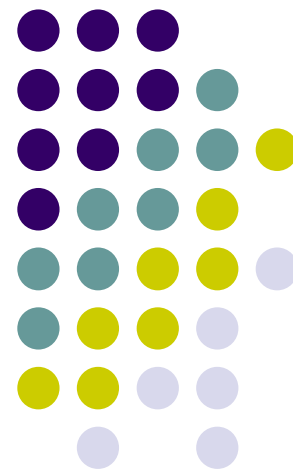
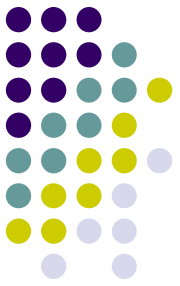


Green Chemistry in the Home

By
Helena Whyte
April 25, 2009



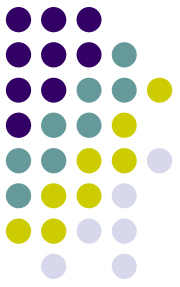
What is “Green”?



- Sustainable
- Kinder and gentler to people and the planet

Read the Label

Danger Warning Caution



- **DANGER**

- Harmful or fatal if swallowed. A teaspoonful may kill an average sized adult.

- **WARNING**

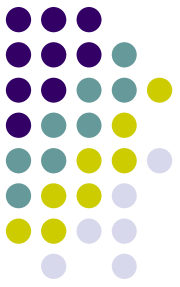
- Harmful if swallowed. An ounce may kill an average sized adult.

- **CAUTION**

- Harmful if swallowed. A pint may kill an average sized adult.

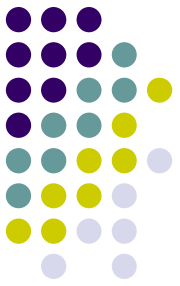
Read the Label

Danger Warning Caution



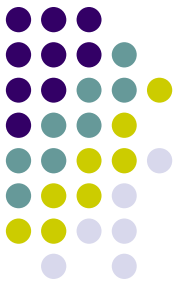
- **Poison:** can injure or kill if absorbed through the skin, injected or inhaled.
- **Toxic:** can cause injury or death if swallowed, inhaled, or absorbed through the skin.
- **Irritant:** causes soreness or swelling of skin, eyes, mucous membranes, or respiratory system.
- **Flammable:** easily catches fire and tends to burn rapidly.
- **Flammable Liquid:** has a flash point below 140°F (100°F for US DOT purposes).
- **Combustible Liquid:** has a flash point from 140°F (100°F for US DOT purposes) to 200°F
- **Corrosive:** a chemical or its vapors that can cause a material or living tissue to be destroyed.

Hazardous Cleaning Products



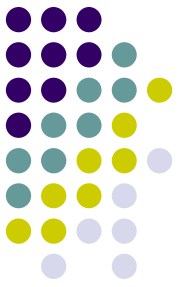
- **Oven Cleaners**
 - May contain lye, strong irritant to lungs and eyes (corrosive)—oven cleaner in a spray can is convenient but dangerous
- **Drain Openers**
 - May contain lye, strong irritant to lungs and eyes (corrosive),
 - Hydrochloric Acid or
 - Trichloroethane
- **Wood and Metal Cleaners and Polishes**
 - May contain petroleum distillates or perchloroethylene, highly flammable

Hazardous Cleaning Products



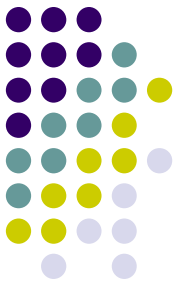
- Air Fresheners
 - May contain formaldehyde or phenol, interfere with ability to smell
 - Formaldehyde may cause nausea, headaches, nosebleeds, dizziness, memory loss
- Toilet Cleaners
 - May contain hydrochloric acid, phosphoric acid, hypochlorite bleach
- Tub, Tile, Shower Cleaners
- Dishwasher Detergents
 - May contain chlorine in a dry concentrated form
 - #1 cause of child poisonings, according to poison control centers

Hazardous Cleaning Products



- General Purpose Cleaner
 - May contain butoxyethanol, lye, or ethanolamine—these are corrosive to eyes and skin and flammable
- Floor Finish Stripper
 - May contain butoxyethanol, lye, ethanolamine, lye, or sodium metasilicate—these are corrosive to eyes and skin and flammable
- Carpet Spot Remover
 - May contain butoxyethanol—poisonous and flammable

If Your Laundry Detergent Gives You A Rash



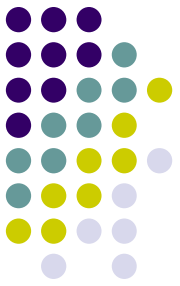
- It may contain
 - Sodium or calcium hypochlorite
 - Linear alkylate sulfonate
 - Sodium tripolyphosphate



Nasty Indoor Pesticides

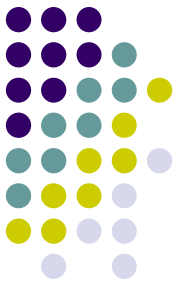
- Ant sprays and baits
- Cockroach sprays and baits
- Flea repellents and shampoo
 - May contain carbaryl, chlordane, dichlorophene
- Bug sprays
- Houseplant insecticides
 - May contain dimpylate (diazinon), chlorinated hydrocarbons, organophosphates—if you can smell it, your lungs are absorbing it
- Moth repellents
- Mouse and rat poisons and baits

Nasty Automotive Products



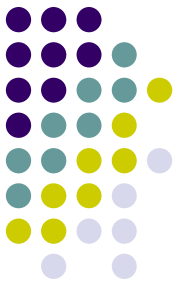
- Motor oil
- Fuel additives
- Air conditioning refrigerants
 - Many are harmful to ozone layer
- Transmission and brake fluid
 - May contain hexanes which cause nerve damage
- Antifreeze
- Tar and bug remover
 - May contain xylene and petroleum distillates

Nasty Workshop/ Painting Supplies



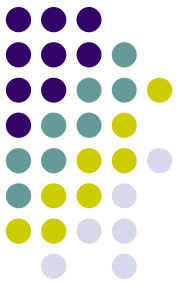
- Adhesives and glues
- Paint strippers and removers
- Stains and finishes
- Paint thinners and turpentine
- Photographic chemicals
- Fixatives and other solvents

Nasty Lawn and Garden Products

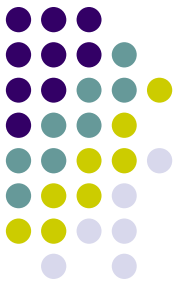


- Herbicides
- Insecticides
- Fungicides/ wood preservatives
- Driveway sealer

Eliminate



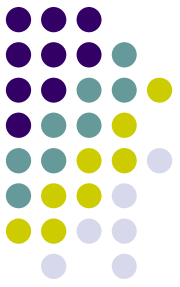
- Phosphates
- Chlorine-containing preservatives
- Hydrochloric acid
- Phosphoric acid
- Nitrotriacetic Acid
- Nitrilotriacetate
- Paradichlorobenzene (old moth crystals)
- Perchloroethylene



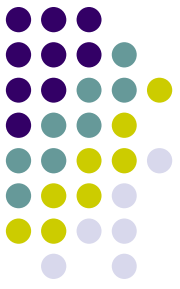
Eliminate

- Phenol
- Tetrachloroethylene
- Methyl bromide
- Organophosphates
- Simazine, an herbicide that disrupts photosynthesis
- Lindane phased out in 2006

Cut Back on the Amount of Product You Use



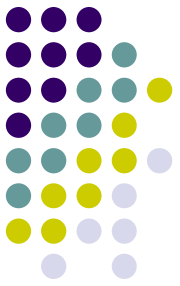
- Cut back on need for floor stripping by keeping abrasive dirt particles from reaching the floor or dilute stripper with water
- Carpet Cleaning Spot Removal
 - Start with clear, cold water and blotting cloths
 - Use carpet spot removal products sparingly
 - Avoid products with hydrofluoric acid or tetrachlorethylene



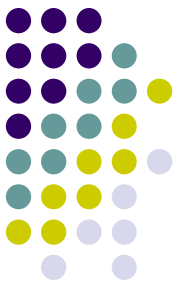
Use Alternative Products

- Less hazardous products can be used for common household chores. For instance occasionally pouring baking soda and vinegar down your drains will keep them from clogging up.
- Vinegar and Salt is an all purpose cleaner.
- Pouring boiling water or vinegar on weeds kills them just as dead as Roundup—consider stunting growth or “chemical mowing” rather than total eradication

Buy



- A small capsule of concentrate (that you add to water and refill old bottle) rather than fresh container—saves on packaging
- Concentrated detergents—saves on packaging and transportation costs



Use Alternative Chemicals

- Use toilet bowl cleaner with citric acid
- Use glyphosate instead of simazine
- Use bifenthrin or pyrethroids instead of lindane
- Use chelated copper ethanolamine instead of copper sulfate (problematic in aquatic settings)



References

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