



1326 North Trinity  
San Antonio, TX 78207

**Test Report**

September 18, 2004

**Performance Test**  
**Perchlorate Removal**

Sodium perchlorate salt has been recently added to San Antonio City water by SAWS (San Antonio Water System).

A test was run to compare under the counter RO versus the EWP for overall purification, overall Perchlorate removal and water waste.

For the EWP the test was run using a 25 carbon gram cell. The test was run at 250 ml/min (equal to a speed of 10 ml/min/g-c).

For the RO, a DOW Filmtec membrane was used in a standard under the counter membrane housing that can be purchased at Home Depot or any water equipment wholesale supply.

The test results are as follows

	RO		EWP	
<b>Permeate (Purified water) Flow</b>	110	ml/min	250	ml/min
<b>Reject (waste water) flow</b>	920	ml/min	129	ml/min
<b>% Waste of Total flow</b>	<b>89%</b>		<b>66%</b>	
<b>TDS of feed water</b>	340	mg/l	340	mg/l
<b>TDS of purified water (Permeate)</b>	102	Mg/l	22	Mg/l
<b>% Purification</b>	<b>77%</b>		<b>94%</b>	
<b>Sodium Perchlorate in feed water</b>	1.0	Mg/l	1.0	Mg/l
<b>Sodium Perchlorate in Purified water (Permeate)</b>	1.0	Mg/l	nd	Mg/l
<b>% Sodium Perchlorate removed</b>	<b>0%</b>		<b>100%</b>	

The sample water was spiked with Sodium Perchlorate at 1 mg/l then tested. 100 liters sample was created for testing.

The perchlorate level was measured using an external analytical testing source. TDS was measured using a Myronel electronic conductivity meter.

The EWP outperformed RO on Removal of sodium perchlorate, purified water quality and the amount of wastewater.

Robert Atlas

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