Harris et al (2) used TA agar supplemented
5 per cent horse blood for primary isolation
of T. hydysenteriae. For inoculation the specimens
were filtered through millipore filters. Gas pack
system provided anaerobic conditions. Songer et
al (3) used TSA medium supplemented with 5 per
cent horse blood and 400 mg/ml spectinomycin
for isolation of T. hydysenteriae. Incubated media
were inoculated in anaerobic conditions provided by
Gas pack system at 42°C.
The purpose of the experiment was to prepare
more selective media for primary isolation of
anaerobes from faeces associated with swine

Material and Methods
Strains: 17 isolates of Treponema hydysenteriae,
3 of T. innocens, 45 of Bacteroides sp., and
2 strains of aerobes were used.
Samples: 60 samples of faeces sampled from
pigs suffering from swine dysentery and healthy
animals were used.
Anaerobic conditions were provided by using a
mixture of 20 per cent deoxygenated CO₂ and 80
per cent hydrogen in anaerobic jars with modified
Wright's catalyst prepared in our laboratory.
Medium: Basal medium TSA blood agar was used.
Spectinomycin was kindly supplied by Upjohn
Company. The following growth stimulating factors
were added to TSA medium used: 0.01% dibutylthio-
methane, 0.1% Tween 80 and yeast extract.
Drug sensitivity of T. hydysenteriae was determined
using MIC test. Aerobes were determined using
triplicate milk in anaerobic jars with modified
Wright's catalyst prepared in our laboratory.

Results
Colony forming units-CFU were the highest
when basal medium supplemented with 0.01%
DPT and egg yolk or rumen fluid.
Yeast extract showed a little less growth, how-
ever more stable growth stimulation of T. hydysen-
teriae than egg yolk and rumen fluid. T. hydysen-
teriae was resistant to spectinomycin and polyn-
ycin. Table 1 shows MIC test of spectinomycin for
anaerobes and aerobes.

Table 1. Sensitivity of selected aerobes and
anaerobes to spectinomycin.

<table>
<thead>
<tr>
<th>bacterium</th>
<th>number of strains</th>
<th>MIC µg/ml</th>
</tr>
</thead>
<tbody>
<tr>
<td>T. hydysenteriae</td>
<td>10</td>
<td>500</td>
</tr>
<tr>
<td>T. innocens</td>
<td>5</td>
<td>500</td>
</tr>
<tr>
<td>Bacteroides sp.</td>
<td>45</td>
<td>3-250</td>
</tr>
<tr>
<td>Staphylococcus aureus</td>
<td>30</td>
<td>0,39-25</td>
</tr>
<tr>
<td>Escherichia coli</td>
<td>30</td>
<td>3,12-250</td>
</tr>
<tr>
<td>Streptococcus sp.</td>
<td>10</td>
<td>0,06-1,56</td>
</tr>
</tbody>
</table>

Tab. 2. Growth of T. hydysenteriae from
diluted faeces samples on spectinomycin/
TSA medium and spectinomycin
vancomycin TSA medium

<table>
<thead>
<tr>
<th>specimen</th>
<th>dilution</th>
<th>mean number of colony forming units</th>
</tr>
</thead>
<tbody>
<tr>
<td>S. TSA</td>
<td>V. TSA</td>
<td>T. hydysenteriae</td>
</tr>
<tr>
<td>S0</td>
<td>10⁴</td>
<td>154</td>
</tr>
<tr>
<td>S10</td>
<td>10⁴</td>
<td>22</td>
</tr>
<tr>
<td>S1</td>
<td>10⁴</td>
<td>58</td>
</tr>
<tr>
<td>S11</td>
<td>10⁴</td>
<td>7</td>
</tr>
<tr>
<td>SW</td>
<td>5^¹</td>
<td>33</td>
</tr>
<tr>
<td>V/III</td>
<td>10⁴</td>
<td>22</td>
</tr>
</tbody>
</table>

x) usually bacteroides sp. and coli.

The results presented in Table 2 shows that
spectinomycin/TSA medium was more selective
than Songer et al (3) medium. The
number of CFU on this medium was only 6 per
cent lower than on spectinomycin TSA agar.

Conclusions:
Spectinomycin/vancomycin yeast extract DTT
TSA medium was tested using samples of 60 faeces
from animals suffering swine dysentery and
healthy pigs. T. hydysenteriae was not only iso-
lated from suffering pigs, but also from carriers
of this bacteria.

Selected references: 1. Blisk M., Szynkiewicz Z.,
Rumiszka A., Medycyna Wet., S. 376, 1980,
2. Harris D.L., Corne C.B., Christensen C.R.,
61, 1972.

To the spectinomycin blood TSA medium
medium 250 µg/ml vancomycin was added.
Table 2 shows the comparison of T. hydysenteriae
growth from diluted samples of faeces on 2