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## **'Natural' versus 'Chemical' – conflict or confusion?**

By Jo Jacobius

Ensuring human and environmental safety are crucial to all businesses and especially to the Cleaning Industry. Clean environments – whether these be offices, retail or leisure premises, catering, health or institutional premises – promote health and well-being and matter as much to the success of the organisation or enterprise as the efficiency of the staff or, for example, the communications systems.

As organisations in the UK increasingly focus on sustainable development, however, there seems, to be a concern that achieving a clean environment means using chemicals; and a perception that chemicals come only at the expense of safety – safety both for people and for the planet. In fact, these objectives are not at all at odds, according to the UK Cleaning Products Industry (UKCPI). One of the problems seems to be the wrong-headed perception that in some way 'natural' products are superior in terms of safety to 'chemical' products. This view first grew up among 'green consumers': today, **an enthusiasm for all things 'natural' is a defining consumer trend of our time.**

But now this perception is uncritically being written into purchasing specifications for professional cleaning. "For organisations pursuing sustainable development, the view that 'natural is superior' is completely counter-productive; in some cases it can lead to decisions that – quite inadvertently - have the opposite effect of that which was intended," according to Dr Andy Williams, Director General of the UK Cleaning Products Industry, the Association that represents 95% of the £3 billion Industry in the UK.

He adds: "Members of the Professional Cleaning Industry need to work to redress the balance of understanding and to open the debate between providers and their clients about ways to improve sustainability and ensure human safety throughout the whole cleaning process. The issue of 'natural' products being in some way better than 'chemical' products is a misleading notion that is simply not founded in science".

Keeping ourselves, our clothes and our environment clean is a necessity and essential for health and safety. The fact is that all substances – including the ingredients in cleaning products - are just arrangements of atoms of the same 90-odd chemical elements of which the planet is made. It is therefore meaningless in terms of safety or sustainability to differentiate between ingredients with the simplistic labels of 'natural' or, implicitly, 'unnatural'.

This very point is highlighted in the newly-published guidance for *Sustainable Cleaning* endorsed by DEFRA following a review by the UK Chemicals Stakeholder Forum and the Advisory Committee on Hazardous Substance. **The guidance states: “It is a common misconception that an ingredient from a plant or other naturally-derived source will necessarily be superior** in terms of human safety, biodegradability, aquatic toxicity and sustainability than one from a petrochemical source”.

To explore the reasons for this prevalent preference for ‘natural’ things, answers, and to open the debate on their implications for sustainable cleaning, UKCPI has published a discussion paper on the subject of chemical versus natural substances used for cleaning. *‘Meeting Natural Expectations’\**. The booklet was described by award-winning science writer John Emsley as ‘a dose of realism’.

Reviewing the publication, John Emsley said: “‘Natural’ is no guarantee a product will do the job we want because Nature did not design its vast range of natural molecules for the benefit of humans. On the other hand chemists have created new molecules specifically to meet our needs, often basing them on natural molecules but with the dangerous components replaced by something safer.

“Today we need to go beyond the pointless confrontation between ‘natural’ and ‘man-made’ and ensure that what we make not only does what we want it to, but it is based on sustainable resources, and poses no threat to the environment.”

It could be that preference for natural things comes down to a simple matter of trust. The author of *Meeting Natural Expectations*, independent consultant on scientific matters, John Pickup, wonders: “Are people perhaps drawn to natural choices because, if things do go wrong, the harm is somehow easier to accept? If ‘natural’ things are seen, as the dictionary has it, as ‘not interfered with by man’, do people hold the view that they are preferable because of mistrust in the technology that produces man-made products? Is this mistrust in our ability to design safe products or mistrust in the motives of the corporations who manufacture them? There may even be a deeper feeling that interfering with the natural order of things in some way carries a risk. Yet it should of course be remembered that the whole of human-kind’s progress over the centuries has been achieved by ‘interfering’ – by making tools, learning how the world works and learning how to shape and control it. As a result, human health and life expectancy, certainly in the Western World, is at an all-time high”.

Dr Williams, Director General of UKCPI, says: “Our Trade Association represents an enormously important industry whose products make a genuine contribution to the quality of people’s lives, giving them the clean, safe and healthy lifestyle they expect. Cleaning has changed markedly in recent years. The focus of cleaning product manufacturers, and those engaged in undertaking cleaning as a profession, has



moved beyond simply doing the job safely and effectively to doing it exceptionally well, cost-efficiently and sustainably as well as, of course, safely.

Dr Williams continues: "As we collectively pursue a more sustainable future it must be remembered that the central key to sustainability of the whole cleaning life-cycle is performance. Product performance affects sustainability as it influences how people use products – and, crucially, how much of a product people use in order to avoid compromising on results. Dosage drives every other aspect of the sustainability equation. Using too much product drains resources, including energy, causes needless rework and adds to waste. A poorly performing product, even if it is described as 'natural', may lead to premature wear and tear or overdosing. In this way, **poor performance undermines sustainability** and may have the knock-on effect of raising costs and damaging business or at least denting budgets. For those engaged in professional cleaning, this is a crucial point".

The safety of cleaning products is also not going to be assured by 'natural' labels but by risk assessment, now being further underpinned by the REACH Legislation. Biodegradability is not a new 'green' feature of cleaning products: it has been a legal requirement for the main ingredients – the surfactants - for 30 years. Safety also depends of course on safe use, by properly trained staff who follow the instructions.

Once safety is assured, green procurement is much more about getting the best out of the products by correct use and minimizing waste than it is about the choice of ingredients. Wherever raw materials are sourced, they have to be chemically processed – 'interfered with' by man – to make them work and ensure they are safe and sustainable.

Dr Williams concludes: "Delivering efficient, safe and sustainable cleaning is more complex than the 'natural' versus 'chemical' argument would imply. Confusion about these two – as it turns out – fairly meaningless distinctions should not cloud opinion or divert those engaged in delivering cleaning from moving towards creating a cleaner, healthier, more sustainable and safer environment achieved in the most cost-effective way".

\*For a copy of *Meeting Natural Expectations* contact: UK Cleaning Products Industry Association on 01829 770055 or email [ukcpi@ukcpi.org](mailto:ukcpi@ukcpi.org). Alternatively this and *Sustainable Cleaning* can be downloaded from [www.ukcpi.org](http://www.ukcpi.org)