

HiPer[®] VDRL Test Teaching Kit

Product Code: HTI021

Number of experiments that can be performed: 10

Duration of Experiment: 1 hour

Storage Instructions:

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

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Aim:

To detect the presence of Treponemes which are responsible for venereal diseases like syphilis.

Introduction:

Syphilis is a sexually transmitted (venereal) disease caused by the spirochaete *Treponema pallidum*. The Venereal Disease Research Laboratory test or VDRL is a blood test for syphilis and was developed by Harris, Rosenberg, and Riedel in 1946. During this test reagins, the non-treponemal antibodies, react with a phospholipid, called cardiolipin, to form aggregation.

Principle:

Treponemes are extensively studied human pathogen and found to have a unique level of dependence on their host due to lack of the ability to synthesize essential nutrients. *Treponema pallidum* is a Gram-negative spirochaete bacterium with subspecies that cause treponemal diseases like syphilis, bejel, pinta and yaws. VDRL is a serological screening test for syphilis which is based upon the flocculation of antibody against the reaginic antigens in syphilitic infection caused by *T.pallidum*. VDRL test is more suitable as a screening agent than a diagnostic tool.

The presence of antibody in the patient's serum is detected by using a non-specific antigen prepared from cardiolipin, lecithin and cholesterol. Patients suffering from syphilis produce antibodies that react with cardiolipin antigen in a slide flocculation test, which are observed through naked eye as well as using a light microscope. After infection the host forms Treponemal antibodies to *Treponema pallidum* as well as non-Treponemal antilipoidal antibodies in response to the lipoidal material released from the damaged host cell. These antibodies are traditionally referred to as 'Reagins'. Cardiolipin, a phospholipid, reacts with the 'Reagins' to give a non-Treponemal flocculation reaction. Non-Treponemal tests are of great value when used for screening and follow up of therapy.

VDRL Teaching Kit applies the above principle for rapid screening by slide flocculation to detect the presence of Treponemes in patient sample suffering from syphilis.

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
			10 expts	
1	TKC 368	VDRL Reagent	0.9 ml	2-8°C
2	TKC 369	Positive Control	0.3 ml	2-8°C
3	TKC 370	Negative Control	0.3 ml	2-8°C
4	GW094	Glass slide for VDRL	1 No.	RT
5	TKC125	Disposable mixing sticks	50 Nos.	RT

Materials Required But Not Provided:

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

Storage:

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

Important Instructions:

1. HiPer® VDRL 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 glass slide 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 20 µl of test sample in a cavity of glass slide provided in the kit.
3. Add 20 µl of VDRL reagent to the surface of the test sample in the same cavity. Do not touch the tip to the liquid surface.
4. Take 20 µl each of positive and negative control in different cavity.
5. Then add 20 µl of VDRL reagent to both positive and negative control cavity.
6. Mix well with disposable mixing sticks. While mixing use different mixing stick every time.
7. Rotate the slide continuously for 4 minutes and observe for flocculation, which can be seen with naked eye or better under light microscope.

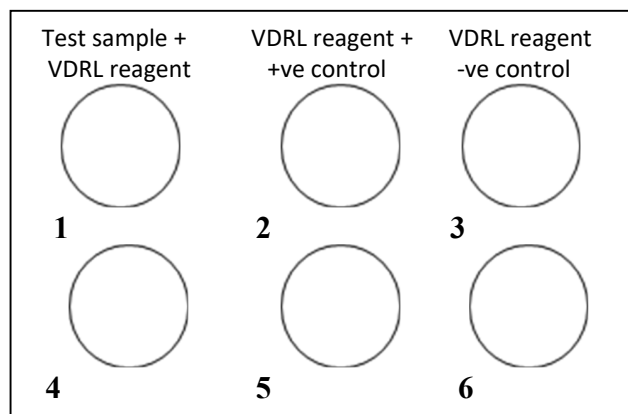


Fig 1: Diagrammatic representation of VDRL test

Observation and Result:

After mixing the VDRL reagent with Positive control, Negative control and Test sample separately observe for flocculation.

Interpretation:

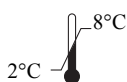
Flocculation in Test sample circle is considered a positive reaction, indicating the presence of treponemes at a significant and detectable level.

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 flocculation observed	The reagents are not stored under proper conditions	Ensure that the VDRL 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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12/2024

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