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# Putting Microfibre Under The Microscope

## Where there's a pro, there's a con....

The drive to gain market share for a new kind of cleaning product has seen microfibre marketers try to convince us that their wonder cloths are so effective, chemicals are not needed. They claim therefore, that the cloths are better for the environment and will reduce spending on chemicals.

In the stampede to stake a claim for microfibre on the moral high ground, the facts have been lost in the haze of emotional planet-saving hype. Microfibre marketers have painted a picture which is really only part of the story – the part that puts the best spin on their product.

What is needed is an objective and realistic assessment, not only of the effectiveness of microfibre cloths, but also of how “environmentally friendly” they really are and any financial savings they actually deliver.

Why do we need to know this? Well, if like most of us you value human life, the most important goal in cleaning is hygiene. This is especially true in higher risk areas where transfer of viruses and disease is more likely such as in hospitals, food preparation areas, schools and accommodation. There has been no shortage of information in the media in recent times about viruses that we haven't heard of before, and their impact.

In his excellent article in Inclean Magazine, hygiene management consultant Kevin Nagle sheds useful light on the subject of microfibre cloths. (*“Cleaning with microfibre cloths, a risk-based evaluation”*, Tech Sheet No. 1702, Inclean April/May 2004)

*“All of the available literature from manufacturers of microfibre cloths states that the use of detergents can be reduced by between 60% and 90%. There is no scientific evidence to show that the use-of microfibre and water alone will be equal to the chemical removal of soil in high traffic areas. This method may be suitable for low risk, low traffic areas, but it is not feasible to be used in high traffic areas due to the nature of the soil, the volume of soil and the penetration of the soil in these areas.”*

*“Scientific research shows that there are many types of soils that adhere to the surface in many different ways such as abrasion, hydrogen bonding, absorption, denaturing, thermal bonding, adhesion and chelating. There is no single method available to remove all of these soils. A*

*variety of methods must be employed which include molecular destruction, soft abrasion, hard abrasion, chemical de-linking, emulsification, thermal removal, sequestration and solvency.”*

*“Products such as microfibre utilise only two of these methods, which is soft abrasion and physical sequestration. Other soils that do not respond to this method will be left on the surface.”*

This means that whilst a microfibre cloth can offer advantages over more traditional kinds of cleaning cloth, microfibre is not the do everything cure-all that the marketers would have you believe. The article continues to report:

*“In addition, there is a requirement for disinfection in some areas of a healthcare facility and many areas of a school such as tuck shops, toilet blocks, and other high traffic areas that could be regarded as an infection hazard. A search of the medical literature reveals no evidence of any research that has been conducted on microfibre to show it has bacteria removing properties equal to or greater than a hospital grade disinfectant, or any disinfectant for that matter. Previously unheard of diseases are now becoming prevalent in public utilities such as legionnaires disease, and necrotizing fasciitis or flesh eating bacteria, as well as the common diseases such as flu, salmonella and other bowel diseases, impetigo, scabies etc. It would be unwise to claim that microfibre has the ability to remove micro-organisms to a safe level if there is no medical evidence to support the claim.”*

*“The use of microfibre cloths in conjunction with a small amount of suitable detergent would provide a high quality cleaning result. Additionally the use of a hospital grade disinfectant in high risk areas would reduce the risk of cross infection. Due to the high retention of soil and moisture in microfibre, daily laundering of cloths is essential. (NOTE: Microfibre requires heavy duty laundry detergents to remove all of the soil and bacteria, as opposed to a rag cloth that already has the soil and detergent in suspension in the weave.)”*

So any reduction in detergent use at the time of cleaning is replaced with detergent use when the cloths are laundered.

To prevent transfer of disease between areas (cross-infection), cloths must be discarded once used in a designated area until laundered. To cater for all areas to be cleaned during a shift, a large number of cloths will be required. Acquiring a sufficient quantity of cloths will be a significant and expensive purchase. Also keeping in mind that pilferage has shown itself to be a

problem with microfibre cloths, cleaning costs could just as easily increase.

With regular laundering of a large number of cloths, a substantial amount of heavy-duty laundry detergent will be needed. This laundry detergent may well have more environmental impact than the disinfectant or spray-and-wipe that the microfibre was claimed to replace. So where is the reduction or elimination of chemical usage?

We've been told that the very fine and dense construction of microfibre allows it to collect and hold more soil than the open weave cloths of old. This theory holds equally that microfibre also entraps more bacteria. Once entrapped by the microfibre, the bacteria are harder to dislodge than from open weave cloths. This raises the question as to whether the soiled microfibre cloths should be disinfected as well as laundered, to prevent bacteria from being re-deposited when the cloths are next used.

We recently heard that a caravan park had implemented microfibre cloths and stopped using any kind of cleaning chemical. In light of the above, this move is highly questionable. With cleaners moving from van to van, or cabin to cabin and using the same cloth, there is a high risk of spreading germs and disease that may have been left in one cabin by the last visitors to many other cabins.

This example could also be from room to room in a hotel. Logic says it would be far better to use a disinfectant in each location, or to use inexpensive cleaning cloths and environmentally friendly surface spray cleaners, and discard the cloth for washing after use in that room.

In truth microfibre cloths can provide a useful and effective tool to incorporate into your cleaning program, provided their weaknesses are acknowledged and understood. There is however, no law that says they can't be used in conjunction with chemicals. In fact, in using microfibre, chemicals will need to play a part somewhere to achieve best results and ensure a satisfactory level of hygiene.

We know that as manufacturers of cleaning chemicals, we have an obligation to minimise the environmental impact of our products so that they can continue to do their important work.

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