

Water activity in the oil & gas industry

Water activity and ERH%

Water activity, or equilibrium relative humidity(ERH%), is widely used as a quality control measure in the oil and gas industry to formulate materials used for drilling and processing.



Moisture migration in drilling fluids & muds

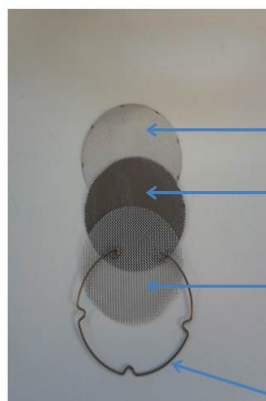
By controlling the water activity of oil drilling muds and fluids, the performance of these materials may be improved with respect to water migration into surrounding rock surfaces during boring.

Challenges in measuring water activity

Drilling materials often contain many ingredients that are solvent-based so protection of the water activity sensor cell is essential. A filter combination of alcohol and chemical layers with a special formulated sensor cell CM3 is specified for this application.

Novasina water activity meter sensor filters

Fitting sensor protective filters to all Novasina water activity meters is recommended to prevent damage or calibration drift of the sensor cell by the non-aqueous volatiles in the samples.



- EVALC alcohol filter
- EVC21 chemical filter
- Retaining mesh – not needed if filters fitted
- Retaining circlip

The EVALC alcohol filter is normally changed by Novatron, during a service visit, and the EVC21 should be changed by the user every 2 months, with daily use. EVC21 filters are supplied in packs of 5 or 10

CM3 solvent resilient sensor cell

