

Saturation Index Worksheet

<i>Use this sheet with the results from your pool water tests.</i>	Value (test results)	Factor (look-up)	New Value (should be)	Factor (look-up)
Total Alkalinity				
pH				
Calcium Hardness				
Temperature				
Sub-Total				
Total Dissolved Solids				
Saturation Index				

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Total Alkalinity				
pH				
Calcium Hardness				
Temperature				
Sub-Total				
Total Dissolved Solids				
Saturation Index				

HOW TO USE THIS WORKSHEET

1. In the column marked 'value', write down the results of your pool water tests (or use the test readings given to you in the homework/test question).
2. Next, using your Langelier Saturation Index sheet, look up the Total Alkalinity, Calcium Hardness, Temperature, and TDS readings, and place the factors for those readings in the 'factor' column. For pH, use the raw test result you got when you tested your water, or which was given to you in the homework/test question.
3. Next, add the factors for Alkalinity, pH, Calcium, and Temperature together, and place this sum in the 'sub-total' box.
4. Finally, subtract the TDS Factor from the number in the sub-total box and record the result in the 'Saturation Index' box. This number is your Langelier Saturation Index Number.
5. Using the chart on the bottom of your green Langelier Saturation Index sheet, determine if the Saturation Index as calculated is Balanced, Corrosive, or Scaling.

TO DETERMINE THE ADJUSTMENT YOU NEED TO MAKE

1. In the column marked 'new value', write down the readings YOU WANT your water to have; you will normally use the 'go for' numbers that you can find on your Water Balance Values sheet.
2. Next, using your Langelier Saturation Index sheet, look up the Total Alkalinity, Calcium Hardness, Temperature, and TDS readings, and place the factors for those readings in the 'factor' column. For pH, use the raw number that you want your water to be.
3. Next, add the factors for Alkalinity, pH, Calcium, and Temperature together, and place this sum in the 'sub-total' box.
4. Finally, subtract the TDS Factor from the number in the sub-total box and record the result in the 'Saturation Index' box. This number is your Langelier Saturation Index Number. Your water should now be much closer to the 'balanced' number located on the bottom of your Langelier Saturation Index sheet.
5. To determine how much you need to adjust each individual factor, simply subtract the original 'value' that you started with from the 'new value' that you wish the water to have. For example if the original value for Total Alkalinity was 50, and you set the 'new value' as 100, you would subtract 50 from 100, giving you an adjustment needed of 50 ppm.
6. When actually adjusting your water, remember to make your adjustments in the order in which they are listed on this sheet; alkalinity first; pH second; calcium hardness third.