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## CONSERVATION TALK

Michael Trinkley

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Mark Twain's quote, "the reports of my death are greatly exaggerated" is doubly significant for this "Conservation Talk" column. Firstly, I know that my absence from the past two issues made it appear that I disappeared. I apologize and am happy to report that I am back with you. Secondly, and the topic of this column, the late reports that the biocide widely used in the cemetery preservation community, D/2 Biological Solution, is no longer available, are false.

The history of D/2 is long and somewhat convoluted—at least to us outsiders. It was originally formulated and distributed by one company under, I suppose, a license from its originator. The formulation was shifted to the company that manufacturers Simple Green a few years ago. Simple Green, as businesses are inclined to do, licensed the product under several names and there were EPA reviews and mandated modifications of the label in 2000:

([http://www.epa.gov/pesticides/chem\\_search/ppls/056782-00002-20001030.pdf](http://www.epa.gov/pesticides/chem_search/ppls/056782-00002-20001030.pdf)) and again in 2003:

([http://www.epa.gov/pesticides/chem\\_search/ppls/056782-00002-20031117.pdf](http://www.epa.gov/pesticides/chem_search/ppls/056782-00002-20031117.pdf)).

I'm not an attorney, but my reading of the modifications is that they were, at least for our use of D/2 to clean monuments, editorial.

For business reasons, the license holder of D/2 chose to terminate their agreement with Simple Green this year, as well as the sole distributor. The "help desk" at Simple Green told people that the product was no longer available. That is true, at least as far as Simple Green is concerned. They are no longer manufacturing the product. The sole distributor sent out a variety of letters and emails that have understandably alarmed individuals—implying the D/2 lost its EPA Registration Number and had disappeared from the market.

The truth is that the product was pulled so that new labels could be physically applied and the product is now available from five distributors:

- Bicknell Supply Company, Elberton, GA  
(<http://www.bicknellsupply.com/products.php>)
- Cemetery Preservation Supply, Dallas, TX  
(<http://www.gravestonecleaner.com/>)
- Granite City Tool, St. Cloud, MN  
(<http://www.granitecitytool.com/>)
- Granite City Tool Vermont, Barre, VT  
(<http://www.granitecitytoolvt.com/>)
- Lime Works, Milford Square, PA  
(<http://www.palimeworks.com/>)

Not all of these will carry all of the sizes that you have become familiar with, but most will carry at least the 1 gallon and 5 gallon containers. You should contact each for pricing and shipping charges.

I am told that the formulation remains the same, as does recommended use. This is important to the conservation community for several reasons. First, D/2 has a fairly long period of testing and use. If there were deleterious consequences associated with its use, they would likely have shown up by now. Second, D/2 has just recently completed a very lengthy testing by NCPTT for use on the VA National Cemetery gravestones and the results of that testing can be broadly applied to other marble monuments.

It's interesting that with the temporary disruption of the supply chain for D/2 several products have popped up. One that has gotten attention is a big box product called "Wet and Forget." I don't recommend the product for monuments and gravestones for a couple of reasons. The first is the product label that directs users to thoroughly saturate dry stone. This should never be done with any product since it makes it almost impossible to get it out of the stone afterwards. But the manufacturer then explains that the product should be left on the stone. This is poor conservation practice, where we want to remove as completely as possible any cleaner we use. Second, take a careful look at the health warnings on the label: corrosive to the eyes, use chemical resistant gloves, toxic to fish, don't inhale. And third, the product has no testing on monuments, so we don't know what the consequences will be 10 or 20 years from now. It is always risky to use new products—especially products not designed and intended for the fragile stones that we deal with.

I also note that Cathedral Stone is reintroducing its MasonRE B+ cleaner, apparently as an alternative to D/2. This seems to be an odd business decision since Cathedral Stone makes no claim that B+ has any particular ability to remove biologicals—what D/2 excels at.

While we know what active ingredients D/2 contains (Octyl decyl dimethyl ammonium chloride, Dioctyl dimethyl ammonium chloride, Didecyl dimethyl ammonium chloride, and Alkyl (C14, 50%, C12, 40%, C16, 10%) dimethyl benzyl ammonium chloride, Cathedral Stone's MSDS tells us only that the product contains proprietary surfactants (these are products that lower surface tension, such as detergents), proprietary wetting agents (similar to surfactants) and proprietary buffers (these adjust the pH of a product, in this creating a pH of 9.5 which is alkaline, somewhere between baking soda and milk of magnesia).

MasonRE B+ may be a perfectly good cleaner – I have not had an opportunity to use it—conservators generally try to avoid the use of proprietary products since so little is known about what is in them or if the formulation changes. In addition, I would probably not use this product if my primary concern was the presence of biologicals such as algae, moss, and lichen.

While I'm a fan of D/2, I should also emphasize that we overclean. Cleaning is like any other conservation treatment—a careful decision should be made about the benefits and costs, about the need, and about whether the stone can withstand the intervention. In addition, I believe strongly that cleaning is a conservation treatment and should be just as carefully documented as any repair or infill.

With all this said, if a monument requires cleaning of biologicals then D/2 is a good choice when used appropriately. And D/2 continues to be available from a variety of suppliers throughout the country.

-Michael Trinkley, Chicora Foundation, Inc.,  
trinkley@chicora.org

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Graham "Ghastly" Ingels, Cover. *The Haunt of Fear* comic book 12 (March - April 1952).