

# 1 Biosol

## 1.1 Mechanism

Discussion with the supplier indicate that Biosol utilizes trace amount of “cell signaling chemicals” that can slow down the reproduction and metabolic rates of the bacteria in sewers. If such a phenomenon occurs, the down-regulation of the bacteria would weaken the biofilm, which will then be detached from the pipe wall by shear due to flowing sewage.

## 1.2 Actions

Followings have been observed in a laboratory study on a sewer reactors receiving Biosol dosing.

The extent of destabilisation of the biofilm following dosing with Biosol were similar in both a control reactor and a reactor receiving Biosol dosing. Likewise, suspended solids levels in the effluent from the dosed reactor train were similar to those in the effluent from the control. Thus, there was no evidence that Biosol destabilised the biofilm as claimed by the supplier.

The general conclusion that Biosol did not affect the biofilm was supported by further testing which indicated that both sulphide and methane concentrations were similar in the effluent from the dosed and control reactor trains.

## 1.3 Typical dosing rates

The supplier has advised a dosing rate of 10 ppm at the start of the pipe.

## 1.4 Cost of chemical

It is unknown at this stage.

## 1.5 Impacts on WWTP

No impacts are known at this stage.

## 1.6 Major limitations

No significant reduction in sulfide and methane production was observed with the dosing of Biosol.

## 1.7 Case studies

None

## 1.8 Additional Information

Further information can be obtained as follows:

- [Report - SCORE SP6 Summary Report](#)

## 2 Biokat

### 2.1 Mechanism

Biokat is claimed to be an innovative cellular bio-activation liquid that stimulates indigenous bacteria to accelerate biological activity. It functions by providing many intracellular micro enzymes that are lacking in the wastewater, which further accelerates the metabolism of microorganisms. By accelerating the metabolic rate of the indigenous organisms, the availability of a carbon source to sulfate reducing bacteria is reduced, thereby decreasing the rate of sulfide production.

### 2.2 Actions

Followings have been observed in a laboratory study on a sewer reactors receiving Biokat dosing.

Both sulphide and dissolved methane concentrations were measured in the effluent from the two reactor trains (ie the dosed and the control) following dosing with Biokat. There was no systematic difference between the two sets of results. Thus the experimental program did not find any evidence that Biokat would affect sulphide or methane generation in a rising main.

### 2.3 Typical dosing rates

The supplier has advised a dosing rate of 1-3 mg/L at the wet-well.

### 2.4 Cost of chemical

It is unknown at this stage.

### 2.5 Impacts on WWTP

No impacts are known at this stage.

### 2.6 Major limitations

No significant reduction in sulfide and methane production was observed with the dosing of Biokat.

### 2.7 Case studies

None

### 2.8 Additional Information

Further information can be obtained as follows:

- [Report - SCORe SP6 Summary Report](#)