

Wyandanch

Community Advisory Board

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It's Winter!

February is Black History Month
2024 Recycling Calendar, Town
of Babylon

Resume & Interview Workshop
February 6 1:00PM-3:00PM
Location: Wyandanch Public
Library

Wyandanch Library Job Fair
February 13
Location: Wyandanch Public
Library

Valentine's Day, February 14

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[NYSHECK.ORG/Wyandanch](https://nyscheck.org/Wyandanch)



Clearing the Air: Unveiling the Health Impacts of Scented Candles and Embracing Greener Alternatives

by Tara Lauther

- Candles are a pleasant addition to a home, but many popular brands pollute indoor air.
- Burning candles manufactured with synthetic fragrances or paraffin wax exposes us to irritating chemicals and carcinogens.
- Choose soy wax and beeswax candles, which burn cleaner than paraffin candles. Choose plant-based fragrances, like essential oils.

After cleaning the house and creating a clean, peaceful atmosphere, my final touch is lighting a candle that will embrace my home with a calming vanilla scent. For thousands of years, candles have lit our homes, aided travelers in the dark, and enhanced our religious ceremonies. When we use candles, what makes it smell like flowers or vanilla? What does that mean for my health?

Scented candles are not only a household favorite, but a booming industry generating a staggering \$2.2 billion in annual revenue in the United States in 2022 [1]. Recent studies have shed light on the potential health impacts associated with indoor candles. These findings are also relevant for related industries like aromatherapy diffusers.

According to Mordor Intelligence, the aromatherapy diffuser market is experiencing rapid growth; they forecast a 7.34% increase in sales revenue each year out to 2029 [5]. One reason is people's desire to live healthier lives.

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Scented Candles: Unveiled

- *CANDLES HAVE BECOME HOUSEHOLD FAVORITES. IN 2024, REVENUES IN THE AMERICAN CANDLE MARKET IS PROJECTED TO REACH \$2.20 BILLION [1].*

WHY CANDLES MATTER

Candles set the mood, but some traditional ones, made from paraffin (a petroleum product), can release toxic chemicals. Armed with this knowledge, many people choose to avoid these types of candles.

HEALTH IMPACTS OF INDOOR POLLUTION

- The combustion of paraffin candles can expose individuals to small quantities of carcinogenic chemicals.
- Minor irritation symptoms include itchy and runny eyes, inflamed nose, swollen sinuses, headaches, dizziness, and fatigue.



CHEMICALS IN FRAGRANCES

Experiments using paraffin candles showed that the presence of fragrance in paraffin candles increases the emissions of aldehydes [3] Note: these emissions are well below the exposure guidelines developed by health agencies.

TOXIC EMISSIONS

When you light scented candles indoors, you release small amounts of toxic chemicals like acetaldehyde, formaldehyde, acrolein, and polycyclic aromatic hydrocarbons (PAHs).



Write to us at: EditorsNewsletterCAB@gmail.com

Let's explore a cleaner alternative: the soywax candle

AVOID SOOT


Paraffin candles can be messy, producing soot during burning. Soy wax and beeswax candles? They generally burn cleaner. No black smoke indicates a soot-free candle.

CHOOSE SOY WAX


Soy wax candles burn more slowly, providing a longer-lasting cozy ambiance. In laboratory settings, scientists measured that soy candles need less air when they burn [8].

CHOOSE CLEAN AIR

Paraffin candles, which are made from petroleum, are associated with the production of minute amounts of toluene and benzene. These chemicals are considered highly carcinogenic [7].



Soywax isn't just clean for your home; it's friendly to the planet too. It's **renewable**, **biodegradable**, and a **sustainable choice** for environmentally conscious candle lovers.



Soywax candles keep it clean. Chemical checks show that **formaldehyde levels are minimal**, unlike paraffin candles which might release more of it when burning [8].

Word Bank

1. **Formaldehyde** is a highly reactive chemical present in alcoholic beverages, tobacco, and industrial waste; it is a Group 1 carcinogen. Formaldehyde is commonly used as a preservative.
2. **Acrolein** is considered a human carcinogen, causing irritation to the upper respiratory tract when inhaled. Its cell toxicity arises from its positively-charged atomic structure, leading to modifications in DNA and proteins.
3. **Paraffin** is a “flammable, waxy substance obtained from wood, coal, or petroleum” [4].
4. **PAHs**- “polycyclic aromatic hydrocarbons” are “chemicals that occur naturally in coal, crude oil, and gasoline” [2].
5. **BTEX**- a group of the following chemical compounds: benzene, toluene, ethylbenzene, and xylenes [6].

While scented candles add charm to living spaces, they also release pollutants similar to those found in cigarette smoke. The combustion of scented candles emits carbon monoxide, sulfur dioxide, nitrogen oxides, and formaldehyde. These chemicals can trigger inflammatory responses in the respiratory system. Studies in the UAE and Qatar [9] indicate a correlation between indoor pollution from burning scented candles or incense and respiratory issues in both children and adolescents. This can exacerbate pre-existing conditions such as asthma. The study, however, did not carefully control for other pollution sources.

In the quest for cleaner and greener alternatives, researchers have explored the combustion characteristics of candles made from hydrogenated soybean oil. The study conducted by Rezaei et al. revealed that soywax candles, unlike their paraffin counterparts, do not emit toxic acrolein [6]. Acrolein is a harmful compound in traditional candles that can adversely impact indoor air quality.

Understanding the impact of candles on indoor air quality empowers consumers to make informed choices. While scented candles remain popular, **soy wax can provide a cleaner and healthier** burning experience. The choice of candles is not just about ambiance; it's about the air we breathe.

References

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