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## ANIMAL STAINS & URINE DAMAGE

Dogs and cats may be our best friends, but not necessarily the best friends of our flooring and upholstery. Neglected animal stains have been a problem ever since people and animals bonded together in companionship. This Bulletin is designed to give you a fairly comprehensive overview and do-it-yourself clean up tips. By using these tips, you will minimize the damage to your flooring or upholstery.

**BE FOREWARNED: THIS IS NOT FOR THE WEAK OF STOMACH!** You will learn more about this than you ever wanted to know!

Animal stains can be broken down into 3 categories: urine, feces and vomit. Each poses different challenges and possible solutions.

### **URINE:**

**The science of urine:** When urine is deposited, it has a pH between 5 and 6 (slightly acidic due to Uric Acid). As it dries, it turns into an alkaline salt with a pH between 10 and 12 (strong alkaline). Urine is the only product in nature that changes from an acid state to an alkaline state. This is a drastic chemical change and it can take a toll on your flooring and furnishings. It will etch stone floors and can be absorbed into the stone causing long term degradation, be absorbed into wood floors causing warping and discoloration, cause permanent discoloration and weakening of the fibers in carpets and cause colors to bleed and fiber damage on Oriental rugs and upholstery. Once dried, the alkaline salts go to work. The salts are very hydrophilic (water loving) and absorbs moisture from the air. The more moisture it absorbs, the more of the familiar ammonia based urine odor is released. The odors are more noticeable in the spring and fall, when your HVAC system is not working as hard. In winter the heated space has a very low relative humidity and in summer the air conditioning cooling coils act like a large dehumidifier, pulling the excess moisture out of the air. Urine that has absorbed into the carpet cushion or ticking of upholstery will release the odors every time someone walks or sits on it. It is also why normal cleaning will not remove most of the odors. In fact they may get worse until everything is dry.



This photo below shows the efflorescence of urine when exposed to an ultraviolet light. (This was likely caused by a smaller, female dog. It is more round than oblong and in the center of the room rather than along a wall or by furniture. The stain is larger than what a cat would usually leave.) We have small ultraviolet lights available for sale if you want to check the stains on your own.

**URINE Clean Up:** Attacking a urine deposit quickly will minimize the damage. Immediately absorb as much liquid as possible with white or paper towels. Stand on the towels to compress carpet or upholstery and draw the liquid from below. There are two approaches:

- 1) Treat the area with an enzyme cleaner such as "Nature's Miracle" which is available at pet stores. Absorb into white towels. Repeat. Then rinse the area with water and blot again.
- 2) Treat the area with the standard detergent solution (see below). Absorb this into white towels. Then blot the area with the standard ammonia solution (this will help with immediate color loss. If color loss is not an issue or the area is dry, skip this step.) Again absorb this into towelings. Then blot the area with the standard vinegar solution. (This neutralizes the ammonia.) Rinse the area with water and blot again.

Follow these treatments with a clear disinfectant. Absorb the area with towelings until it is as dry as possible. Place several dry, white cotton towels over the area and weigh down. Allow to dry a minimum of six hours. This allows the residual liquids to be drawn (wick) into the absorbent towels.

**FECES:** Pet feces tend to be easier to deal with than urine. Compact, solid deposits can be easily removed with a plastic bag. The surface should then be cleaned with the standard detergent or enzyme solutions and blotted dry. It should be followed by a disinfectant treatment of the area.

Loose feces should be scraped up as much as possible. Any residual feces should be cleaned up the same as described for fresh urine removal. This should also be followed with an application of disinfectant. Be on the lookout for red staining (See vomit).

#### **VOMIT:**

**The science of vomit:** Vomit contains stomach acids that are very strong and can be damaging to your flooring. Vomit will almost immediately etch stone floors, which requires polishing or honing to remove. It can damage the finish on hardwood floors as well. On carpet, vomit can strip off any stain resistant protection. Many pet foods also contain red dyes in an effort to make the food look “meatier” to the people buying it. Dogs and cats are colorblind and could not tell the difference. These dyes will easily transfer and damage many fibers such as nylon, wool and cotton. Mighty Mac should be able to correct the etching on stone or remove the dyes on fabrics.

**VOMIT cleanup:** Scrape up as much of the vomit as possible, especially red or yellow tinted vomit. Make sure any grass is picked up before heavy duty scraping so you do not cause grass stains. Any residual vomit should be treated the same as fresh urine. Watch for any color change in textiles.

**GENERAL INFORMATION:** Immediate action is key to preventing future problems. Forgotten or never noticed accidents can return to haunt you. A small spot on a carpet would be much larger on the backings or cushion. When cleaned, the larger area may appear and look much worse.



**SEVERE DAMAGE:** Dogs urinate much more frequently than cats. Cat urine is much more concentrated and tends to carry more odors. Urine deposits add up quickly as well. A small dog (10-20 pounds) that is left inside a home while the owner is at work, will expel between 4 to 6 ounces of urine at a time. They will go an average of 5 times in a 9 hour period. That adds up to a gallon *each week*. The photo is of the back (underside) of a wall to wall installation carpet that was removed from a house that had 3 dogs in it. You are seeing a landing from a staircase (lower left), a hall (across the top) and a closet. We had to remove the cushion, treat the damaged plywood subfloor with urine decontaminant and then seal the subfloor. We cleaned both sides of the carpet twice with special urine neutralizing

products before installing new cushion and then reinstalling the carpet. Once reinstalled, we cleaned the carpet a third time. Occasionally the backings of a carpet will delaminate due to the corrosive nature of the urine deposits. When this happens, the carpet must be replaced.

**STANDARD SOLUTIONS:** Test ALL of the solutions first by applying a small amount in an inconspicuous area to determine its effect on the fiber and dyes. Wait thirty minutes to an hour to see if any color changes or other problems may arise.

**Standard white vinegar solution;** one part white vinegar to two parts water.

**Standard ammonia solution;** one tablespoon clear or sudsy, uncolored household ammonia in one cup of water.

**Standard detergent solution;** one teaspoon neutral white or colorless detergent in a cup of lukewarm water. Make sure the detergent is bleach free!