

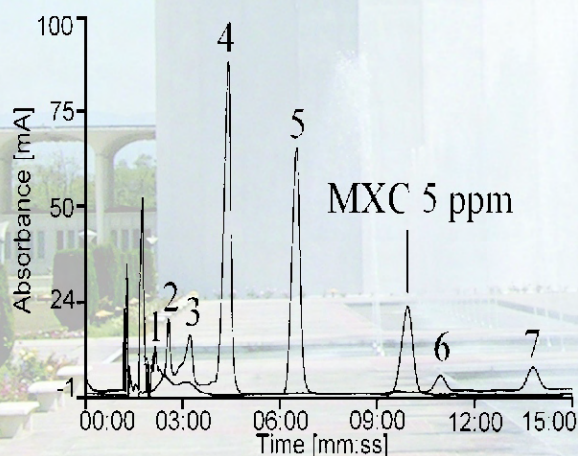
## Introduction

Environmental protection is of vital significance. Human exposure to environmental pollution is posing serious health related risks especially to infants. The environmental carcinogens such as polyaromatic hydrocarbons (PAHs), indiscriminate use of chlorinated and organophosphorous pesticides and non-regulated release of industrial toxic chemicals are of great public health concern. These chemicals can enhance air, water and soil pollution, which may hinder human sustainable progress.

Trace level analysis of anions and cations in reactor pool water is important for its improved operation and to mitigate corrosion related problems. Quality control and quality assurance (QC/QA) of nuclear extractants is required for efficient extraction of uranium and other metals in nuclear field. Trace level impurities in nuclear fuel gases are also important in various process stream of nuclear fuel fabrications.

Considering the importance of reliable QC/QA in nuclear field and reliable

quantification of the toxic organic compounds in environmental matrices, Chemistry Division (CD), PINSTECH, is organizing this training course. The course is designed to cater the theoretical and practical needs of scientists / researchers and industrial workers. The course will cover theoretical aspects of gas chromatography (GC) and high performance liquid chromatography (HPLC). Subsequently hands on training will be provided with special emphasis to the application in nuclear and environmental fields following the interpretation of the chromatograms.



Gamma radiolytic degradation products of Methoxychlor

## Short Training Course on Theoretical and Practical Aspects of Chromatography: Application of HPLC and GC in Environmental and Nuclear Fields

November 29 - December 03, 2010

Chemistry Division, PINSTECH

P.O. Nilore, Islamabad

Registration Form

PHOTO

Name: \_\_\_\_\_

Father's Name: \_\_\_\_\_

NIC No.: \_\_\_\_\_

Highest Qualification: \_\_\_\_\_

Designation/Post: \_\_\_\_\_

Experience: \_\_\_\_\_

Organization/Establishment: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

\_\_\_\_\_

E-Mail: \_\_\_\_\_

Ph. (Office) \_\_\_\_\_

(Mobile) \_\_\_\_\_

Signature : \_\_\_\_\_

Recommendation by the Head of nominating Establishment:

Signature/Date \_\_\_\_\_

**Note:** Participants from Universities/ academic institutions/industry and other non-strategic organizations are required to submit security clearance form (copy attached) along with two photographs at least **two weeks before** the start of training course.

## Training Course Programme

November 29 - December 03, 2010

### Course Venue

Chemistry Division  
PINSTECH, P. O. Nilore, Islamabad

### Eligibility

Only scientists having background of Chemistry with minimum qualification of BS/M.Sc.

### Registration

Registration form dully filled and recommended by the Head of Establishment should reach Head Chemistry Division PINSTECH, P.O. Nilore, Islamabad on or before 10, November, 2010

### Registration Fee

Rs. 8,000/- per participant  
Rs. 6,000/-per participant for university students. Fee payable in the form of cheque at Registration desk in favour of Head Chemistry Division, PINSTECH.

### Accommodation

Participants will make their own arrangements in Rawalpindi/ Islamabad. Lunch & Tea will be served during office hours.

### Pick & Drop to venue

Only enroute pick & drop from Rawalpindi Islamabad to course venue will be provided.

Patron: **Dr. Jamshed Hussain Zaidi. T.I.**  
Director General, PINSTECH

Advisory  
Committee: **Dr. Javed Iqbal Akhtar**  
Director Science

**Dr. M. Mufazzal Saeed**  
Head Chemistry Division

**Dr. Muhammad Arif**  
DCS, Chemistry Division

Organizing  
Committee: **Dr. Nasir Khalid, DCS** Convener

**Dr. Sohaila Rehman, DCS** Member

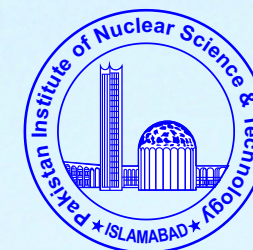
**Dr. Muhammad Riaz, PS** Member

**Mrs. Lubna Shaheen, JS** Member

Contact  
Persons **Dr. Nasir Khalid, DCS**  
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Course  
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Pakistan Institute of Nuclear Science and Technology  
P.O. Nilore, Islamabad, Pakistan  
Fax: 051-9248808 / 051-2207374



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**Chemistry Division**  
Directorate of Science  
**Pakistan Institute of Nuclear Science & Technology**  
P.O. Nilore, Islamabad