



# SWEMED DIAGNOSTICS

## RF TEST

Latex agglutination slide test for qualitative and semi-quantitative determination of Rheumatoid factors.

### PRINCIPLE:

The Rheuma TEST latex test is based upon the immunological reaction between the Rheumatoid Factors (RF) and the corresponding antibody (IgG) coated onto polystyrene latex particles.

### REAGENTS AND MATERIALS PROVIDED:

01. RF latex reagent
02. Positive control
03. Negative control
04. Glass slide & Mixing sticks

### STABILITY:

The reagent and control sera are stable upto the expiry date as mentioned on the vial label, when stored at 2<sup>o</sup> - 8<sup>o</sup> C, do not freeze.

**SPECIMEN: Serum: Storage at 2<sup>o</sup> - 8<sup>o</sup> C upto 1 week.**

### PROCEDURE:

#### A. QUALITATIVE TEST:

Bring all reagents and serum samples to Room Temperature and mix gently prior to use. Latex Reagents and controls are READY TO USE.

Place on separate reaction cell on glass slide:	
1. Serum specimen	1 drop
2. Positive control	1 drop
3. Negative control	1 drop
Then add RF latex reagent	1 drop each
Mix with separate mixing sticks and spread the fluid over the entire area of the cell.	
Tilt the slide back and forth slowly for 2 minutes observing preferably under artificial light.	

### INTERPRETATION OF RESULTS:

Distinct agglutination indicates RF content more than 6 IU/ml in the undiluted sample. Sera with positive results in the qualitative test may be retested in the semiquantitative test for titre.

### B. SEMIQUANTITATIVE TEST:

Prepare dilution of the specimen with physiological saline 0.9%, as indicated in the following table

Dilution	RF (I.U/ml in undiluted sample)
1:2	12
1:4	24
1:8	48
1:16	96
1:32	192
1:64	384

Then proceed as in qualitative test for each dilution.

### INTERPRETATION OF RESULTS:

The last dilution of serum with visible agglutination is the RF titre of the serum.

### CALCULATION OF TITRE:

RF (IU/ml) = 6 x D, where 6 is the sensitivity in IU/ml and D is the highest dilution of serum showing agglutination.

**SENSITIVITY:** 6 IU/ml

### QUALITY CONTROL:

Positive and negative controls should be run with each series of test sera and incorporated in reading the results. The negative control will show no agglutination. The positive control will show a distinct agglutination within 2 minutes.

### CLINICAL SIGNIFICANCE:

The clinical significance of RF determinations consists in differentiating between rheumatoid arthritis, in which the rheumatoid factor has been demonstrated in the serum of approximately 80% of the cases examined, and rheumatic fever in which the rheumatoid factor is almost always absent. The RF test is more frequently positive in long term active processes than in diseases which are less active or are still in early stages. It is occasionally found in the serum of patients with polyarthritis nodosa, systemic lupus erythematosus, hepatitis and certain other diseases.

### REFERENCES:

1. Adams, L.E.; Hesa. E.J. Amer. Technol. 48, 1978.
2. Normausell, D. Immunochemistry 9, 1972.
3. Plotz, Singer. Am. J. Med. 22, 1979.
4. Assimeh, S.N.; Johnson, P.M.J. Immunol Methods 34, 1980.