Auramine

Prelims: *Current events of national and international importance | Health*

Why in news?

India continues to face recurring episodes of chemical adulteration in food, one of the most persistent among them is auramine O, banned under Indian food-safety regulations.

- **Auramine O –** It is a ***synthetic yellow dye***, produced from compounds such as dimethylaniline and formaldehyde.
  - The dye appears as yellow flakes or powder and dissolves easily when mixed with solvents.
- **Used in –** *Industry*, including textile and leather processing, printing inks, paper manufacturing, etc.
- **Banned for food use –** It is bright in colour, easily available and low-cost, yet remains unapproved for use as a food additive.
  - **International Agency for Research on Cancer** (IARC) – classifies auramine as a substance that is possibly *carcinogenic to humans.*

Other adulteration *- Metanil yellow, rhodamine B, Sudan dyes, Argemone oil, calcium carbide, urea, other mineral oil, chalk powder, etc.*

- **Commonly found in** – Sweets, turmeric powder, and street food snacks, gives a bright yellow hue that looks more appealing to consumers.
- **Effects –**
  - **Toxic effects** – Range of health risks, including liver and kidney damage, enlargement of the spleen, mutagenic effects, etc.
  - **Persistent exposure** – Even small amounts consumed regularly can accumulate and cause long-term harm.
  - **Children at risk** – Brightly colored foods often target children, increasing vulnerability.
- **Global context –** In the ***U.S., EU, and East Asian nations*** classify

auramine strictly as an industrial dye, and its presence in consumables triggers product recalls and import alerts.

- **Findings from investigation in India** – Despite a strong legal framework, weak enforcement, economic pressures, and fragmented supply chains allow banned dyes like auramine to persist in Indian food.
- **Significance of violation –** In ***India, food regulator bans*** the use of such dyes, but mix of informal trade, high demand, weak testing and limited awareness of safety standards allows these chemicals to circulate -
    - Leads to public health risks, erosion of consumer trust, regulatory strain, and structural weaknesses in the food economy.

References

1. The Hindu | Auramine in Indian food
2. Ground Report | Auramine