A. Microbeads with attached antigen in test tubes.

B. Antigens bound to walls and bottom of microtiter wells.

Blood/Serum dispensed into each receptacle

1 Bead is placed in each tube

Solid-phase antibody complex

1 hour incubation (HIV antibodies if present complex with HIV antigen)

Removal of excess serum or blood

Wash

Add anti-human Immunoglobulin G linked to horseradish peroxidase-conjugate solution

2 hour incubation (conjugate attaches to antigen-antibody on solid phase)

Withdraw excess solution

Wash

Add substrate (o-phenylenediamine or azinobenzthiazolium)

Color develops

Substrate reacts with peroxidase to produce a yellow-orange color in those tubes or microwells containing HIV antibodies. The intensity of the color is proportional to the amount of antibody present in the serum.