



BBIA, Food Waste and Testing of OXO-Biodegradable Plastic

Michael Stephen, an international expert on bioplastics, shares his thoughts and opinion on important issues impacting the bioplastics industry. Today, Michael writes about BBIA, food waste and Testing of OXO-Biodegradable Plastic.



Michael Stephen

BBIA

An astonishing attack on oxo-biodegradable plastic on 1st June by the lobby group for the “compostable” plastics companies – in a letter to the UK Environment Minister full of inaccuracies and misleading statements.

It was dealt with line by line in a factual response on 4th June by Michael Laurier, CEO of Symphony Environmental, the market-leader in oxo-biodegradable plastic.

Laurier also asks the Minister to consider why these companies are attacking oxo-biodegradable plastic. “This needs to be understood” he says “as part of a concerted lobbying and PR campaign over nearly 20 years by the bio-based plastics industry, upon which they must by now have spent millions of Euros.” “They are obviously not spending this money and making all this effort to protect the environment – they are doing it because they (mistakenly) see oxo-biodegradable plastic as a threat to their market share.”

“Their actions are fundamentally anti-competitive, and are designed to stifle a competing technology. Worse still – if they succeed they will have deprived policymakers of a technology which could be used to deal with plastic which has escaped into the open environment, from which it cannot be collected for recycling, composting, or anything else.”

The BBIA and Symphony letters were noted in [Bioplastics News](#), [Plastics Today](#) and [Letsrecycle](#).

Food Waste

Plastic packaging is key to reducing food waste, and even a small amount of packaging can help prevent a lot of food waste. The widespread removal of packaging would lead to an exponential increase in food waste and consequential GHG emissions.

The vast majority of foods last longer when packaged properly, but discarded packaging is something we all deal with every day so it's easy to overestimate its environmental impact compared to food waste.

In most cases, any GHG reductions achieved by not pre-packaging food are quickly outweighed by even a minor increase in food waste.

Today it is possible to package food not only in plastic but with anti-microbial plastic and plastic which keeps the food fresh for longer. (www.d2p.net)

An LCA done by Intertek in February 2011 on shopping bags showed that plastic has the best environmental credentials of all the alternative materials. Another LCA by Intertek in May 2012 on shopping bags and bread wrappers showed that oxo-biodegradable plastic was even better. See [article](#)

Testing of OXO-Biodegradable Plastic

It is not difficult to test for degradation in the natural environment, and it has been observed in a convincing manner outside laboratory conditions, for example in seawater at Bandol in the south of France. It is then a simple matter to measure the molecular-weight of the degraded residue.

However, it is futile to attempt testing for biodegradation in the open environment because it would be impossible to measure CO₂ evolution (which is the standard measure of biodegradation) under those conditions. Scientists have therefore devised laboratory protocols over many years which simulate the natural process of biodegradation, and the degraded residue has been observed at Queen Mary University London to be consumed by bacteria commonly found on land and in the oceans.

It is sometimes said that there is no guarantee that oxo-biodegradable plastics would receive the necessary pre-treatment of light and heat to start the degradation process. In fact it is necessary only for the plastic to be exposed to air. UV light and heat will accelerate the process but are not essential.

It is in any event most unlikely that the plastic would not be exposed to both. Oxo-biodegradable plastic technology is designed to deal with plastic which escapes into the open environment as litter where it will almost certainly be exposed to UV light, and to ambient heat. It could possibly be deprived later of light or heat or both, but the process of oxidation once started, will continue. In the hypothetical event that it did not, the performance of the plastic would be no better and no worse than ordinary plastic.

Michael Stephen

Michael Stephen is a lawyer and was a member of the United Kingdom Parliament, where he served on the Environment Select Committee.

When he left Parliament Symphony Environmental Technologies Plc. attracted his attention because of his interest in the environment.

He is now Deputy Chairman of Symphony, which is listed on the AIM market of the London Stock Exchange, and is the founder and Chairman of the Oxo-biodegradable Plastics Association.

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