CLAIMS

We claim:

1. An optical blocking structure, comprising:

a frame defining an aperture;

first and second elongate structural members each comprising first and second ends wherein the first and second elongate structural members are connected at their first ends to opposite sides of the aperture, and further wherein the first and second elongate structural members extend from the frame parallel to and in the same direction as one another; and

an optically opaque blocking member positioned to extend between the respective second ends of the first and second elongate structural members.

2. The optical blocking structure of claim 1, wherein the optically opaque blocking member includes a blocking face dimensioned to block reflected beams from a first surface of a sample container in an imaging system and to not block reflected beams from a second surface of the sample container.

3. The optical blocking structure of claim 2, wherein the optical blocking structure is dimensioned to be disposed adjacent a beam splitter and the blocking face of the blocking member is disposed in a plane that is at an angle relative to a plane of the frame, further wherein the angle is chosen such that the blocking face of the blocking member is substantially parallel to a face of the beam splitter.

4. The optical blocking structure of claim 3, wherein a width of the blocking face of the blocking member is between about 2 mm and 7 mm.

5. The optical blocking structure of claim 3, wherein a width of the blocking face of the blocking member is of a width selected to block reflected beams from a second surface of the sample container without interfering with beams reflected from one or more interior surfaces between the first surface and the second surface of the sample container.

6. The optical blocking structure of claim 1, wherein the optically opaque blocking member is dimensioned for use in operation with a scanning system that images samples contained in a multilayer sample container that comprises four reflective surfaces, and further wherein the optically opaque blocking member includes a blocking face dimensioned to block reflected beams from a first surface of a sample container in an imaging system and to not block reflected beams from second and third surfaces of the sample container.

7. The optical blocking structure of claim 6, wherein the optically opaque blocking member is dimensioned to have a triangular cross-section.

8. An optical blocking structure, comprising:

a frame defining an aperture, wherein the aperture is dimensioned to be from about 20 mm to 40 mm in width and from about 15 mm to 30 mm in height;

a first structural member comprising a first end and a second end defining an elongate body, the elongate body dimensioned to be between about 20 mm and 30 mm in length;

a second structural member comprising a first end and a second end defining a second elongate body, the elongate body dimensioned to be between about 20 mm and 30 mm in length, wherein the first and second structural members are connected at their first ends to opposite sides of the aperture, wherein the first and second structural members extend from the frame parallel to and in the same direction as one another; and

an optically opaque blocking member positioned to extend between the respective second ends of the first and second blocking members, the optically opaque blocking member dimensioned to be between about 1 mm and 20 mm in width.

9. The optical blocking structure of claim 8, wherein the optically opaque blocking member includes a blocking face dimensioned to block reflected beams from a first surface of a sample container in an imaging system and to not block reflected beams from a second surface of the sample container.

10. The optical blocking structure of claim 9, wherein the optical blocking structure is dimensioned to be disposed adjacent a beam splitter and the blocking face of the blocking member is disposed in a plane that is at an angle relative to a plane of the frame, further wherein the angle is chosen such that the blocking face of the blocking member is substantially parallel to a face of the beam splitter.

11. The optical blocking structure of claim 10, wherein a width of the blocking face of the blocking member is of a width selected to block reflected beams from a second surface of the sample container without interfering with beams reflected from one or more interior surfaces between the first surface and the second surface of the sample container.

12. The optical blocking structure of claim 8, wherein the optically opaque blocking member is dimensioned for use in operation with a scanning system that images samples contained in a multilayer sample container that comprises four reflective surfaces, and further wherein the blocking face is dimensioned to block reflected beams from a first surface of a sample container in an imaging system and to not block reflected beams from second and third surfaces of the sample container.

13. The optical blocking structure of claim 11, wherein the optically opaque blocking member is dimensioned to have a triangular cross-section.