Lake Tuz mineral nutrient concentrations (from Nilhan et al., 2008)

<table>
<thead>
<tr>
<th>Soluble (me/L)</th>
<th>March</th>
<th>April</th>
<th>May</th>
<th>June</th>
<th>July</th>
<th>August</th>
<th>September</th>
<th>October</th>
<th>November</th>
<th>Average</th>
<th>Average March-August</th>
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<tbody>
<tr>
<td>Na</td>
<td>Min</td>
<td>Max</td>
<td>Mean</td>
<td>Min</td>
<td>Max</td>
<td>2012</td>
<td>Min</td>
<td>Max</td>
<td>Mean</td>
<td>Min</td>
<td>Max</td>
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<tr>
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<td>Min</td>
<td>Max</td>
<td>Mean</td>
<td>Min</td>
<td>Max</td>
<td>2012</td>
<td>Min</td>
<td>Max</td>
<td>Mean</td>
<td>Min</td>
<td>Max</td>
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<tr>
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<td>Min</td>
<td>Max</td>
<td>Mean</td>
<td>Min</td>
<td>Max</td>
<td>2012</td>
<td>Min</td>
<td>Max</td>
<td>Mean</td>
<td>Min</td>
<td>Max</td>
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<td>Mg/Ca</td>
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<td>Max</td>
<td>Mean</td>
<td>Min</td>
<td>Max</td>
<td>2012</td>
<td>Min</td>
<td>Max</td>
<td>Mean</td>
<td>Min</td>
<td>Max</td>
</tr>
<tr>
<td>Cl</td>
<td>Min</td>
<td>Max</td>
<td>Mean</td>
<td>Min</td>
<td>Max</td>
<td>2012</td>
<td>Min</td>
<td>Max</td>
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<td>Min</td>
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<tr>
<td>SO4</td>
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<td>Mean</td>
<td>Min</td>
<td>Max</td>
<td>2012</td>
<td>Min</td>
<td>Max</td>
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<td>Min</td>
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<td>SO4 by subtr</td>
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<td>Max</td>
<td>Mean</td>
<td>Min</td>
<td>Max</td>
<td>2012</td>
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<td>Max</td>
<td>Mean</td>
<td>Min</td>
<td>Max</td>
</tr>
<tr>
<td>HCO3</td>
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<td>Max</td>
<td>Mean</td>
<td>Min</td>
<td>Max</td>
<td>2012</td>
<td>Min</td>
<td>Max</td>
<td>Mean</td>
<td>Min</td>
<td>Max</td>
</tr>
<tr>
<td>B (ppm)</td>
<td>Min</td>
<td>Max</td>
<td>Mean</td>
<td>Min</td>
<td>Max</td>
<td>2012</td>
<td>Min</td>
<td>Max</td>
<td>Mean</td>
<td>Min</td>
<td>Max</td>
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</table>
Artifical Lake Tuz medium
"invented" by John Cheeseman, ca. 2010

<table>
<thead>
<tr>
<th>Ion</th>
<th>1x solution (meq/L)</th>
<th>Solution no.</th>
<th>Composition for recipe</th>
<th>meq/L</th>
<th>FW</th>
<th>g/L</th>
<th>g/10 L</th>
<th>1000x stock (g/L)</th>
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<td>53.49</td>
<td>0.0134</td>
<td>0.01 mL of 1000x</td>
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<td>136.1</td>
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</tbody>
</table>

Weigh salts 1-8 into separate containers (or only 1-7 if your freak out about Boron)

Dissolve all salts but the CaCl2 by adding with stirring to 8L of deionized or distilled water.
Add a little at a time and/or use a magnetic stirrer, wooden spoon or long spatula to stir off the bottom as needed.

Dissolve the CaCl2 in about 700-800 mL dW then pour it slowly into the main solution.
Note: CaSO4 is only sparingly soluble and not to 25 mM so it is important that it not precipitate at this step.

Add 1000x micronutrients and Fe using a Hoaglands or MS recipe (in lieu of better information) when making the stocks (add 10 mL/10 L)
The natural pH of this seems to be almost exactly 8.

Dissolve the N and P salts (#9-11) in 200 mL DW and store at 4°C for addition at the time of use.
Concentrations of N and P are intentionally very low. The plants don't care and the solutions take longer to turn green.