WHAT IS CLAIMED IS:

1. A method of analyzing a plurality of analytes detectable by light emission and arranged in a two-dimensional analyte array supported by a planar matrix, the method comprising:

placing the planar matrix within 5 cm of a detector comprising one or more moveable solid-state image sensors;

moving the image sensor(s) with respect to the planar matrix and acquiring a plurality of sub-images of the planar matrix;

assembling the sub-images into a full image of the planar matrix in accordance with the positions occupied by the image sensor(s) when the sub-images are acquired; and

analyzing the analytes using the full image of the planar matrix,

wherein a transparent faceplate is placed between the planar matrix and the detector,

wherein the maximum thickness of the transparent faceplate is about 10 mm.