

# What's Lurking in Your Soap? The Trouble with Triclosan

*A joint project of Food & Water Watch and Beyond Pesticides*

Who knew that washing your hands could harm your health and the environment? Thanks to the chemical industry, a hazardous antibacterial compound called triclosan is now an ingredient in many household and personal care products such as soaps, cleaners, cosmetics, clothing, and even children's toys. While consumers might think triclosan can protect them from harmful bacteria, it turns out that the use of this dangerous chemical in household products is no more effective than soap and water — and may be doing more harm than good.

To make matters worse, triclosan persists in the environment, mixes with other chemicals to form more toxic substances, contributes to the growing problem of bacterial resistance to antibiotics and causes a range of human and ecological health problems.

## What Is Triclosan?

Chemical company Ciba invented triclosan in the 1960's.<sup>1</sup> In 1972, the company introduced triclosan to the consumer market where it was confined for the most part to health care settings.<sup>2</sup>

But in the last decade, it has been sold to household product manufacturers as an antibacterial agent.<sup>3</sup> These

## Triclocarban

Triclocarban is an antibacterial substance with a structure and function similar to triclosan that also has toxic properties. While triclosan is widespread in a wide array of consumer products, triclocarban has been mostly used in soaps.<sup>31</sup> Triclosan has been more widely studied than triclocarban because it is more easily detected,<sup>32</sup> but both commonly contaminate waterways, are associated with negative health and environmental impacts, have no added consumer health value and thus should be avoided in household products.



manufacturers then create antibacterial products that contain triclosan, which are marketed to consumers as healthier than other products.<sup>4</sup>

Depending on the company that sells the chemical, it also appears in products as Microban®, Irgasan® (DP 300 or PG 60), Biofresh®, Lexol-300, Ster-Zac or Cloxifenolium.<sup>5</sup> Some antibacterial soaps use triclocarban in place of triclosan.<sup>6</sup>

## No Benefits

Claiming that products containing this antibacterial substance promote good health is misleading. While these products do inhibit bacterial growth, experts question whether this is really necessary for everyday household use.<sup>7</sup> In fact, soaps that contain triclosan have not been proven to be more effective in preventing normal household illnesses than ordinary soap and water.<sup>8</sup> In 2005, an FDA advisory panel of experts voted 11 to one that antibacterial soaps were no more effective than regular soap and water in fighting infections.<sup>9</sup>

## Many Risks

Triclosan can create more potent strains of bacteria, increasing antibacterial and antibiotic resistance. So its use in household products may actually contribute to more illnesses. That's because triclosan kills

most — but not all — of the bacteria it encounters. The germs that survive a triclosan onslaught emerge stronger and harder to kill in the future. With the increasing prevalence of triclosan, common bacteria can become more resistant. And if they infect people, treatment with antibiotics could be more difficult.<sup>10</sup>

Because antibacterial resistance is a growing health concern, the American Medical Association in 2000 said that “there is little evidence to support the use of antimicrobials in consumer products” and that given the risk of antimicrobial resistance, “it may be prudent to avoid the use of antimicrobial agents in consumer products.”<sup>11</sup>

Antibacterial resistance is not the only health concern associated with triclosan. The increased use of antibacterials in general has been linked to increased allergies in children.<sup>12</sup> Further studies specific to triclosan have

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shown that it affects reproduction in lab animals, produces toxic chemicals such as dioxin and chloroform when it reacts with other chemicals like the chlorine in water, irritates skin in humans and might even cause cancer.<sup>13</sup> New laboratory studies on rats and frogs show that triclosan can disrupt thyroid hormone, alter development and impair important functions at the cellular level.<sup>14</sup> And a study by British researchers found that triclosan has estrogenic and androgenic hormone properties and exposure could potentially contribute to the development of breast cancer.<sup>15</sup>

Triclosan also poses a threat to the environment. It is toxic to algae,<sup>16</sup> phytoplankton<sup>17</sup> and other aquatic life. This is a major problem, as many products that contain triclosan are now washing down our drains and into our water systems, making triclosan a common contaminant of streams and rivers.<sup>18</sup> Because it is a con-

taminant in sewage sludge that is often spread on land, the chemical is now showing up in earthworms.<sup>19</sup> Triclosan bioaccumulates in these organisms and researchers are concerned that it will accumulate and spread through aquatic and terrestrial food webs.<sup>20</sup>

Today, triclosan has become so common that it has shown up in blood,<sup>21</sup> urine<sup>22</sup> and breast milk<sup>23</sup> of people across the globe. While people who use triclosan products daily have higher levels of the chemical in their bodies, even consumers who do not use triclosan on their skin are exposed to the chemical through food, water and even household dust.<sup>24</sup>

## Is it just the U.S.?

Triclosan is a concern to governments all around the world. Although the United States does not currently restrict triclosan use in cosmetics, both Japan and Canada do.<sup>28</sup> The European Union classifies triclosan as an irritant, dangerous for the environment and very toxic to aquatic organisms,<sup>29</sup> while public authorities in Denmark, Finland and Germany have issued statements advising consumers not to use antibacterial products.<sup>30</sup>

## Lack of Regulation

Both the Environmental Protection Agency (EPA) and Food and Drug Administration (FDA) have some responsibility for regulating the marketing claims companies make about products containing triclosan. But unfortunately, neither agency restricts use of the chemical in consumer products.

When a product containing triclosan is used on inanimate objects, it is regulated by the EPA, which has registered the chemical as a pesticide. If a company markets a product containing triclosan with a health claim such as “kills bacteria,” then EPA must



verify the product’s effectiveness.<sup>25</sup> If a product contains triclosan, but does not make such a claim, then EPA does not review it.

The FDA regulates personal care products containing triclosan when they carry a health claim. FDA requires tests to prove safety and effectiveness of the product. If the product makes a purely cosmetic claim such as “improves skin,” it is considered a cosmetic. FDA does not review or approve the safety and effectiveness of cosmetics.<sup>26</sup>

## What You Can Do

### • Avoid Products That Contain Triclosan

Be on the lookout for triclosan on the ingredient lists of soaps, facial cleansers, exfoliants, acne medicines, toothpaste, cosmetics, deodorant and other personal care products. When looking for triclosan in plastics or fabrics, watch out for products that are marketed as containing Microban or Biofresh.

#### *Some Examples of Products That Contain Triclosan*

<b>Neutrogena</b>	Deep Clean Body Scrub Bar
<b>Lever 2000</b>	Special Moisture Response Bar Soap, Antibacterial
<b>CVS</b>	Antibacterial Hand Soap
<b>Dial</b>	Liquid Soap, Antibacterial Bar Soap
<b>Softsoap</b>	Antibacterial Liquid Hand Soap
<b>Cetaphil</b>	Gentle Antibacterial Cleansing Bar
<b>Clearasil</b>	Daily Face Wash
<b>Clean &amp; Clear</b>	Oil Free Foaming Facial Cleanser
<b>Dawn</b>	Complete Antibacterial Dish Liquid
<b>Ajax</b>	Antibacterial Dish Liquid
<b>Colgate</b>	Total Toothpaste
<b>Right Guard</b>	Sport Deodorant
<b>Old Spice</b>	Red Zone, High Endurance and Classic Deodorants
<b>Vaseline</b>	Intensive Care Antibacterial Hand Lotion

### • Support Companies That Do Not Use Triclosan

**CleanWell**  
**LUSH soaps and cosmetics**

### Nature’s Gate soaps and cosmetics

**Vermont Country soap**

**Naked Soap Works**

**MiEssence products**

**Purell Instant Hand Sanitizer**

**Ivory soaps**

**Paul’s Organic soap**

**Dr. Bronner’s Magic soaps**

**Tom’s of Maine soaps and toothpaste**

**The Natural Dentist**

**Listerine Essential Care**

**Peelu toothpastes**

**Weleda toothpaste**

**Toxic Free Basics**

### • Look for Retailers Who Do Not Sell

#### **Products That Contain Triclosan**

Ikea and The Body Shop both sell only triclosan-free products. Whole Foods has a large selection of products that do not contain triclosan, but make sure you read the label because Whole Foods does not have a specific store policy banning triclosan. Trader Joe’s has a similar practice. Aveda searched its product ingredient database and found no evidence of triclosan, but the company told Food & Water Watch that it has no specific policy regarding triclosan.<sup>27</sup>

### • Get Triclosan Out of Your Community

Encourage your local schools, government agencies and religious institutions to use their buying power to go triclosan-free. Contact us for tips on how to get started.

## Endnotes

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## About Food & Water Watch

Food & Water Watch is a nonprofit consumer organization that works to ensure clean water and safe food in the United States and around the world. We challenge the corporate control and abuse of our food and water resources by empowering people to take action and by transforming the public consciousness about what we eat and drink.

## About Beyond Pesticides

Beyond Pesticides (formerly National Coalition Against the Misuse of Pesticides) works with allies in protecting public health and the environment to lead the transition to a world free of toxic pesticides.



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