

Forensic Aspects of E-Waste on Human Health [†]

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Abstract: E-waste is a growing environmental challenge worldwide, with a major implication for forensic toxicology. In the modern era, artificial intelligence and automated system chips and sensors are manufactured, which also leads to E-waste. Nowadays, even working equipment comes under e-waste as people are not able to resist chasing the latest technology and they are not aware that formatting devices cannot permanently delete data. Poor awareness of the disposal of E-waste and the high cost of setting up recycling facilities are some of the key issues in environmental forensics. To illustrate E-waste, the hazardous materials found such as heavy metals, brominated flame retardants, and persistent organic pollutants. By looking at routes from which the incineration, recycling, and disposal of E-waste release these hazardous materials into the environment, we can analyze the effects of E-waste on the contamination of soil, water, and quality of air by highlighting the possibility of bio-accumulates and bio-magnificent in different ecological compartments. The threats to human health are caused by E-waste pollution exposure and the connections among the contaminants, carcinogenesis, and reproductive problems in humans. Analysis-based forensic investigation and the application of toxicology methods can help to mitigate the impact of E-waste.

Keywords: environmental forensic; toxin; chips; data privacy; forensic toxicology.

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Conflicts of Interest

None.