

retire bad actor chemicals!

**For more information on each bad actor visit
www.toxies.com**



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the **TOXIES**

bad actor bingo: a trivia game

Time: About 45 minutes

Ages: 12 and up

Players:

- Up to 20 individual players or teams
- Game Facilitator: Keeps the trivia questions and score card paper, reads the bad actor trivia questions off in random order and checks off each question that has been read and answered.

In your game kit you will find:

- A score card with 45 Bad Actor Trivia questions
- 20 game boards with a 4 x 4 grid of bad actor chemicals that correspond to the Bad Actor Cards
- 240 place markers

Directions:

- Every player takes a game board and 12 place markers.
- The Game Facilitator keeps the score card and reads the first trivia question.
- Trivia questions should be read in random order.
- The player that shouts “Toxies” and raises his or her hand first gets an opportunity to answer the question.
- If the player answers the question correctly, the player gets to put a marker down on that bad actor square on his or her game board. Only players that answer the question correctly may put a marker down on that bad actor square.
- If the player provides an incorrect answer, the player that shouted “Toxies” second, gets an opportunity to answer the question.
- Whoever makes a horizontal, vertical, or diagonal line across their game board first wins. The yellow square is a free spot!

perchlorate

- This bad actor chemical affects the thyroid, can be found in fireworks, and makes its way into people through contaminated ground water.
- Over 700,000 pounds of this bad actor chemical is used in every space shuttle launch.
- Barstow, California's water supply was cut off for four days in 2010 because of this bad actor chemical contaminating the town's ground water.

dioxin

- This bad actor chemical was the main ingredient in Agent Orange, which was sprayed in Southeast Asia during the Vietnam War.
- In January 2011, high levels of this chemical in animal feed forced the closure of more than 1,000 farms in Germany and the slaughter of at least 8,000 egg-laying chickens.
- This was one of the main chemicals found at Love Canal in Niagara Falls, NY where hundreds of families were evacuated 1978-1980 due to widespread contamination.

triclosan

- Which bad actor chemical is added as an antibacterial/antifungal agent in many soaps and toothpaste?
- Which chemical has been banned in Canada because of its association with allergies, cancer and reproductive harm, but is still added to many personal care products in the U.S.?
- Doctors are worried this bad actor chemical is helping breed a new generation of antibiotic resistant super-bacteria.

halogenated flame retardant

- This bad actor is a class of chemicals and commonly found in furniture foam, electronics, and building materials.
- The foam in products for babies and toddlers often contains this bad actor, which builds up in their bodies and has been linked to toxicity to the brain, thyroid, endocrine and reproductive systems.
- Chlorinated tris, PBDEs, TCEP, and Firemaster 500 are all names for this bad actor.

bpa

- This plastic additive is also a synthetic sex hormone, which has links to diabetes, obesity, predispositions to breast and prostate cancer, and heart disease.
- This chemical can be found in baby bottles, food can linings and receipts.
- By eating fresh foods, you can reduce the levels of this bad actor chemical in your body by as much as 60%.

formaldehyde

- In 2010, hair-straightening product Brazilian Blowout was discovered to contain high concentrations of this bad actor.
- Personal care products, cosmetics, nail polish, household cleaners, and particle board are all common items this bad actor chemical can be found in.
- Workplace exposure to this chemical is associated with spontaneous abortion, abnormal menstrual cycles, and nasal sinus cancer.

lead

- High exposure of this bad actor occurs through substandard housing and toxic-emitting facilities.
- This bad actor has been discovered in many consumer products including children's bounce-houses, toys, jewelry and pottery.
- Exposure to this bad actor in the U.S. costs \$50.9 billion a year in healthcare costs for children.

methyl iodide

- This bad actor chemical is used as a fumigant in strawberry fields, and was recently applied for the first time in California.
- This bad actor is a pesticide and a chemical warfare agent, produced by Arysta LifeScience.
- Before being used in agriculture, this bad actor was primarily used in a laboratory setting to induce cancer.

mercury

- In 2011, Vermont passed a bill creating a recycling program for this bad actor chemical which is found in compact fluorescent light bulbs.
- The Marvin Gaye song, "Mercy Mercy Me" mentions which Toxics winner this year?
- Minnesota was the first state to ban the use of this bad actor in mascara.

phthalates

- This bad actor was a 2010 Toxics winner, and is a member of the "toxic trio," used in plastics to increase flexibility, transparency, and durability.
- This 2010 Toxics winner was discontinued in some products like plastic rubber duckies, but is receiving widespread attention for its role in fragrances, lotions, shampoos, nail polish, and cleaning products.
- This 2010 Toxics winner was featured in a 2010 study conducted by Swedish and American scientists, which showed that children that live in homes with vinyl floors containing this chemical are more likely to have autism.

toluene

- This 2010 Toxics winner caused Fetal Solvent Syndrome more than 30 years ago.
- This bad actor was a 2010 Toxics winner and is a close chemical relative of benzene, known for decades to cause leukemia.
- During the first annual Toxics in 2010, this bad actor carried a bottle of a nail polish to indicate membership in the "Toxic Trio."

perchloroethylene

- This bad actor chemical accounts for the majority of all dry cleaning fluid in the United States.
- This bad actor is primarily used in small mom and pop shops, and according to the US EPA, exposed workers can develop memory loss and other health conditions.
- This bad actor chemical is estimated to have contaminated 1 in 10 public drinking wells in California.

hexavalent chromium

- This 2010 Toxics winner co-starred in the movie *Erin Brockovich* alongside Julia Roberts.
- Hinkley, California was made famous by this chemical's presence in its groundwater, and received 2010 Toxics recognition.
- This 2010 Toxics winner is used in the production of stainless steel, textile dyes, wood preservation, leather tanning, and in anti-corrosion coatings. It made it to California's Prop 65 list in 2008.

perfluorochemicals (PFC)

- When cooking in a non-stick Teflon pan, you may be mixing this 2010 Toxics winner into your dinner.
- This 2010 Toxics winner persists in your body for decades, is used widely as a water, stain and grease repellent for food wrap, carpet, furniture and clothing.
- This 2010 Toxics winner can be found in such popular products as Gore-Tex, Teflon, Stainmaster, and Scotchguard.

n-methyl pyrrolidone (NMP)

- The 2010 Toxics winner is an industrial solvent and makes frequent appearances in paint stripper and graffiti remover.
- This 2010 Toxics winner "showed the most" last year, and causes developmental damage; lowered birth weights, delayed physical development, behavioral deficits.
- This acutely toxic skin irritant was a 2010 Toxics winner and is known to cause reproductive damage like testicular atrophy and has been used for decades as a catalyst in chemical mixtures.

1

Hexavalent
Chromium

**HEXAVALENT
CHROMIUM**

2

Perchlorate

PERCHLORATE

3



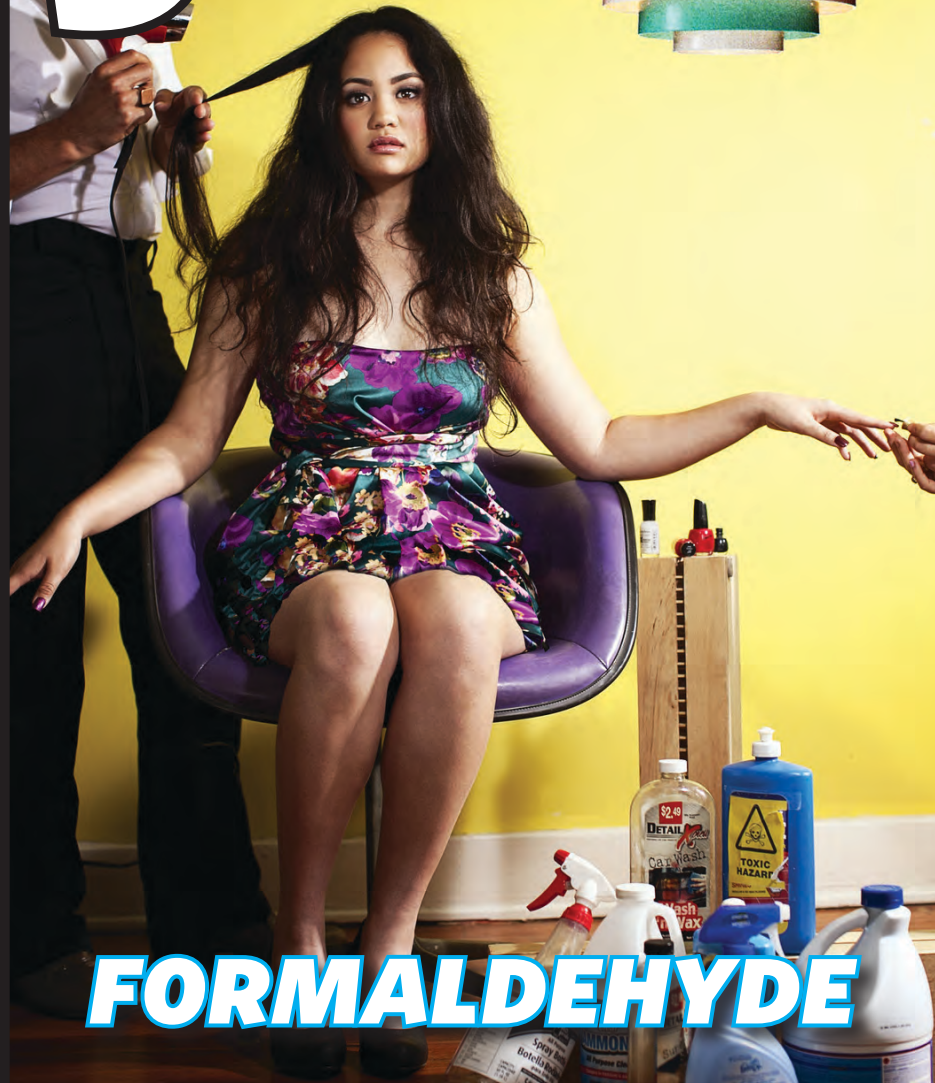
**BISPHENOL-A
(BPA)**

4



**HALOGENATED
FLAME RETARDANTS**

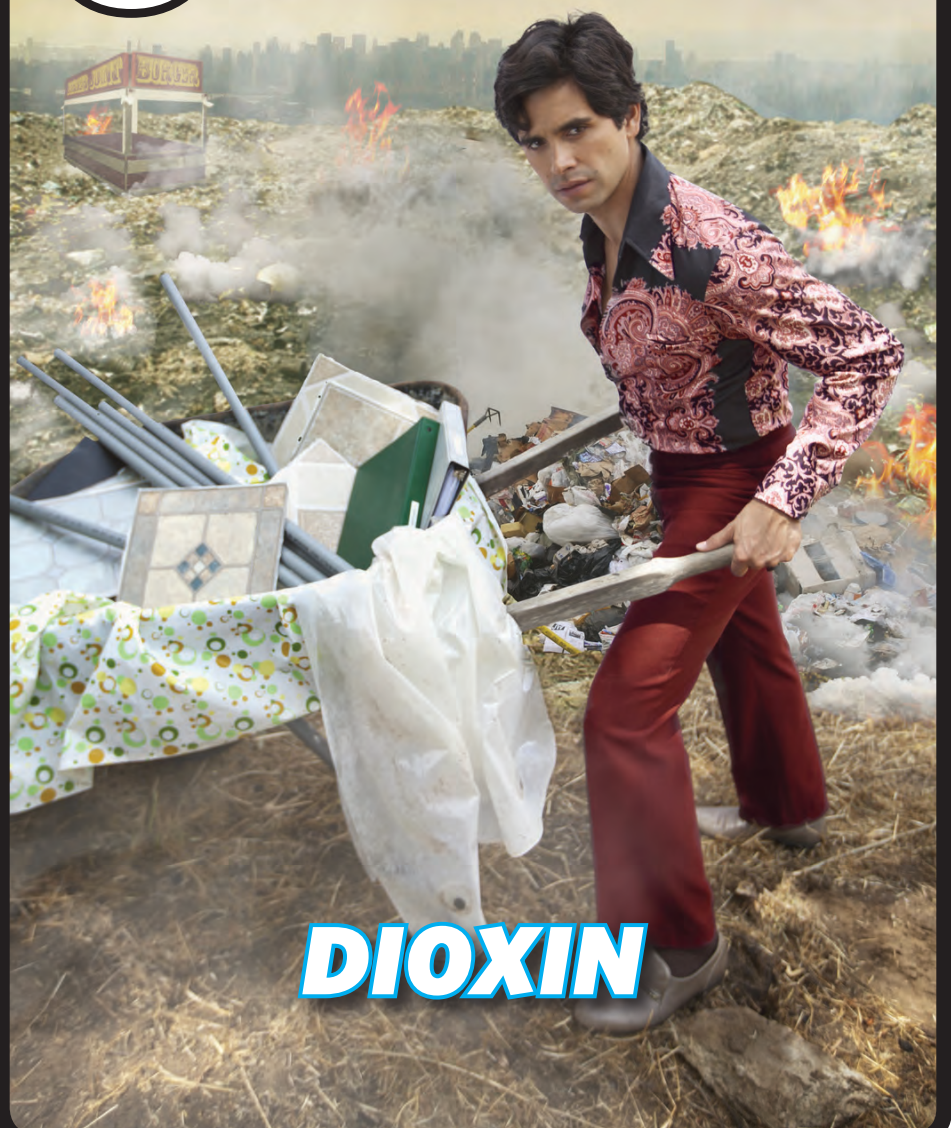
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FORMALDEHYDE



6



DIOXIN

7



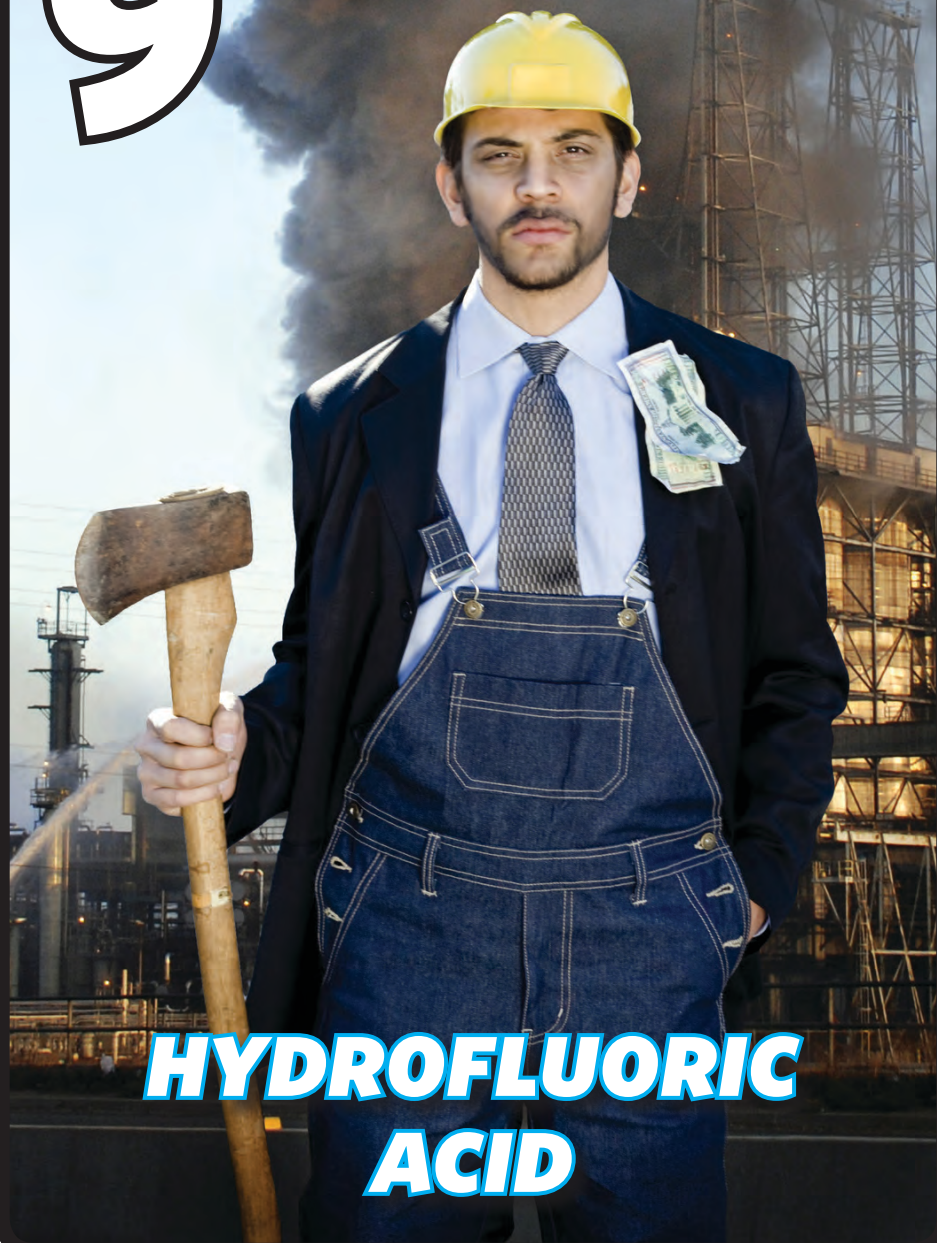
**N-METHYL
PYRROLIDONE**

8



TOLUENE

9



**HYDROFLUORIC
ACID**

10



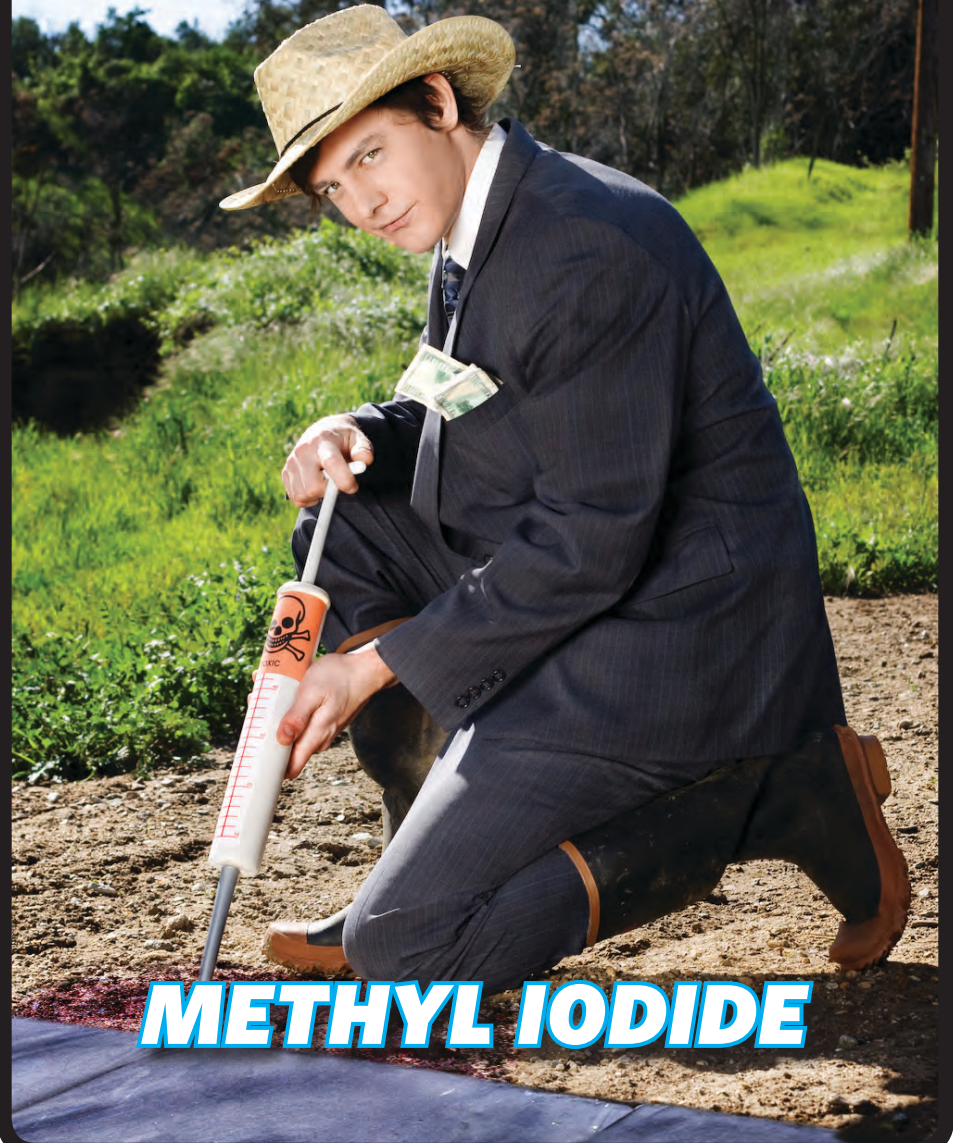
**PERCHLORO-
ETHYLENE**

11



**PERFLUORINATED
COMPOUND**

12



METHYL IODIDE

13



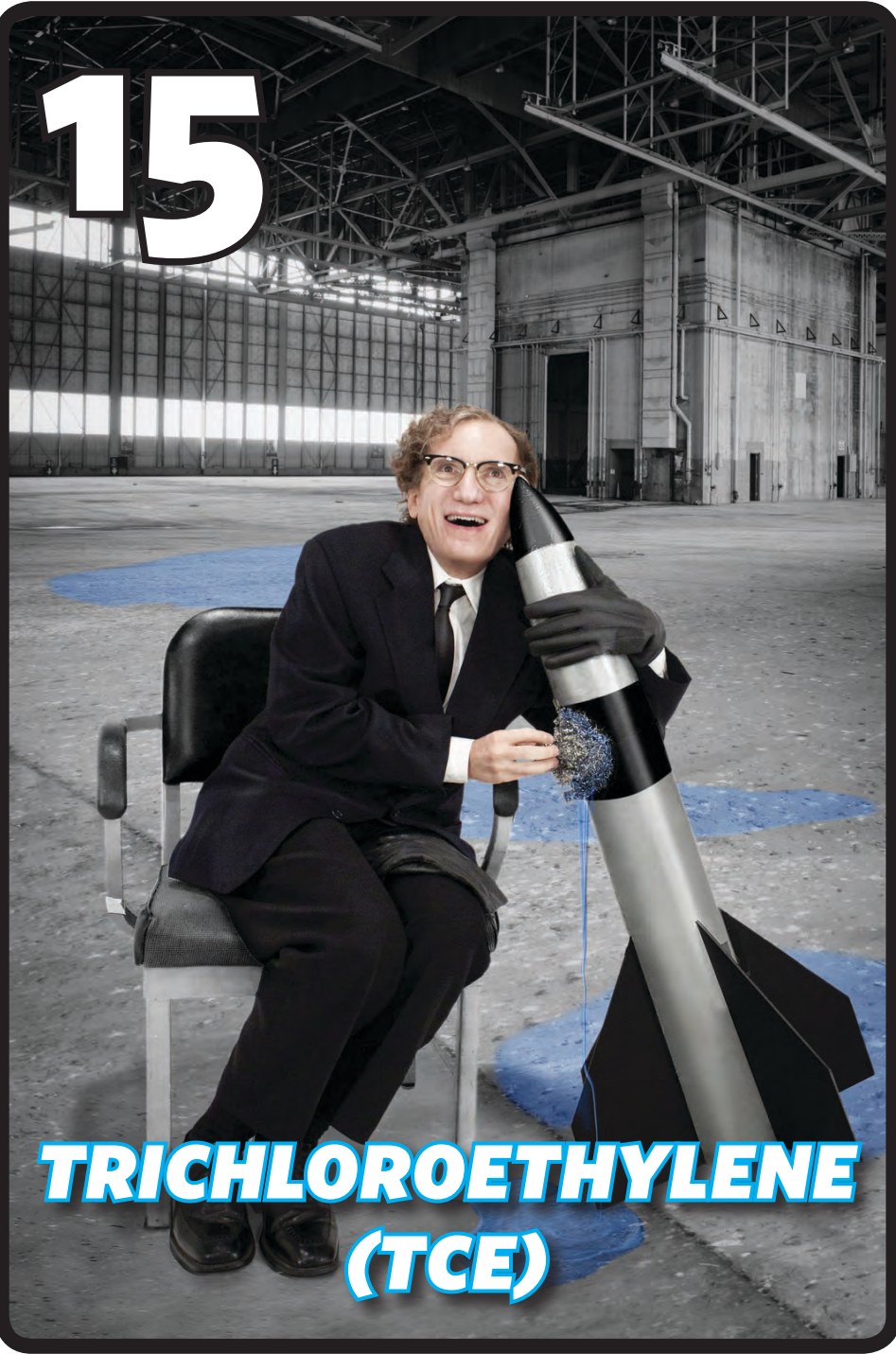
TRICLOSAN

14



**ULTRAFINE
PARTICULATE
MATTER**

15



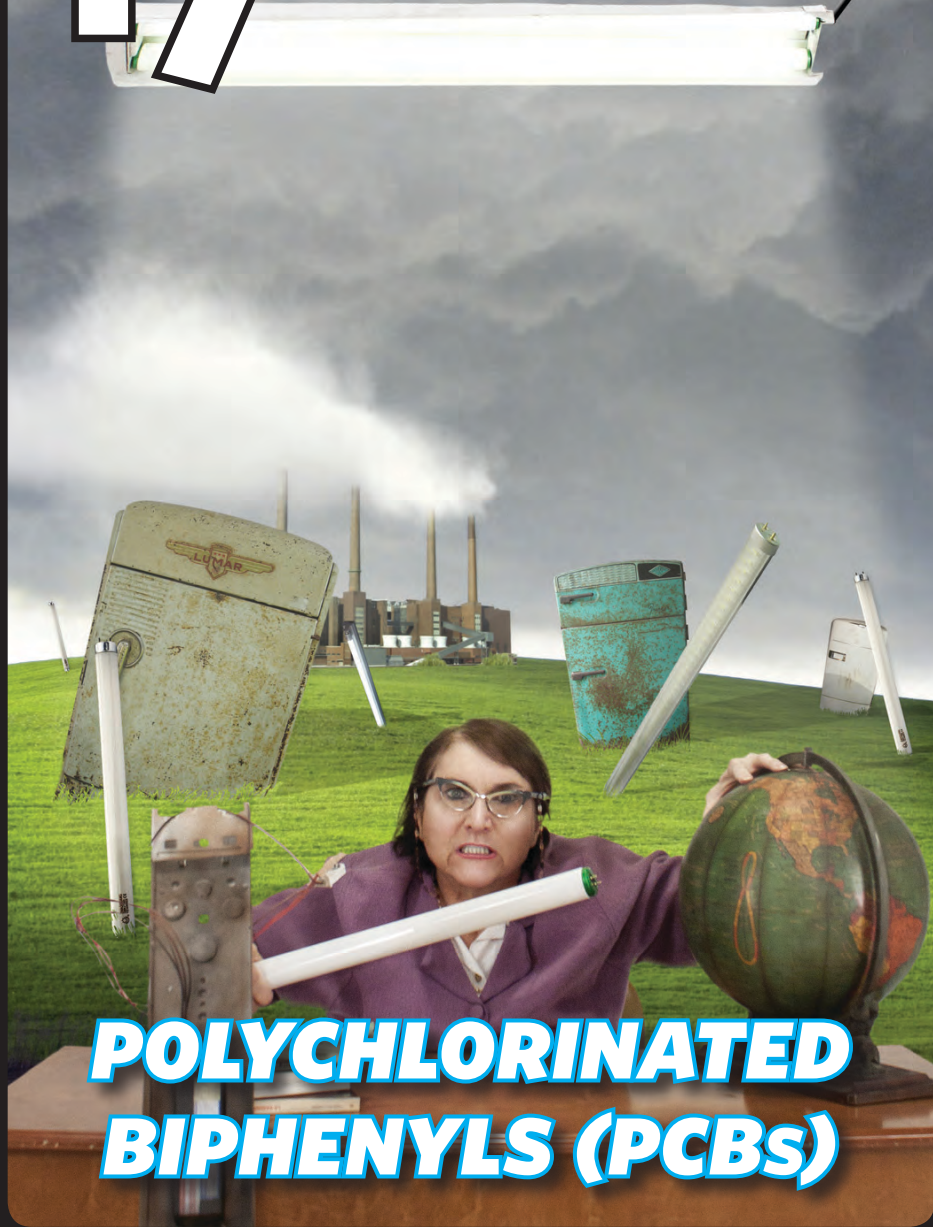
**TRICHLOROETHYLENE
(TCE)**

16



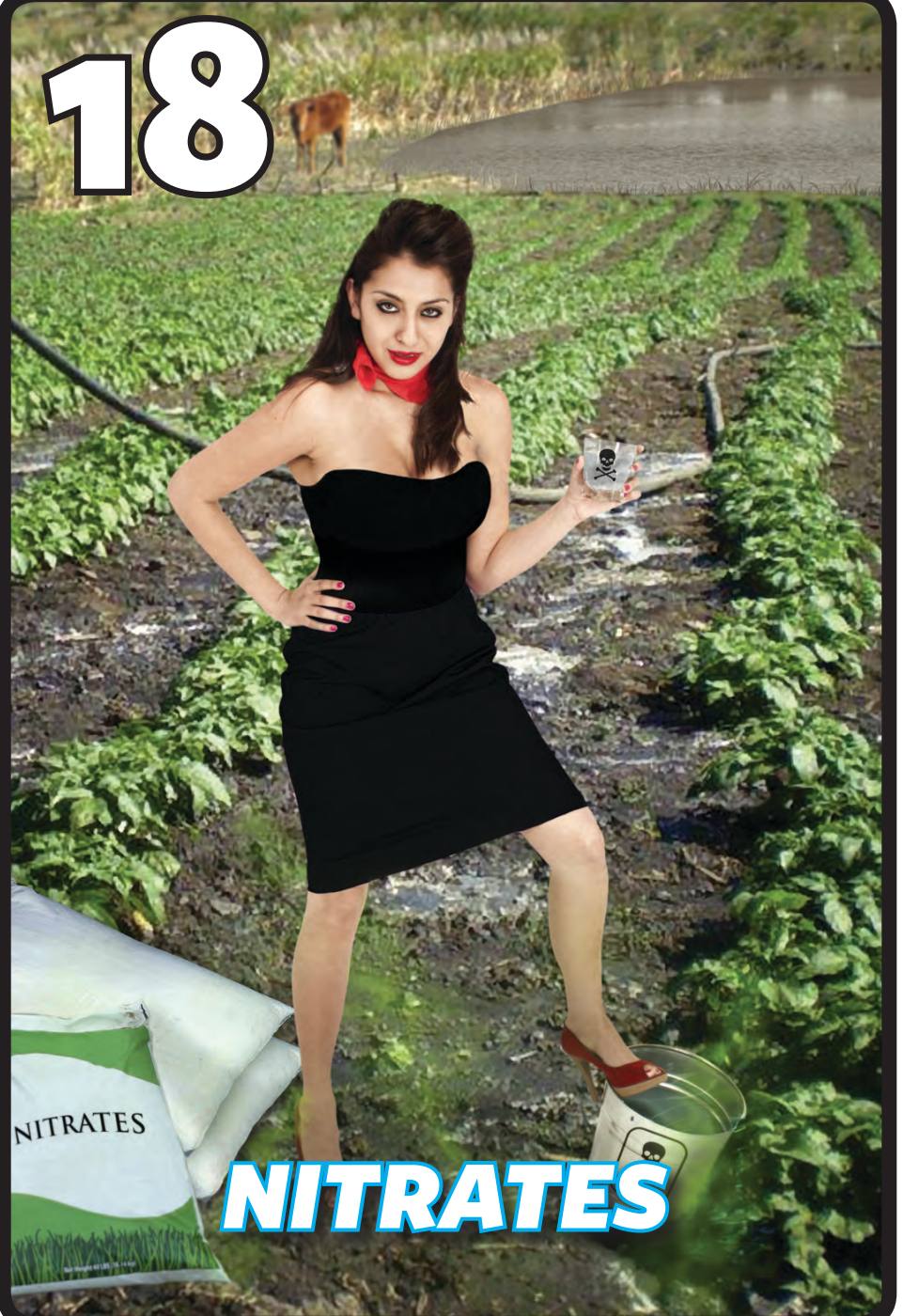
**SODIUM
HYDROXIDE**

17



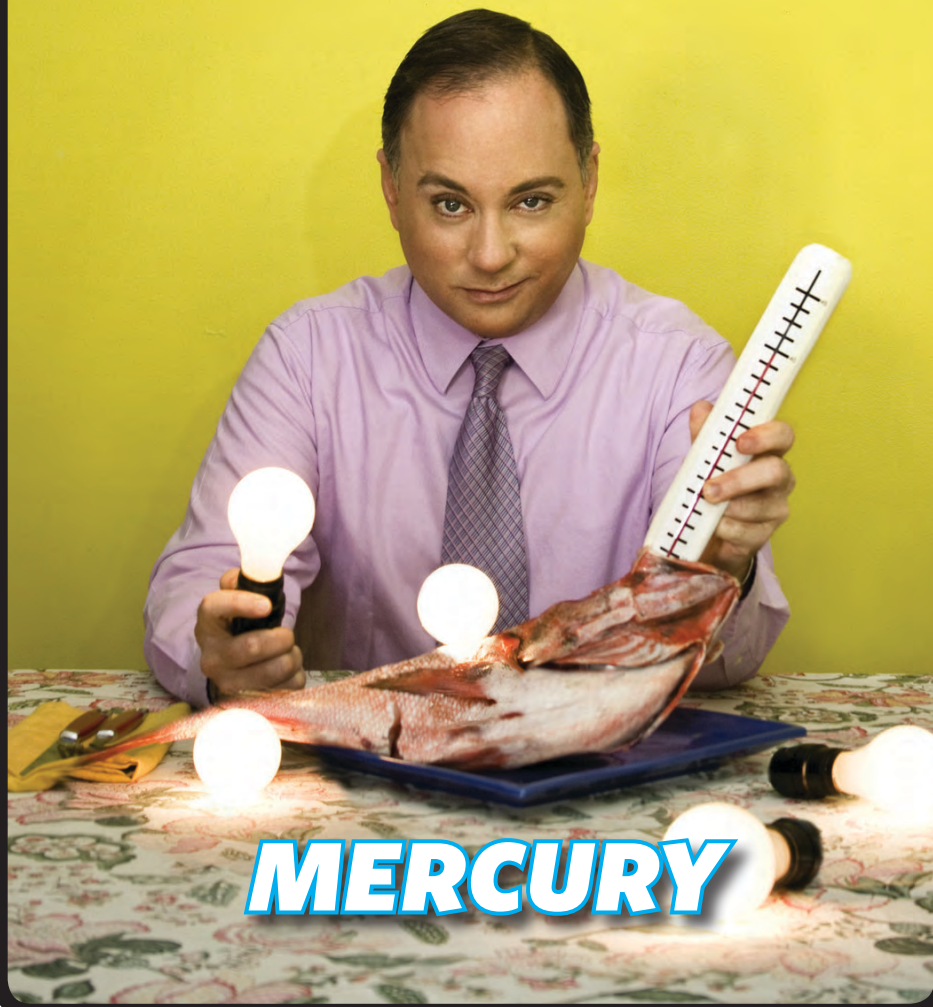
**POLYCHLORINATED
BIPHENYLS (PCBS)**

18



NITRATES

19



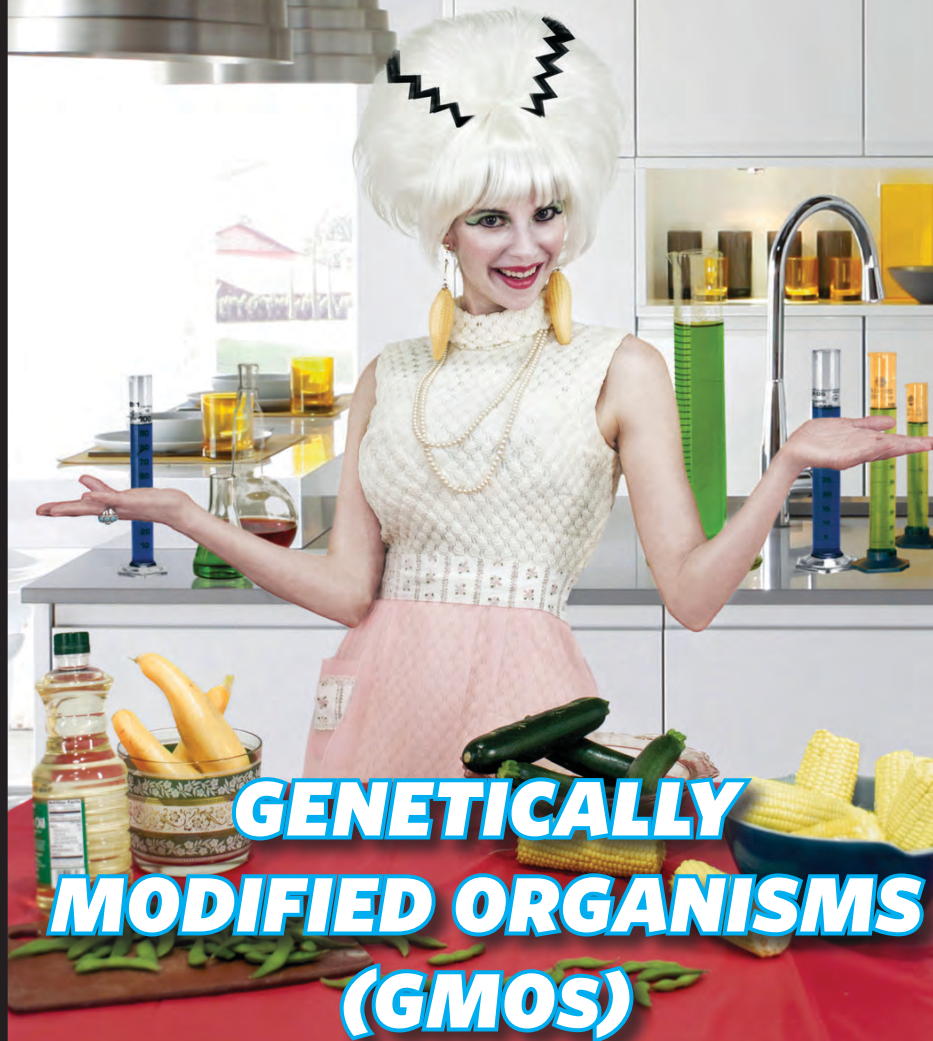
MERCURY

20



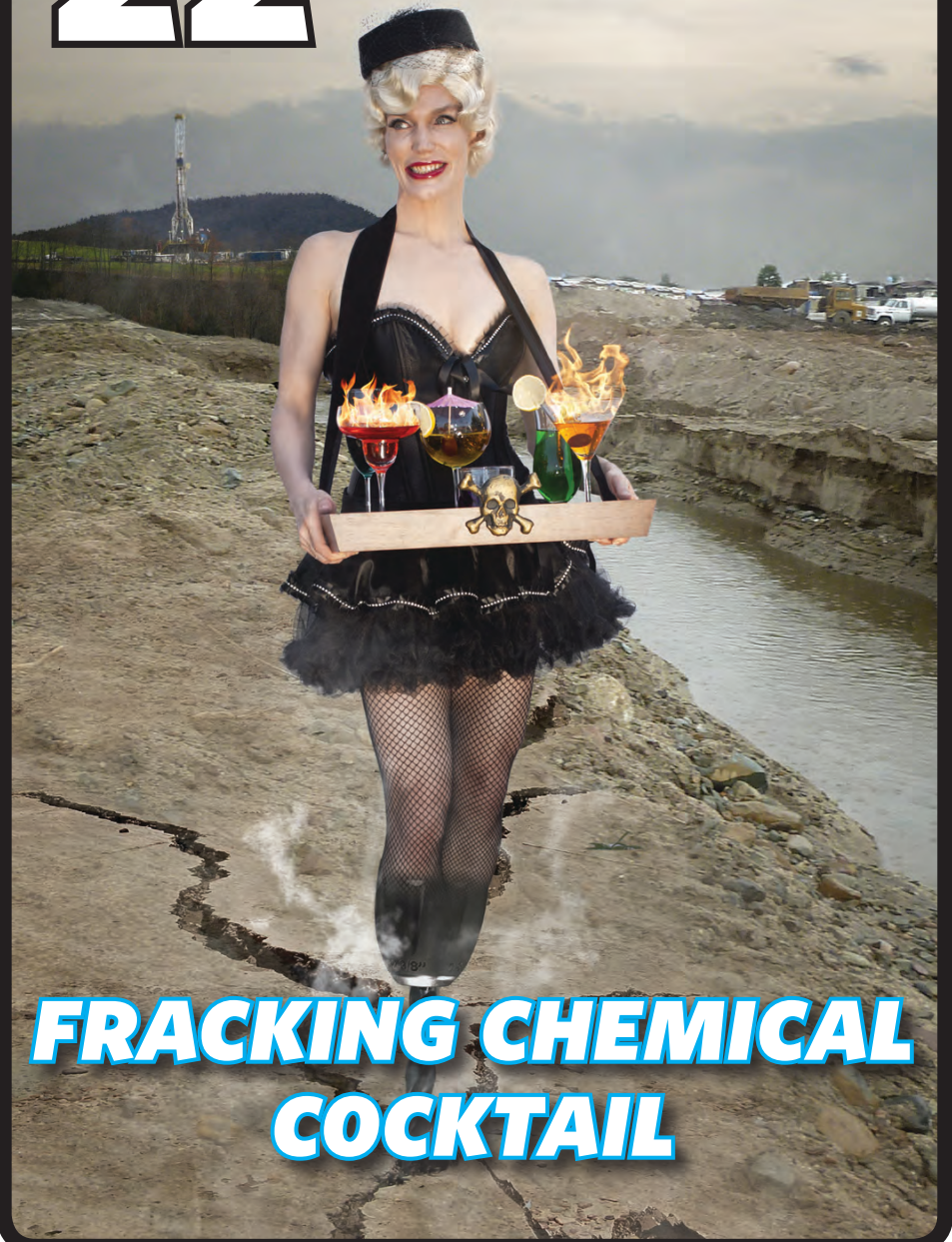
LEAD

21



**GENETICALLY
MODIFIED ORGANISMS
(GMOS)**

22



**FRACKING CHEMICAL
COCKTAIL**

23

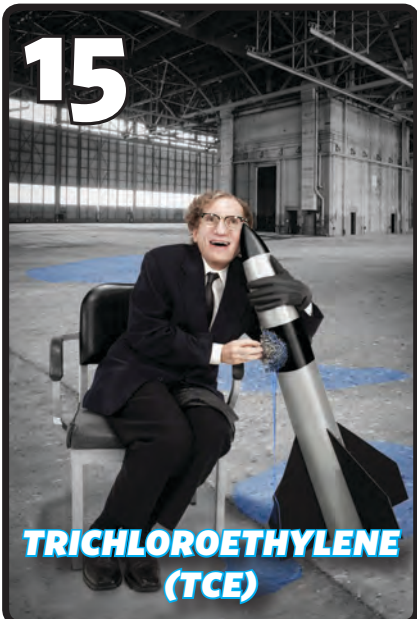


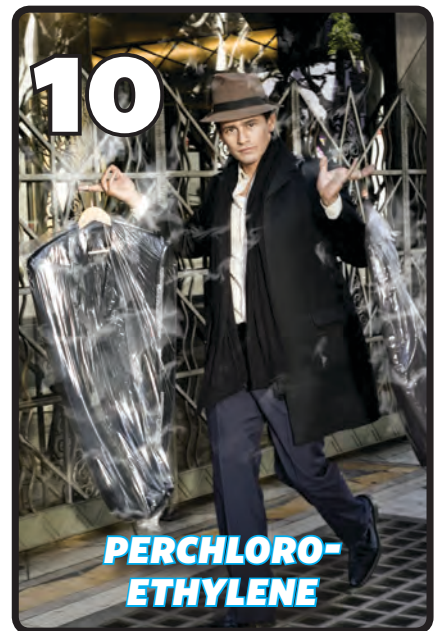
CHLOROPICRIN

24

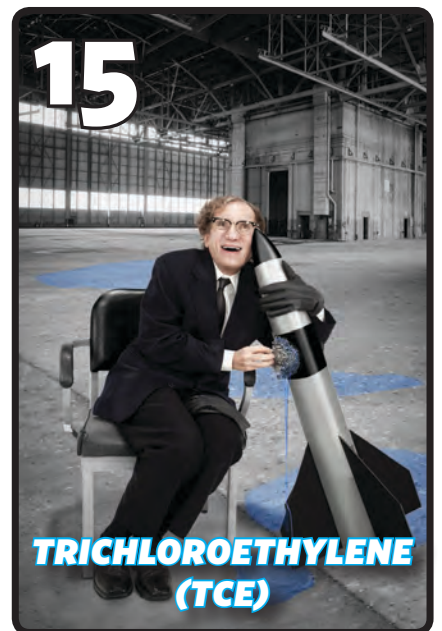


PHTHALATES

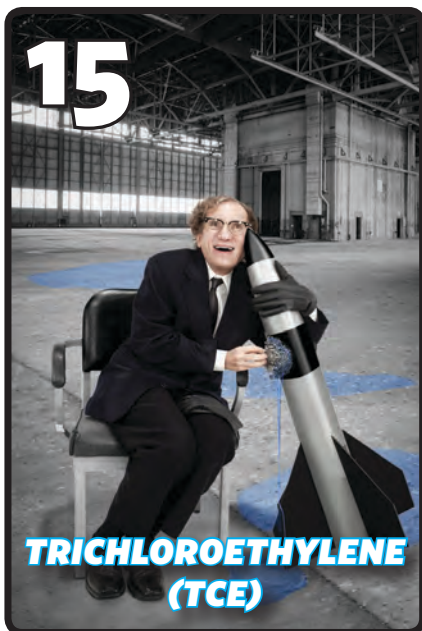






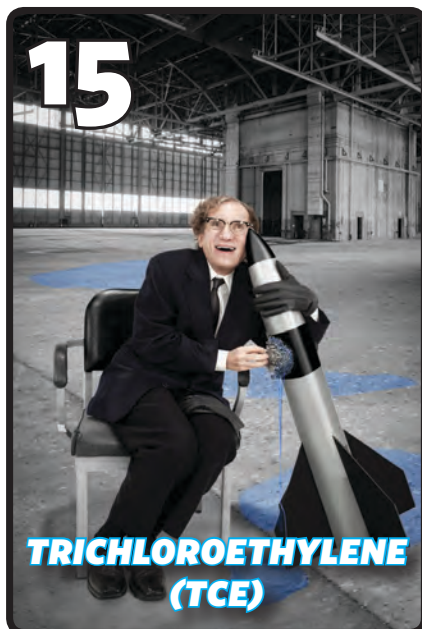
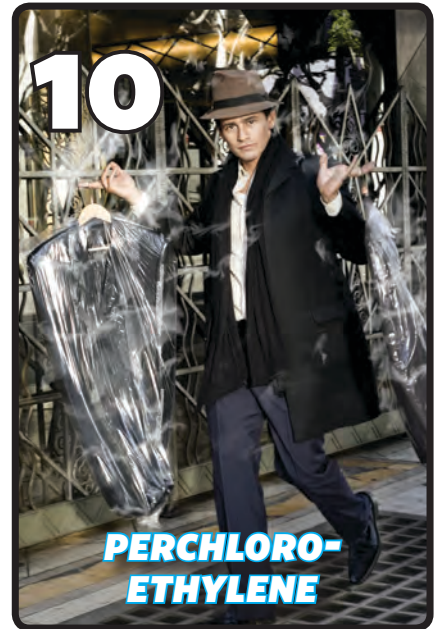




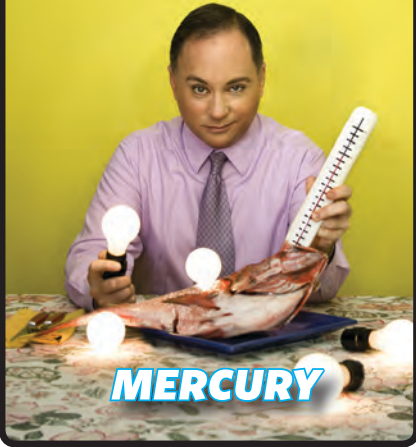








19



MERCURY

18



NITRATES

23



CHLOROPICRIN

16



SODIUM HYDROXIDE

9



HYDROFLUORIC ACID

3



BISPHENOL-A (BPA)

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POLYCHLORINATED BIPHENYLS (PCBs)

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N-METHYL PYRROLIDONE

11



PERFLUORINATED COMPOUND