

SediMaxx

Where do settleable substances in wastewater come from?

Settleable substances in wastewater have a wide variety of emission sources. The settleable substances can be both organic and inorganic. Household wastewater contains a mixture of organic (e.g. faeces, food scraps) and inorganic (e.g. mineral abrasive particles in cleaning products, cat litter) settleable substances. When rainwater is discharged into the municipal sewage system, sand and other washed-out soil components form a large part of the settleable substances in the wastewater.

Industrial companies also cause a wide range of emissions of settleable substances. Particularly high quantities of pollutants are generated in mining (drilling mud, cleaning of ore).¹ Before industrial companies discharge wastewater heavily contaminated with settleable substances into water bodies (direct discharge) or municipal networks (indirect discharge), these are usually cleaned in settling tanks. Many of the settled substances can be reused in production.



Why is the determination of settleable substances in wastewater important?

Large amounts of settleable substances in the wastewater significantly reduce the cleaning performance of sewage treatment plants. Large quantities of sand can exceed the cleaning capacity of the sand separators and primary sedimentation tanks in sewage treatment plants. Cat litter, which is illegally disposed of in toilets, is a particular problem for sewage pipe systems. The clay minerals in the litter are difficult or impossible to dissolve and tend to settle at the bottom of the pipes. Municipal waste disposal companies often have to use complex flushing processes to clear the pipes of these deposits several times a year.

If settleable substances enter water bodies in large quantities, they can, for example, cover lake beds with dense, oxygen-impermeable sediments. Important soil organisms are killed as a result and foul gases are formed. Settleable substances in wastewater are also sometimes harmful to fish eggs. Water turbidity caused by settleable substances in wastewater can lead to a lack of oxygen in water bodies. Drilling mud and other settleable substances in wastewater from industrial plants can be contaminated with heavy metals and other chemicals. This can pose a direct health risk to humans..

Settled substances in wastewater are determined using an Imhoff funnel according to DIN 38409. One litre of sample is filled into the funnel and after a certain time (e.g. 30 minutes) the level of the settled sediment is read manually..

With the **SediMaxx (Dpa) from MAXX**, this process is completely automated. The device automatically takes one liter of sample and fills it into the Imhoff funnel. After an adjustable time, the level of the settled substances is automatically determined and recorded, or transferred as a measured value. After the measurement, the Imhoff funnel is automatically emptied and rinsed with water.