Supporting Information

Calculate example of the add amount of the CuSO₄ • 5H₂O in water group:

1. Reagent: The reagent of Copper sulfate pentahydrate was used. (Sigma, Aldrich, Germany, Ph.Eur.99-102%)

2. Stock solution: Weighting 0.9823 g CuSO₄ • 5H₂O, dissolve it in ultra-pure water and make up the final volume to 250mL. the copper concentration of the solution is:

\[ \text{Cu}^{2+} (mg/mL) = \frac{0.9825 \times 1000 \times 63.55}{249.69} \div 250mL = 1mg/mL \]

3. Copper solution prepared: Add 6 mL stock solution to 1000 mL of volumetric flask, make up to the mark with ultra-pure water, the concentration of the water is 6 mg Cu/L.

4. Calculation: At first, the concentration of the water is 6, 15 and 30 ppm. Take 6 ppm as an example.

After first three days, the total amount of consumed feed is 169.9g; water is 165.6g, so the copper is 1019.4μg for diet group and 993.6μg for water group.

\[
\frac{1019.4 - 993.6 + 1019.4}{993.6} \times 6mg/L = 6.3mg/L
\]

Adjust the concentration in drinking water to 6.3 ppm in the next three days.

5. Add 6.3 mL stock solution to 1000 mL of volumetric flask, make up to the mark with ultra-pure water, the concentration of the water is 6.3 mg Cu/L. The level of 15 and 30 ppm are calculated and prepared by the same steps.

<table>
<thead>
<tr>
<th>Steps</th>
<th>Potency(W)</th>
<th>Time(min)</th>
<th>Ramp</th>
<th>Hold</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>800</td>
<td>5</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>1400</td>
<td>10</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>0</td>
<td>/</td>
<td></td>
<td>20</td>
</tr>
</tbody>
</table>

Supporting Table 1. Precise heating program of microwave: