

HiPer[®] RA Test Teaching Kit

Product Code: HTI019

Number of experiments that can be performed: 20

Duration of Experiment: 1hour

Storage Instructions:

- The kit is stable for 12 months from the date of manufacture
- Store the Latex reagent, positive and negative control at 2-8 °C
- Other kit contents can be stored at room temperature (15-25°C)

Index

Sr. No.	Contents	Page No.
1	Aim	3
2	Introduction	3
3	Principle	3
4	Kit Contents	4
5	Materials Required But Not Provided	4
6	Storage	4
7	Important Instructions	4
8	Procedure	4
9	Observation and Result	5
10	Interpretation	5
11	Troubleshooting Guide	6

Aim:

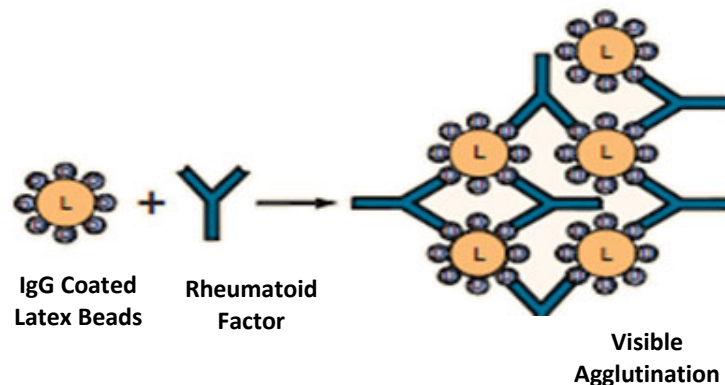
To detect the presence of Rheumatoid Factors (RF) which are produced during Rheumatoid arthritis (RA).

Introduction:

Rheumatoid arthritis or RA is a chronic and inflammatory disease of flexible (synovial) joints. During this disorder the synovial lymphocytes produce abnormal IgG and in response to this the host immune system generates IgM and these are called Rheumatoid factors (RF). These are autoantibody as they are generated against one's own tissue and for this reason RA is considered as a systematic autoimmune disease. Through a blood test the presence of RF can be detected and consequently RA is diagnosed.

Principle:

Agglutination is a reaction of clumping together of antigen-bearing cells, microorganisms or particles in the presence of specific antibodies (agglutinins) in a suspension. Reaction time for agglutination to occur is shorter compared to other antigen-antibody interactions. Latex agglutination makes use of latex particles which are built from different organic materials to a desired diameter, and may be functionalized with chemical groups to facilitate attachment of molecules. Latex agglutination tests have been in use since 1956 to detect a wide range of analytes in the clinical laboratory. The first description of a test based on latex agglutination was the 'Rheumatoid Factor Test' proposed by Singer and Plotz in 1956. In this method the patient's blood sample is mixed with tiny latex beads covered with human antibodies (IgG). The latex beads clump or agglutinate if rheumatoid factor (IgM RF) is present.



HiPer[®] RA Test Teaching Kit applies the above principle for rapid screening of latex slide agglutination to detect the presence of RF in patient's sample suffering from Rheumatoid Arthritis.

Kit Contents:

Table 1: Enlists the materials provided in this kit with their quantity and recommended storage

Sr. No.	Product Code	Materials Provided	Quantity	Storage
			20 expts	
1	TKC355	Latex reagent	1.6 ml	2-8 ⁰ C
2	TKC356	Positive control	0.22 ml	2-8 ⁰ C
3	TKC357	Negative control	0.22 ml	2-8 ⁰ C
4	TKC124	Disposable Agglutination Cards*	10 Nos.	RT
5	TKC125	Disposable Mixing Sticks	120 Nos.	RT

*** One latex agglutination card can be used for 2 experiments.**

Materials Required But Not Provided:

Test Serum Sample, Micropipettes, Tips, Gloves and Masks.

Storage:

HiPer[®] RA Test Teaching Kit is stable for 12 months from the date of manufacture without showing any reduction in performance. On receipt, store Latex reagent, Positive control and Negative control at 2-8°C.

Important Instructions:

1. RA Test Teaching Kit should be used according to the kit instructions.
2. Allow all reagents to reach room temperature before use.
3. Do not dilute any of the kit reagents.
4. Do not intermix the reagents.
5. Do not freeze any of the kit reagents.
6. Ensure the Agglutination card is clean and dry prior to use.
7. Wear masks and gloves while handling the reagents.

Procedure:

1. Before starting the experiment, bring all reagents to room temperature and mix well.
2. Take 10µl of test serum sample on one of the latex disposable slide circle (As shown in fig.1).
3. Take 10 µl of Positive and Negative control each on other circles.
4. Add 25 µl of Latex reagent to all these three circles. Do not let the dropper tip touch the liquid on the slide.

5. Using disposable mixing sticks mix all the contents uniformly over the entire circles of the slide.
6. Rock the slide gently, back and forth for 2 minutes. Observe for agglutination.

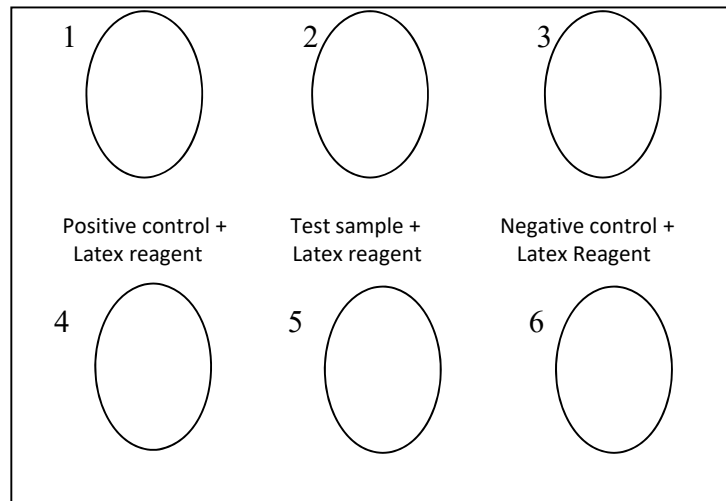


Fig 1: Diagrammatic representation of RA test

Observation and Result:

After mixing the Latex reagent with Positive control, Negative control and Test sample separately observe for the agglutination reaction.

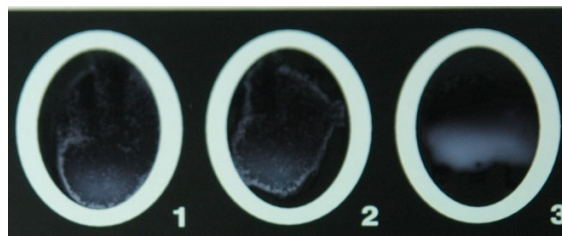


Fig 2: Agglutination reaction for Latex reagent with Positive control, Negative control and Test sample

- Circle 1: Positive Control
- Circle 2: Test sample
- Circle 3: Negative Control

Interpretation:

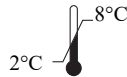
Agglutination of latex particles is considered a positive reaction, indicating the presence of rheumatoid factor at a significant and detectable level.

Troubleshooting Guide:

Sr.No	Problem	Possible Cause	Solution
1	False positive result	The reagents were mixed with each other	Ensure that the reagents are added properly onto the respective well without spilling to the sides
		Incubated for a longer time	The results should be read within the time period mentioned in the brochure
2	No agglutination observed	The reagents are not stored under proper conditions	Ensure that the latex reagent, positive and negative control are stored in refrigerator (2-8°C)

Technical Assistance:

At HiMedia we pride ourselves on the quality and availability of our technical support. For any kind of technical assistance mail at mb@himedialabs.com



Storage temperature



Do not use if package is damaged



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