TUBEX® ***TF*** **is a rapid and sensitive in vitro diagnostic test for detection of acute typhoid fever**

TUBEX® ***TF*** provides an accurate and reliable result within 10 minutes.

TUBEX® ***TF*** utilizes Heparinized plasma or serum samples.

TUBEX® ***TF*** is suitable for any laboratory setting.

TUBEX® ***TF*** is based on visual interpretation.

TUBEX® ***TF*** is characterized by high sensitivity and specificity.

TUBEX® ***TF*** Wash enables the analysis of colored samples.

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References:
1. Lim P-L., et al. One-step 2-minute test to detect typhoid-specific antibodies based on a particle separation in tubes. J Clin Microbiol. 1998; 36: 2271-2278

2. Tam FCH., et al. The TUBEX typhoid test based on particle-inhibition immunoassay detects IgM but not IgG anti-O9 antibodies. J Imm Meth. 2003; 282:83-91.

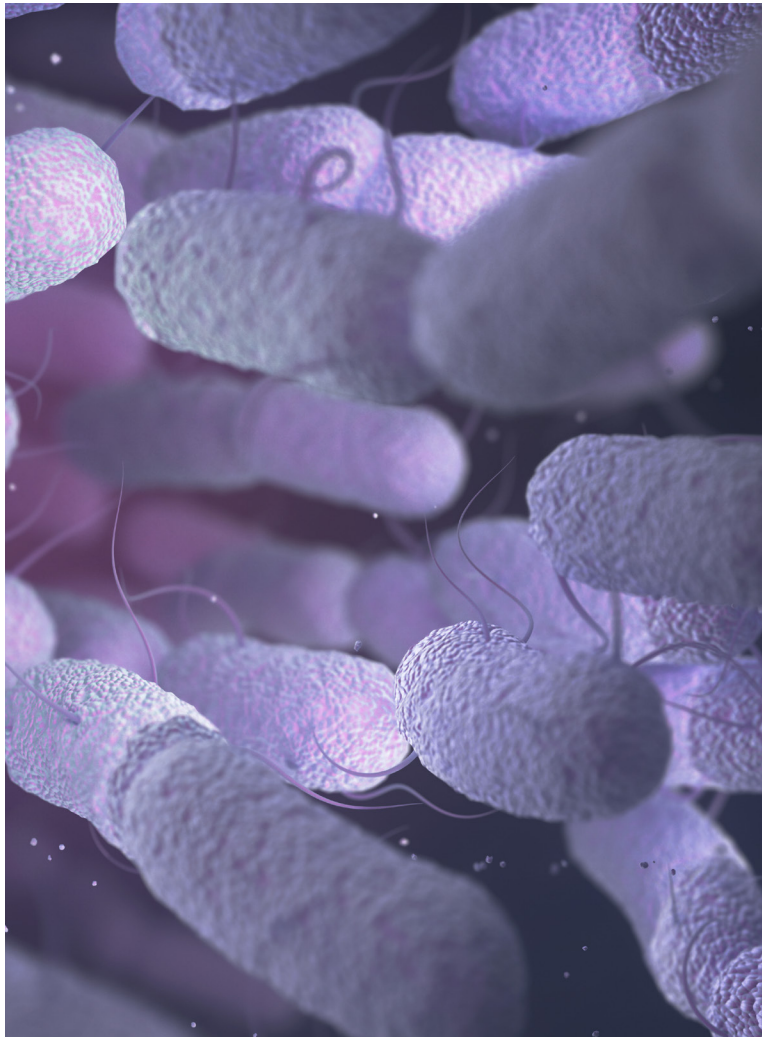
3. Kawano R.L., et al. Comparison of serological test kits for diagnosis of typhoid fever in the Philippines. J Clin Microbiol. 2007; 45:246-247.

4. Rahman M., et al. Rapid detection of early typhoid fever in endemic community children by the TUBEX O9-antibody test. Diagn Microbiol Infect Dis. 2007; 58:275-281.

5. Tarupiwa A., et al. Evaluation of TUBEX-TF and OnSite Typhoid IgG/IgM Combo rapid tests to detect Salmonella enterica serovar Typhi infection during a typhoid outbreak in Harare, Zimbabwe. BMC Researches Notes. 2015; 8.50

TUBEX® *TF*

For Rapid Detection of Typhoid Fever



Background

Typhoid fever is a water- and foodborne infectious disease caused by *Salmonella Typhi*. The disease is endemic in large parts of Asia, Africa, and Central and South America, and occasionally also causes epidemic spread.
Symptoms include prolonged fever, fatigue, headache, nausea, abdominal pain, constipation, or diarrhea.
Due to its non-specific clinical indications, patients with typhoid fever may be misdiagnosed with malaria, dengue fever, gastroenteritis, or pneumonia.

Typhoid fever can be treated with antibiotics if diagnosed early, but severe cases may lead to serious complications or death if left untreated. The rise of antibiotic-resistant strains of *Salmonella Typhi* is making treatment more difficult. This underscores the importance of timely diagnostic testing to ensure effective treatment

Diagnostics

Blood culture, a commonly used diagnostic can be cumber some, time-consuming, and even impossible without laboratory facilities. Diagnostic alternatives must therefore deliver effective and reliable results, independent of laboratory facilities.

TUBEX® ***TF*** is an in vitro diagnostic test, based on early detection of *Salmonella Typhi* IgM anti-O9 antibodies in serum. It is based on IMBI® technology[1,2] a semi-quantitative assay technology, a simple assay technology based on visual interpretation. TUBEX® ***TF*** is characterized by high sensitivity and specificity. TUBEX® ***TF*** can be performed in any laboratory environment and the result is ready within 10 minutes.

If the analysis of colored samples (such as icteric or haemolytic) is required, the alternative product TUBEX® ***TF*** Wash is available.

Well documented in research

Antibody detection

In a comparative study in the Philippines[3], Kawano and co-workers evaluated four antibody detection tests for typhoid fever. The sensitivity of TUBEX® ***TF*** was 95% at a specificity of 80%. In this study TUBEX® ***TF*** performed best among the analysed tests.

Better performance than Widal

In a prospective trial in Bangladesh by Rahman and co-workers[4], a total of 243 febrile outpatients (mainly children and adolescents) and 57 healthy controls were enrolled. Based on culture results, TUBEX® ***TF*** was 91% sensitive and 82% specific in febrile subjects. Specificity increased to 90% in non-febrile healthy subjects, suggesting that some culture-negative patients could be truly typhoidal. The Widal test demonstrated a sensitivity of 82 % and a specificity of 69% in febrile patients and 58% in non-febrile healthy subjects.

TUBEX usage during typhoid outbreaks

In an evaluation study from Zimbabwe by Tarupiwa and co-workers[5], a total of 131 patients with typical symptoms and signs of typhoid fever were tested with TUBEX® ***TF***. Based on blood culture as reference standard, TUBEX® ***TF*** had 100% sensitivity and 94% specificity. The results indicated that TUBEX® ***TF*** could be a useful tool for the rapid diagnosis of *Salmonella enterica* serovar Typhi infection during typhoid outbreaks in Zimbabwe.