



Mastering Urine

Webinar Notes



Mastering Urine: Destaining & Decontamination

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Our topic is mastering Urine: Destaining and Decontamination.

Urine is one of those funny topics, which we talk about with a kind of interested, obligatory, disgust. You got half the world wishing the problem didn't exist, the other half making good money out of it. However, urine is an important subject. It ruins perceptions of buildings, facilities and homes that are otherwise well kept and maintained.

The idea today is not to simply tell you the best way to destain and decontaminate, but also discuss the composition and physical characteristics of urine and why decontamination is such a challenge. I firmly believe that if you better understand the background, it will help dramatically in successful urine decontamination and staining removal.

A Challenging Scenario



Carpet & Upholstery

- Residential carpets
- Delicate area rugs
- Aged Care facilities
- Childcare



Tiles & Grout

- Washrooms, ablution blocks, rest rooms
- Kennels, catteries, animal accommodation

- **Mal-Odour** – mild to pungent urine odour impacting visitor and resident experience.
- **Staining** – stubborn and sometimes permanent staining on carpets and area rugs.
- **Extensive** – spread and penetration of urine liquid into carpet backing and sub-floor, deep into carpet yarn and absorption into porous hard surfaces.
- **Greasy cholesterol** – build-up in heavily contaminated areas
- **Bacterial contamination** – Breeding ground for fungi and other pathogens.

The Urine Challenge



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A challenging Scenario

The challenging scenario includes both carpet & upholstery, and tiles & grout. Tile and grout applications include washrooms, ablution blocks, etc. The same principles and chemistry apply to kennels, catteries and animal accommodation. The first challenge that most people refer to is the **urine odour**. This can be a mild to pungent urine odour impacting visitors and resident's experiences, in residential homes, aged care homes and in washroom facilities.

Urine staining is the other major complaint. Staining can be apparent on both textiles, fibres, as well as hard surfaces, especially on grout lines.

Further factors worth noting are;

- The extensive spread and penetration of urine liquid on carpet - when urine is excreted from the body onto carpets, the reach of the spill can extend way beyond the apparent size of the spill on the surface.
- Greasy cholesterol – urine contains cholesterol which can build up where pets or animals have excreted urine in one spot for an extended period. This needs to be treated as if it was an oily spot before you begin with the urine decontamination process.
- Bacterial contamination- urine contains bacteria. Predominantly E. coli. We need to ensure that a germ-free surface is left after the treatment.

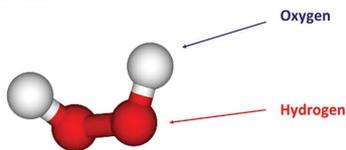
Hydrogen Peroxide

CAS number: 7722-84-1

CAS name: Hydrogen Peroxide

Formula: H₂O₂

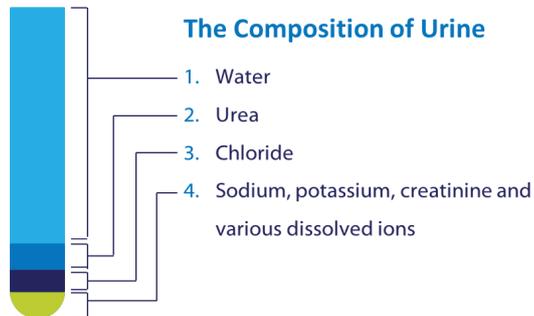
Molecular Structure:



The Urine Challenge



Urine – Composition



- **Urochrome** – the yellow pigment in urine
- **Bacteria** – mostly e-Coli
- **Cholesterol**

Composition of urine

The composition of urine is key to understand. The diagram on the slide is a summary of its composition. Knowing each of the components is not super critical but it is worthy of note that over 90 percent of urine is water. So when you have a urine spot, the longer you leave it, the more water is going to evaporate and the greater the concentration of the components on the carpet or tiles & grout becomes.

Perhaps most important to know is the components which are not normally mentioned. These are **urochrome**, which is the yellow pigment in urine. Secondly, is the **bacteria**, which is mostly E. coli. And lastly, the **cholesterol**, which we discussed in relation to the greasy marks that can occur on severe urine contaminations.

The Urine Challenge



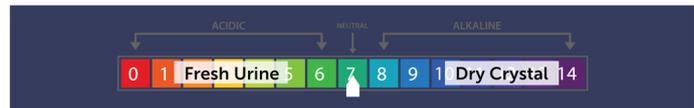
Urine – Complex Biology

The Physical Characteristics of Urine

Freshly excreted urine has an acidic pH of 5-6. As it dries and ages the metabolic process involves bacteria breaking down the uric acid into ammonia and carbon dioxide. This results in the formation of resilient uric crystals which;

- Have a pH of 11 – 12 (similar to ammonia)
- Emit ammonia
- Encapsulate bacteria
- Have a high concentration of urochrome dye

The uric crystal will emit mal-odour whenever it is moist or re-moistened.



The Physical Characteristics of Urine

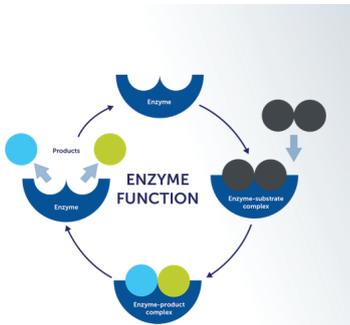
The physical characteristic of urine is what is really important. And this page is really the kicker. If you want to understand the difficulties that surround urine contamination, why so many people get it wrong, why so many public washrooms constantly smell of urine, this page is key.

Freshly excreted urine has a pH of around 5-6, which is moderately acidic. This is demonstrated in a washroom of a facility, which has urinals and marble flooring. The splashes of urine around each urinal cause etching on the marble floor. Marble being a calcite stone, which is sensitive to acids, is etched by the acidic urine. Don't ever be convinced to agree to a request to remove those stains. Because they're actually etch marks. They need to be polished out. This needs to be pointed out and explained to the building manager.

But back to the urine being acidic. It is acidic in its freshly excreted state. As it dries and ages it goes through a metabolic process whereby the action of bacteria changes it to a robust alkaline crystal. **This alkaline crystal has a high pH of 11 to 12, emits ammonia and encapsulates the bacteria.** When there is a concentration of urine contamination, with poor ventilation, this ammonia odour is often very distinct. The encapsulated bacteria, mostly E. coli bacteria, emits its own malodour.

The uric crystal will emit malodour whenever it is moist or re-moistened. At times the urine odour may recede as the uric crystal becomes dry, and it's assumed to be gone. However, all that is required is a humid day and immediately the uric crystal becomes re-moistened and the smell returns.

The last point is the high concentration of the urochrome dye. With most of the moisture evaporating from the liquid urine, the concentration of urochrome can be very high.



The Urine Challenge



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Urine – Complex Biology

Breaking down the Uric Crystal

Bactericides, chlorine bleach and deodorizers have little effect on the tough uric crystal.

The **secret to effective** urine decontamination is to break down the uric crystal with targeted chemistry. This decomposition destroys or releases trapped bacteria and neutralizes the ability to emit ammonia.

- Acids – organic and mineral acids
- Enzymes & Bio-enzymes

Urine stain removal

The removal of residual stains following decontamination require oxidation of the urochrome pigment;

- Hydrogen Peroxide – carpets & hard surfaces
- Chlorine bleach – hard surfaces

Breaking down the uric crystal

Urine is a very complex biology, and the key to it's removal is breaking down the uric crystal. The last slide was a kicker on understanding why we get urine wrong. This page is going to tell you how we can get it right. The secret is to effectively break down the uric crystal.

It's not uncommon for people to approach urine removal, especially in washrooms, with chlorine bleach or disinfectants, such as a lemon disinfectant. These chemistries are unable to break down the robust uric crystal. Once the smell of chlorine or lemon disinfectant dies away, the urine smell is back again because the uric crystal has not been decomposed sufficiently. It is still able to emit ammonia and release the malodour caused by bacteria.

There's only really two ways to eliminate and eradicate the uric crystal. The first option is acidic chemistry, which is the quickest and most effective way of destroying or eliminating the uric crystal. The second chemistry that is very effective is the use of enzymes or bio enzymes. This technology is often preferred in situations where a longer dwell time is possible. It's ideal for application in aged care facilities for instance.

The diagram on the top left provides a summary of how the enzyme function works. The enzyme is a peculiar chemistry whereby the enzyme locks onto the uric crystal, or any organic matter (depending on its target design). Whilst the uric matter is locked into the enzyme site the enzyme itself distorts and breaks the uric crystal into two "products", thus releasing it from the fibre or substrate and making it available for being flushing away. The beauty of it is, that the enzyme, instead of being used up, is now available to process more organic soiling. So, it's a continual process. The enzyme will keep on working until all the organic matter has been used up. It's a very successful technology, especially for odour control.

Removing the urine stain removal largely revolves around the removal of the urochrome pigment. Two chemistries are very effective. Firstly, hydrogen peroxide works very effectively and is favoured for use on textiles, carpets and upholstery. Chlorine detergent is a very effective and inexpensive way of removing urochrome urine dye stains from tiles, grout and stone. Please note that chlorine, must never be used on carpet and upholstery.

Remember

Urine spills spread out extensively under and through the base of the carpet. A urine spill can affect an area 3 or 4 times larger than what appears on the surface.

And urine deposits not reached by the treatment, will continue to emit odour and spoil an otherwise successful job.

Urine Decontamination



The Process

1. Do a thorough scope of the job

- Your nose is a critical tool
- Use a UV light
- Moisture meter
- Remember troublesome urine deposits may be further afield than just the principal spill.
- Is the urine contamination surface only or is it through to the carpet backing, floorboards, etc.
- Know the substrates. Will delicate surfaces be damaged by the urine treatment chemistry? Is it possible the substrate may have been damaged by the urine.

2. Prequalification

- Have that frank conversation with the client
- Never promise stain removal
- Mutually agree that fibre dyes may have been affected and that colour change/loss may occur
- Remember that the urine issue is their problem, not yours – make sure you keep it that way.

The Process

The process is as important as choosing the correct chemistry.

1. Scope out the job – The first thing that must be focused on is a thorough scope of the job. Many people are doing this already, but the importance of recording it in a methodical way is important. This will enable you to communicate professionally with your client before you start and after the job is completed. The first thing to note is that your nose is a critical tool. It smells out urine very effectively. It may be worthwhile closing the windows, and doors to eliminate any cross drafts. A UV light is a very effective tool in accurately locating urine spills. Remembering that the immediate location of the urine spill or corner that the dog or cat has been urinating in, might not be the only urine contaminated location. There are likely other spills around the room or passageway, which may otherwise be missed without the aid of a UV light. A moisture meter is another useful tool.

Remember that the urine spill may extend right through the carpet backing, through to the floorboards/subfloor, depending on the volume of the spill and/or how long it has been left.

An important part of the scope is a knowledge of the affected substrates. Certain fibres, fabrics and dyes, can be damaged by the urine itself. We will discuss this again to provide a bit more insight. Furthermore, some urine decontamination treatments can damage certain substrates. Such as natural stone can be damaged by an acidic treatment.

Fabrics and carpets which have been contaminated over an extended period will also have been wet for a prolonged time causing issues such as delaminating & browning.

2. Pre-qualification – Prequalification is possibly the most important step. It is important to have a frank conversation with your clients about the task at hand to set expectations realistically. They're expecting the world of you. They're expecting you to totally eradicate this troublesome odour and stain that's occurred on their carpets. Remember that their dog, or cat, their darling pet, is the cause of the problem. The problem belongs to the customer. Make sure to keep it that way. Don't make it yours. The moment you promise that you are going to eradicate the smell, and the stain, you've taken ownership of the problem. Discuss the complexities relating to urine odour and staining with the client. Make mention of your expertise and previous successes but never promise a 100% fix before you begin.

How the chemistry works

Activity	Pet & Flood	Deozyme
Uric Crystal dissolution	Organic acid	Bio-enzyme
Bacteria kill	Dual bactericide	Bio-enzyme
Odour removal	ElimoTech	ElimoTech
Replacement scent	Floral scent	Floral scent
Auxiliary	Wetting agent	Wetting agent

Urine Decontamination



The Process

- 3. Removing the uric crystal** Always start with neutralizing and removing the uric crystal.
- Organic Acid - The application of an organic acidic treatment such as **Actichem Pet & Flood** provides the fastest, effective option.
 - Enzymes – The application of an enzyme or bio-enzyme treatment such as **Actichem Deozyme** provides fail-safe decontamination and odour removal where staining is not a key issue.



Woven rugs should be treated with an organic acid or Pet & Flood in a rug bath.
 Tiles and grout are best treated with an acidic detergent to affect an initial, deep clean.
 Natural stone should be treated with Actichem Deozyme (dilute 1:8)

The Process, cont'

3. Removing the Uric Crystal – The decontamination works must always start with neutralising and removing the uric crystal. Note that some of the following steps can occur concurrently, depending on the chemistry used. However, it is important to understand each separate steps so that if something goes wrong, you're able to go back and identify what went wrong and how to remediate it.

Organic acids are extremely effective and the fastest way of neutralising and dissolving the uric crystal. The organic acid does two things, one is that it dissolves the uric crystal, which neutralises its ability to emit ammonia and secondly, in breaking it down it releases the bacteria. Which can then be subjected to a disinfectant or in many instances flushed away by the rinsing action.

Enzymes are the other effective option and can be invaluable where severe odour and extensive urine ingress into porous surfaces or hard-to-reach locations has occurred. Enzymes are also especially effective when longer dwell time is possible. And, where staining isn't the critical aspect of the decontamination.

Two popular example products are **Pet & Flood** and **Deozyme**. A summary of their unique chemistries can be found at the top left-hand side of the slide. The uric crystal dissolution is affected by a blend of organic acid chemistry in Pet & Flood. The dissolution of the crystal with the Deozyme is by means of bio enzymes and enzymes. The beauty of Deozyme and the bio enzyme concept is that it continues to work over an extended period of time. It can be left in the carpet and continue to work, providing a very effective solution for severe contamination including hard to reach areas where the contamination has seeped through to floorboards, into porous substrates, underneath base plates, etc. The bacteria kill, which includes odour causing germs is performed by a combination of two anti-microbial agents in the Pet & Flood. The bio enzymes deactivate these bacteria in the case of Deozyme.

Odour removal is affected by the ElimoTech technology, in both products. Elimotech is an odour neutralising technology. Replacement scent is done by a fresh floral scent.

A note in relation to woven rugs - woven rugs should be treated with an organic acid, such as acetic acid or Pet & Flood in a rug bath to remove the uric crystal. Tiles and grout such as in washrooms are best treated with an acidic detergent to affect an initial deep clean. Natural stone should be treated with Actichem Deozyme, which is safe on acid sensitive surfaces.

Sodium Percarbonate as found in Actichem Oxyboost Plus also provides outstanding urine stain removal on natural stone, tiles, grout, concrete and other resilient surfaces.



The Process

4. Removing the stain Often the stain will be removed during the “uric crystal removal” step. However, if staining is still apparent;

- Hydrogen Peroxide - The oxidising action of Actichem Conquer O2 or Actichem Spotaway U provides the most success on textiles and fibres.
- Chlorine – The oxidising action of Actichem Chlorosan provides the most success on concrete, tiles, natural stone and grout.



Urine Decontamination



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The Process, cont'

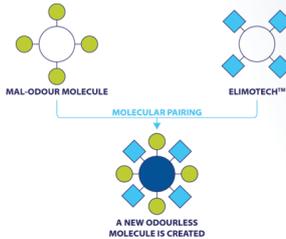
4. Stain Removal - The next part of the process is removing the stain. Many of the stains will have been removed in the previous process of neutralising the uric crystal. However, where staining remains, the use of an oxidising agent is recommended.

Carpets, upholstery and textiles, are most effectively treated with hydrogen peroxide technology. Two example products are Actichem Conquer O2 and Spotaway U, both being based on hydrogen peroxide Chlorinated detergents such as Chlorosan are very effective on hard surfaces such as natural stone, tiles and grout. Note: never use chlorinated solutions on carpets or upholstery.

Sodium percarbonate, as found in Actichem Oxyboost Plus is another very effective destaining product for carpet, textiles and hard surface destaining work. Many contractors already use Oxyboost Plus, on natural stone or synthetic carpets. So, this is a secondary use it for.

How the chemistry works

Odour Control with ElimoTech
 Innovative Chemistry for Total Odour Control
How ElimoTech "molecular-pairing" works
 ElimoTech neutralizes mal-odour molecules using molecular-pairing technology. The natural-based ElimoTech molecules react with mal-odour molecules and form a new odourless molecule.



Urine Decontamination



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The Process

5. Odour Control
 The breakdown of the uric crystal removes the odour source, however trapped mal-odour molecules often need to still be treated.

- Molecular alteration – Advanced odour control technology such as the Actichem ElimoTech neutralizes mal-odours at a molecular level.

6. Replacement Scent
 The area needs to be scented with a replacement scent which "re-sets" the olfactory senses.

Urine decontamination has a strong underlying "sensory" factor – don't ignore this.

The Process, cont'

5. Odour Control – the source of the odour has been removed by the neutralisation of the uric crystal, and bacteria. However, malodour molecules may still be trapped in fibre yarns, in porous substrates or in the atmosphere. Specialist odour neutralisers which modify mal-odours at a molecular level are used to overcome this. The **Elimotech** technology, targets and modifies malodours at a molecular level, changing them to a completely different, non-reversible odourless molecule. This is illustrated in the diagram on the slide. Actichem urine decontamination products which employ the ElimoTech technology are Pet & Flood and Deozyme.

6. A Replacement Scent – Lastly, it's important to provide a replacement scent. Remember that urine removal and decontamination is a very sensory operation, it's a sensory journey. Your clients have found the malodour particularly obnoxious, and we need to remember that, and not ignore it. A replacement scent is critical to reset the olfactory senses. If a room or area has constantly been affected by urine mal odour, a resident's olfactory senses will tell them that there is a urine smell every time they step across the threshold of that room. Even though the malodour may be completely eliminated. By providing a replacement scent, a scent that's completely different, the olfactory sensors are reset, or rebooted and this completes the sensory journey of your client. This is very important, don't ignore it.

How the chemistry works

Activity	Pet & Flood	Deozyme
Uric Crystal dissolution	Organic acid	Bio-enzyme
Bacteria kill	Dual bactericide	Bio-enzyme
Odour removal	ElimoTech	ElimoTech
Replacement scent	Floral scent	Floral scent
Auxiliary	Wetting agent	Wetting agent

The Urine Challenge



Urine Decontamination The Actichem Products



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The Actichem Product Selection

We've mentioned, several products with particular ability at removing the uric crystal or at destaining action. This chart provides an overview of the strengths and limitation of each product.

Deozyme, excels at odour neutralisation, with Pet and Flood a close second. This can be largely attributed to their very effective uric crystal dissolution and anti-microbial action.

The two hydrogen peroxide products, Conquer O2 and the Spotaway U excel at urine stain removal.

On hard surfaces, the Responsibly Green Bathroom Cleaner, which is a bio enzyme product, is especially good for odour control maintenance in bathrooms and washrooms. The T&G Restore being an acidic product is very effective for deep clean operation to remove uric crystal deposits. Chlorosan, is ideal for stain removal on hard surfaces. Remember to always rinse between using T&G Restore and Chlorosan.



The Urine Challenge



Urine Decontamination A step-by-step guide

Light to Moderate Contamination

Once off and low volume urine spills

- Actichem Pet n Flood (dilute up to 1:4)
- Actichem Deozyme (dilute 1:16).

1. Generously spray apply. Sufficient to reach base of the carpet.
2. Agitate and allow 10 minutes dwell time.
3. If Pet n Flood is used, extract with water or Rinse Pro.
4. If Deozyme is used, vacuum only. Do not add rinse water.
5. Stain Removal (if required) – spray apply Conquer O2 and agitate. Blot away or vacuum away excess moisture. Do not rinse. If Deozyme is used, dampen a white cloth with Conquer O2 and blot stain. Do not spray apply.

Hot tip

This special blend provides excellent urine decontamination in one step.

- 700ml Water
- 240ml Actichem **Pet n Flood**
- 60ml Actichem **Perox**

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Methods

The following slides provide a step-by-step guide to urine decontamination, with reference to product solutions and procedures.

Note that when using Deozyme, the area must not be rinsed with fresh water, but rather vacuum only extracted to allow the bio enzymes to continue their work.

We've provided a very helpful tip - When using Pet & Flood, a measured amount of Perox (hydrogen peroxide 50%) can be added to the ready-to-use solution. This enables excellent stain removal during the decontamination process.

Hot tip

This special blend provides excellent urine decontamination in one step.

- 500ml Water
- 440ml Actichem **Pet n Flood**
- 60ml Actichem **Perox**

The Urine Challenge



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Urine Decontamination

A step-by-step guide

Heavy Contamination – Method 1

- Actichem Pet n Flood (dilute up to 1:1)
- Actichem Deozyme (dilute 1:16).

1. Pull back or remove affected carpet. Discard underlay.
2. Liberally apply solution to the front and back of the carpet and sub-floor.
3. Agitate and allow 15 – 30 minutes dwell time.
4. If Pet n Flood is used, extract all treated surfaces with water or Rinse Pro.
5. If Deozyme is used, vacuum only. Do not add rinse water.
6. Stain Removal (if required) – spray apply Conquer O2 and agitate. Blot away or vacuum away excess moisture. Do not rinse. If Deozyme is used, dampen a white cloth with Conquer O2 and blot stain. Do not spray apply.

If a greasy deposit exists on the carpet, there is likely a build-up of cholesterol. You will need to preclean the area with a standard prespray solution.

Hot tip

This special blend provides excellent urine decontamination in one step.

- 500ml Water
- 440ml Actichem **Pet n Flood**
- 60ml Actichem **Perox**

The Urine Challenge



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Urine Decontamination

A step-by-step guide

Heavy Contamination – Method 2

- Actichem Pet n Flood (dilute up to 1:1)
- Actichem Deozyme (dilute 1:16)

1. Soak the affected area copiously with solution. As if to mimic the size of the original urine spill. Solution should reach through the underfelt to the sub-floor.
2. Agitate and allow 30 minutes dwell time.
3. Extract moisture using a “water claw”.
4. If Pet n Flood is used, rinse extract all treated surfaces with water or Rinse Pro.
5. If Deozyme is used, vacuum only. Do not add rinse water.
6. Stain Removal (if required) – spray apply Conquer O2 and agitate. Blot away or vacuum away excess moisture. Do not rinse. If Deozyme is used, dampen a white cloth with Conquer O2 and blot stain. Do not spray apply.

A water claw connected to a powerful, efficient extraction machine must be used. Do not attempt this method using a regular carpet cleaning wand to extract the moisture.

If a greasy deposit exists on the carpet, there is likely a build-up of cholesterol. You will need to preclean the area with a standard prespray solution.

For heavy contamination the flushing action of water is advantageous, even when using Deozyme. However, a post application of Deozyme will provide the ongoing bio-enzyme action.



The Urine Challenge



Urine Decontamination A step-by-step guide

Washrooms – Deep Clean

- Actichem T&G Restore (dilute 1:16)
 - Actichem Forest Fresh (dilute 1:25)
1. Apply T&G Restore solution to the affected floor area.
 2. Agitate and allow 15 minutes dwell time.
 3. Rinse extract or hose down floor drain.
 4. Apply Forest Fresh solution to the affected floor area.
 5. Allow 10 minutes dwell time.
 6. Rinse extract or hose down floor drain.
-
- Actichem Deozyme (dilute 1:8) – when treating natural stone
1. Apply Deozyme solution to the affected floor area.
 2. Agitate and allow 15 minutes dwell time.
 3. Squeegee or vacuum only to remove excess moisture. Do not add rinse water.

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The Urine Challenge



Urine Decontamination A step-by-step guide

Washrooms – Maintenance

- Actichem RG710 Bathroom Cleaner (dilute 1:100)
1. Apply RG710 Bathroom Cleaner to the floor area or/and other washroom surfaces.
 2. Agitate briefly to spread solution
 3. Squeegee or vacuum only to remove excess moisture. Do not add rinse water.

RG710 Bathroom Cleaner is a bio-enzyme cleaner and odour neutralizer. It effectively digests organic matter and neutralizes residual mal-odours.

Safe for use on all washroom surfaces, including natural stone, chrome and soft metals.

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Q&As

Health impacts of enzymes. Can you please address this? As I understand it, enzymes can cause respiratory issues?

Enzymes per se, due to their chemical nature can theoretically cause lung damage. However, the use level and procedures used make this risk very low. Minimizing the amount of which the chemical is aerosolised will limit the exposure. However, I highly recommend wearing some form of respiratory protection whenever spraying or aerosolising any chemicals.

Can Pet & Flood be used for in-house use or is its professional use only? If not, what is best for residential customer use?

Pet & Flood is a product which needs to be rinse extracted, so it's not ideal for DIY use or people without an extraction machine. The Deozyme is an ideal product for DIY use because it does not need to be extracted. For stain removal, I would recommend the Spotaway U or the Conquer O2. Spotaway U is a very economical form of hydrogen peroxide. The Conquer O2 has the advantage of wetting agents, chelates and encapsulation technology and tackles a wider range of stains. The combination of Deozyme and Conquer O2 will pretty much see any homeowner or aged care facility sorted.

Wool safe product should be used on wool. So how do you get around that issue?

Pet & Flood is safe on all wool carpets. However, it hasn't been tested by or certified by the WoolSafe organisation. The Conquer O2 is being reformulated to enable WoolSafe certification. So stand by, for more news on this one.

I use Pet & Flood all the time.

Thanks for another good shout out for Pet and Flood. That's very good. We have many people that love Pet and Flood. It has garnered a huge following over the last few years as many successful urine contamination problems have been resolved with it. Many people add in the hydrogen peroxide as well.

Urine contamination on vinyl and hard surfaces is common. Acids can affect vinyl as do high pH bases (is that correct)? How does that affect approaches to clean and hopefully restore urine affected vinyl?

The safest and most effective method for treating vinyl is with Actichem OxyBoost Plus (Sodium Percarbonate). Add 20g OxyBoost Plus to 1Lt of hot neutral cleaner solution and use within 30min. Apply to the affected area, agitate well and allow at least 15 minutes dwell time. Rinse well with water.

After addressing urine contamination with Pet & Flood cleaner, along with peroxide and an acid rinse, is it feasible to apply a substantial amount of Deozyme as a final step?

Deozyme as a final step will be successful, however it is important that the previous chemistries are rinsed well, so that there is no bactericidal agents left in the carpet which could affect the Deozyme bio-enzymes.

Is it safe to mix Deozyme with Pet & Flood cleaner or have it come into contact with peroxide, for example, post-misting a stain with Conquer O2 after Deozyme treatment?

Deozyme contains bio-enzymes and shouldn't be mixed with any other chemicals. Nor should it be used on a carpet or surface which still contains residues of other chemicals. Especially products which have a biocidal action.

Is it acceptable to combine Deozyme with an Actichem prespray to enhance cleaning efficacy, not solely for addressing urine-related issues?

This could be done, however we have not done any testing on this concept.

In relation to the products discussed in the webinar, are they safe to use together or are there any chemicals which one should avoid using when using these chemicals?

Virtually all of the products mention in this webinar contain either a bactericide or bioenzyme. And therefore should not be mixed with any other chemicals. Except for the Pet & Flood and Perox blend mentioned.

How to remove urine stains on mattress?

The recommendation for mattresses is a 3% hydrogen peroxide solution. For a 1Lt solution, add 30ml Encap Fine Fabric or Performance Plus and 60ml Perox (Hydrogen Peroxide 50) into 910ml water. Alternatively, the Actichem RG615 Mould Remover provides an outstanding solution – despite the name.

What is the best way to deal with urine on painted toilet walls?

The safest and most effective method for treating painted toilet walls is with Actichem OxyBoost Plus (Sodium Percarbonate). Add 20g OxyBoost Plus to 1Lt of hot neutral cleaner solution and use within 30min. Apply to the affected area, agitate well and allow at least 15 minutes dwell time. Rinse well with water. Alternatively, Actichem Chlorosan can be used, however precheck for paint stability.

Is there a specific reason for using a floral scent in pet & flood cleaner and Deozyme over other scents, particularly concerning resetting the olfactory experience associated with urine decontamination? For example, I enjoy the Citrus Orange aroma from D-limonene, which serves as my booster. Yet, various rinse and presprays often have disparate scents that may not blend seamlessly. How can I tackle the issue of combining fragrances, such as incorporating a fruity prespray, an orange solvent, the floral Deozyme, and a fruity rinse, to achieve a more cohesive and pleasant olfactory experience? This includes situations like using a floral-scented Pet & Flood cleaner alongside a fruity Rinse Pro product.

Thanks for your feedback. This sounds like a question for the laboratory team. We'll pass this onto them.

