Claims

1. A method for performing competitive binding analysis of two analytes comprising:

preparing a control of a first analyte by pulling a first sample of said first analyte into a sample holding line, pulling a second sample of said first analyte into said sample holding line;

injecting said control sample through an SPR sensor, said SPR sensor including a bound ligand;

measuring the binding interaction of the first analyte in the control with said ligand using SPR analysis to generate a binding interaction curve;

preparing a binding competitive analysis dispersion gradient by pulling a sample comprising the first analyte and a second analyte into the sample holding line, followed by pulling a sample of the first analyte into the sample holding line thereby forming the binding competitive analysis dispersion gradient;

pushing the resulting competitive analysis dispersion gradient through said SPR sensor;

measuring the binding interaction of the competitive analysis dispersion gradient with said ligand to generating a binding interaction curve;

subtracting the binding interaction curve generated by control sample from the binding interaction curve generated by the competitive analysis dispersion gradient to determine the competitive binding the second analyte to the ligand in the presence of the first analyte.

2. The method of claim 1, wherein the volume of each sample pulled into the sample holding line will be between about 10 and 500 μl.

3. The method of claim 1, wherein the rate at which each sample is pulled into the sample holding line is from about 50 μl/min to about 600 μl/min.

4. The method of claim 1, wherein the rate at which each sample is pulled into the sample holding line is about 250 μl/min.

5. The method of claim 1, wherein the pushing of the dispersion gradient takes place at a flow rate of about 10 μl/min to about 200 μl/min.

6. The method of claim 1 wherein the pushing of the competitive analysis dispersion gradient takes place at a flow rate of about 10 μl/min to about 200 μl/min.

7. The method of claim 1 wherein the pushing of the control takes place at a flow rate of about 10 μl/min to about 200 μl/min.