Training Course of Industrial Analytical Services

1.1 Introduction:

The organization Industrial Analytical Center (IAC) is dedicated to serve a large number of Industries of Pakistan, particularly export-based Industries. The objective of current protocols "Skill development Program" is to provide the type of detailed instruction and comments that an expert would pass on to a competent technicians or graduate who need to learn and use an unfamiliar analytical procedure, related to following fields.

- **Pharmaceutical Analysis**
- **Environmental Analysis**
- **Food Analysis**

1.2 Application

1.2.1 Pharmaceutical Training Program:

The main objective of the pharmaceutical lab of IAC is to offer training program for analytical techniques used in pharmaceutical industries. IAC trainers ought to have a good command over the all new instrumental technologies and to be a successful scientist go where industry of Pakistan and foreign countries. The first priority of the pharmaceutical industries is the candidate is fully command on the new analytical technologies in growing areas and also aware working in pharmaceutical industries.

1.2.2 Food Training Program:

Accurate and state- of- the- art analysis of food composition is of interest and concern to a divergent clientele including research works in academic, government and industrial settings, regulatory scientists, analyst in private commercial laboratories , and quality control professionals in small and large companies. Therefore methodology to determine safety (presence of dangerous microbes, pesticides, and toxicants), acceptability (flavor, odor, color, texture), and nutritional quality (essential vitamins, minerals, protein, and lipids) are essential analysis. Current protocol in food training is designed to meet all these requirements.

1.2.3 Environmental Training Program

Employee awareness and involvement is essential for the management of environmental safety program. IAC has developed comprehensive training program to support environmental relative industries. The training program also include operational personnel training compress of analytical aspects. The subject of environment issues are multidisciplinary in nature the solution of environmental and related problems therefore required the effort of social scientists, microbiologist and chemists. The techniques in Environmental chemistry are a compendium of lab exercises for the chemical examination of water, wastewater, food and other environmental samples. By having practical exposure the user would understand and appreciate the complicated and tedious process of laboratory examination of environmental samples

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Pharmaceutical Training Program:

Instruments
High Performance Liquid Chromatography
Gas Chromatography
Microbiological Techniques
Spectrophotometer
FTIR
Karl-Fisher (Moisture analyzer)
Dissolution
Disintegration
Friability
Sieve Shaker
Hardness Tester

Environmental Analysis Program:

Instruments	Test/Parameters
Inductivity Couple Plasma	Heavy metal Analysis
pH meter	pH
Conductivity meter	Conductivity+ TDS
Nova 60	Turbidity
Nova 60	TSS
BOD meter	BOD
Titration method	COD
(Organic metal in soil)	
Physical Testing	Chloride
Physical Testing	Nitrate
Gas Chromatography	Pesticidal Analysis
Microbiological equipments	Total plate count
	Total Coliform
	Total E-coli
	Pseudomonas Spps
	Salmonella
	Yeast
	Mold

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Food Analysis Training Program:

Instruments	Test/Parameter
Kjeldhal	Total Nitrogen & protein
Inductive Coupled Plasma	Heavy metal analysis
High Performance Liquid Chromatography	Sudan dyes in red chilli
Bomb Calorimeter	Calorific value
Lovibond	Rancidity
Lovibond	Color
By Titration method	Saponification
High Performance Liquid Chromatography	Vitamin A in oil and ghee
	Vitamin C by titration
UV-Visible Spectrophotometer	Transfat
Fats/Soxhlet	Fat composition Transfat
Free Fatty Acids/Titration method	Fat composition Transfat
Microbiological equipments	Total plate count
	Total Coliform
	Total E-coli
	Pseudomonas Spps
	Salmonella
	Yeast
	Mold
	Aflatoxin by HPLC
	Aflatoxin by VICAM Fluorometer

2.2 Eligibility Criteria

It is recommended that participants of the training course should have either B.Sc. degree in Chemistry or relevant field.

2.3 Examination

After the completion of training a verbal/written test will be given.

2.4 Certificate

Certificates will be issued upon the course completion

Literature, and study material will be provided

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