

Scientific studies demonstrate efficiency

Indaver processes hazardous waste in general and thus also PFAS-containing waste at high temperature in rotary kilns. 3 elements guarantee the destruction of PFAS molecules: high temperature (1) combined with a long residence time (2) in the facility and turbulence (3). This is how Indaver offers a solution for PFAS-containing waste in our society. PFAS still has many applications, which ultimately constitute waste.

Recent studies show that Indaver's impact in terms of water and air is very limited. Indaver thus plays a pioneering role within the waste processing industry in order to map the effects of processing PFAS-containing waste flows on water, soil and air and to take appropriate measures to reduce these effects ever further.

In this way, Indaver helps provide a solution to the PFAS problem in our society.

Measurements are always carried out on the basis of the most recent measurement methods as described in the Compendium of sampling, measurement and analysis, where in Flanders VITO publishes these validated measurement methods as the reference laboratory.

Extensive investments in water treatment plant dramatically reduces PFAS in discharge water

The water treatment plant was expanded in 2022 and 2023 to include several activated carbon filters and sand filters. The measurement results substantiate the excellent performance of the plant. On an annual basis, the residual PFAS still discharged will be less than 10g. This is confirmed by a scientific study carried out by Arcadis, which shows that Indaver's operations have no impact on people and the environment. No waste treatment plant in the EU can present comparable results.

Rotary kiln processing is best available technology for destroying PFAS

Indaver destroys industrial PFAS residues in its rotary kilns at the Antwerp site. This technology, prescribed by Europe for the destruction of persistent organic pollutants, ensures that the molecules come into prolonged and complete contact with the fire and are broken down. Recent efforts and investments have led to significant improvements in emissions.

To gain a more detailed insight into Indaver's emissions, VITO carried out several measurements over a wider period between December 2021 and May 2022. These measurements used a state-of-the-art measurement methodology based on the USA OTM-45 and further developed by VITO (Draft LUC/VI/003).

VITO modelled the measured emissions to determine the expected precipitation (immission). The results show that immissions in 2021-2022 were well below the EFSA standard. Recent measurements carried out in 2023 after further optimisations to the treatment process show even a further decrease of PFAS in the flue gases.

The measurement method applied will form the basis for a recognised sampling and analysis method for measuring and evaluating PFAS in flue gases. Such a method does not yet exist in Europe.

Indaver operates in full compliance with legislation and respects all standards

With its wastewater treatment plant, Indaver complies with the strict standards imposed in the licence. The application for renewal of the standards is currently pending. In the meantime, Indaver must comply with the strict standards laid down in VLAREM, the Flemish environmental legislation. Indaver therefore always operates legally.

Shared ambition between the various stakeholders and industry to arrive at a supported solution to the PFAS problem within a clear legislative framework.