

# 8 Dangerous Items That Used to Be Allowed in Kids' Chemistry Kits

BY MAGGIE MALACH

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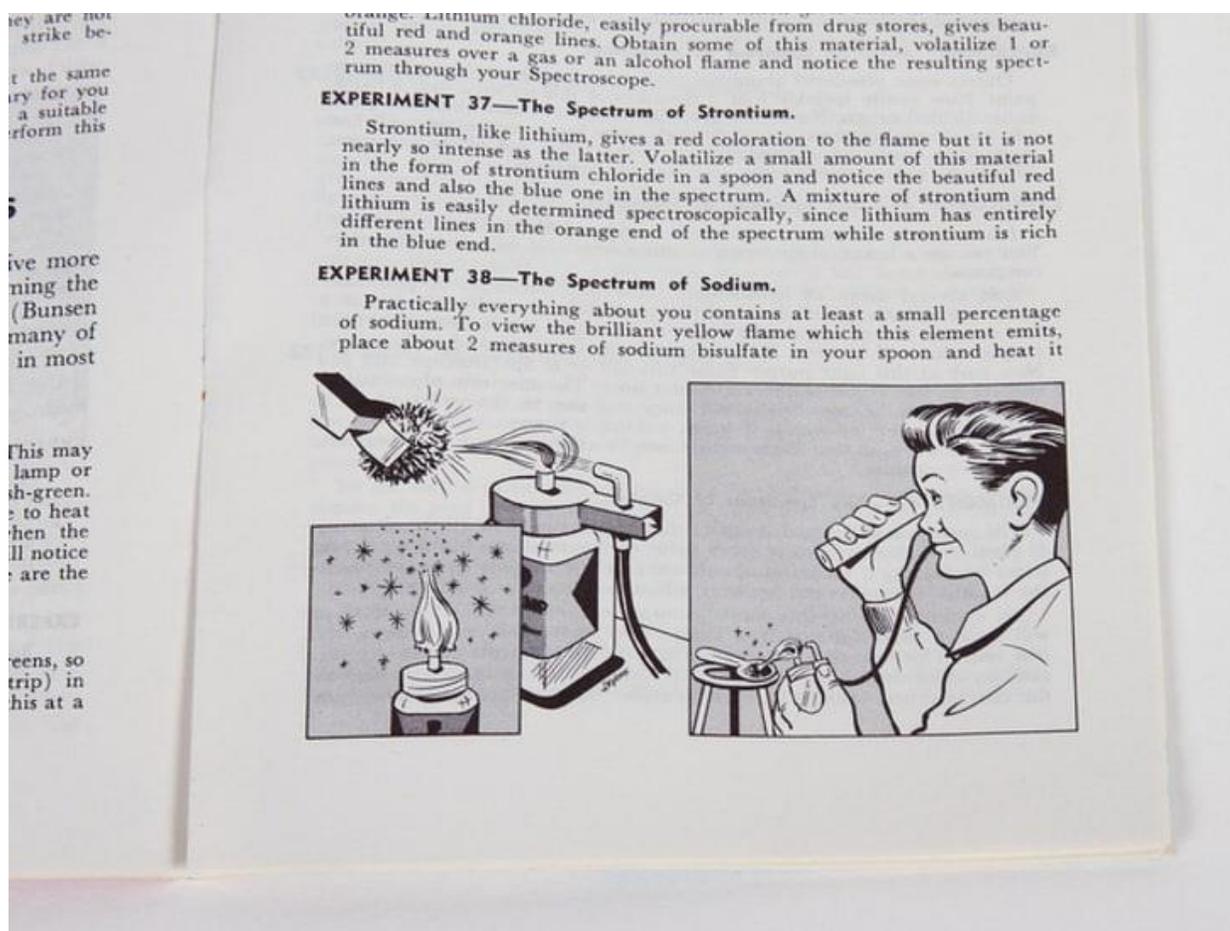
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Although children's chemistry kits were first manufactured in the 18th century, it wasn't until around the time of the Great Depression that they became a popular toy. The marketing was simple: chemistry kits paved the way for kids to have a career in science.

As Rosie Cook of the Chemical Heritage Foundation told *Smithsonian* magazine: "Coming out of the Depression, that was a message that would resonate with a lot of parents who wanted their children to not only have a job that would make them money but to have a career that was stable. And if they could make the world a better place along the way, then even better."

That's all fine and good, but unfortunately, as early versions of these chemistry kits were bolstering a child's career prospects, they were also posing a serious threat to their health. Many sets contained items that would horrify modern consumers, and it wasn't until the Federal Hazardous Substances Act of 1960 that the ingredients in chemistry kits started to become closely regulated. To celebrate National Chemistry Week, we're looking back at a few of the shocking inclusions.

## 1. BLOWTORCH



WINDELL

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There are an infinite number of reasons why a blowtorch in the hands of a child is a bad idea, but early chemistry kits included them so kids could produce flames for their experiments. This illustration from a chemistry manual shows one such example. The budding chemist ignites sodium bisulfate

with blowtorch of the literal variety—powered through a mouth-blown tube. If that's not scary enough, there was an entire kit devoted to glass-blowing, because mom and dad definitely want you to be doing that at home.

## 2. IODINE SOLUTION

Iodine solution was originally included in these kits because it can be used to test for starch, but chemicals can multitask, and this one can also help make methamphetamine. On top of its potential for the unlawful, if more than 2g of pure iodine are ingested, it can be lethal.

## 3. SODIUM FERROCYANIDE



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If the "cyanide" in the name doesn't give it away, this was not a safe chemical. That's not to say it isn't useful—it can create Prussian blue dye—but it's no

longer in chemistry kits because it's slightly toxic in high enough levels ... and it has a scary name.

#### 4. RADIOACTIVE URANIUM ORE



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Uranium dust was often included in "nuclear" and "atomic energy" kits common in the 1950s. It was intended for use with a spintharoscope, a device through which a young chemist could see radioactive disintegration. "By today's standards, they're terribly dangerous but they're fascinating nonetheless," Cook told the BBC.

#### 5. THREE "VERY LOW-LEVEL" RADIOACTIVE SOURCES

Gilbert U-238 Atomic Energy Lab came with radioactive sources that emitted alpha, beta and gamma radiation. Young scientists could watch the

alpha particles travel thanks to the cloud chamber that was also included in the kit, and while it might not have been Marie Curie-levels of exposure, but it certainly could not have been good.

## 6. POTASSIUM NITRATE

Some kits even allowed young scientists to deviate from the curriculum and create smoke bombs. A key ingredient in the mix is potassium nitrate, which is also found in gunpowder, fireworks and some older solid fuel rockets.

## 7. COPPER SULFATE



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Copper sulfate can be used to deposit a thin layer of metallic copper on metal surfaces, which might look nice but comes at a price—the stuff is poisonous if ingested, though immediate vomiting usually helps combat its toxicity.

## **8. CALCIUM HYPOCHLORITE**

Calcium hypochlorite is an oxidizer that can create chlorine gas which can be toxic and can irritate the respiratory system. Not exactly the sort of fresh air you want the kids to be getting during their playtime.

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