

81. TWO-SITE ENZYME IMMUNOASSAY FOR ALPHA-FETOPROTEIN IN DRIED BLOOD SAMPLES COLLECTED ON FILTER PAPER
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A method for measuring alpha-fetoprotein (AFP) in eluates of dried blood samples on filter paper using a sensitive, simple and rapid two-site immunoenzymometric assay was developed for use in screening for liver diseases, particularly, hepatoma. In this method, a dried-blood spot of 6mm diameter (equivalent to about 12 μ l of whole blood) is incubated overnight with anti-AFP-Alkaline phosphatase conjugate in a tube containing a monoclonal anti-AFP antibody coated polystyrene bead. The enzyme activities associated with washed beads is determined colorimetrically with para-nitrophenyl phosphate as substrate. The range of AFP measurable is from 9 to 900 ng/ml of plasma. Comparison of the value of AFP in dried blood samples determined by this method and the serum AFP level determined by a commercial radioimmunoassay showed a good correlation ($r=0.82$). Preliminary studies with this method have demonstrated it is suitable for screening hepatoma in the high risk population.

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