VEGAN SAUSAGE PRODUCTS WITH LUPIN PROTEINS AND DIETARY FIBERS

Project

The PlantsProFood project, involving an alliance of 10 companies and 4 R&D organizations, aims to recover food ingredients from the seeds of native blue sweet lupins (Lupinus angustifolius). The new ingredients, such as lupin protein isolate and lupin dietary fiber, will enable food producers to develop innovative products with excellent nutri-physiological properties.

Background

It is currently estimated that there are about 700,000 vegans in Germany, with that number constantly increasing. There is hence a growing demand for vegan products. The PlantsProFood project aims to develop vegan sausage-like products (cuttable sausage and spreadable sausage). The biggest challenge here is to recreate the textural and sensory properties of real sausage products. The use of lupin proteins and lupin dietary fibers must give the creaminess and spreading properties of liver sausage products and must also provide firmness of structure for cuttable sausage.
**Objective**

The objective was to use the protein and dietary fiber fractions from the seeds of blue sweet lupins to manufacture innovative, vegan, sausage-like products. The neutral taste and excellent functional properties of these lupin ingredients make them ideal for use in vegan sausage products.

**Results**

Lupin proteins and dietary fibers allowed vegan sausage products (cut sausage and spreadable sausage) with excellent sensory properties and improved spreading and cutting properties to be manufactured. The color of the products was also similar to traditional sausage products.

<table>
<thead>
<tr>
<th>Sample</th>
<th>Dry matter [%]</th>
<th>pH value</th>
<th>Strength</th>
<th>Penetration depth [mm] (penetrometer)</th>
<th>Color measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spreadable, vegan sausage product</td>
<td>49.9</td>
<td>5.6</td>
<td>7.1</td>
<td>53.9</td>
<td>53.9</td>
</tr>
<tr>
<td>Standard liver sausage</td>
<td>48.3</td>
<td>6.2</td>
<td>5.7</td>
<td>61.9</td>
<td>11.4</td>
</tr>
</tbody>
</table>

1 Spreadable vegan sausage.