



University: UzSWLU
Country: Uzbekistan
Web Address: <https://www.uzswlu.uz/en>

[3] Waste (WS)

3.16 Toxic Waste Treatment

In 2025, Uzbekistan State World Languages University (UzSWLU) ensured the safe and complete treatment of 2,560 kilograms ($\approx$ 2.56 tons) of toxic and hazardous waste, accounting for 100 percent of the total toxic waste generated that year.

All hazardous waste was collected, neutralized, recycled, or safely incinerated through licensed contractors and on-campus controlled procedures.

This process fully complied with Uzbekistan's national environmental regulations and international occupational safety standards (ISO 45001).

Breakdown by Treatment Method

Type of Toxic Waste	Volume Treated (kg)	Treatment Method	Responsible Partner
Fluorescent lamps (mercury vapor)	580	Collected and recycled	<i>EcoLight Tashkent</i>
Batteries and accumulators	350	Metal extraction and recycling	<i>EkoService Uz</i>
Expired laboratory chemicals	920	Neutralized and safely incinerated	<i>ChemUtil Tashkent</i>
Chemical residues and spills	600	Neutralized on campus under supervision	<i>Faculty of Natural Sciences</i>
Contaminated glass & gloves	110	Sterilized and disposed through municipal system	<i>Eco Techno Clean LLC</i>
Total Treated	2,560 kg ($\approx$ 2.56 tons)	100% treated and documented	—

Toxic Waste Management System

UzSWLU's toxic waste treatment system is designed around **safety, transparency, and sustainability**, combining national regulation and digital oversight:

- **Licensed Disposal Contracts:**
Treatment and disposal carried out by certified organizations (*EcoLight Tashkent*, *ChemUtil Tashkent*, *EkoService Uz*) under multi-year agreements (2024–2026).
- **On-Campus Neutralization:**
Small quantities of low-risk chemical residues are **neutralized within laboratory conditions**, supervised by the **Department of Natural Sciences** using controlled pH-balancing and adsorption techniques.



- **Digital Monitoring (ICT):**
All activities are tracked via the **UzSWLU Green Data Portal**, which logs monthly treatment volumes, contractor certificates, and CO₂-equivalent reductions.
- **Safety Oversight:**
The **University Environmental Safety Committee** conducts quarterly audits and laboratory inspections to ensure compliance with safety standards.

Key Results in 2025

- **100% of toxic waste safely treated**, with full documentation and digital records.
- **No environmental or health incidents** reported across all facilities.
- **CO₂-equivalent reduction: $\approx$ 1.5 tons/year**, achieved through improved neutralization efficiency and reduced reagent use.
- Introduction of **QR-coded chemical labeling** to trace hazardous materials from use to disposal.
- Over **350 participants (150 staff, 200 students)** trained in *Safe Chemical Waste Management*.

Environmental and Economic Impact

Indicator	2024	2025	Change
Total toxic waste treated	2,840 kg	2,560 kg	▼ -10%
Share safely treated	100%	100%	—
CO ₂ -equivalent reduction	—	1.5 tons saved	New
Disposal cost savings	18 mln UZS	22 mln UZS	▲ +22%
Safety incidents	0	0	Maintained

- The university achieved **zero pollution incidents** and improved **chemical storage conditions** in all laboratories.
- Treated waste records verified through *EcoLight*, *ChemUtil*, and *EkoService* certificates archived digitally.
- Waste management outcomes are integrated into the annual **Sustainability Report 2025** for public transparency.

Contribution to SDGs

This program contributes directly to:

- **SDG 3 – Good Health and Well-being**, ensuring a safe and healthy environment;
- **SDG 12 – Responsible Consumption and Production**, through efficient chemical waste control;
- **SDG 13 – Climate Action**, by reducing toxic emissions and CO₂ equivalents;
- **SDG 17 – Partnerships for the Goals**, by working with certified contractors and NGOs.

Additional evidence link (i.e., for videos, more images, or other files that are not included in this file):