



Clean and Green: DIY Cleaners and Best Practices

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Overview

- Introduction
- Toxics Use Reduction Institute Laboratory
 - Who are we?
- Let's talk about cleaning! (Small group discussions)
 - Why do we clean? What is green cleaning?
- Do-It-Yourself Activity
 - All-Purpose Cleaner
- How to have a constructive conversation about cleaners at your school
 - Massachusetts laws and regulations on cleaning
- What you can do
 - Know Your Cleaners – Resources and Tips
- Wrap-up Discussion/Questions

Toxics Use Reduction Institute Lab- Who Are We?

- Toxics Use Reduction Act – MA Law 1989
- Lab est. 1993
 - Mission: Focus on cleaning methods and chemistries to evaluate the effectiveness of different cleaners and equipment for a variety of substrates and soils.
 - Industry – Assist/Share Best Practices
 - Janitorial – 3rd Party Testing, Community
 - Other: Household, Disinfection, Research
- Learning Laboratory
 - 18 undergraduate students/3 graduate students
 - Chemistry, Chemical Engineers, Public Health, Business, Clinical Science, Economics, etc...

Ice Breaker!

- Break into groups and mix it up
 - Create groups of teachers, parents, janitorial staff, public health, etc..
 - Each group will get a post it paper
- Take 5-7 minutes to answer :
 - What does it mean to clean something?
 - How do you know when something is clean?
 - What is green cleaning?
 - How do you know it's green cleaning?

Myths: Cleaning ≠ Disinfecting

- You cannot disinfect a dirty surface
 - A surface is not disinfected if debris remains after you clean
- Don't automatically disinfect when you clean
 - Use when necessary
 - Food Prep areas
 - Telephones
 - Door knobs
 - While disinfecting may be necessary on some surfaces for preparing food or on telephones if someone is sick
 - Overuse of antimicrobial products = potential 'super bugs'

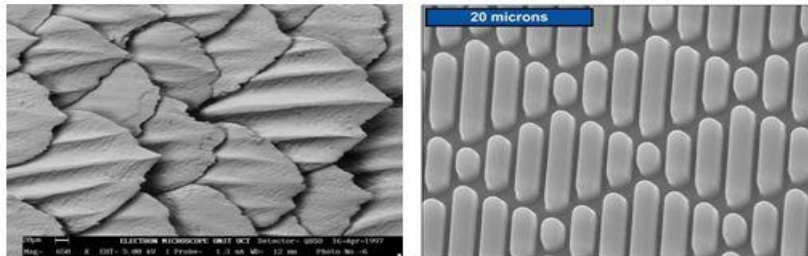


Alternative Antimicrobial Technologies



What is Sharklet and how does it work?

Denticles: Also known as scales, vary enormously in size, shape, structure, and extent, ranging from rigid armour plates in fishes such as shrimpfishes and boxfishes, to microscopic or absent in fishes such as eels and anglerfishes. The morphology of a scale can be used to identify the species of fish it came from.



<http://ocean.si.edu/ocean-photos/biomimicry-shark-denticles>

“Sharklet Technologies is proud to produce products with the Sharklet pattern to help make the world a healthier, environmentally safer and better place. We’re equally honored to offer a biomimetic technology inspired by the shark which will allow humans and microorganisms to coexist in a sustainable and healthy way.”

Myths: A “Clean” Smell ≠ Clean

- Don't confuse fragrance with cleaning performance
 - Some people are chemically sensitive to these kinds of ingredients
 - Fragrances can also be used to mask odors that may be associated with an unsafe ingredient
 - Use unscented products wherever possible



What is Green Cleaning?

“Use of cleaning products that have a reduced impact on human health and the environment, often because they have been re-formulated to eliminate the most potentially toxic ingredients.” – EPA



What is “Greenwashing”?

- Making a product seem like a healthier and safer choice through marketing:
 - Brand Name Examples
 - “Green”, “Enviro-”, “Eco”, “Soy-”, “Clean”, “Na
 - Description Examples
 - Chemical-Free (Water is a chemical)
 - Organic (Petroleum is organic)
 - Color
 - Earth tone color bottles



Tips for Home Cleaning:

- Look for cleaners that:
 - List all ingredients
 - Are biodegradable
 - Are plant-based not petroleum-based
 - pH neutral (not a strong acid or base)
 - Package in pump-spray and not aerosol cans
 - Third party certified
- Steam clean
 - No need for chemicals. Kills bacteria.
- Use microfiber towels
- Only sanitize when necessary (flu, food prep areas, etc.)



Do-It-Yourself (DIY) Cleaners

- Ingredients you already own
 - Cheaper
- Know what is in your products
- Potentially Safer (Human Health/Environment)
 - Borax?
 - Essential oils?



DIY Activity

- Create your own all-purpose cleaner
 - Activity Handout

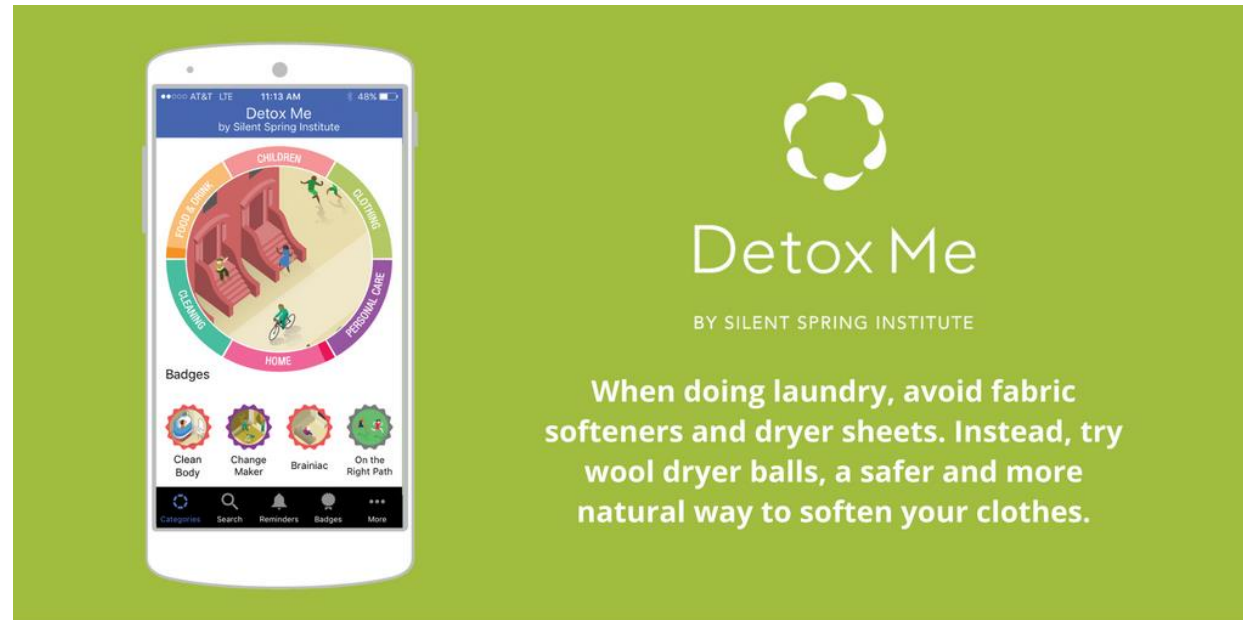
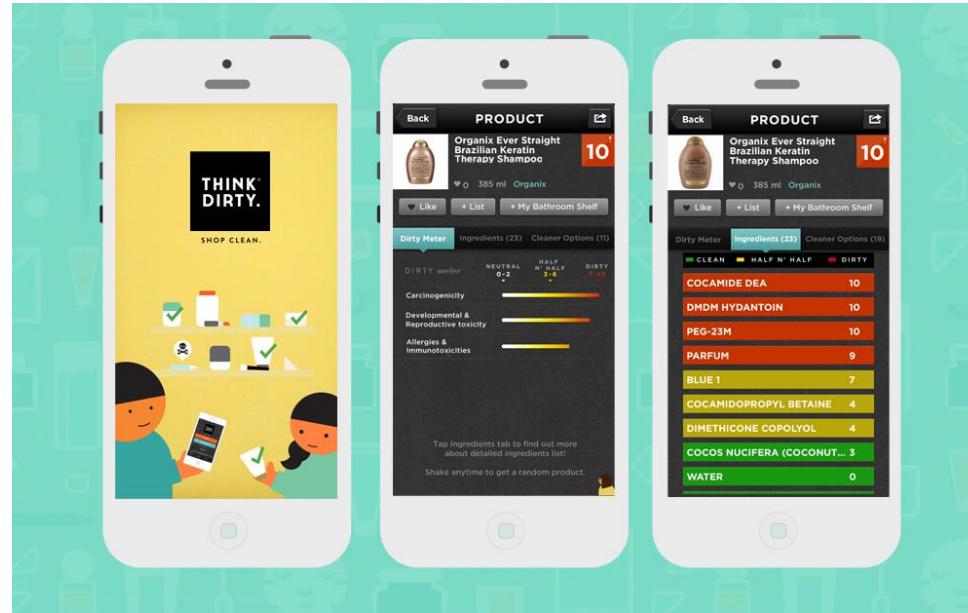
Starting the Conversation with Your School

- Know there may be cleaning standards schools must meet
- Talk with your school about what they are using for cleaners
 - Create a page on the school website about cleaners
- Offer preferred green cleaner options from FAC85 or direct school officials to:
 - [Operations Service Division FAC85: Environmentally Preferable Cleaning Products](#)
 - [FAC85 Fact Sheet](#)
- TURI Assistance
 - Reach out to TURI Lab
 - Dr. Jason Marshall Jason_Marshall@uml.edu
 - Alicia McCarthy Alicia_McCarthy@uml.edu
 - TURI Community Grants



Phone Apps

- Think Dirty
 - Android
 - iPhone
- Detox Me
 - Android
 - iPhone



Other Resources

- TURI Green Cleaning DIY Recipes
 - <http://gcl.cleansolutions.org/index.php>
- TURI.org
- EPA Safer Choice
 - <https://www.epa.gov/saferchoice>

Thank You!

Questions?

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