

Shigella

Agglutinant sera

355-7161 / 355-7171 / 355-7151
355-7182 / 355-7183

DEFINITION

Strains susceptible of being agglutinated in these sera must be immobile and present biochemical characteristics of *Shigella*, such as:

- non-gas-producing,
- weakly saccharolytic,
- urease negative,
- lysine decarboxylase negative,
- Christensen citrate negative.

Each of these polyvalent sera groups a certain number of serotypes in 4 sub-groups.

1. Sub-group A: 2 polyvalent sera

- **Serum A1:** anti-*Shigella dysenteriae* (indole negative): serotypes 1, 3, 4, 5 and 6.
- **Serum A2:** anti-*Shigella dysenteriae* (indole positive): serotypes 2, 7 and 8.

Two of the ten serotypes of sub-group A (mannitol-negative) are encountered very rarely: 9 and 10.

2. Sub-group B: 1 polyvalent serum

Serum anti-*Shigella flexneri* serum, which agglutinates the 6 serotypes of this sub-group as well as X and Y.

3. Sub-group C: 3 polyvalent sera

- **Serum C1:** anti-*Shigella boydii* (indole -): Serotypes 1, 2, 3 and 4
- **Serum C2:** anti-*Shigella boydii* (indole -): Serotypes 8, 10 and 14
- **Serum C3:** anti-*Shigella boydii* (indole +): Serotype 5, 7, 9, 11 and 15

Of the 15 serotypes in this sub-group:

- 12 and 13, encountered only exceptionally, are not agglutinated by these sera.
- serotype 6, closely related to *S. sonnei*, phase II, is agglutinated by the corresponding serum.

4. Sub-group D: 1 mixed serum

Mixed serum D, marketed under the name of mixed anti-*sonnei* serum. It agglutinates the 2 phases of *S. sonnei*.

N.B.: The mixing of populations has led, even in Europe, to the isolation of sub-group C (*S. boydii*). This sub-group is much less represented than sub-group B (*S. flexneri*), however.

Thus, agglutination with sera of sub-group C should not be investigated unless it has not been possible to detect it with anti-B sera.

5. Bio-Rad also markets a monovalent serum:

Anti-*S. dysenteriae* 1 serum (or *Shiga* bacillus: mannitol-, indole-, catalase+), which agglutinates only this serotype.

PRESENTATION

The sera are pre-diluted for agglutination on slides and presented in 2 ml bottles.

1 monovalent anti-*S. dysenteriae* 1 serum
code 355-7161

1 mixed anti-*S. sonnei* serum
code 355-7171

1 polyvalent anti-*S. flexneri* serum
code 355-7151

Pack of 2 bottles of sera A1 and A2
code 355-7182

Pack of 3 bottles of sera C1, C2, C3
code 355-7183

STORAGE

- + 2°C to 8°C in a dry place.
- Expiration date and batch number are shown on the package.

METHODOLOGY

First isolate a pure strain in the following manner:

- use an absolutely clean glass slide.
- deposit on this slide a drop of serum and a drop of isotonic saline water (to check the "smooth" state of the strain).
- using a platinum inoculating loop, collect a small quantity of culture: emulsify it first to check its "smooth" condition.
- After this check, emulsify with the drop of serum to obtain a light and uniform mix.

READING AND INTERPRETATION

Examine with the naked eye, or better still above a concave mirror: agglutination appears within 30 seconds.

QUALITY CONTROL OF MANUFACTURER

Every product manufactured and marketed by Bio-Rad is subject to a quality-assurance procedure at all stages, from the reception of raw materials to the marketing of the end-product. Each batch of finished product undergoes quality control and is marketed only if it satisfies the acceptability criteria.

Documentation relative to the production and control of each batch is kept on file

BIBLIOGRAPHY

- **TOUCAS M., d'HAUTEVILLE H., DELTEL M. (1982):** Répartition et étude des souches de *Shigella* isolées en France, reçues au centre National des *Shigella* de 1978 à 1981. Méd. Mal. Infect. **12**, 588-593.
- **TOUCAS M., RICHARD C. (1979):** Isolement et diagnostic des *Shigella* et *Alkalenscens dispar.* Journées Pasteur- Necker. 19-21.