

**QUALITY EVALUATION LABORATORY**  
**Spices Board, Cochin-682 025.**

**TRAINING PROGRAMMES : 2016-17**

*Spices Board proposes to conduct the following training programmes on the analysis of spices and spice products during 2016-2017. The training programmes will be held in the Quality Evaluation Laboratory (NABL accredited under ISO/IEC 17025:2005 and ISO 9001:2008 & ISO 14001:2004 certified by British Standards Institution, U.K.) of the Board, 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.12,650/ (Rs.11,000/- +15% as service Tax) per programme/participant.*

*The number of trainees in each programme will be maximum limited to eight. 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.*

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

*The nomination in the prescribed form (attached) along with the training fee in the form of Demand Draft drawn in favour of Secretary, Spices Board, should reach "**The Scientist-D & Head, Quality Evaluation Laboratory, Spices Board, Kochi-682 025**" within 10 days prior to the commencement of the programme. Applications submitted along with the training fee (fee once fee paid is non-refundable) only will be considered for the selection of participants.*

**K R K Menon**  
**SCIENTIST -D & HEAD**

**1. Training programme on Analysis of Mycotoxins and Illegal Dyes in spices and spice-products using HPLC & LCMS/MS: 31<sup>st</sup> October 2016 - 4<sup>th</sup> November 2016**

**Course content**

<i>Introduction to Quality Systems and Laboratory Safety with respect to Residue analysis</i>
<i>General introduction to Mycotoxins and Illegal Dyes</i>
<i>Sample preparation and extraction for Mycotoxins</i>
<i>Basics of Chromatography focusing on HPLC theory</i>
<i>Clean-up of Mycotoxins</i>
<i>Sample preparation and extraction for Illegal Dyes</i>
<i>Basics of mass spectrometry</i>
<i>Introduction to LC-MS/MS</i>
<i>Demonstration of Analysis of samples by LC-MS/MS</i>

**2. Training programme on Physical & Chemical Analysis of spices: 7-11<sup>th</sup> November 2016**

**Course content**

<i>Introduction to Quality Systems and Laboratory Safety with respect to Chemical analysis</i>
<i>Analysis of physical contaminants in spices (ASTA cleanliness parameters)</i>
<i>Sample preparation for laboratory analysis</i>
<i>Moisture and volatile oil analysis in spices</i>
<i>Total ash and Acid insoluble ash analysis</i>
<i>Determination of Water activity content</i>
<i>Analysis of Capsaicin in chillies by HPLC</i>
<i>Starch content in spices- gravimetric method</i>
<i>Analysis of Curcumin in turmeric, Piperine content in pepper and Colour in Chillies using UV-Vis spectrophotometer.</i>
<i>Sulphur dioxide content estimation using modified Monier William apparatus</i>

**3. Training programme on GC, GCMS/MS and LCMS/MS (“Q” Trap) analysis of Pesticide residues in spices and spice products: November (21-25 November 2016)**

**Course content**

<i>Introduction to Quality Systems and Laboratory Safety with respect to Residue analysis</i>
<i>General introduction to Pesticide Residue Analysis</i>
<i>Sample preparation and extraction for OC and PY Analysis</i>
<i>Basics of Gas Chromatography focusing on GC theory</i>
<i>Clean-up of OC and PY Analysis</i>
<i>OP Extraction and Clean-up</i>
<i>QA/QC measures on Pesticide Residue Analysis</i>
<i>Introduction to LC-MS/MS</i>
<i>OP Extraction - LC-MS/MS</i>

**4. Training programme on microbiological analysis of spices/spice products: 5-9 December 2016.**

**Course content**

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*Introduction to Quality Systems and Laboratory Safety with respect to Microbiological analysis*

<b>Day</b>	<b>Contents</b>
Day 1	Briefing on Quality systems & Microbiological analysis of Spices . Sample preparation for Aerobic count & Yeast & Mould- automated enumeration
Day 2	Sample preparation for VIDAS Salmonella assay. Sample preparation for Total Coliforms, E.coli, Bacillus cereus, Staphylococcus aureus - automated enumeration Continue analysis for Aerobic count by Tempo TVC method
Day 3	Continue analysis for Yeast & Mould, Total Coliforms, E.coli, Bacillus cereus, Staphylococcus aureus by TEMPO method Sample preparation for Vitek 2 Compact Continue Salmonella assay using VIDAS
Day 4	Sample preparation and analysis using MALDI TOF Continue biochemical characterization using Vitek 2 Compact
Day 5	Demonstration on Salmonella isolation using other rapid methods. Results and discussion on the analysis conducted

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REGISTRATION FORM

1. [ ] *Training programme on analysis of Mycotoxins and illegal dyes in spices and spice products using HPLC & LCMS/MS: October 31-4<sup>th</sup> November 2016\**
2. [ ] *Training programme on physical & chemical analysis of spices/spice products: November 7-11, 2016\**
3. [ ] *Training programme on GC /GCMS/MS/ LCMS/MS with Q Trap analysis of Pesticide residues in spices and spice products: November 21-25, 2016\**
- 4 [ ] *Training programme on microbiological analysis of spices/spice products: December 5-9, 2016\**

\*Please indicate the programme of choice with ★ mark.

<b>Name &amp; Address of the unit/Institution :</b> <b>Regn.No. With the Spices Board :</b> (if applicable)		
<b>City:</b>	<b>State:</b>	<b>Pin:</b>
<b>Tel:</b>	<b>Mob No:</b>	<b>E-mail:</b>

<b>Details of the participant</b>	
<b>A. Name</b>	:
<b>B. Designation</b>	:
<b>C. Educational qualification</b>	:
<b>Nature of experience</b>	:
<b>E. Details of DD enclosed:</b>	
<b>D.D.No.</b>	<b>Bank:</b> <span style="float: right;"><b>Date:</b></span>

*Separate Registration form should be used for each programme per participant. The duly filled in registration form along with the training fee of Rs.12650/ in the form of **DD drawn in favour of Secretary, Spices Board** should reach the following address atleast 10 days before the commencement of each programme.*

*Scientist-D & Head,  
Quality Evaluation Laboratory  
Spices Board, Palarivattom P.O, Cochin-682 025  
Phone No.0484 – 2349134  
Email: [sbqel@indianspices.com](mailto:sbqel@indianspices.com)  
[Email:krk.menon740@nic.in](mailto:krk.menon740@nic.in)*