DUAL CHAMBER, MULTI-ANALYTE TEST STRIP WITH OPPOSING ELECTRODES

ABSTRACT OF THE DISCLOSURE

A dual chamber, multi-analyte test strip has a first insulating layer, a first electrically conductive layer, with a first working electrode, disposed on the first insulating layer and a first patterned spacer layer positioned above the first electrically conductive layer. The first patterned spacer layer has a first sample-receiving chamber, with first and second end openings, defined therein that overlies the first working electrode. The test strip also includes a first counter/reference electrode layer that is exposed to the first sample receiving chamber and is in an opposing relationship to the first working electrode. The test strip further includes a counter/reference insulating layer disposed over the first counter/reference electrode layer and a second counter/reference electrode layer disposed on the counter/reference substrate. Also included in the test strip is a second patterned spacer layer that is positioned above the second counter/reference electrode layer. The second patterned spacer layer has a second sample-receiving chamber, with first and second end openings, defined therein. The test strip additionally has a second electrically conductive layer, with a second working electrode, disposed above the second patterned spacer layer, a second insulating layer disposed above the second electrically conductive layer, a first analyte reagent layer disposed on the first working electrode within the first sample-receiving chamber; and a second analyte reagent layer disposed on the second working electrode within the second sample-receiving chamber. The second counter/reference electrode layer is exposed to the second sample receiving chamber and is in an opposing relationship to the second working electrode.