NIJZ National Institute of Public Health

NATIONAL LABORATORY OF HEALTH, ENVIRONMENT AND FOOD

Results of the epidemiological wastewater surveillance of polioviruses in Slovenia

In 2024, Slovenia implemented epidemiological wastewater surveillance of polioviruses. Wastewater sampling is conducted quarterly at selected wastewater treatment plants, in accordance with the Wastewater surveillance plan of polioviruses in Slovenia.

The last confirmed case of poliomyelitis in Slovenia occured in 1978. Therefore, the primary objective of epidemiological wastewater surveillance of polioviruses in Slovenia is to detect any potential reintroduction of polioviruses into the country.

Monitoring results

Composite sample (for the area)	Results					
	4th and 5th March 2024	**3rd and 4th June 2024**	**2nd and 3rd September 2024**	**2nd and 3rd December 2024**	**3rd and 4th March 2025**	**2nd and 3rd June 2025**
Central Slovenian region – Ljubljana[1]	negative	negative	negative	negative	negative	negative
Central Slovenian region – other[2]	negative	negative	negative	negative	negative	negative
Primorska region[3]	negative	negative	negative	negative	negative	SL3* (WWTP Nova Gorica)
Celje-Novo mesto region[4]	negative	negative	negative	negative	negative	negative
Eastern Slovenia region[5]	negative	negative	negative	negative	negative	negative

[1] WWTP Ljubljana; [2] WWTP Domžale-Kamnik, WWTP Kranj, WWTP Trbovlje, WWTP Litija in Šmartno pri Litiji, WWTP Zagorje; [3] WWTP Koper, WWTP Nova Gorica, WWTP Postojna; [4] WWTP Celje, WWTP Šaleške doline, WWTP Novo mesto, WWTP Brežice; [5] WWTP Maribor, WWTP Murska Sobota, WWTP Slovenj Gradec.

Interpretation of results

The monitoring plan covers 16 major wastewater treatment plants, representing 34.2% of Slovenia's population across all statistical regions. Up to and including March 2025, **no evidence of polioviruses has been detected** in wastewater samples.

In June 2025, no polioviruses were detected in wastewater samples from the Central Slovenian region – Ljubljana, Central Slovenian region – other, Celje-Novo mesto region and Eastern Slovenia region. * However, in the wastewater sample from the WWTP Nova Gorica (from the composite sample for the Primorska region), **the presence of a Sabin-like type 3 (SL3) was confirmed**.

Sabin polioviruses are used in oral polio vaccines (OPV). OPV is still widely used in national routine immunization programs in many countries outside of Europe, particularly in Asia and Africa. As a result, vaccine-derived Sabin and Sabin-like polioviruses can often be detected in the

population and in wastewater in areas where OPV is used for routine immunization, or in wastewater from areas where individuals recently vaccinated with OPV—who may be shedding the virus—are or have recently been present.

The presence of SL3 in the wastewater at the Central Wastewater Treatment Plant Nova Gorica (CČN Nova Gorica) therefore does not pose a risk to public health, and no additional measures are necessary. However, it does demonstrate that Slovenia has a very sensitive and well-functioning system for epidemiological surveillance of polioviruses in wastewater.

Nevertheless, additional monitoring of polioviruses was carried out in wastewater samples from CČN Nova Gorica on June 17 and June 23, 2025. Polioviruses were not detected in these samples, suggesting that individuals vaccinated with OPV are no longer shedding the SL3 virus in the area of CČN Nova Gorica, or that such individuals are no longer present in this area.

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