



Government of Puducherry
Department of Science, Technology & Environment
Puducherry Pollution Control Committee
Puducherry EIACP HUB

Happy Diwali

FESTIVAL OF LIGHTS

"Brighten your Diwali with lights, love,
and a promise to protect our Earth.
Celebrate responsibly for a greener
tomorrow."

31st October 2024

#EcoFriendlyDiwali #CelebrateGreen

#DiwaliWithoutPollution



@eiacphubpd

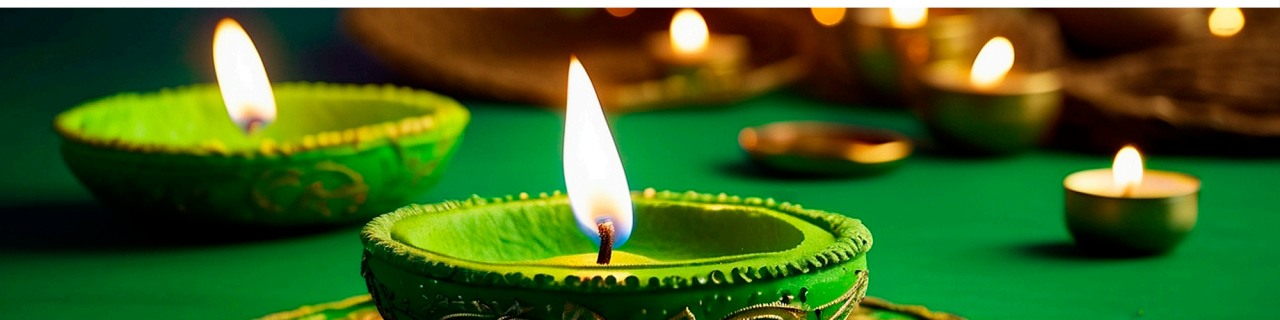
History of Diwali

Diwali, also known as the Festival of Lights, is one of India's most celebrated festivals, symbolizing the victory of light over darkness and good over evil. Traditionally, Diwali commemorates Lord Rama's return to Ayodhya after 14 years in exile, where he defeated the king Ravana. Homes are illuminated with diyas (oil lamps), people exchange sweets, and vibrant rangoli designs are made to welcome prosperity and happiness.






Why Eco-Friendly Diwali?

As we celebrate, let's be mindful of our choices. Bursting of firecrackers contribute to air and noise pollution, affecting both human and environmental health. An eco-friendly Diwali helps us create lasting memories without leaving a negative impact on our surroundings. Small changes can lead to a cleaner, greener Diwali for everyone!





How to Celebrate an Eco-Friendly Diwali


Eco-Conscious Decor:

-  **Go Natural:** Use flowers, leaves, and handmade paper decorations.
-  **Earthen Lamps (Diyas):** Light clay diyas and energy-efficient LED lights.
-  **Organic Rangoli:** Create rangoli with rice flour, turmeric, or flower petals instead of chemical-based colors.

Mindful Gifting:

-  **Support Local Artisans:** Buy handmade gifts and sweets from local vendors to promote small businesses.
-  **Sustainable Packaging:** Wrap gifts in reusable cloth or eco-friendly paper.

Say No to Traditional Firecrackers:

-  **Opt for Green Crackers:** Green crackers are designed to emit 30% less pollution and are safer for everyone.






What Are Green Crackers?

Green crackers are alternatives to traditional firecrackers, producing fewer emissions and less noise. Developed by the **Council of Scientific and Industrial Research (CSIR)**, green crackers release 30% less particulate matter and use materials that reduce air and noise pollution. Look for the green logo or QR code from CSIR to ensure the crackers are genuinely eco-friendly.



Types of green crackers

There are three types of green crackers available in India.




SWAS (Safe Water Releaser)

-  Release water vapour.
-  Diluents for gaseous emissions.
-  30% less particulate matter released.

STAR (Safe Thermite Cracker)

-  Reduced particulate matter released.
-  Reduced sound intensity.

SAFAL (Safe Minimal Aluminium)

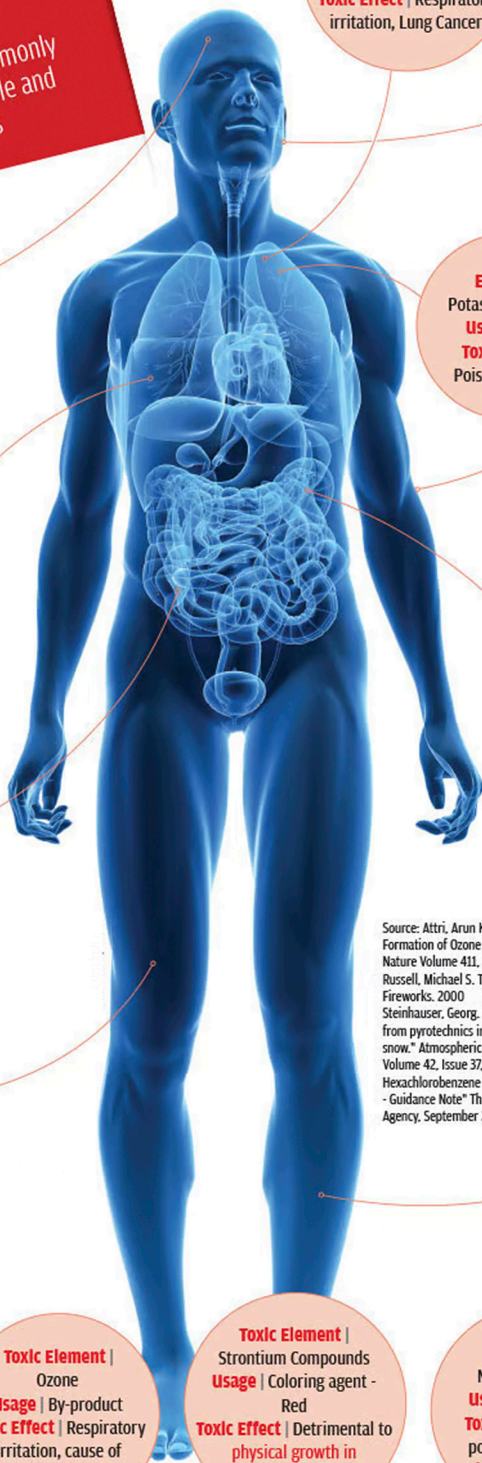
-  Minimal usage of aluminium.
-  Magnesium used in place of aluminium.
-  Reduced sound intensity.



Note: The Government has developed a green logo.

How Fireworks Kill you: Part by Part

Chemical composition of commonly available fireworks, their role and physiological effects



Toxic Element | Aluminum

Usage | Coloring agent - White
Toxic Effect | Skin conditions, accumulation within the body, Cause of Alzheimer's disease

Toxic Element | Nitric Oxide

Usage | By-product
Toxic Effect | Poisonous, reacts with lung tissue

Toxic Element | Cadmium compounds (banned)

Usage | Coloring agent
Toxic Effect | Lung damage, Cancer, Gastrointestinal Problems

Toxic Element | Lithium Compounds

Usage | Coloring agent - Red
Toxic Effect | Poisonous, Respiratory irritation

Toxic Element | Lead Dioxide/Nitrate/Chloride

Usage | Oxidizing agent
Toxic Effect | Poisonous to plants and animals, detrimental to physical and mental growth in infants and unborn children, accumulation within the body

Toxic Element | Ozone

Usage | By-product
Toxic Effect | Respiratory irritation, cause of global warming

Toxic Element | Strontium Compounds

Usage | Coloring agent - Red
Toxic Effect | Detrimental to physical growth in infants, Poisonous

Toxic Element | Nitrogen Dioxide

Usage | By-product
Toxic Effect | Highly poisonous, fatal for infants, source of acid rain

Toxic Element | Sulphur Dioxide

Usage | By-product
Toxic Effect | Poisonous, source of Acid rain

Toxic Element | Antimony Sulphide

Usage | Coloring agent - Glitter effect
Toxic Effect | Respiratory irritation, Lung Cancer

Toxic Element | Perchlorate (Ammonium and Potassium)

Usage | Oxidizing agent
Toxic Effect | Poisonous, contaminated ground and surface water, Lung Cancer, cause of Thyroid complications

Toxic Element | Arsenic Compounds

Usage | Coloring agent
Toxic Effect | Lung cancer, Skin conditions

Toxic Element | Potassium Nitrate

Usage | Fuel
Toxic Effect | Poisonous, Lung Cancer

Toxic Element | Mercury (Chlorides)

Usage | Reducing agent
Toxic Effect | Poisonous, accumulation within the body

Toxic Element | Barium Nitrates

Usage | Coloring agent - Green
Toxic Effect | Poisonous, Respiratory Irritation, Radioactive effects, Gastrointestinal Problems, Muscular Weakness


Toxic Element | Copper compounds


Usage | Coloring agent - Blue
Toxic Effect | Poisonous, accumulation within the body, Cancer, skin conditions, Hormone imbalance


Source: Attri, Arun K. "Microclimate: Formation of Ozone by Fireworks." *Nature* Volume 411, June 28, 2001
Russell, Michael S. *The Chemistry of Fireworks*. 2000
Steinhauser, Georg. "Heavy metals from pyrotechnics in New Years Eve snow." *Atmospheric Environment* Volume 42, Issue 37, December 2008
Hexachlorobenzene (HCB) in Fireworks - Guidance Note" *The Environment Agency*, September 2010


Guidelines for the Use of Firecrackers During Diwali in Compliance with Supreme Court Directives:


In accordance with the Order of the Hon'ble Supreme Court of India in I.A. No. 44727/2021 under Writ Petition (C) No. 728/2015, dated 29.10.2021, the following guidelines are issued for strict adherence during the Diwali festival:

 **Timing:** Only green firecrackers are permitted, and they may be burst for a maximum of two hours. In Puducherry, these hours are set from **6:00 AM to 7:00 AM** and from **7:00 PM to 8:00 PM**.

 **Use of Green Firecrackers Only:** Only green crackers, which are less harmful to the environment, are allowed. All other types of firecrackers are prohibited.

 **Prohibition in Silence Zones:** Firecrackers must not be used within silence zones, which include areas at least 100 meters away from hospitals, nursing homes, primary and district healthcare centers, educational institutions, courts, religious places, or any other designated silence zone by relevant authorities.

 **Sound Level Restrictions:** Firecrackers with a sound level exceeding 125 dB(AI) at a distance of 4 meters from the bursting point are strictly prohibited.

 **Ban on Barium Salts and Joined Crackers:** The use of barium salts in firecrackers, as well as the production, sale, storage, and transport of joined crackers (such as series crackers or “laris” or “Saravedi”), are strictly banned in consideration of public health and environmental protection.

Choose a Greener, Cleaner Diwali!

Celebrate Diwali with joy, love, and care for the environment. By choosing an eco-friendly Diwali, you not only protect your health but also help reduce the impact on nature. Let's light up our lives, not the air!

