Contamination test of Salmonella sp. in household industry white tofu Naimata Kupang Yuliani Ni Nyoman1), Blegur Fatmawati1), Sutaryana Juliady Dharma1), Budiana I Gusti Made Ngurah2) 1) Pharmacy Health Polytechnic Study Program Ministry of Health Kupang 2) Chemistry Study Program, University of Nusa Cendana Kupang Email: y.ninyoman@yahoo.com

Abstrak

The test of Salmonella bacteria Sp. contamination in white tofu produced in home industries in Naimata has been conducted. The test was conducted at the Microbiology Laboratory of the Food and Drug Supervisory Agency of the Province of East Nusa Tenggara in Kupang on August 3 - August 8, 2016. The research based on the level of consumption of tofu produced in home industries in Naimata is quite high by the community. The purpose of this study was to determine whether the white tofu produced in the household industry in Naimata was contaminated with Salmonella bacteria or not. The research process consists of three stages, namely, the Pre-enrichment stage, where the sample is weighed 25 grams aseptically and then mixed into 225 mL BPW media and incubated at 37 °C for 24 hours, enrichment stage is the stage where 1 mL of culture in the previous stage was taken and 0.1 mL was then added to the media so that MKTTn and RVS were 10 mL which were then incubated at 37 °C and 42.5 °C for 24 hours, the Inoculation and Identification stage was culture from MKTTn media and RVS was taken then planted in the media XLD and BGA specific. The data analysis method used is only comparing the test results from the research sample with SNI: 01-3142-1998 regarding the Quality Requirements of Tofu as a reference. This test is also made a positive comparison or control, which is also made XLD and BGA media planted with culture of Salmonella bacteria. The results of the ceramics test of Salmonella bacteria in white tofu stated that the white tofu produced in the home industry in Naimata was not contaminated with Salmonella bacteria Sp. with a negative value of colonies / 25 grams of samples according to the Indonesian National Standard SNI: 01-3142-1998 regarding the quality requirements of tofu. Analysis of results The analysis of the results is done by comparing the test results with the standard limits for contamination of bacteria Salmonella Sp. according to the Indonesian National Standard SNI: 01-3142-1998 namely Negative / 25 g.

Results and Discussion

This study was conducted on white tofu samples obtained from home industries in Naimata to obtain data on the presence or absence of contamination of bacteria Salmonella Sp. in knowing what is produced by the industry. The sampling process is done by aseptic method, ie the sample is taken randomly from the upper right corner to the lower left corner (diagonally), inserted in aOffice in glass beaker sterileand then taken to the Microbiology laboratory of the Food and Drug SupervisoryKupang to be crushed before weighing as many samples 25 grams for testing to the next stage.

A. Pre-enrichment test This test generally uses non-selective search media that contains enough nutrients to strengthen very weak or diseased bacterial cells caused by food processing (BPOM, 2009).

In this test, the results obtained were tofu samples that had been suspended withmedia BPW as much as 225 mL then incubated at 37 °C for 24 hours. The results obtained were that the suspension had undergone a color change from the previous cream to brownish color. These results show that in the sample there are microbes but it is not certain that Salmonella but the bacterial growth activity in the sample may be due to factors - factors such as: C. Inoculation and identification tests for Salmonella. Each microbial colony to be identified must be completely pure and to obtain pure culture selective media are used which allow for the isolation of suspect microbial colonies based on the biochemical characteristics of microbes which will affect the bacterial growth properties of a specific medium, namelymedia BGA and XLD (BPOM, 2009 ). Tests at this stage will be taken for each bacterial culture loop onmedia MKTTn and RVS suspected of Salmonella to be scratched onmedia BGA and XLD by the quadrant stroke method which will then be incubated at ± 37 °C for 24 hours. Based on the results of observations made at this stage, negative results were obtained because the BGA and XLD media did not show a collection of bacterial colonies that showed specific characteristics as listed in the literature. In this test positive controls were also made on BGA and XLD selective media planted with cultures of Salmonella Typhimurium bacteria. Based
Controls were also made on BGA and XLD selective media planted with cultures of Salmonella Typhi/murium bacteria. Based on observations obtained when planting culture Salmonella on specific media BGA and XLD, it was seen that there was a bacterial colony Salmonella growing, the testing would be carried out with a confirmation test. Table 1.

<table>
<thead>
<tr>
<th>Salmonella Sp. No. Samples</th>
<th>Pre-enrichment</th>
<th>Enrichment</th>
<th>Inoculation and identification</th>
<th>MKTTn</th>
<th>RVS</th>
<th>BGA</th>
<th>XLD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. white Know Cloudy Cloudy Cloudy (-) Salmonella (-) Salmonella (-)</td>
<td>Salmonella (-) Salmonella (-)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. positive control Salmonella Typhi/murium Cloudy Cloudy Cloudy (+) Salmonella (+) Salmonella (+)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(source: primary data research, 2016) In the confirmation test, the results of positive control cultures were taken 1 cone and then planted on Nutrient Agar media and then incubated at 37 °C for 24 hours. Salmonella is positive if the biochemical test and serological test results are as follows: 1. TSIA : butt (+), slant (-), positive or negative gas and H2S positive or negative. 2. urea hydrolysis: negative 3. test β-galactosidase : negative 4. production: negative 5. Indole: negative 6. Proskauer voges reaction: negative

Conclusions

Based on microbiological testing conducted at the Laboratory of Drug and Food Control in Kupang on August 3 - 8, 2016 against white tofu samples obtained from home industries in Naimata, the results obtained were non-polluted samples bacteria Salmonella Sp (negative colony / 25 g sample). In other words, the samples tested have met the quality requirements of the Indonesian National Standard SNI 01-01142-1998 regarding the quality requirements to know the parameters tested were contamination Salmonella

Sources

Similarity