Sensory Evaluation of Magic Cookie Bar Supplemented with Folic Acid

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Abstract
Liquid folic acid has been tested during this experiment and was found to be a suitable method of folic acid supplementation that can easily be added to favorite recipes a 100 mcg drop at a time. Preparing food using folic acid supplementation helps to minimize the risk for neural tube birth defects.

Methods

Four magic cookie bars were supplemented with folic acid in increasing increments of 100 mcg, 200 mcg, 300 mcg, and 400 mcg. The other magic cookie bar was the control of this experiment and was made without folic acid supplementation. The five bars were evaluated by using six sensory characteristics- flavor, texture, color, aftertaste, cell size, and thickness.

Results

Nutrition analysis reported that the original control recipe had 8 mcg of dietary folate equivalents. The control had the lowest amount of total folate with 8 mcg per recipe. The sample with a 25% increase in folic acid and receiving 100 mcg in supplemental liquid folic acid had a total amount of 108 mcg. The 50% increased sample had 208 mcg, 75% with 308 mcg and 100% receiving the most supplementation with 408 mcg of total folate. The results from the study indicated that liquid folic acid was an acceptable way to add supplemental folic acid to cooked foods, especially baked goods. This study may be useful not only for dietitians counseling pregnant patients, but also to clients wanting to actively prevent neural tube birth defects by taking 0.4 to 0.8 mg of folic acid if there is any risk in becoming pregnant.

<table>
<thead>
<tr>
<th>Variation</th>
<th>Folate Already in Recipe</th>
<th>Supplemental Folate</th>
<th>Total Folate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>8 mcg</td>
<td>0 mcg</td>
<td>8 mcg</td>
</tr>
<tr>
<td>25%</td>
<td>8 mcg</td>
<td>100 mcg</td>
<td>108 mcg</td>
</tr>
<tr>
<td>50%</td>
<td>8 mcg</td>
<td>200 mcg</td>
<td>208 mcg</td>
</tr>
<tr>
<td>75%</td>
<td>8 mcg</td>
<td>300 mcg</td>
<td>308 mcg</td>
</tr>
<tr>
<td>100%</td>
<td>8 mcg</td>
<td>400 mcg</td>
<td>408 mcg</td>
</tr>
</tbody>
</table>

Table 1

References


