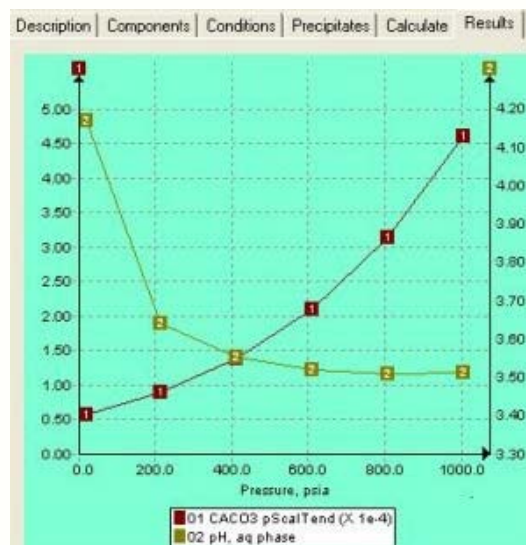


PRODUCT DESCRIPTION SHEET

ScaleChem



ScaleChem is simulation software for the assessment of scaling problems in oil and gas production. ScaleChem is synonymous with accurate oilfield scaling prediction. OLI System's expertise is in electrolyte and in particular, aqueous chemistry. ScaleChem calculates the phase separation and scaling tendencies of brines at the extreme, high T, P conditions characteristic of today's well conditions.

The standard solids chemistry covered by ScaleChem includes analysis for these solids. Scaling tendencies for these solids are reported for every calculation request.

anhydrite CaSO_4
 barite BaSO_4
 calcite CaCO_3
 gypsum $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$
 siderite FeCO_3

iron sulfide FeS
 halite NaCl
 celestite SrSO_4
 dolomite $\text{CaMg}(\text{CO}_3)_2$

EXPANDED SOLIDS

With ScaleChem's expanded chemistry, additional cations, anions, and many more solids are covered. This allows solids analysis from the new cations and anions, which have been added. Over 275 solids are available in the ScaleChem databank.

Scaling tendencies for every solid with a scaling index $> 1.0\text{E-}05$ will be reported for a calculation request which uses expanded solids.

FEATURES

- Well Profiles** ScaleChem can be used to calculate scaling tendencies at user specified temperatures and pressures. Detailed phase reports and solids formation is given at each point.
- Mixing Compatible Waters** Check the compatibility of different waters at user specified ratios, in order to find safe ratios (no solids formation) for injection and disposal operations.
- Saturation at Reservoir Conditions** Saturate a water with respect to one or more solids to simulate reservoir conditions.
- Facilities Calculations** Simulate the filtering, mixing and separating of waters in post-processing, surface operations.



PRODUCT DESCRIPTION SHEET

CAPABILITIES

- Complete speciation
The OLI model predicts and considers all of the true species in solution in the range of -50 to 300° C, 0 to 1500 bar, and 0 to 30 molal ionic strength.
- Robust standard state framework
Based on the Helgeson equation of state, parameter regression and proprietary estimation techniques
- Activity coefficients for complex, high ionic strength systems.
Based on the combined work of Bromley, Zeimaitis, Meissner, Pitzer and OLI technologists
- Comprehensive databanks
The Complete OLI databank with the aqueous chemistry for 79 inorganic elements as well as thousands of organics. Data service provides customized coverage of client chemistry in the form of private databanks.
- Thermo physical properties
OLI has developed unique chemical /physical based models to compute thermodynamic and transport properties for complex aqueous mixtures.

SCALECHEM V3.1

Robust, stable, with these new features

- Hydrocarbon phase
Available for all calculations and defined in one of three ways as: Characteristic C1 - C20, Pseudocomponents, or Petroleum fractions. For petroleum fractions, ASTM D86, D1160, D2887 or TBP curves supported
- High-calcium brine predictions
Updated literature searches and updated data regressions
- Gas hydrate effects on brine chemistry
Methanol, ethanol and propylene glycol have been added as components - These components used in gas hydrate treatment can have an effect on brine chemistry by influencing the water activity.

CONTACT US

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