What is claimed is:

1. A thermal block assembly for use in a biological analysis system comprising:

a sample block configured to accommodate a sample holder, the sample holder configured to receive a plurality of samples;

a heating and cooling element; and

a heat sink including a surface, the surface including a plurality of projections for engaging the heating and cooling element to hold the heating and cooling element on the heat sink.

2. The thermal block assembly of claim 1, further comprising:

a thermally conductive material for thermally coupling the sample block and the thermoelectric device,

wherein the thermally conductive material includes a plurality of openings and the plurality of projections on the surface of the heat sink are configured to engage the plurality of openings in thermally conductive material.

2. The thermal block assembly of claim 1, wherein the plurality of projections include a plurality of ridges.

3. The thermal block assembly of claim 1, wherein heating and cooling element includes a plurality of adjacent thermoelectric devices and the plurality of projections are configured to extend between each of the adjacent thermoelectric devices.

4. The thermal block assembly of claim 1, wherein the heat sink further includes a peripheral edge, the peripheral edge including a plurality of perimeter projections configured to engage a peripheral edge of heating and cooling element.

5. The thermal block assembly of claim 1, wherein the plurality of projections are arranged in a plurality of columns and rows.

6. The thermal block assembly of claim 1, wherein the heating and cooling element includes six adjacent thermoelectric devices and the plurality of projections are arranged in five rows.

7. The thermal block assembly of any of the preceding claims, wherein the sample block has 384 cavities.

8. A biological analysis system comprising a thermal block assembly of any of the preceding claims.