(III) Salmonella

Specimen collection

Preservation

Colony isolation

Aerobic culture

DD checker MLCB agar

Salmonella LA “SEIKEN”

Differential media:
- TSI agar
- LIM agar
- Simmons Citrate agar
  (BBL, Nissui Pharma, etc.)

Identification kit
- Bio Test 1 (Eiken)
- ID test EB-20 (Nissui Pharma, etc.)

Biochemical properties

B-Disk method
Micro specimen dilution method etc.

Identification

Serotyping

Evaluation of results

SS agar
DHL agar
(BBL, Nissui Pharma, etc.)

Antigens can be detected without culturing.

Salmonella antisera “SEIKEN”
Set 1-7
Various monovalent sera
Salmonella phase induction antisera “SEIKEN”
# Salmonella Antisera

## CE Marked

<table>
<thead>
<tr>
<th>Former Alphabetic O Groups</th>
<th>Current WHO O Groups</th>
<th>2mL x 2 polyvalent, 15 O-grouping and Vi</th>
<th>5mL x 7 H-G mono</th>
</tr>
</thead>
<tbody>
<tr>
<td>O Groups</td>
<td>O Groups</td>
<td>Polyvalent O</td>
<td>H-t</td>
</tr>
<tr>
<td>A</td>
<td>2</td>
<td>293855</td>
<td>293983</td>
</tr>
<tr>
<td>B</td>
<td>4</td>
<td>293862</td>
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<tr>
<td>C1-C2</td>
<td>6,7</td>
<td>293886</td>
<td>294005</td>
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<td>C2-C3</td>
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<td>D1</td>
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<td>9,46</td>
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<td>D3</td>
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<td>E1-E2-E3</td>
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<tr>
<td>E</td>
<td>1,3,19</td>
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<td>F</td>
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<td>G1-G2</td>
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<td>21</td>
<td>294217</td>
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<td>M</td>
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<td>38</td>
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<tr>
<td>Q</td>
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<td>41</td>
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<td>294447</td>
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<td>X</td>
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<td>Y</td>
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<td>294487</td>
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<tr>
<td>Z</td>
<td>50</td>
<td>294507</td>
<td>294507</td>
</tr>
</tbody>
</table>

## Former 2mL x 2 polyvalent, 15 O-grouping and Vi

### Typing Set 2

- **H-a** 293923
- **H-b** 293930
- **H-c** 293947
- **H-d** 293954
- **H-e** 293961
- **H-f** 294036
- **H-g** 294050
- **H-h** 294067
- **H-i** 294081
- **H-j** 294098
- **H-k** 294111
- **H-l** 294120
- **H-m** 294135
- **H-n** 294142
- **H-o** 294149
- **H-p** 294159
- **H-q** 294166
- **H-r** 294180
- **H-s** 294197
- **H-t** 294203
- **H-u** 294210
- **H-v** 294227

### Phase Ind. Set 200181

- **H-f** 211798
- **H-m** 211804
- **H-p** 211811
- **H-s** 211828
- **H-t** 211835
- **H-u** 211842

### Also Available

- Poly A-G 292483
- Poly A-S 292476
- Omnivalent 292537
- H-E Complex 292520

## Not CE Marked

### 5mL x 4 H-L mono

- **Vi** 294470

### Also Available

- H-v 294098
- H-w 294104
**Purpose:** Serotyping of *Salmonella*

**Features:** Antisera for the typing of Salmonella Group O and H antigens. These are available in two separate sets to accommodate the requirements of users. All items are also available separately in single polyvalent or monovalent vial form. (Refer to our complete product list on the previous page.)

**Contents of kits:**
- **Set 1:** For Salmonella Group O antigen serotyping. (18 vials including Vi serum)
- **Set 2:** For Salmonella H antigen serotyping (17 vials)
- **Set 3:** H-L antigen group factor serum set. (4 vials)
- **Set 4:** H-1 antigen group factor serum set. (5 vials)
- **Set 5:** H-G antigen group factor serum set. (7 vials)
- **Set 6:** H-Z4 antigen group factor serum and H-e, n antigen group factor serum set. (5 vials)
- **Set 7:** for serotyping of typhoid bacillus and paratyphoid A bacillus.
  - (5 vials: 2 O sera, 2 H sera, and 1 Vi serum)

**Note:** The antisera contain preservatives and therefore cannot be used for phase induction. Set 7 is not necessary if using Sets 1 and 2. Antisera nomenclature consist of alphabetical letters (upper and lower case) and numerals, which should be noted when placing an order. Use only non-selective culture medium.

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**Important note regarding O grouping**

Bacterial serotyping methods are standardized worldwide. The WHO has a reference center based in France (Pasteur Institute) for Salmonella, as does the bacteriology department in Japan’s National Institute of Infectious Diseases (NIID). Due to the fact that each country should have a similar reference center, manufacturers of typing antisera obtain bacterial strains via the Pasteur Institute. Therefore, Denka Seiken also uses strains obtained from the Pasteur Institute through the NIID.

A committee comprised of experts from various countries was organized to determine the serotyping of Salmonella. This task was originally based on research done by Kaufman-White. At first, O serotypes were assigned letters from the Roman alphabet: A, B, etc. Later as new serotypes were discovered, they were included in these groups. However, since there are only 26 letters in the alphabet, after ‘Z’ all O-antigen factor strains were assigned a number. Eventually, Salmonella serotyping charts listed a mixture of Roman letters and numerals; therefore, about 10 years ago all O-antigen factor strains were ultimately assigned a uniform number to simplify the typing system, which is currently in use.

The antisera product list on the previous page conforms to that of the WHO, by including a column in the left-hand side of the chart to depict the difference between the former and current classification systems. Although internationally MUREX and DIFCO still employ the alphabet classification system, the reason is unclear. The aforementioned comparison chart has been included in our product list for the convenience of users familiar with either system.

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**Antisera for Salmonella Phase Induction “Seiken”**

**Purpose:** The flagella of Salmonella exist in phases 1 and 2. This product is used for phase induction of the H antigen by its addition to a semi-fluid culture medium.

**Features:** Available for individual purchase or as a set.

**Note:** The antisera do not contain preservatives. This serum cannot be used for agglutination tests. Antiserum nomenclature consists of alphabetical letters (upper and lower case) and numerals, which should be noted when placing an order. (Please refer to the list on the previous page.)
Salmonella LA

<table>
<thead>
<tr>
<th>Product Code 230379</th>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Salmonella screening by Slide Latex Agglutination</strong></td>
<td>30 tests</td>
</tr>
<tr>
<td>Kit contents:</td>
<td></td>
</tr>
<tr>
<td>Sensitized latex</td>
<td>1 mL x 1 vial</td>
</tr>
<tr>
<td>Control latex</td>
<td>1 mL x 1 vial</td>
</tr>
<tr>
<td>Positive control</td>
<td>0.5 mL x 1 vial</td>
</tr>
<tr>
<td>Test card</td>
<td>18 pcs.</td>
</tr>
<tr>
<td>Mixing stick</td>
<td>80 pcs.</td>
</tr>
</tbody>
</table>

**Purpose:** Identification of *Salmonella*.

**Features:** Identifying *Salmonella* from unknown bacteria by slide latex agglutination method. Having outstanding specificity, it does not react with other bacteria on separated culture medium. Effective for differentiation from Citrobacter, which resembles *Salmonella*. Rapid reaction and easy to perform.

**Note:** Cannot be used for serotyping of *Salmonella*. 