

**ASSESSMENT OF DEGRADABLE AND NON
DEGRADABLE PLASTIC BAGS IN THE MARKET
OF ISLAMABAD**



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ABSTRACT

The study examines the composition of degradable and non-degradable plastic bags collected from the markets of different sectors of Islamabad. Hundred samples of both Degradable and non-degradable plastic bags were collected for assessment. The study showed the quantity, proportion and patterns of different metals (additives) used in the production of both degradable and non-degradable plastic bags when analyzed with Hands Held X-Ray Fluorescent (HHXRF). Furthermore, the examination shows trends shown by these heavy metals including Titanium, Calcium and Copper used in massive amount, the study also shows the presence of some hazardous metals i.e. Arsenic, Lead, Cadmium, Chromium and Mercury in traces. It was deduced that, the degradable plastic bags might be more hazardous than non-degradable plastic bags because due to the Photolytic properties of additives used in degradable plastic bags when the chains of polymers break, the heavy metals are released in environment and become the part of it. It is recommended that further experimental research should be conducted for the detail's analysis of degradable and non-degradable plastic bags.

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ABBREVIATIONS

AECOM	Architecture, Engineering, Consulting, Operations, and Maintenance
ASTM	American society for testing and Materials
CFC	Chloro Fluoro Carbon
EPHC	Eastern Plumas Health Care
FDEP	Florida Department of Environmental Protection
HDPE	High Density Polyethylene
HHXRF	Hand Held X-Ray Fluorescence
LDPE	Low-density polyethylene
OECD	Organization for Economic Co-operation and Development
PBB	Plastic Bag Ban
PE	Polyethylene
PP	Polypropylene
PS	Polystyrene
PSB	Plastic Shopping Bag
PVC	Polyvinyl Chloride
XRF	X-Ray Fluorescent

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