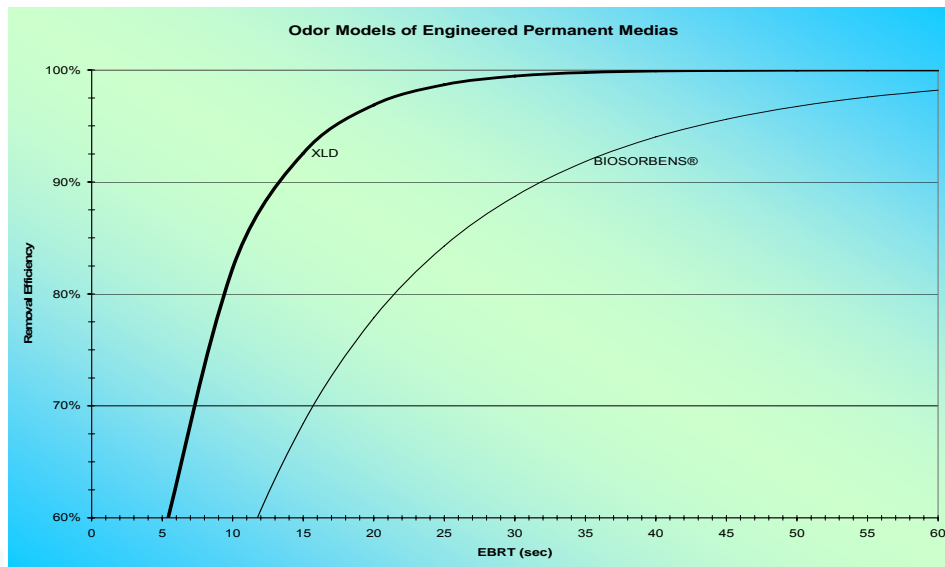




XLD Biofilter Media Removes up to 99% Odor from Biosolids Systems

Biorem has introduced an engineered biofiltration media that can remove biosolids and other sewage plant odours by up to 99% in 30 seconds, and greater than 95% in 20 seconds or less empty bed residence time. The media also achieves removal of most reduced sulphur compounds to below detection limits. Predicted performance of this media, in comparison with Biorem's Biosorbens media, is shown in Figure 1.

Figure 1: Predicted Biosolids Odor Removal by Biorem's XLD Engineered Media



Special features of XLD media include very low density, very high internal and external surface area, high moisture retention, and a specialized coating to enhance retention and destruction of highly odorous compounds. This results in high reaction rates, high treatment efficiency and low pressure drop. XLD's light weight permits design of unique bed configurations to meet specific site requirements. For example, multi-tiered beds can be used for sites with tight space constraints providing significant savings in ducting cost. Small footprint configurations, reduced capital costs and superior performance make a biofilter with XLD an attractive alternative to chemical scrubbers for removal of biosolids odor emissions

The control of odors emitted from biosolids operations present one of the most challenging tasks to operators of wastewater treatment plants and biosolids handling facilities. Individual odor components are often present in concentrations of only several ppm, but yet cause odor numbers in excess of 10,000 Dilutions to Threshold (D/T).



Common chemical species that contribute to odor are methyl mercaptan (MM), dimethyl sulfide (DMS) and dimethyl disulfide (DMDS). However it is known that ultra low levels of other organic species from the chemical families including ketones, aldehydes and amines may also be strong contributors to odor.

Following extensive research study, confirmatory pilot studies were conducted using Biorem's XLD media at three sewage plant sites and performance is summarized in Table 1.

**Table 1: Odor Removal From Biosolids Air Emissions with XLD
20 seconds EBRT**

Contaminant	Plant One			Plant Two*			Plant Three		
	Inlet	Outlet	%	Inlet	Outlet	%	Inlet	Outlet	%
Odor (D/T)	6090	215	96%	34470	912	97%	30544	1499	95%
H2S (ppb)	540	ND	100%	12040	ND	100%	2540	ND	100%
MM	60	ND	100%	330	ND	100%	990	ND	100%
DMS	60	ND	100%	ND	ND	-	100	ND	100%
DMDS	30	10	67%	ND	ND	-	220	ND	100%
Total RSC	150	10	93%	330	ND	100%	1310	ND	100%

* EBRT was 15 seconds for odor and 10 seconds for others

At 30 seconds EBRT, the odor removal was 99% as presented in Table 2.

**Table 2: Odor Removal From Biosolids Air Emission with XLD
30 seconds EBRT**

Contaminant	Inlet	Outlet	%
Odor (D/T)	15360	116	99%
H2S (ppb)	2600	ND	100%
MM	260	ND	100%
DMS	170	ND	100%
DMDS	50	ND	100%
Total RSC	480	ND	100%

For further information, contact info@biorem.biz or our local manufacturers rep in your area