

# Sodium Hypochlorite Production Accuracy

The Available Chlorine and Excess Sodium Alkalinity produced on our state-of-the-art system is easily adjustable. Since there is currently no inline direct monitor available to measure and compute the strength or excess alkalinity of the sodium hypochlorite solution, we use two time tested and proven ways to control these values.

For the strength our control system monitors the flow of water and sodium hydroxide and calculates the strength and compares it to a set point and makes automatic adjustments to flow rates to maintain a very tight strength tolerance.

For the Excess Alkalinity our control system monitors a related voltage called “Oxidation Reduction Potential” (ORP) at three different points. The measured value is compared to a set point, and the control system makes automatic adjustments to flow rates to maintain a very tight Excess Alkalinity tolerance.

Both are very repeatable processes, but to ensure on spec product, the operator will take periodic product samples and perform a chemical titration and make minor set point adjustments if needed.

Below is an example of the typical repeatability of our sodium hypochlorite system. The sodium hypochlorite samples were taken at a producer’s site that uses our equipment.

Sample #	Reference	Trade % Available Chlorine (xc)	% Excess Alkalinity (xa)
1	57689	15.42	0.27
2	57374	15.30	0.26
3	57337	15.41	0.25
4	55735-01	15.46	0.24
5	57629	15.42	0.24
6	57806	15.42	0.24
7	57754	15.36	0.24
8	57951	15.36	0.24
9	58027	15.45	0.24
10	57968	15.45	0.24
11	58079	15.44	0.24
12	55735-02	15.44	0.25
13	58042	15.42	0.25
Totals		200.35	3.2