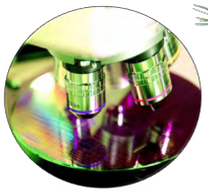
Fungal Identification & Enumeration



Date: December 5th — 7th, 2011

Instructor: Dr. Florence Wu

Location: AEMTEK Training Room, 46309 Warm Springs Blvd., Fremont, CA 94539

Cost: $1,650 (Includes course materials, light breakfast, break refreshments and certificate of attendance)

Objectives: 1) Acquire essential knowledge and skills for fungal identification.
2) Practice fungal sampling, isolation, culture and enumeration techniques.
3) Gain proficiency in identifying the most common environmental fungi.

Who Should Attend: Any professionals in the food, environmental and pharmaceutical industries that are interested in learning and performing fungal identification.

Monday, December 5th, 2011 (Day 1)
8:30 AM—5:00 PM

8:00—8:30 AM	**Welcome & Continental Breakfast**
Lecture 1	Characteristics, Reproduction and Classification of Fungi
Lab Session 1	Fungal Sampling, Culturing and Isolation Techniques
12:00—1:00 PM	**Lunch (On Your Own)**
Lecture 2	Essential Skills for Fungal Identification and Introduction to Zygomycetes
Lab Session 2	Microscopy Techniques and Examination of Zygomycete Species
4:30—5:00 PM	Questions & Answers / Adjourn

Tuesday, December 6th, 2011 (Day 2)
8:30 AM—5:00 PM

8:00—8:30 AM	**Continental Breakfast**
Lecture 3	Characteristics, Classification and Important Species of Ascomycetes
Lab Session 3	Identification of Ascomycete Species and Diagnostic Keys
12:00—1:00 PM	**Lunch (On Your Own)**
Lecture 4	Characteristics, Classification and Important Species of Deuteromycetes
Lab Session 4	Microscopic Examination of Deuteromycete Fungi
4:30—5:00 PM	Questions & Answers / Adjourn

Wednesday, December 7th, 2011 (Day 3)
8:30 AM—3:00 PM

8:00—8:30 AM	**Continental Breakfast**
Lecture 5	*Aspergillus*, *Penicillium* and Other Common Species
Lab Session 5	Microscopic Examination of Common *Aspergillus* and *Penicillium* Species
12:00—1:00 PM	**Lunch (On Your Own)**
Lecture 6	Introduction to Basidiomycetes and Yeast
Lab Session 6	Demonstration of Fungal Enumeration Techniques
2:30—3:00 PM	Questions & Answers / Adjourn

About the Instructor

Dr. Florence Wu is the Chief Scientific Officer and Principal Mycologist at AEMTEK, Inc. She has over 20 years of academic and work experience in mycology and microbiology. She earned a Ph.D. in mycology from the University of Tennessee, and has been performing fungal identification and microbiology analysis for academics, environmental, pharmaceutical, and food and beverage industries. In addition, Dr. Wu has published many scientific papers and book chapters, and has given many technical lectures and presentations. She currently holds the positions of Board Member, Adjunct Professor, and Research Associate at various institutions, and is an active member of several professional organizations, including the Indoor Air Quality Association, International Association for Food Protection, and Parenteral Drug Association.

DETAILED WORKSHOP OUTLINE

For questions regarding course content, please contact Florence Wu at 510-979-1979 or e-mail her at florence@aemtek.com.

Lecture 1 – General Characteristics, Reproduction and Classification of Fungi

- General characteristics of fungi
- Definition of fungal structures
- Fungal reproduction and spores
- Classification and naming of fungi
- Proper handling of samples and fungal cultures

Lecture 2 – Essential Skills for Fungal Identification and Introduction to Zygomycetes

- Diagnostic features for fungal identification
- Spore generating mechanism and its significance for identification
- How to use dichotomous keys as a tool for identification
- Useful and specific references for various industries
- Introduction to Zygomycetes

Lecture 3 – Characteristics, Classification and Important Species of Ascomycetes

- General characteristics of Ascomycetes
- Definition and classification
- Growth and reproduction requirements
- Important environmental and containment species

Lecture 4 – Characteristics, Classification and Important Species of Deuteromycetes

- General characteristics of Deuteromycetes
- Definition and classification
- Growth and reproduction requirements
- Important environmental and containment species

Lecture 5 - *Aspergillus*, *Penicillium* and Other Common Species

- General characteristics of *Aspergillus* and *Penicillium*
- Definition and Identification
- Other common contaminant fungi

Lecture 6 - Introduction to Basidiomycetes and Yeast

- Characteristics and classification of Basidiomycetes
- Introduction to yeast
- Options for yeast identification

Lab Session 1 - Fungal Sampling, Culture and Isolation Techniques

- Product sampling strategies and methods
- Environmental sampling design and techniques
- Fungal culture preparation methods
- Growth requirements and media selection
- How to isolate fungi for identification

Lab Session 2 – Microscopy Techniques and Examination of Zygomycete Species

- Calibration, use and maintenance of a microscope
- Introduction of mounting media
- Methods for making good microscopic slides
- Examination and description of important fungal structures
- Identification of Zygomycetes species

Lab Session 3 – Identification of Ascomycete Species and Diagnostic Keys

- Examination of ascus and ascospores
- Microscopy of important Ascomycete species
- Use of important diagnostic keys

Lab Session 4 – Microscopic Examination of Deuteromycete Fungi

- Ecology and occurrence
- Colony appearance observation
- Microscopic characteristics
- Examination of most common environmental molds

Lab Session 5 – Microscopic Examination of Common *Aspergillus* and *Penicillium* Species

- Morphological characteristics for identification
- Classification and culture schemes
- Examination of important species
- Automated identification methods

Lab Session 6 – Demonstration of Fungal Enumeration Techniques

- How to select suitable enumeration methods
- Direct plating, pour plating, and spread plate methods
- Pro and cons of commercially available enumeration methods

AEMTEK

FOUR EASY WAYS TO REGISTER!

1) **ONLINE:** HTTP://STORE.AEMTEK.COM/TRAINING
2) **PHONE:** 510-979-1979
3) **FAX:** 510-668-1980
4) **MAIL:** AEMTEK, INC., 46309 WARM SPRINGS BLVD. FREMONT, CA 94539

For questions regarding registration, travel/hotel information, or other special requests, please contact Melissa Hughes at 510-979-1979 or e-mail her at melissa.hughes@aemtek.com.

ATTENDEE REGISTRATION FORM

Fields marked with asterisk (*) are required

ATTENDEE INFORMATION (Please print. Use one form for each person attending.)

First Name* M.I. Last Name*

Title*

Company*

Business Address*

City* State* Zip Code*

Business Phone* Ext. Business Fax

E-mail Address*

WORKSHOP ATTENDING*

☐ **Fungal Identification and Enumeration** **$1,650.00**

Monday, December 5th—Wednesday, December 7th, 2011

Cost includes course materials, light breakfast, break refreshments and certificate of attendance.

Total Amount Due*

$_____

METHOD OF PAYMENT*

☐ **Check** (Please remit payment to Aemtek)

☐ **Visa**

☐ **MasterCard**

☐ **Discover**

☐ **American Express**

I am authorized to sign this Attendee Registration form on behalf of attending company and/or individual, and I have read and understand the Registration form and agree to be bound by all of its terms and conditions.

Signature*

Date*

Credit Card #

Date of Expiration

CCV # (3-4 digit code located on front/back of card)

Name as it appears on credit card

Billing Street Address

Billing City and Zip Code

TERMS & CONDITIONS

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