



Description:

- *Salmonella* is a rod-shaped, Gram negative, non-motile bacteria, which does not form spores.
- This bacterium was first discovered in the 1880s and named *Bacterium suipestifer*. Later it was renamed *Salmonella* after the scientist who discovered it, Dr Daniel Salmon.

Interesting Facts:

- Most reptiles and amphibians carry *Salmonella*.
- *Salmonella* diseases are zoonotic, spreading from animals to humans, and also from human to human.
- *Salmonella* move through their host's intestines via flagella.
- There are approximately 2,500 different strains of *Salmonella*.
- *Salmonella* infections have been found to be more frequent in summer than in winter.
- Even after symptoms of *Salmonella* infection have stopped, it is still possible to infect others. That is why it is advisable to wait another 48 hours after symptoms have disappeared to go back to work or school.
- *Salmonella* is not killed in the freezing process.
- According to the U.S. Centers for Disease Control and Prevention, approximately 1.2 million illnesses occur due to non-typhoidal *Salmonella* annually.
- Some people may develop reactive arthritis when suffering from a *Salmonella* infection.

Infection:

- *Salmonella* infections are known as salmonellosis. It takes 12 to 72 hours for symptoms to develop.
- *Salmonella* infections generally cause abdominal cramps, nausea, chills, loss of appetite, diarrhoea and fever.
- The most common ways of becoming infected by *Salmonella* are through contaminated eggs, dairy, poultry and meat products.
- After being eaten, *Salmonella* passes through the stomach to the intestine, where it binds to and passes through the intestinal wall.
- *Salmonella* has evolved mechanisms to prevent our immune system from attacking it.
- The best way of avoiding *Salmonella* infection is by cooking food thoroughly and performing good handwashing technique.

In the Lab / at Wickham Laboratories Ltd

- Media such as Xylose Lysine Deoxycholate agar (XLD) can be used to examine for the presence / absence of *S. abony*. Shiny black colonies, 1-2 mm in diameter are indicated as a positive result. This is then confirmed using identification techniques such as MALDI-ToF (Matrix Assisted Laser Desorption Ionization-Time of Flight).
- The presence / absence of this bacteria is also included in the QC testing for products with raw materials of natural origins. It may also be included in testing for other products if the risk assessment by the client deems it to be necessary.
- *Salmonella spp* are predominantly a foodborne organism found due to faecal pollution in the supply chain however it must be considered as part of the risk assessment of your product to determine if this testing needs to be included.
- Most food ingredients and food products will undergo batch testing for *Salmonella* to prevent outbreaks. From clinical specimens, *Salmonella* infection is identified by culturing a sample from an infected patient and evaluating it via a combination of appearance, serology and biochemical testing. If diagnosed, it should be reported to any treating clinician and public health organisations.

