A NEW SALMONELLA SEROVAR: SALMONELLA ITAMI
(9,12:1,2,13:1,2)

RIICHI SAKAZAKI, KAZUMICHI TAMURA, HISAO ABE*,
YOSHIHARU OGAWA* and YOSHIITO MIYATA**

Japan Salmonella Reference Center, The First Department of Bacteriology, National
Institute of Health, Kamiosaka, Shinagawa-ku, Tokyo 141; *Quarantine Station,
Osaka International Airport, Toyonaka-shi, Osaka 560, and **Osaka Prefectural
Public Health Laboratory, Higashinari-ku, Osaka 537

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SUMMARY: A new Salmonella serovar, here named Salmonella itami, was iso-
lated from a traveller suffering from gastroenteritis, who had just returned from
Thailand. The isolate belonged to the subgenus I of Salmonella, and the antigenic
formula was determined to be 9,12:1,2,13:1,2.

During the medical inspection at the quarantine station of Osaka Inter-
national Airport, an organism of previously unreported Salmonella serovar was
found in stool specimens of a traveller suffering from gastroenteritis, who had
just returned from Thailand. The new serovar strain belonged to the Salmonella
subgenus I. The media and methods used to characterize the strain were
basically those recommended by Edwards and Ewing (1974). The results are
described below.

The organism was a gram-negative, facultatively anaerobic, asporogenous rod
which was motile by means of peritrichated flagella. It produced H₂S in the
butt of Kligler iron agar, utilized citrate on Simmons' agar, and failed to grow
in KCN broth. It did not produce indole, urease, phenylalanine deaminase, or
gelatinase. The organism gave positive reactions in lysine and ornithine
decarboxylase tests within 24 hr, and negative reaction in the arginine dihydrolase
test. It produced tetrathionate reductase. Malonate was not utilized within
4 days.

The organism fermented glucose promptly with gas production. It fer-
mented also arabinose, maltose, melibiose, rhamnose, trehalose, xylose, dulcitol,
mannitol, and sorbitol within 48 hr. Cellobiose, lactose, raffinose, sorbose, sucrose,
adenitol, inositol, salicin, or esculin was not attacked within 15 days. Glycerol
was fermented within 3 days. Acid was produced from citrate and d-tartrate but not from mucate in Kaufmann-Petersen’s broth. Galacturonate was not utilized. It gave a negative reaction in ONPG test.

Preliminary O-agglutination tests showed that the organism belonged to O-group D. The somatic antigen factors determined with single-factor sera were 9,12. The organism was diphasic. In the analysis of the H antigens, the phase 1 antigens were determined to be 1,2 and the phase 2 antigens to be 1,2. Thus, the complete antigenic structure of the organism was 9,12:1,2;1,2.

The organism was sent to Dr. L. Le Minor, WHO Collaborative Centre for Reference on Salmonella, Pasteur Institute, Paris, who agreed that it is a new serovar of Salmonella. The serovar was named Salmonella itami after Itami City where the Osaka International Airport is located.

We thank Dr. L. Le Minor for his confirmation of our results on the organism.

REFERENCES