

# Petroleum Geochemistry

Consultant / Trainer

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The **Petrogenium** (in collaboration with EPTS) **Petroleum geochemistry** course will guide the participants with the necessity of integration between geochemistry and geology. The prediction of fluid type (oil or gas) and volumes generated in the basin, or present in un-drilled traps, relies a.o. on the understanding of petroleum systems. Geochemistry can provide key data to build a reliable petroleum systems model, and thus helps to rank prospects and to minimise exploration risk. This course teaches the fundamentals of the geochemical tools, and demonstrates the potential of geochemistry in hydrocarbon exploration.



### Participants

This **Petrogenium**. course aims at Petroleum geoscientists involved with exploration & production of hydrocarbons.



### Learning Objectives

At the end of the course participants will have gained insight into the main geochemical concepts, tools, and application domains. They will understand how geochemistry can contribute to solving exploration and production problems. Exercises are used to reinforcing the acquired knowledge in a practical context. The participants will be able to apply basic geochemical tools, and will be in a position to define and manage geochemical projects.

# Programme

## DAY 1

### Focus On Source Rocks

- Introduction: Objectives of geochemistry, it's role in E&P ventures
- Source rocks: depositional environment
- Quality assessment of source rocks
- Generation of hydrocarbons
- Migration: from kitchen to trap
- Exercises

## DAY 2

### Focus on oil finger printing

- Objective of oil analyses
- Basic chemistry of hydrocarbons
- Overview of analytical methods
- The basic parameters for oil typing
- The gasoline fraction: the "star diagram method"
- Exercises

## DAY 3

### Focus on exploration applications

- Basins & petroleum systems
- Biomarkers
- Oil family mapping
- Gas geochemistry
- Biodegradation of oil
- Prospect risking using geochemical data
- Exercises.

## DAY 4

### Core acquisition, analysis & interpretation.

- Reservoir architecture & filling history
- High Resolution GC for reservoir geochemistry
- Maturity effects & reservoir compartments
- Case histories: Monitoring, compartmentalisation, near-field exploration.
- Exercises

## DAY 5

### Focus on wells, pipeline, infrastructure

- Waterwashing, Evaporative fractionation, TSR, BSR
- Pay-zone detection & completion intervals
- Precipitation of solids during production (Wax, pyro-bitumen, asphaltenes)
- Application of water geochemistry
- Design workprogram: Saving money by using geochemistry
- Exercises

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## Why select Petrogenium.?

The above support will be provided by principal consultants with 30+ years world-class experience in the technology and hands-on know-how from operation of refinery units.

## Contact Petrogenium.:

Email: [training@petrogenium.com](mailto:training@petrogenium.com)

Website: <https://www.petrogenium.com/training/>

***Because Experience Matters***