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Chemical levels in cigarette, beedi butts "not toxic to humans, environment", says CSIR-IITR study

New Delhi, Sep 10 (PTI) Chemical levels in cigarette and beedi butts are lower than the government-prescribed limits and not toxic to humans and environment, according to a recent study by Lucknow-based Indian Institute of Toxicology Research (IITR).

Cigarette butts are the most common type of litter on earth, with an estimated 4.5 trillion of them discarded annually around the globe.

Most of the cigarette butts are discarded in dustbins, roadside, beaches or other public places, posing a major threat to living organisms and ecosystem health. Some studies suggest cigarette butts are toxic to microbes, insects, and fish etc.

In April last year, the National Green Tribunal (NGT) directed the Ministry of Environment and Forests (MoEF) to get a study conducted as to whether cigarette and beedi butts fall within the category of toxic waste.

A Memorandum of Understanding was signed in October last year between the Central Pollution Control Board (CPCB) and CSIR-Indian Institute of Toxicology Research to analyse chemical and elemental composition of various brands of cigarettes and beedi butts (both burnt and unburnt) and to see if they meet the required parameters.

Burnt and unburnt butts of 10 cigarette brands and beedi brands were used in the study, according to CSIR-IITR.

Except endosulfan (in one brand), the levels of chemicals listed in class "A" of schedule II 2016, including arsenic, cadmium, lead, mercury, chromium, and cobalt, were either below the level of detection or many fold lower than the threshold value, the IITR report said.

The levels of chemicals listed in class "C" of Schedule-II 2016, including anthracene, phenanthrene and amines, were also lower than the prescribed limits under experimental conditions with limited sample size, it said.

“The analysis reflects that the concentrations detected will not be toxic to human and the environment, the study said.

It, however, said that data is not available on cellulose acetate mediated human health risk assessment and toxic responses, and response on microflora in the soil.

Cellulose acetate is a major component (95 per cent) of cigarette butts along with the wrapping paper and rayon.

The degradation studies carried out on cigarette butts have shown only 37.8 per cent degradation in two years in the soil under ambient conditions; hence it will persist in soil for a longer duration, the IITR said.

The degradation studies under natural environmental conditions and laboratory simulating conditions will be required to conclude the safety/toxicity of cigarette butts to further correlate with human and environmental health risk assessment, it said.

The research institute suggested recycling of cellulose acetate after recovery from cigarette butts as an immediate solution to the problem until the degradation and safety data are generated.

The NGT had earlier issued notices to the MoEF, Ministry of Health and Family Welfare and CPCB on a plea filed by a doctors' body seeking prohibition on consumption of tobacco in all public places and proper disposal of related waste.

Doctors for You, an NGO working towards cancer care, had moved the tribunal, asking that the Centre be directed to declare cigarette and beedi butts "toxic waste".

It had claimed that tobacco was causing major health problems and its "cultivation processing, production and disposal was harming the ecology badly".

Source: <https://www.outlookindia.com/newscroll/chemical-levels-in-cigarette-beedi-butts-not-toxic-to-humans-environment-says-csiriitr-study/1933074>