Fluorescent Treponemal Antibody-Absorption (FTA–ABS)

Background:
FTA-Abs is a treponemal test for syphilis. Using antibodies specific for the Treponema pallidum species, such tests are more specific than non-treponemal testing such as VDRL. In addition, FTA-Abs turns positive earlier and remains positive longer than VDRL. Other treponemes, such as T. pertenue, may also produce a positive FTA-Abs.

FTA (Fluorescent Treponemal Antibody) - Abs (absorption) should always be followed to confirm a positive RPR and/or VDRL test for syphilis. The ABS suffix refers particularly to a processing step used to remove nonspecific antispirochetal antibodies present in normal serum.

The antigen for the FTA-Abs test is whole bacteria. The bacteria cannot be cultured on laboratory media (unsubstantiated reports aside) and so the organisms used are a lyophilized suspension of T. pallidum extracted from rabbit testicular tissue. This is spread over and fixed to a slide. Patient serum is mixed with an absorbent (the "ABS" part of the test) containing an extract of a non-pathogenic treponeme, Treponema phagedenis biotype Rieter, i.e. to soak up non-specific reactivity, then added to the slide. FITC (a fluorophore)-labeled antitreponeme antibody and TRITC (another fluorophore)-labeled anti-human antibodies are added as secondary antibodies. The spirochete location is identified using the FITC staining and the TRITC staining identifies whether the patient has anti-T. pallidum antibodies (binding to the same spirochete).

This test is not useful for following therapy, because it does not wane with successful treatment of the disease, and will continue to be positive for the life of the patient after primary exposure.

Reference range:
Healthy individual: Negative.

Sample:
1 ml of Serum or 2 ml of whole blood in a plain tube.

Duration:
2 hours after receiving the sample.