



AL076: Advanced Crude Oil Testing





Training Description:

Crude oil is the single largest traded commodity in the world. Proper sampling, analysis, and reporting of data according to established standards is of paramount importance, especially with the volatility in price, and the market proliferation of synthetic, high TAN, and extra heavy crude oils. Whether crude oil is refined in the near-term or stored for an extended period, it is fundamentally important that recognized procedures and standards be used in sampling and analysis. This is true from the time crude oil is produced, through transportation and interim storage, until it is ultimately refined. Analytical data must be accurate and reliable as they are the basis for decisions on whether a given crude oil can be effectively processed and yield the desired product slate. These data are also used by engineering personnel in planning refinery upgrades.

Training Designed for:

This course is intended for Laboratory technicians and chemists responsible for the analysis of crude oil samples for quantity and quality purposes, Laboratory technicians and chemists responsible for the analysis of crude oil samples for quantity and quality purposes, Refinery personnel responsible for evaluating crude oil to determine their processing characteristics, Operating (field) personnel responsible for collecting samples will also benefit from a better understanding of how test results are directly dependent on proper sample collection and handling as well as Traders and buyers involved in sale, purchase, or exchanges of crude oil.

Training Program:

DAY ONE:

- ❖ PRE-TEST
- ❖ Introduction
- ❖ Crude Oil History; Supply and Trading Patterns
- ❖ Definitions and Terms
- ❖ Quality Variations and Their Causes
- ❖ The Complexities of Crude Oil Composition
- ❖ Sampling Protocols
- ❖ Sampling Containers and Sample Integrity

DAY TWO:

- ❖ Composition and Classification
- ❖ Inspection Analyses (Cursory Assay)
- ❖ Comprehensive Analyses (Full Assay)
- ❖ Other Important Crude Oils and Fraction Properties
- ❖ Basics of Crude Oil Processing Evaluation

DAY THREE:

- ❖ Bitumen and Extra Heavy Crude Oils
- ❖ Crude Oil Quality (Case Studies)
- ❖ ASTM Crude Oil Proficiency Testing Program
- ❖ Challenges Presented to the Analyst by Heavier, Higher Sulfur Feed stock and Opportunity Crude Oils





- ❖ Future Needs in Crude Oil Characterization and Analytical Test Method Requirements

DAY FOUR:

- ❖ Typical oilfield processing
- ❖ Production fluid treatment objectives
- ❖ Production fluid separation Emulsion
- ❖ Theory
- ❖ Stabilization
- ❖ Destabilization
- ❖ De-emulsifier

DAY FIVE:

- ❖ Oil treatment basics
- ❖ Dehydration
- ❖ Desalting
- ❖ Stokes law of settling theory or gravity separation
- ❖ De-emulsifier requirements and selection
- ❖ Group discussion on the chemicals used
- ❖ Course Conclusion
- ❖ POST-TEST and EVALUATION

Training Requirement:

“Hand’s on practical sessions, equipment and software will be applied during the course if required and as per the client’s request.” (This hands-on, highly-interactive training includes simulator, real-life case studies and exercises).

This training course is available upon request in English or Arabic, virtual online live or face to face public/inhouse. Content, location and duration can be adapted to your specific wishes. It is therefore possible to focus on specific modules of the training course as per client’s learning needs and objectives. Further, it should be forwarded to us a month prior to the course dates.

Training Methodology:

This interactive training course includes the following training methodologies as a percentage of the total tuition hours:

- 30% Lectures, Concepts, Role Play
- 70% Workshops & Work Presentations, Techniques, Based on Case Studies & Practical Exercises, Software & General Discussions
- Pre and Post Test

Training Certificate(s):

Internationally recognized certificate(s) will be issued to each participant who completed the course.

Training Fees:

As per the course location - This rate includes participant’s manual, hand-outs, buffet lunch, coffee/tea on arrival, morning & afternoon of each day.





Team Training Discount—If you're registering with a company colleague (or two or more) at the same time, you can save an additional 20%. (The 20% discount applies only to two or more participants taking the same course and does not apply to two participants taking separate courses.)

Note: The 5% VAT (Value Added Tax), will be effective starting 01st of January 2018 as per the new regulation from the UAE Government. The VAT applies for all quotation both for local and abroad.

Training Timings:

Daily Timings:

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|---------------|-------------------------------|
| 07:45 - 08:00 | Morning Coffee / Tea |
| 08:00 - 10:00 | First Session |
| 10:00 - 10:20 | Recess (Coffee/Tea/Snacks) |
| 10:20 - 12:20 | Second Session |
| 12:20 - 13:30 | Recess (Prayer Break & Lunch) |
| 13:30 - 15:00 | Last Session |

For training registrations or in-house enquiries, please contact:

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Training & Career Development Department

