

**BROOKS
TECHNOLOGIES**

January 5, 2001

Harry Plander
Polylok, Inc.
173 Church Street
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RE: Filter Testing Report

1. Description of test sites.

Site 1 – Single family home with four residents and municipal water supply. Tank was pumped out in August 1999. Polylok filter was installed in October 1998.

Site 2 – Single family home with four residents. Municipal water supply. Tank was pumped out in August 1999. Polylok filter was installed in October 1998.

2. Tests.

Biochemical Oxygen Demand (BOD₅) and Total Suspended Solids (TSS) concentrations are determined on filtered and unfiltered septic tank effluent every two weeks. The test protocol follows Standard Methods for the Examination of Water and Wastewater.

3. Results.

Site 1 – Forty-six samples were collected between October 22, 1998 and January 2, 2001. The range of BOD₅ concentrations in the unfiltered samples was 180 mg/l to 1224 mg/l. The range of BOD₅ in the filtered samples was 30 mg/l to 642 mg/l. The percent reduction in BOD₅ concentrations ranged from 0% to 93% with an overall average concentration reduction of 66%.

The range of TSS concentrations in the unfiltered samples was 53 mg/l to 1040 mg/l. The range of TSS concentrations in the filtered samples was 26 mg/l to 367 mg/l. The percent reduction in TSS concentration ranged from 2% to 94% with an overall average concentration reduction of 59%.

Note that when the tank was pumped out the filter was not cleaned. No problems have occurred to date.

Site 2 – Forty-five samples were collected between October 22, 1998 and January 2, 2001. The range of BOD₅ concentrations in the unfiltered sample was 203 mg/l to 1209 mg/l. The range of BOD₅ in the filtered samples was 72 mg/l to 761 mg/l. The percent reduction in BOD₅ concentrations ranged from 0% to 73% with an overall average concentration reduction of 36%.

The range in TSS concentrations in the unfiltered samples was 171 mg/l to 2725 mg/l. The range of TSS in the filtered samples was 84 mg/l to 527 mg/l. The percent reduction in TSS ranged from 2% to 96 % with an average concentration reduction of 65%.

In September 2000 after 23 months of continuous use the filter plugged to the extent that the water level in the tank rose above the level of the top of the effluent pipe. The filter was removed, hosed off, and replaced.

It should be noted that one of the persons in this household is taking heavy doses of a number of potent medications that may be having an effect on the actions taking place in the septic tank.

Summary

Use of the Polylok septic tank effluent filter at two single family homes reduced the concentration of BOD₅ by 66% in System 1 and 36% in System 2 in the septic tank effluent before it was applied to the disposal area. The TSS concentration was reduced by 59% in System 1 and 65% in System 2 by passing it through a Polylok filter before applying the effluent to a disposal area.

Brooks Technologies

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