EVIDENCE MASTER

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EVIDENCE STORAGE v. PRESERVATION

The evolution of investigative techniques, technologies and methodologies are being advanced due to the scrutiny of the courts, and the subsequent ruling(s). This statement immediately triggers thoughts of *Daubert*, but that scrutiny can (and does) include physical evidence and spoliation issues, up to and including being denied admissibility in the courtroom. This ruling can be invoked as a result of any damage or alteration that may occur to the evidence. The most valuable asset of any fault/failure type investigation is properly preserved physical evidence, whether positive or negative (Photo 1). Courts of jurisdictions have applied different definitions to the term spoliation. The term broadly refers to the intentional, reckless, or negligent destruction, loss, material alteration or obstruction of evidence that is or maybe relevant to litigation.

Photo 1

The loss (inadmissibility) of strategic evidence required for trial may prevent a party from adequately proving or defending a claim. The destruction of evidence required for trial also violates the spirit of discovery and generally undermines the claim of the *spoliator* of objectivity. For these reasons, most courts discipline spoliators of evidence in a strict and unforgiving manner.

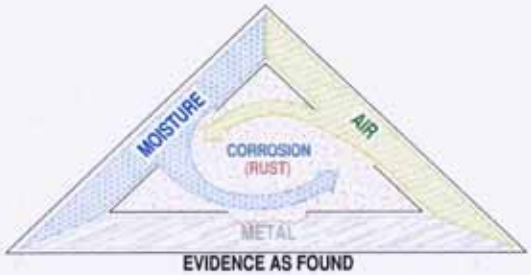


Figure 1

Physical evidence from any incident has usually been exposed to some form of a hostile atmosphere. The actual incident most probably included forceful acts that altered the original condition of the artifact. Prior to an inspection by a qualified expert, items of valuable physical evidence may be ripped, burned and/or thrown from the structure from any floor level. Those, or similar acts of violence occur and are out of the control and responsibility of the expert (Figure 1).

These adverse effects form the very pattern(s) from which the investigative process is begun. Patterns which must be properly preserved for the scrutiny or objective review or challenge by other potentially interested or involved parties. The proper analysis and interpretation of those pattern(s) are the basis upon which theories are formed, tested and relied upon for findings, conclusions and/or opinions.

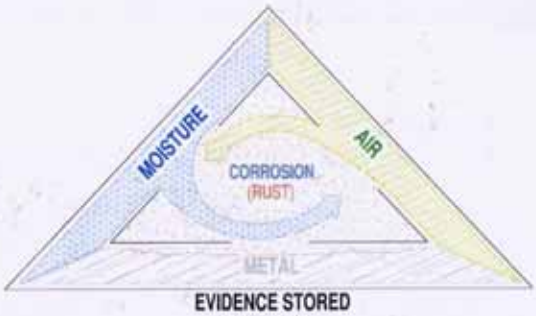
Photo 2

Where then does the responsibility of care begin? Think first, is it really when the actual evidence is originally discovered? Probably not, because the investigator may not, at that point in time, even know what the specific value of an artifact of physical evidence is, until after the site/scene examination(s) are long past and laboratory inspections are conducted (Photo 2). If the item at the scene is even a potential cause of the event there is a responsibility to preserve. The responsibility to recognize and preserve items of even that potential evidence are clearly outlined in standards and guidelines that are used by objective forensic experts, and that responsibility is enforced by the same *gatekeeper* as in all matters of admissibility of testimony and/or items of valuable physical evidence, the judge of the court of jurisdiction.

The corrosive effect(s) of temperature, moisture, acids, and even air on ferrous and/or non-ferrous metal evidence started at the point in time of exposure of the bare metal. Metals are formed in a process of heating the ore and are instantly in the process of degradation by oxidation (rust). That degradation could be from any source or form, such as, but not limited to, water, blood or any contaminant to which the item(s) may be exposed. Even the body oils and acids produced by the human hand can have destructive effect on objects. These effects are a continuing episode, and all matter is in some phase of decomposition. This corrosive/degrading effect is present in all sorts of evidence can be considered as an alteration.

The proper care and preservation of items of evidence demand the very highest regard; regard that will include the use of the best technology for the inhibition of the corrosive effects of air and moisture, and other elements of degradation.

The act of recognizing, documenting, photographing and collection of that most valuable physical asset of your investigation comes down to the next crucial step, *storage* or **preservation** of the item(s). The difference in *storage* and **preservation** is most simply stated as the level of care given. This level of care cannot overlook the search for, and use, of the most technologically advanced methods or products.



EVIDENCE STORED
Figure 2

The most frequently encountered size of physical evidence can be (and customarily is) stored in the common/household quick locking plastic bag. As the size of artifact(s) increase, the simple solution has been the use of common plastic shrink or stretch wrap. As a matter of fact this type bag or wrap has been *the containerization of choice*. This choice has been a matter of convenience, and made historically without regard for the continuing deterioration of the item being ***stored*** (not exactly ***preserved***) (Figure 2). Storing carrots in a moist atmosphere may be acceptable, but to place metal objects in a container that seals the moisture and air together is not.

Photo 3 (Stored)

The flexibility and availability of these plastic products are known universally. Common household use type bags can be obtained from most any retail grocery or hardware store. The valuable physical evidence is then *stored* within an atmosphere that encourages, rather than inhibiting, the growth rate of corrosion/rust (Photo 3). Any moisture sealed in with your item of evidence will continue to attack, and physical changes (alteration) will occur. You don't need a college degree to know what moisture, air and temperature will accomplish. Those changes, when preventable, could be a ground for a serious and objective challenge, and may be sufficient to the denying of admissibility of the artifact in the court rooms.

Stored away and left in the best climate controlled warehouses, the corrosion and rust increases until the next presentation to other interested parties. They will be the first to scrutinize and inspect item(s) of evidence as a basis of formalization of their analysis, theory, opinion and/or conclusions.

With the increased rusting and deterioration of the pattern type evidence, that expert is then forced to rely on the next best evidence, the photographs taken by you, the adversary type group. The report of that objective examiner will most probably have comments as to the material change (alteration) of the item(s). All objective testifying experts most probably agree that the preferred review of a file should include inspection of the physical evidence. That expert will probably express a desire to independently evaluate those patterns of incident caused damage. This challenge may seem *far-fetched*, since everybody is using the same plastic bag or shrink wrap.

Private industry does not accept the effects of corrosion/rust on their most valuable asset, even though that product, part or component can be replaced, should it be lost, damaged or destroyed. Their loss is *only* found in the bottom line of profits and loss, after all that product is replaceable. You and your valued client are not afforded any means of replacing your item of evidence. There is no substitution for the presentation of an unspoiled item of direct/physical evidence for the scientific support of your theories, findings and/or conclusion.

Private industry does not take chances with the loss of profits associated with the loss of their valued asset. Through research and development, products are, and have been available to inhibit the corrosive effect(s) of the properties of the atmosphere to their product. This same technology is available for the preservation of articles of evidence.

Figure 3

The product is more expensive than household storage containers, but cost effective, especially considering the other outcome, a successful claim of spoliation of evidence. This product has been tested by independent laboratories and found to be effective in the inhibiting of corrosion/rust. The preservation of our own (and other nations) military arms is trusted to this product and has a proven track record. The use of the product that includes a vapor phase corrosion inhibitor (vpci), mitigates the continuing damage by the natural rusting/corrosion process and, it does not alter or add to the chemical make-up of the item being preserved (Figure 3). Care must be exercised in choosing which corrosion inhibiting wrap is used, as some may contain undesirable additives that could be misinterpreted under the scrutiny of microscopic examinations. The vapor phase is a continuing preserving action, and after the item is removed from the wrapping and exposed to ambient atmosphere, the entire vapor (gas) dissipates, leaving no residue on the preserved item. This benefit specifically targets the avoidance of claims of spoliation or alteration (Photo 4).

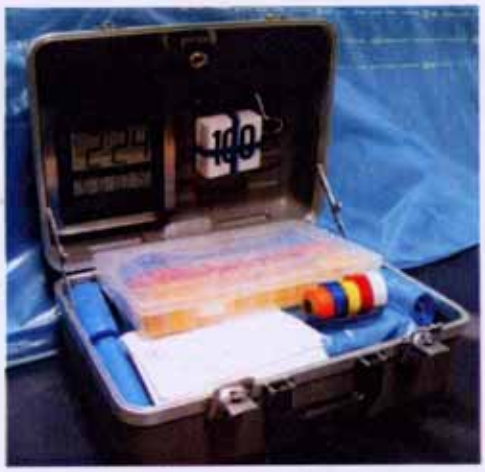
The flexible type packaging, in the forms of bag(s) and wrap(s), both in plastic and other forms are available and is the *standard-of-care* that **should** be given to valuable items of physical evidence by the objective/professional preserver of evidence in forensic endeavors. The item(s) of evidence will be preserved for future presentations and/or inspections, tests or testimony with the least amount of change caused by the atmospheric conditions.

The gain of this better (state of the art) type technology is manifest as a good faith effort to more fully preserve evidence in the *most-near* post incident condition as possible. Allowing items of evidence to be exposed to a lesser degree of care could cause the value of the item to be compromised to the point of being ruled as inadmissible. The corrosion inhibiting wrap is the technological answer to an advanced method of preserving your (and your clients) most valuable asset, physical evidence. Those vapors defend the object, forming a thin molecular protective barrier. This measure prevents the atmospheric moisture type contamination and damage to the item. As the item continues to be preserved within the protected environment, the vapors deteriorate, but are replenished for an extended period of time. The vapors are truly gaseous and permeate the entire preservation area. This ensures your client that all dimensions (internal or external) areas are protected from alteration and/or degradation.

The vapors do not alter the material properties of the artifact and the thin layer of crystals do not alter the findings of or by the scanning electron microscope (**SEM**), due to the unique formula.

The corrosion preventative vapors dissipate upon exposure to air. The facility where protected items are housed should be climatized to optimize the lifespan of effectiveness of the product used. The use of corrosion inhibitors will allow adversarial groups an equal opportunity to view and analyze each artifact, without additional pattern alteration or damage.

Photo 4 (Preserved)



Ev-KIT.1

QUANITY	CONTENTS	PRODUCT CODE	PRICE
1	molded plastic case (18" x 13" x 8)		$ 165.00
1	molded plastic tray		$ 8.25
1	radio controlled digital day/date/temperature clock		$35.00
50	tamper evident steel ties with twist tool		$11.55
20	yellow sequentially numbered tamper evident plastic ties		$ 1.25
20	red sequentially numbered tamper evident plastic ties		$ 1.25
20	blue sequentially numbered tamper evident plastic ties		$ 1.25
20	lock tite VPCI blue bags (10X12) with evidence tags		$ 60.00
20	lock tite VPCI blue (12 x 18) with evidence tags		$60.00
20	flat VPCI blue bags (18 x 24) with evidence tags		$ 80.00
10	flat VPCI blue bags (24 x 30) with evidence tags		$ 40.00
25	VPCI blue sheathing		$ 25.00
5	gusseted VPCI blue bags (44 x 54 x 90)		$ 90.00
1 each	yellow, orange, blue, red and white adhesive identification tape		$3.50
1 each	black and yellow enamel paint markers		$ 2.50
1	black sharpie		$1.50
1 set	1 100 sequential black/white photograph numbers		$55.00

EVCOR

QUANTITY	PRODUCT	CODE	MIL	PRICING (+Shipping/Handling/Tax)
100 bags	10 X 12 Lock Bag	111	4	$ 3.00 each
500 bags	10 X 12 Lock Bag	111	4	$ 2.50 each
1000 bags	10 X 12 Lock Bag	111	4	$ 2.00 each
100 bags	12 X 18 Lock Bag	112	4	$ 3.00 each
500 bags	12 X 18 Lock Bag	112	4	$ 2.50 each
1000 bags	12 X 18 Lock Bag	112	4	$ 2.00 each
10 bags	18 X 24 Flat Bag	883	4	$ 4.00 each
100 bags	18 X 24 Flat Bag	883	4	$ 3.50 each
500 bags	18 X 24 Flat Bag	883	4	$ 3.00 each
100 bags	24 X 30 Flat Bag	883	4	$ 4.00 each
10 bags	44 X 54 X 96 Gusseted Bags	930	4	$ 18.00 each
20 bags	44 X54 X 90 Gusseted Bags	930	4	$ 330.00 per roll
1 rolls	20 X 100 Sheathing	640	4	$ 175.00 per roll
1 rolls	12 X 250 Sheathing	207	4	$ 240.00 per roll

EVIDENCE MASTER and **CORTEC®,** has prepared a dedicated carry case for the use of organizing your tools for evidence preservation. *Ev-Kit.1* as shown above comes with the most common need items, plus some advanced professional units. As the kit requires replenishing, you will be able to order any variety of our evidence preservation materials.

This inclusion of commonly used evidence bags and/or sheathing is not to be construed to be a complete list of available preservation use packaging materials. Please consult the **CORTEC®** product list/brochure or contact us directly for other products. All **CORTEC®** products are industry tested and ready for your use to better serve your valued client.