Ikea curtains break down pollutants, highlight interest in fabric purifiers

23 February 2019, by Nancy Cohen

Can you use textiles to clean the air? Take sunlight. Add a film coating to fabric. And you get curtains that destroy pollutants and purify the air inside your home. The recipe is being touted by Ikea. Along with bunk beds and bedside tables, some thinkers at Ikea have been looking into technologies that can address indoor air pollution without having to resort to more complex filtering systems or electric power.

"Kind of like a houseplant," said Jesus Diaz in *Fast Company*.

"Air purifiers are so 2018," sniffed Emma Loewe in *mindbodygreen*.

Ikea named their curtain product Gunrid. It is the result of the company's exercise into what they refer to as "air purifying textiles." What interests the team at Ikea behind this is that the technology is not limited to the output of curtains, but can be applied to any textile. The Ikea news announcement did not go into detail on the treatment components but this surface treatment causing the fabric to break down pollutants was said to be mineral-based.

What about at night, and on sunless days? Do the curtains work? No problem; Gunrid can be activated by natural and artificial light. "Photo catalysts are generally only activated by sunlight, but the coating we have developed together with our partners also reacts to indoor light," said Mauricio Affonso. He is product developer, IKEA of Sweden.

According to their lab tests, Ikea said the photo-catalyst coating works and is safe, though work will continue in testing.

Lena Pripp-Kovac, who heads "sustainability" said that Gunrid is the first product to use the technology but gives the company "opportunities for future applications on other textiles."

Affonso said the concept is not unlike photosynthesis in nature. When the fabric gets into contact with light, he said, it breaks down pollutants.

He recalled his growing up days in Brazil, where, at times, the air felt quite heavy. The way it smelled, the way it made him feel "not so good," he realized that the air itself outside was "not so good." That is not to ignore a needed focus on indoor air, which he said can be even worse.

His comment resonates with a discussion on the Centers for Disease Control and Prevention site, with "a growing body of scientific evidence has indicated that the air within homes and other buildings can be more seriously polluted than the outdoor air in even the largest and most industrialized cities. Other research indicates that people spend approximately 90% of their time indoors. Thus, for many people, the risks to health from exposure to indoor air pollution may be greater than risks from outdoor pollution."

What's next? Lab tests were carried out; the next step is "chamber tests and home tests," said the

company, to confirm Gunrid efficiently removes volatile organic compounds in a room. The Gunrid curtain is targeted for availability in IKEA stores next year.

Nonetheless, some interesting questions were raised on sites, such as how do you wash these curtains?

Liz Stinson in *Curbed*: "Over the last few years, Ikea worked with research universities to develop the solution, which can be applied to the surface of any fabric to banish odors and pollutants (just imagine what this means for anyone with pets and a fabric couch). How does it feel? Does it smell? Does it actually work? Those are all questions we'll get to answer when the line of curtains drops next year."

Actually, the idea of developing textiles that address filtration is not new. Researchers have worked on this in the past. In 2016, the Cornell University carried a report about a paper that appeared in *Chemistry of Materials* journal. They infused cotton with a beta-cyclodextrin polymer, which acted as a filtration device in water and air.

More information:
www.ikea.com/us/en/about_ikea/ … -IKEA-GUNRID-curtain

APA citation: Ikea curtains break down pollutants, highlight interest in fabric purifiers (2019, February 23) retrieved 1 July 2022 from https://techxplore.com/news/2019-02-ikea-curtains-pollutants-highlight-fabric.html