

ABSTRACT FORM

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Title: (CAPITAL LETTERS) A LOW BUDGET DISC-ELISA FOR HEPATITIS-B SURFACE ANTIGEN (HBsAg)

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Abstract

A number of commercial EIA kits are available for the detection of HBsAg by the third generation techniques. However, being expensive, these kits have not been used in our country extensively. As an alternative the test needs modification by different workers to suit their requirements and conditions. Such a modification was described by us using a low cost micro-ELISA on micro-titre plate. To further reduce the running cost and the time, the performance of Disc-ELISA on nitro-cellulose membrane discs is described. The test is based on double antibody sandwich technique using heterologous antibodies; horse anti-HBs as catching antibody and HRPO labelled goat anti-HBs as developing antibody. The test has been carried out on 5 mm nitro-cellulose membrane discs. Because of the high affinity of proteins for the nitro-cellulose membranes, the binding is quick and quantitative with high capacity. A comparison between Disc-ELISA and micro-ELISA on micro-titre plates showed an absolute agreement with positive test results in 137 of 612 (22.4 %) blood samples tested. However, the cost of Disc-ELISA per test was Rs.0.70 in comparison to Rs.1.40 and Rs.23.00 by micro-ELISA and commercial Auszyme kit, respectively. The Disc-ELISA involved incubations for only 30 min. in comparison to 2.5 h by micro-ELISA.

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