

Training - Laboratory Analyses for Oil and Gas Production



LABO-EN-P



Face-to-face only



5 days

This course provides a comprehensive knowledge and develops practical skills in conducting reliable and safe laboratory analyzes for the Oil & Gas industry

Level

Skilled

Public

Laboratory personnel, operational staff and other professionals (engineers, managerial staff, technical, operator, assistant) interested in laboratory analyzes dedicated to Oil & Gas operations

Objectives

Attendees will be able to implement the following skills:

- Grasp the physical and chemical concepts involved in various analyzes
- Comprehend issues requiring special attention in various analyzes
- Assess the results of an analysis and decide whether to carry out the analysis over again
- Review main Occupational Health and Safety rules within the framework of laboratory activities

Pedagogical & technical resources

Several applications and illustrations

Assessment of achievements

- Trainees are assessed throughout the training through practical application phases and interactions with the trainer
- A final on-the-spot evaluation may also be carried out at the end of the course and/or at the end of each module using tests designed to verify the learners' understanding and assimilation of the knowledge linked to the training objectives

Prerequisites

No prerequisites are necessary to follow this course

Responsible

IFP Training instructors, with expertise in the field and trained in modern teaching methods adapted to the specific needs of learners from the professional world

Program

ROLE & RESPONSIBILITIES OF LABORATORY STAFF

0.25 day

Member of production staff. Equipment yields controls/monitoring.
Final product quality controls/monitoring. Recommendations to improve treatments.

ANALYZES SPECIFIC TO CRUDE OIL

1.25 days

Specific gravity or density.
Vapor Pressure (Reid VP).
Water content: Basic Sediment & Water (BSW), dean stark distillation.
Salt content: chlorides content, conductimetry.

Acid components content:

- H₂S content (methylene blue).
- H₂S and mercaptans by potentiometry.
- Total Acid Number (TAN) of liquid hydrocarbons.

Fluid rheology: pour point, kinematic viscosity, wax content.

ANALYZES SPECIFIC TO GAS

0.75 day

Gas characterization analyzes:

- Dew point (HC and water).
- Gas composition by Gas Phase Chromatography (GPC).
- Gas specific gravity estimate from composition.

Acid components content:

- H₂S content (Dräger), H₂S and mercaptans content (potentiometry, iodometry).
- CO₂ content (Dräger and acidimetry).

ANALYZES FOR THE FOLLOW-UP OF EFFLUENT TREATMENT OPERATIONS

1.25 days

Demulsifiers evaluation and selection (bottle tests, field tests).

Quality controls/monitoring of poor and rich Triethyleneglycol (TEG):

- Water content, pH.
- Hydrocarbon content.

Follow-up of equipment performances: water content, residual emulsion.

ANALYZES DONE TO OPTIMIZE ANTICORROSION TREATMENTS

0.75 day

Deposits and scale analyzes.

Chemical corrosion and bacterial corrosion appraisal.

Recommendations for chemical additives and treatments.

HSE IN LABORATORY ACTIVITIES

0.75 day

Laboratory facilities design and implementation.

Chemicals management (storage, use...).

Occupational health and safety behavior.

To French entities : IFP Training is referenced to DataDock ; you may contact your OPCI about potential funding.

Please contact our disabled persons referent to check the accessibility of this training program : referent.handicap@ifptraining.com