

CLEARING THE AIR SUMMIT

Exploring the science & safety of air care products

All About Air Fresheners: Your Questions Answered

Q: What is malodor?

A: Malodor is a term used to describe very unpleasant smells. Lingering malodor can be created from many different sources, such as a stinky wet dog, a frequently used restroom or trash can. Research published by the Monell Chemical Sciences Center, Umea University, and others shows that malodors can cause psychological and physiological stress, including increased feelings of depression, fatigue, and headaches, resulting in emotional, cognitive, social, and even economic harm.

Q: What products are considered air fresheners?

A: Air fresheners include several types of products designed to improve the air in the home, including aerosol sprays, pump sprays, diffusers, gels, candles, and plug-ins. In addition to making surfaces smell better, fabric refresher products also clear fabrics of allergens such as pollen, dander, and dust mites.

Q: How do air fresheners work?

A: Air fresheners are carefully designed and rigorously tested for safety and wellbeing to improve the air quality in our homes. They can be formulated with a variety of odor-eliminating technologies such as buffering systems to alter the pH of odor molecules to a more neutral state; aldehydes, which act like an odor magnet; and odor-trapping technologies, where odor molecules are contained within macromolecules that fall to the ground instead of circulating through the air and going into your nose. Significant research has determined the chemical makeup of common malodors and which air freshener product ingredients can actively treat these smells.

Q: How are air fresheners created?

A: Developing air fresheners is both an art and a science. The artistic piece focuses on combining flower, fruits, plants, and other natural scents. The science focuses on replicating those scents or creating nature-inspired scents in a lab and balancing them with other ingredients that are tested to safely neutralize, trap, and eliminate odors. When air fresheners are dispersed into the air, those with odor-trapping ingredients get rid of malodor on a molecular level, pulling them out of the air and locking them away, so you no longer smell them.

Q: What are common ingredients in air fresheners?

A: Air care products are designed to keep your home healthy, clean, and happy. Air fresheners usually contain water, odor removers, pH neutralizers, fragrance, and preservatives. Products with odor-trapping technology contain cyclodextrin, a molecule derived from starch, that pulls smelly molecules into its center to be eliminated. Preservatives, regulated by the EPA, help maintain the product's high quality,

prevent spoilage, and extend shelf life. pH neutralizers such as citric acid, found in lemons, neutralize odor molecules to be closer to the pH of water.

Q: Why is fragrance in air freshener products?

A: Only one of our five senses - smell - is uniquely linked to memory and emotion; therefore, fragrance can create an enjoyable experience in our homes. Researchers at Brown University Medical School found that fragrances are beneficial by increasing positive emotions, decreasing negative mood, and even reducing stress. When combined with malodor removal technologies, there are many benefits to having fragrance in air fresheners. Fragrance is positively associated with emotional benefits, such as nostalgia and memory, and is tied to improvements in psychological health. In addition, pleasant scents can have a huge impact on our daily lives, making a positive effect on mood, memory recollection, stress reduction, sleep enhancement, and physical and cognitive performance.

Q: Are air fresheners safe to use around children and pets?

A: Air freshener products are designed and tested for safety and wellbeing. When used as directed, they are safe for families, pets, and the environment. Companies take great care to responsibly design and create products that utilize ingredients well-within approved ranges and they are subject to stringent regulatory and safety standards. Products are rigorously tested to evaluate different ways that the products could be introduced to a family member or pet to ensure that the product's safety thresholds fall well-below any danger zones. Air fresheners are also developed to have controlled particle sizes, so it's nearly impossible to deeply inhale them into the lungs.

Q: Is it safe to use air fresheners with fragrance?

A: Fragrances are comprehensively tested for safety before use in consumer products. In the U.S., the fragrance industry is regulated by several government agencies and dozens of state and federal laws.

Q: Can I use air fresheners if I have allergies, asthma or other sensitivities?

A: Everyone's body is different, so not every individual will experience air freshener ingredients in the same way. People with pre-existing conditions such as allergies or dermatitis, for example, may be more likely to experience a skin reaction from a fragranced product. Currently, a connection between the development of asthma and exposure to air fresheners cannot be established based on scientific studies. However, for individuals with sensitivities, there are fragrance-free options available, so individuals can utilize the product that is right for them. Individuals with concerns should consult with their doctor before using any air freshening products.

Q: What is the difference between synthetic ingredients and natural ingredients?

A: Natural and synthetic ingredients are both used to create products we use in our homes, including air freshener products. Natural ingredients are molecules sourced from plants and synthetic ingredients are carefully designed and manufactured from a variety of starting materials (including natural starting materials). Many synthetic fragrance ingredients have the same molecular structure as natural fragrance ingredients. In fact, your body cannot tell the difference between fragrance molecules sourced from nature or the nature-identical molecules crafted in a scientific lab. Regardless of their origin, air freshener ingredients are subject to regulations and evaluations designed to help protect consumer safety and the environment.

Q: Where can I find more information about air fresheners?

A: For more information about malodor, fragrance, and air freshener safety, visit <https://fragranceconservatory.com> and <https://www.healthystartsathome.org/>.