

Test Foam Stability and Foamer Efficiency

with the Foam Tester FOA

Characteristics

- Run pressurized foam tests to simulate high temperature field conditions
- Test foam stability
- Test foamer efficiency in carry-over tests with continuous weighting
- Test defoamers in collapse tests
- Single or double tube setup with individual flow setting
- Based on principles of ASTM D892

Examination of foam generation under varying conditions

The Foam Tester enables an investigation of the generation and stability of foams. Inside a column, foam is generated by sparkling nitrogen or pressurized air through the liquid sample. The gas flow is injected by a sparger disc at the bottom to provide homogeneous bubbles. The sparger disc is made of a porous borosilicate filter material, different pore sizes are available. The gas is preheated before it is injected.

Measuring aqueous solutions over 100 °C without boiling

- Pressure up to 10 bar (174 psi)
- Temperature up to 150 °C (302 °F)
- Flow rate up to 20 l/min



Everything under control

The gas flow rate is controlled via software by an electronic flow controller. The pressure is controlled by a backpressure overflow valve and shown on an analog pressure

gauge and in the software. The temperature is maintained and controlled via software in a special designed dry bath heating oven.

Different test modes

Carry-over test:

Depending on temperature, flow rate, pressure and pore size of the sparger disc a foam is continuously produced. The foam is carried out through an over flow tube. Optionally, the overflow tube can be upgraded with active cooling.

The weight of the discharged foam is continuously measured using a computer-controlled balance. All data is recorded continuously.

Foam collapse test:

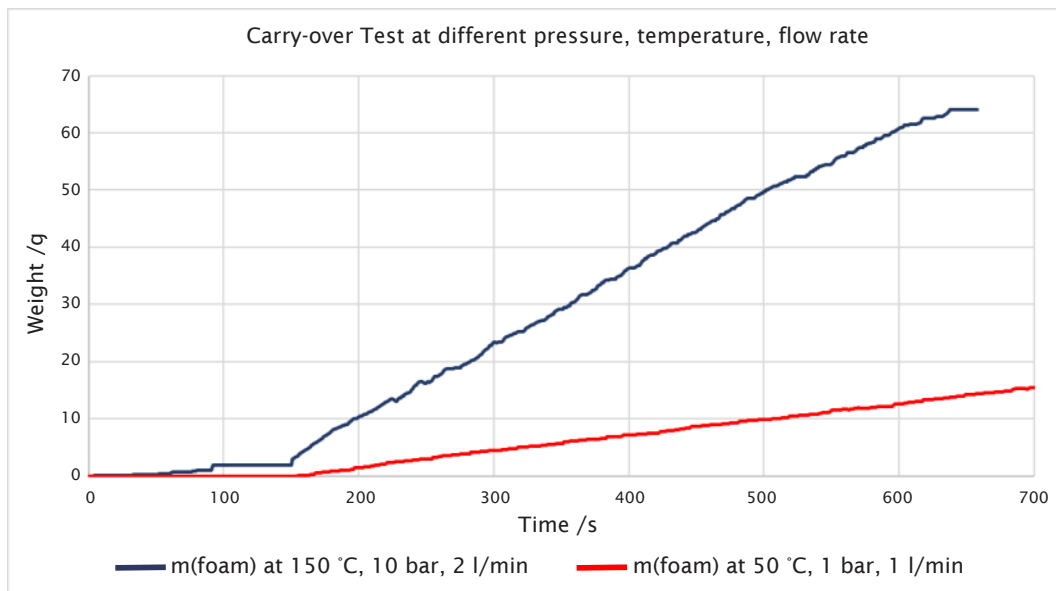
The time for decomposition of the produced foam is evaluated by optical examination.

Depending on temperature, flow rate, pressure and pore size of the sparger disc a specific amount of foam is produced. Additives can be added before or during the experiment manually. The gas supply is switched off and the speed of foam decomposition is determined by measuring the decreasing height of the foam over time.

Foam stability test:

The height of the produced foam is evaluated by optical examination.

Depending on temperature, flow rate, pressure and pore size of the sparger disc a specific amount of foam is produced. Additives can be added before or during the experiment manually. After a certain time the foam reaches an equilibrium of newly produced and decomposing foam. The height of the foam can be read off a scale on the test cell.



Specifications:

Temperature range:	Room temperature up to +150 °C (+302 °F)
Pressure range:	Ambient pressure up to 10 bar (145 psi)
Amount of test cells:	1 (basic unit) or 2 (extended units)
Sample amount:	50 .. 200 ml (each cell)
Gas flow:	0,1 .. 20 l/min (customized)
Gas supply:	Pressurized air or Nitrogen - max. 12 bar (174 psi)
Power consumption:	Max. 3000 W
Voltage input:	230 V~ / 50/60 Hz
Weight:	Main unit: 68 kg (with test cells etc.: 97 kg)
Dimensions (WxDxH):	44 x 54 x 143 cm