Best-before date mass experiment – food storage temperatures registered by Swedish school pupils

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Significance:
A high proportion of food items were stored at higher temperatures than recommended. The pupils sometimes failed when using the best-before date. However, the mass experiment contributed to an increased interest and knowledge of food hygiene, food storage and resource management among the school pupils.

Introduction:
The fourth Friday in September is Researchers’ Night, instituted by the European Commission. In autumn 2011 a mass experiment focusing on refrigeration temperatures was organized through 72 Swedish schools.

The aim
To investigate the food storage temperature in Swedish refrigerators and to use best-before-date labeling to determine whether school children considered the food items eatable. Would such an experience increase interest and knowledge of food storage and resource management among school pupils?

Methods: The experiment was performed by 1.812 school pupils who registered the temperature on different shelves in their own family’s refrigerator.

Amount of food items stored above recommended temperatures

<table>
<thead>
<tr>
<th>Place</th>
<th>&lt; 0°C</th>
<th>0-4°C</th>
<th>5-8°C</th>
<th>&gt; 8°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>44%</td>
<td></td>
<td></td>
<td>21%</td>
</tr>
<tr>
<td>B</td>
<td></td>
<td>26%</td>
<td>36%</td>
<td>37%</td>
</tr>
<tr>
<td>C</td>
<td></td>
<td>61%</td>
<td></td>
<td>11%</td>
</tr>
<tr>
<td>D</td>
<td></td>
<td>47%</td>
<td>35%</td>
<td>16%</td>
</tr>
<tr>
<td>E</td>
<td></td>
<td>44%</td>
<td>28%</td>
<td>25%</td>
</tr>
<tr>
<td>F</td>
<td></td>
<td>36%</td>
<td>31%</td>
<td>30%</td>
</tr>
</tbody>
</table>

Average temperatures:
A = 6.2 °C
B = 7.5 °C
C = 4.8 °C
D = 5.9 °C
E = 6.1 °C
F = 6.8 °C

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