

## Water treatment: how to avoid the odor issues?

### The wastewater treatment leads to the appearance of bad smells.

Indeed, the sewage loaded in organic load follow a biological fermentation process. As a result, unpleasant odors appear.

The decomposition of the nitrogenous composites leads to the creation of ammonia and amino responsible for the appearance of smells similar to fish odors or urine odors.

Other composites can be responsible for the outbreak of bad smells:

- the sulfur composites: mercaptans and sulfurs
- volatile fatty acids (VFA)
- carbon composites: aldehydes

The main smelly composites are mentioned in the following table:

Composites	Value of the olfactory thresholds (mg/m <sup>3</sup> )
<i>Nitrogenous composites</i>	
Ammonia	20
Amino	0,03 à 0,1
<i>Sulfur composites</i>	
H <sub>2</sub> S and mercaptans	0,002 à 0,1
<i>Carbon composites</i>	
Aldehydes and ketone	0,2 à 0,4

Those nasty odors have been noticed during the dehydration process or during the sludge storage.

Considered as an issue for populations, those bad smells must be treated to do not become a permanent problem.

To prevent and to eliminate odors have become a major concern for the wastewater treatment plants because severe measures have been taken in order to control bad smells. Indeed, regulations have been fixed and they now impose an odor value maximal to avoid any issue with the neighborhood.

In order to resolve these olfactory issues which appear during wastewater treatment, our society offers adapted solutions to this problem.