	Demonstration and practical session on ASTA cleanliness parameters.
	Demonstration and practical training on starch analysis
Day 2	Demonstration and practical training on Moisture and volatile oil analysis of selected spices.
	Demonstration and practical training on Total ash and starch analysis (Contd..)
	Theory and basics of HPLC
Day 3	Demonstration and practical training on Capsaicin analysis.
	Demonstration and practical training on acid insoluble ash analysis
Day 4	Practical training on HPLC Capsaicin quantification.
	Demonstration and practical training on Piperine analysis.
	Demonstration and practical training on colour value analysis.
	Demonstration and practical training on Curcumin analysis.
Day 5	Demonstration and practical training on colour value analysis- continues
	Visit to other laboratories.
	Concluding session

Course content
MICROBIOLOGICAL ANALYSIS OF SPICES/SPICE PRODUCTS.

Day 1	Introduction
	Microbiological Analysis of Spices/Spice products
	Salmonella analysis using VIDAS SLM method, US FDA BAM Method - (Day 1)
	Yeast and mould Count (US FDA BAM Method) (Day 1)
	E.coli and Coliforms (US FDA BAM Method) (Day 1)
Day 2	*Salmonella* analysis (VIDAS SLM method) Contd. (Day 2)
	Salmonella analysis (US FDA BAM Method) Contd. (Day 2)
	E.coli and Coliforms (US FDA BAM Method) Contd. (Day 2)
	Aerobic Plate Count (US FDA BAM Method) Contd. (Day 1)
	Introduction to ISO/IEC 17025 quality system.
Day 3	*Salmonella* analysis (VIDAS SLM method) Contd. (Day 3)
	Salmonella analysis (US FDA BAM Method) Contd. (Day 3)
	E.coli and Coliforms (US FDA BAM Method) Contd. (Day 3)
	Introduction to method verification, uncertainty measurement, PT/ILC programme.
	ETO testing in spices - Significance
Day 4	*Salmonella* analysis (VIDAS SLM method – confirmation of positive samples) Contd. (Day 4)
	Salmonella analysis (US FDA BAM Method) Contd. (Day 4)
	E.coli and Coliforms (US FDA BAM Method) Contd. (Day 4)
	Use of RT PCR in *Salmonella* analysis
Day 5	*Salmonella* analysis (US FDA BAM Method) Contd. (Day 5)
	E.coli (US FDA BAM Method) Contd. (Day 5)
	Yeast and mould Count (US FDA BAM Method) Contd. (Day 5)
	Lab tour and closing session

Course content ANALYSIS OF MYCOTOXINS AND ILLEGAL DYES IN SPICES/SPICE PRODUCTS	
Day 1	Opening session
	Briefing on training material/general laboratory practices
	Introduction to Quality systems and laboratory safety
	General introdution to Mycotoxins and illegal dyes
	Sample preparation, extraction for aflatoxin analysis, Clean up, concentration and HPLC analysis of Aflatoxins
Day 2	Setting up of Aflatoxin in HPLC
	Introduction to HPLC
	Aflatoxin data processing and calculations
	Extraction of Ochratoxin A
Day 3	Clean up and setting up of Ochratoxin A in HPLC
	Theory and basics of HPLC
Day 4	Basics of LCMS/MS and Theory
	Setting up of Illegal dyes in LCMS/MS
	HPLC Trouble shooting
	Data Processing and Calculation for illegal dyes analysis LCMS/MS
Day 5	Completion of Chromatograms and calculations
	General discussions
	Visit to other laboratories
	Concluding session