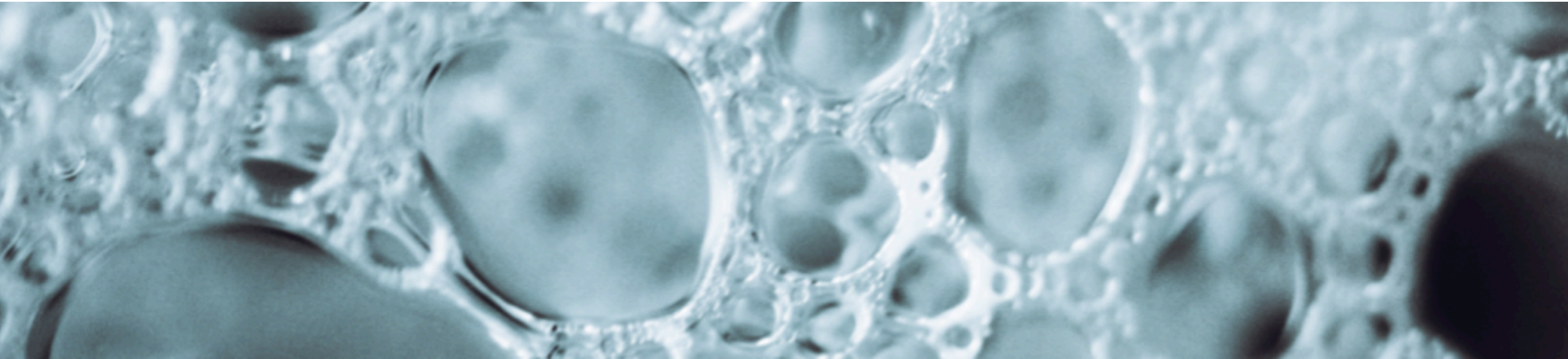


ANTIFOAMING AGENTS FOR ADVERSE MEDIA WITH SURFACTANTS (HIGH ACIDITY OR HIGH ALKALINITY): EMULTROL DFM DV-1, EMULTROL DFM DV-1 S and EMULTROL DFM DV-30



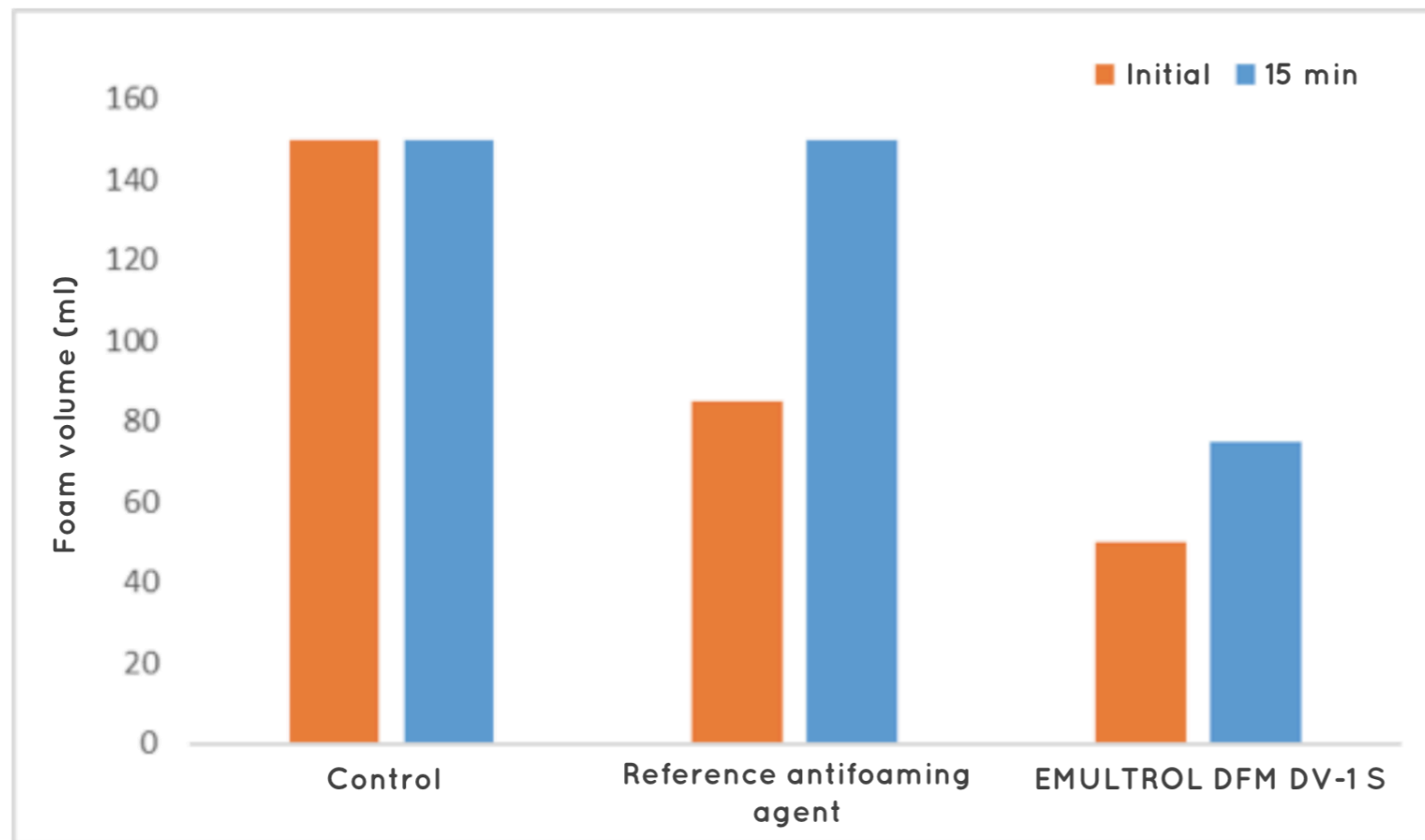
The results of two studies carried out at Concentrol laboratories are presented below. In the first, we will see the performance of EMULTROL DFM DV-1 S compared to a reference antifoaming agent on the market, using a dishwasher detergent as a medium. In the second one, the antifoaming effectiveness over time of EMULTROL DFM DV-30, EMULTROL DFM DV-1 and the competitor's antifoaming agent is compared.



Both **Concentrol** products are high-performance solutions for adverse media with surfactants (high acidity or high alkalinity), such as detergents and fabric softeners.

Study 1

Comparative antifoaming test between Emultrol DFM DV-1 S and a market reference antifoaming agent in dishwasher detergent medium



This graph shows the volume of foam formed in the macro-foaming test in a dishwasher detergent medium with each of the different antifoaming agents used in this study.

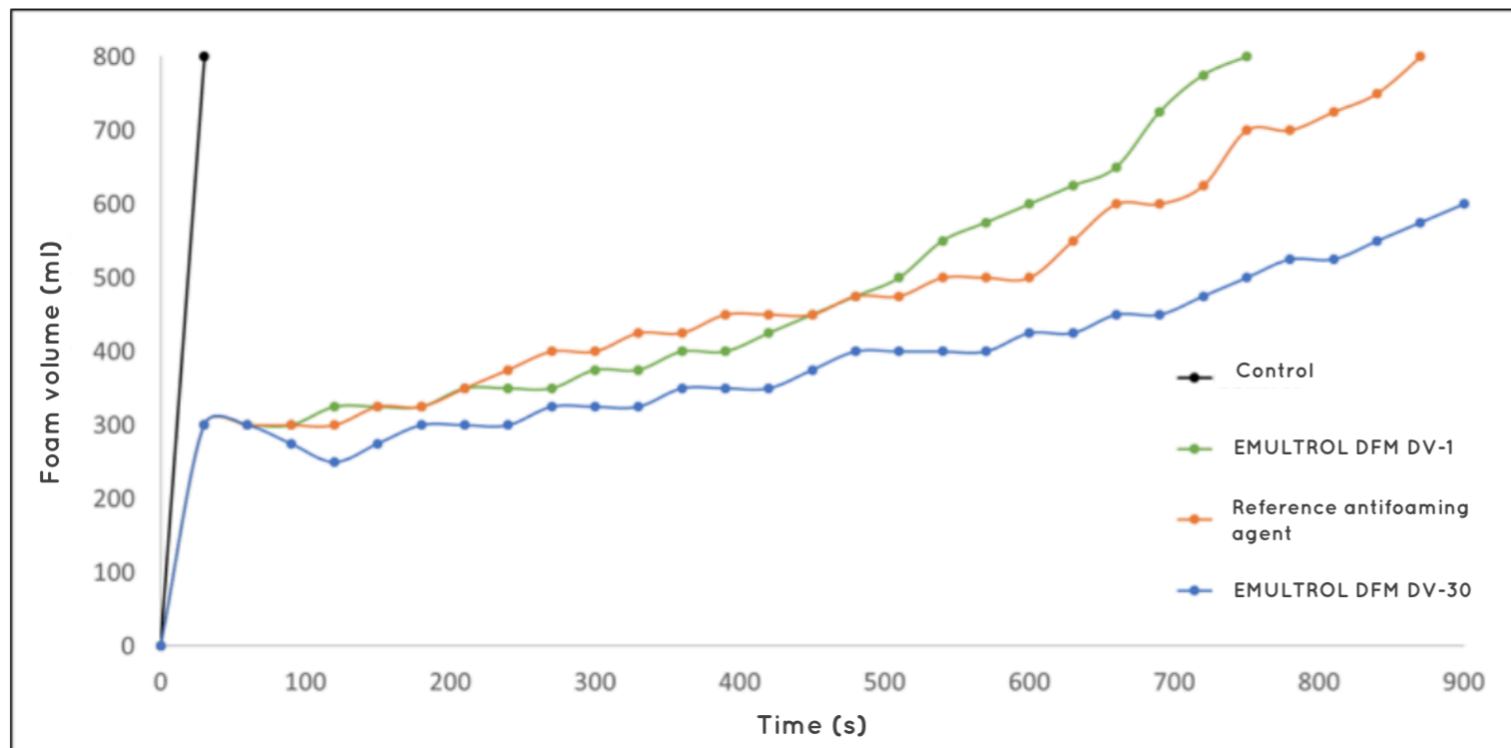
The antifoaming agent **EMULTROL DFM DV-1 S** is recommended not only because it shows a better immediate antifoaming effect compared to the market reference antifoam, but also for its **greater stability over time in a medium with an alkaline pH such as dishwasher detergent.**

Study 2

Comparative study of antifoaming agents for fabric softener with Emultrol DFM DV-30, Emultrol DFM DV-1 and a product from the competition

Product	Composition	Dry extract (%)	Rotational viscosity at 50 rpm (cps)
Common antifoaming agent on the market	Aqueous silicone emulsion	30	1800
EMULTROL DMF DV-30	Aqueous silicone emulsion	30	3500
EMULTROL DMF DV-1	Aqueous silicone emulsion	17	600

The volume of foam formed over time is compared with antifoaming agents based on silicone emulsions with different concentration of solids, in a softener base.



The antifoaming agent **EMULTROL DFM DV-30** is shown to be the **most effective, compared to the antifoam from the competition**, which contains a similar amount of solids. On the other hand, **EMULTROL DFM DV-1** proves to be the most efficient antifoaming agent due to its optimal **effectiveness/solids ratio**.