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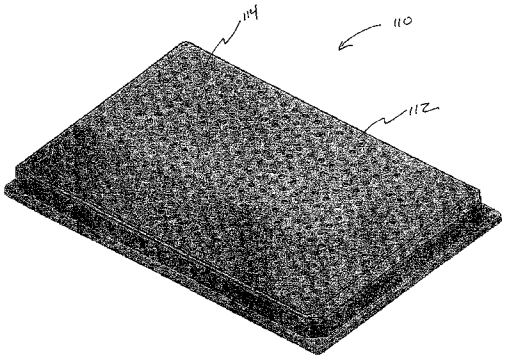
(54) Title: CONDUCTIVE MICROTITER PLATE



(57) Abstract: The present invention is a multi-well vessel such as a microtiter plate, made from a plastic material formulated for increased thermal conductivity. In a preferred embodiment, the plastic material is a thermally conductive formulation of a cyclic polyolefin, syndiotatic polystyrene, polycarbonate, or liquid crystal polymer, with a melting point greater than 130 °C and exhibiting very low intrinsic fluorescent properties. A conductive medium, such as conductive carbon black, is included in the formulation of the plastic material at about 5 % or greater by weight to increase thermal conductivity. To further increase thermal conductivity, a thermally conductive ceramic filler, such as a Boron Nitride filler, may be added to the formulation. A polymeric surfactant may also be added to the formulation for increased performance. The invention may also include a flat piece of conductive material attached to the flat bottom of the plate to impart conductivity and flatness to the part. Alternatively, the flat bottom surface of the plate may be metallized or coated with a flat layer of conductive material. The plate may also include a transparent lid, or cover, preferably made from polycarbonates, polypropylenes, or cyclic olefins or from multi-layer films made from two or more clear materials with desired barrier properties. Additionally, a fluorescent grade of polymer, such an epoxy prepared with a fluorescent die, can be embedded at a particular position on the plate to help indicate when the lights on the test equipment are in operation.

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