



SMITHERS-OASIS

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Some media have given attention to a recent publication by C. Trestrail *et al.* that describes statistically insignificant biological responses of marine and freshwater invertebrates to the ingestion of floral foam microparticles following their starvation in laboratory conditions. Aside from the attention-grabbing title of the publication, “Foaming at the Mouth,” it is difficult to understand why.

As a global company with a long-standing commitment to sound science and good environmental stewardship, we have a number of concerns, including:

- First, the publication does not reflect real-world conditions. The test subjects were harvested, transferred to a laboratory environment, and literally “starved” by the researchers before being fed a diet of only crushed floral foam in water filtered to prevent naturally occurring algae and bacteria from influencing results. It is hardly surprising that the test subjects ingested the foam in these conditions. As the authors conceded, “the ingestion of these microplastics was likely driven by the physical presence of the microplastics” in the absence of anything else.
- Second, “No mortality was observed during the experiment,” and the small group of biomarkers for which the authors collected data showed only effects without statistical significance, if at all. The authors were left expressing uncertainty about certain data they reported due to the conceded presence of “confounding factors,” and speculating about how changing the test parameters, such as “modifying exposure time or selecting a different age class” of test subjects “could have yielded statistically significant results.”
- Third, the publication appears to have been prompted by what the authors describe as a “viral social media trend” involving “videos of people using their fingers to crush blocks of floral foam” that purportedly “generates innumerable microplastics.” The authors provided no data or analysis about the scope of their conjecture regarding “threats” to the biological subjects of their laboratory experiments, instead apparently secure in leaving such subjects to the realm of the imagination.

Smithers-Oasis stands behind its OASIS® Floral Foam and embraces sound science that looks thoughtfully at the performance of our materials in the real world. The publication by C. Trestrail *et al.* does not add to that body of knowledge.

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