

FOAMSCOPE™

Cement Foam Analysis

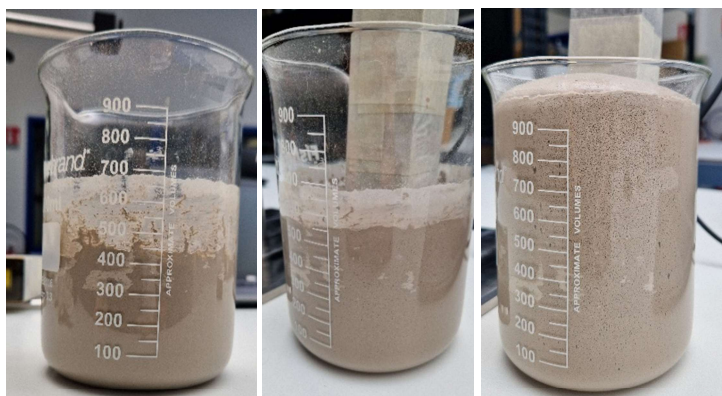
Objective

Characterize foam formation immediately after adding H_2O_2 and before setting.

Measurement

FOAMSCOPE™ captures bubble images continuously during expansion, enabling the foam structure and its evolution to be quantified over time.

Sample	MasterProtect NFF 2000 IN
Camera settings	Exposure: 4.30ms - Gain: 2dB
Capture settings	Frequency: 1fps - Time: 900sec

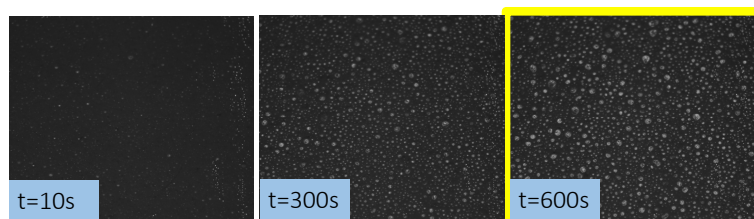


Key analysis parameters

FOAMSCOPE metric	Information provided
Bubble count	Bubble population and evolution of nucleation/stabilization
Mean Eq. Diameter	Characteristic bubble size and bubble growth
Polydispersity Index (PDI)	Homogeneity of the bubble size distribution
Bubble Area / Total Area	Apparent gas area fraction and foam development

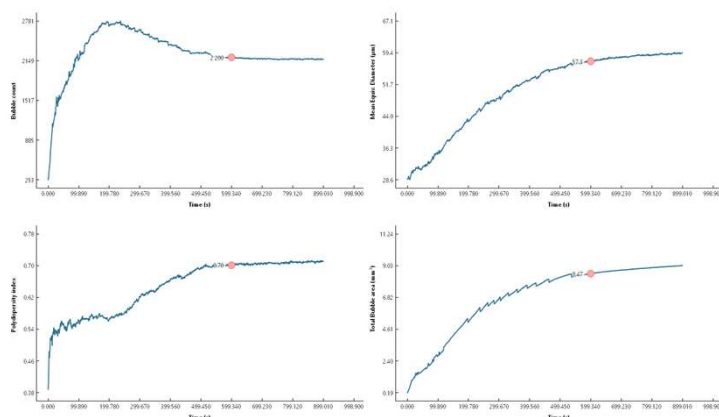
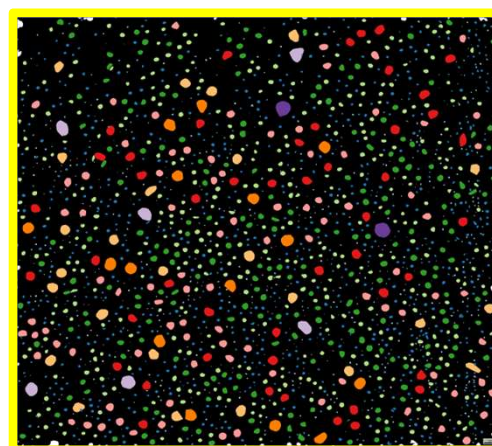
Note: this sheet is designed as an application illustration, not as a scientific validation study.

Foam structure images capture



1. Nucleation: High number of small bubbles appears immediately after H_2O_2 addition.
2. Growth: Bubble size increases while the foam structure develops.
3. Stabilization: The bubble population progressively reaches a more stable size distribution.

Foam structure analysis



FOAMSCOPE™ enables the kinetics of cement foam formation to be quantified before setting, through complementary measurements of bubble population, size, size distribution and apparent gas area fraction.