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ARE NEUTRAL DETERGENTS THE WAY TO GO? NOT NECESSARILY ...

We all agree that safety and environmental care are key issues in how we operate our business and perform all functions. Problems develop however, when sweeping statements and hype about general trends get in the way of common sense.

Consider the pH of cleaning products. It may be well-meaning to steer toward the use of neutral (pH=7) detergents. However, it is not sensible to presume this will improve safety or benefit the environment. One thing it will do is compromise cleaning effectiveness.

THE BEST PH FOR THE JOB!

Over many years of formulating and manufacturing cleaning chemicals, we have found that the optimum pH levels for cleaning products are:

Product	Optimum pH Range For Best Performance
Hand Cleaners	5 – 7
Dish Detergent	7 – 9
Hard Surface Cleaners	
- (sensitive surfaces)	8.5 – 10.5
- (HD fat, oil or dirt removal)	12 – 14

We've also found that if we move outside these ranges, product performance will be reduced. For example, if we decided to make a hand soap with a pH of 12, it would clean well but would damage people's hands. Or, if we produced a kitchen fat degreaser/detergent with a pH of 6, it would be a failure at the job of fat removal.

Some flooring manufacturers' do specify the use of a neutral detergent. This is usually based on risk-prevention and idiot-proofing, **not** on a scientific appraisal of the optimum cleaning process.

Why is there a new preference among safety advisers for pH neutral products? Probably because pH neutral products are thought to be milder on the skin and therefore safer to use. However, this is an assumption that overlooks the effects of the other ingredients in a detergent. For example, a popular hand cleaning liquid was heavily promoted as being pH neutral, but it contained synthetic detergents that are rated as

skin irritants. Time has shown this to be true, because this product has had to be reformulated and now has a high level of moisturisers to combat the effects of the detergents. The point is, it was harsh even though it was neutral.

MILD ALKALINE DETERGENTS

Looking at hard-surface cleaning, why do we find pH 8.5 to 10.5 is ideal? This is because the average soil on surfaces is usually slightly acidic overall and it is removed faster by a product with some alkalinity to react with the acidity in the soil. (Incidentally, the product left after the reaction is neutral). The contribution of a small amount of alkalinity is recognised in the Australian Standard AS4187 in reference to cleaning in healthcare facilities: "Mild alkaline detergents in the pH range 8.0 to 10.8 are preferred over neutral detergents in most applications... Neutral detergents... may not prove as effective as built alkaline detergents in many of the dirtier applications" (AS41857-1994, PP14715).

PREVENTING BACTERIA GROWTH

Cleaning is performed to provide a hygienic environment for building occupants. Scientific testing has shown that if a surface is completely clean, there is no food supply for bacteria to multiply. If the bacteria are prevented from growing on the surface, this a major benefit in terms of public health because the risk of spreading bacteria is reduced.

It's worth noting that, studies by the American Society of Microbiology have demonstrated the troublesome bacteria such as methicillin-resistant staphylococcus aureus (MRSA – 'Golden Staph') can survive on a dry surface for up to 10 weeks. So regular, thorough cleaning of surfaces subject to frequent human contact is vital.

The best way to keep surfaces this clean is to use a mildly alkaline detergent which will be more effective than with a neutral detergent.

So, before you rush to change to a neutral detergent for the sake of it, be realistic in your assessment of the situation. A neutral product will not necessarily be any safer than a mildly alkaline detergent. pH neutral detergents are not necessarily mild on the skin. In fact, they may be quite harsh and irritating. The best detergents for removing all foreign matter from hard surfaces are mildly alkaline (pH 8.5 to 10.5) unless there is a heavy soil load (fat, oil or dirty grease). Surfaces cleaned with highly effective mildly alkaline detergents help to reduce the spread of harmful bacteria and are preferred over neutral detergents for this reason.

A final point: look carefully at the material safety data sheet (MSDS), and consider the track record and ethos of the supplier. Product safety is based on all of the ingredients selected, not only the pH.

HEAVY DUTY DETERGENTS: WHICH IS WHICH?

Three key products in Agar's range of heavy duty detergents are HF Detergent, Presto and Shifter. These powerful workhorses sell consistently well month in month out. In a sales sense, they tend to lie under the radar. However, they are each very effective cleaners in their own specific way, and worthy of attention.

The table below is intended to explain how each can be best utilized.

	Best for Soil Type:	Method of Application:	Foam Height:
HF DETERGENT	Automotive & Industrial soilage – mud, road dirt, engine oil, grease.	Mopping Sponge Autoscrubber	Medium
PRESTO	Fat, cooking oil, food, carbon residues, soapy build ups.	Foam Gun Mopping Sponge	High
SHIFTER	General dirt, food spillage, road grime (especially on troublesome, porous ceramic tiles.)	Autoscrubber Mopping	Low-medium

If you want the added sanitising and mould killing power of chlorine, consider Chloradet. Like Presto, this is also a high foamer.

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