

# CONTENTS SOLUTIONS

THE GO-TO-GUIDE FOR PERSONAL PROPERTY RESTORATION

Vol. 1, Issue 4

## FREEZE DRYING

*Not Just for Coffee Anymore*

## MRSA MEETS ITS MATCH

*Ultrasonics Take on Superbugs*

Provided by your Contents Restoration partner

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## SAVING DOLLARS MAKES SENSE

**Contents Restoration Specialists  
Save Insurance Millions!**

# Freeze-drying—Not Just For Coffee Anymore!

The concept of vacuum freeze-drying to restore valued items isn't new by any means.

In 1960, the Smithsonian Institute reported a case in which a book was restored with vacuum freeze-drying after being at the bottom of the Missouri River for 100 years!

Over 20 years ago, the United Nations Educational, Scientific and Cultural Organization (UNESCO), reported, "The most effective method found to date, and the most generally accepted by conservators for the stabilization of water-

damaged archival and library materials is freezing at low temperatures." Since that time the freeze-drying restoration profession has far exceeded even their measured praise.

Freeze drying is now being used to halt mold attacks, stabilize soluble inks and dyes, prevent adhesion and of course, to remove water, in books, files, artifacts, heirlooms, and more.

When a broken steam pipe set off the sprinkler system at prestigious Yale University, their extensive collection of archived newspapers was completely saturated. Fortunately, Yale had an agreement with a restoration company that used some of the latest freeze-drying techniques. 368 boxes were sent for processing.

When the newspapers were returned, one of the curators was so surprised at the pristine condition of the collection when he opened one of the transport boxes that he remarked, "Are you sure these are the materials we sent out? It looks perfectly normal

— no waves, no water stains on the edges..."

One spokesperson for the industry is quick to add, "We can restore water damaged items to a state in which they are measurably better than we received them, and if we can get to them quick enough we can often bring them back to a condition that is remarkably similar to the state they were in before the disaster."

In a process similar to freeze-drying coffee, the items are separated, formed, sometimes bound and put under pressure to maintain their original shape. Then the special chamber is flash frozen to as low as 40 degrees (Fahrenheit) below zero. The water turns to ice and is then transformed in a gaseous state and vacuumed away. No moisture is allowed to return to the objects being dried.

In books this means no water stains, no smeared ink, the binding, glue, leather, cardboard and page edges are left in tact and without any further damage.

For corporate documents, files, blueprints, and maps it means you get back the vital data that otherwise could have been lost

Photographs and other types of media are completely dried without harsh chemicals or the erosion caused by other processes.

In the home this means that some of your most precious possessions can be restored. For corporate managers it means that in spite of records damaged by fire hoses, floods, broken sprinkler pipes or other natural disasters, your accounts, reports and files can be saved, restored and used to keep your company working and back on track.

## Smoke, Water and Time

The secret to restoring smoke and water damaged electronics is ... time!

First, don't turn on an electrical device (computers, television sets, etc.) if you think it has been compromised by the smoke or water.

Second, the faster you get a contents restoration professional involved, the better your chances for a successful restoration.

Smoke contains particulate matter and is acidic in nature—especially when there is moisture involved. Smoke is a corrosive mixture which begins etching the metal components, which almost ensures that there will be electronic failure—unless it is cleaned away with ultrasonics and other advanced techniques.

Contents specialists have methods to clean the harmful matter away and stop the corrosion from continuing. They also have associate companies which specialize in the restoration of electronics and the recovery of computer data etc.

Until recently, many owners and insurance professionals naturally assumed that if fire hoses had sprayed a computer or television set, or if smoke and ash coated the casing and seeped inside that the electronics were ruined. Today, with modern techniques, the odds are dramatically improved for the restoration and preservation of such items.

Where there is smoke and water, the professionals know, it is only a question of time.





Clean

## MRSA Meets Its Match!

According to Denise Winterman of the BBC News Magazine, "In an effort to purge hospitals of superbugs (MRSA), contractors are using ultrasonic cleaning techniques. But these aren't limited to the health service, and can even be used on your office keyboard."

And she continues, "Keyboards, mice and other equipment become breeding grounds for bacteria."

In future issues of *Contents Solutions*, we will invite top American professionals who are on the front lines of restoration and are using ultrasonic technology to clean everything from smoke damaged clothing to televisions and computers, to share their expertise on how to restore your valuable office data and personal belongings. You will learn how they actually submerge items in the ultrasonic bath, mixed with special cleaning compounds, and agitate the solution with various frequencies of sound vibration (the frequency used depends on the fragility of the items being cleaned.) The items are then dried with air and heated in special ovens to dry them.

While it is remarkable that ultrasonics can clean a computer and have it function as good as new, it's even more remarkable that it significantly helps to reduce and practically eliminate bacteria.

The ATP test, or "Adenosine Triphosphate" test, measures living matter or bioluminescence to detect a surface's cleanliness and indicates the presence of contamination, allergens and bacteria. Lisa Morantz tells us

that, in one experiment conducted by Morantz Ultrasonics of Philadelphia, PA and a leading UK microbiologist, a plate, which had been run through a dishwasher, was found to still have an ATP count of 1,759 teeming across its surface. But after the same plate was "washed" with ultrasonic technology, it had only had an ATP count of 45.

Morantz conducted further tests where it discovered that by varying the temperature and adding a cleaning solution, the count could be reduced to as little as an ATP count of 7. This considerably lowered reading was considered to be an extraordinary difference.

Restoration companies aren't the only ones interested in ultrasound's future. *Science Daily* reports that, "High-power ultrasound ... has been shown to be 99.99 percent effective in killing bacterial spores after only 30 seconds of non contact exposure ..."

And *Science Clarified*, an online research and educational organization adds, "Ultrasonic vibration also can be used to kill bacteria in milk and other liquids."

Virtually anything that isn't paper can be cleaned using this specialized ultrasonic equipment, including items you would not think could be submerged in water—such as electronics and wood (watch for articles about "freeze-drying" paper).

Ask your contents restoration specialist which things in your office or home can be restored and sanitized—not replaced! with this remarkable technology.



## Canadians Use Water to Fight Water

Many contents restoration specialists have come to know the pro's insider secret of keeping many forms of media wet after a flood to help preserve them. In the article, "*Salvage Operations for Water Damaged Archival Collections: A Second Glance*," by Betty Walsh, The Canadian Council of Archives tells us to wash disks like CDs and DVDs that have been exposed to contaminants like sea water, with cool clean water before storing or transporting. And for media such as computer tapes, videos and audios, they add, "Keep tapes wet, at their initial level of wetness..." In general, magnetic tapes can remain wet for several days, as long as the water is cool and clean.

Betty Walsh has been salvaging wet records and writing disaster plans for the British Columbia Information Management Services (formerly the B.C. Archives and Records Service) since 1982. She says in part, "Media damaged by mud, sewage, or sea water: as soon as possible, rinse in tap water."

"Keep magnetic media wet so that contaminants will not dry onto the tape or diskettes." And if magnetic tapes can't be, "...salvaged for more than a week, immerse them to prevent mold."



## Did You Know?

*Contents restoration specialists save the insurance industry millions*

- One contents network estimates that they have already saved almost \$6 million in just over 1000 claims.
- And they calculate that they have restored over 45 tons of "soft contents" that no one thought could be saved.
- Contents processors consistently demonstrate they can restore 85% of the soft contents that insurance companies have simply written off in the past—even when it has been damaged by smoke, water and raw sewage!



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cleaning for all  
types of contents:  
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art work, fine fabrics,  
rugs, wood furniture,  
documents, books,  
photos, and more!

## Coming Up In the Next Issues of Contents Solutions



**THE FRAGILITY FACTOR**  
New Restoration Techniques  
for the Most Delicate Items



**THE ANTIQUE STATE OF MIND**  
Restored As Good As Old!



**THE ORIENTAL CONNECTION**  
Restored From Smoke and  
Fire Damage

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