

RICIN CARD TEST

INTENDED USE:

RICIN Card Test is a rapid chromatographic test for the detection of RICIN present in water, human serum or plasma.

INTRODUCTION:

Ricin (pronounced /'raɪ sɪn/) is a protein toxin that is extracted from the castor bean (*Ricinus communis*). It can be either a white powder or a liquid in crystalline form. Ricin can cause severe allergic reactions, and exposure to small quantities can be fatal.

RICIN is poisonous if inhaled, injected, or ingested, acting as a toxin by the inhibition of protein synthesis. While there is no known antidote, the US military has developed a vaccine. Symptomatic and supportive treatment is available. Long term organ damage is likely in survivors. RICIN causes severe diarrhea and victims can die of shock. Abrin is a similar toxin. To cover 25 km² area with 50% toxicity, about 1 metric ton of RICIN is required (estimated by the United States Department of Cultural and Biological Society in service to the United States Biological and Technological threat survey).

Deaths caused by ingestion of castor oil plant seeds are rare. Eight beans are considered toxic for an adult. A solution of saline and glucose has been used to treat RICIN overdose. The case experience is not as negative as popular perception would indicate.

PRINCIPLE:

The RICIN Test device consists of a sample window containing an absorbent pad where the test sample has to be added. The absorbent pad is held in contact with the porous membrane material. The membrane has three zones of antibody. The first is mobilized by the sample while the other two are immobilized. The mobile zone consists of colored colloidal gold particles sensitized with monoclonal antibody. The second zone consists of Polyclonal antibody immobilized on the membrane (Test Line). The third zone (Control line) consists of Anti mouse IgG which is also immobilized. If the test sample contains RICIN, it will form a complex with anti RICIN, colloidal gold conjugate and allows this to be trapped by the test line. The unbound colloidal gold particles continue to move along the strip capillary until they come in contact with the control line and are trapped, giving a red line demonstrating the validity of tests.

STORAGE:

The Cards are stable until the expiry date mentioned when stored at 4-30° C.

SENSITIVITY:

The RICIN Card test will yield a positive result with RICIN concentration as low as 50 ng/ ml.

QUALITY CONTROL:

Each reaction card has its own built in quality control indicator. If after performing the test no line is visible on the card or questionable results are obtained. Please repeat the test using a new toxin card.

CONTENTS OF THE KIT:

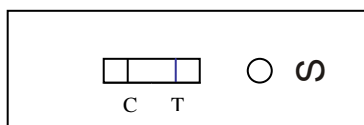
One Testing Device, One Dropper and Silica Gel as Dehydrant.

PROCEDURE:

- ❖ Collect sample in a clean container.
- ❖ Add 2 drops of sample into the sample window and read the results between 5-20 minutes.
- ❖ Do not read any result beyond 20 minutes. Discard the test device after reading the results.

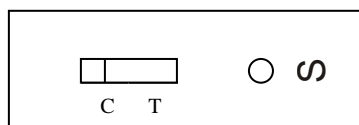
INTERPRETATION OF RESULTS:

POSITIVE



Control Band Test Band

NEGATIVE



Control Band

Test Invalid (Test Again)

