Effect of Sterilization Dosage, Medium, and Tempeh Thickness on Physical Properties and Nutrition Value of Canned Tempeh

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OBJECTIVES

Fresh tempeh = short shelf life
Canned tempeh = stable
What are their effects to:
• Physical properties
• Nutrition
• Sensory

METHOD

Tempeh of different thicknesses and canned in different mediums (water, brine, oil) at different levels of F₀ (obtained from different combinations of time and temperatures) were analyzed for their hardness, pH, isoflavone, and sensory.

RESULTS

SENSORY ATTRIBUTES

<table>
<thead>
<tr>
<th>Type of tempeh</th>
<th>Daidzein (mg)</th>
<th>Genistein (mg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fresh tempeh²</td>
<td>17.59</td>
<td>24.85</td>
</tr>
<tr>
<td>Fresh tempeh³</td>
<td>26.00±6.00</td>
<td>28.00±11.00</td>
</tr>
<tr>
<td>Sterilized tempeh</td>
<td>2.40</td>
<td>2.95</td>
</tr>
<tr>
<td>Fried tempeh⁴</td>
<td>35.00±11.00</td>
<td>31.00±11.00</td>
</tr>
<tr>
<td>Fermented tempeh⁵</td>
<td>8.00</td>
<td>7.20</td>
</tr>
</tbody>
</table>


CONCLUSIONS

• Canned tempeh is softer as well as has lower pH and isoflavone content than fresh tempeh
• Tempeh hardness and its pH depend on F₀ (regardless of its time-temperature combination)
• In general, canned tempeh in oil is more acceptable by panelists