

POLYMERIC MICRONEEDLE ARRAY AND APPARATUS AND METHOD FOR MANUFACTURING OF THE SAME

ABSTRACT

The present invention provides a polymeric microneedle array, and apparatus and method for manufacturing the polymeric microneedle array. The apparatus comprises a forming mould having a surrounding wall so as to forming a cavity and a bottom integrated with one end of the surrounding wall, wherein the bottom has an array of openings; a top mould having an array of apertures that are aligned with the openings in the forming mould; and a holding plate having a plate and an array of micro pins that are integrated onto the plate so that the micro pins can be moved up or down with the plate. The method comprises the steps of providing polymeric materials to the bottom of the cavity of the forming mould; closing the top mould and the forming mould; moving down the micro pins; curing the molten polymeric materials; withdrawing the top mould; retracting the pins; and obtaining the polymeric microneedle array. The present invention further provides a medicine delivery device for delivery liquid and/or fine powdered medicines.

FIG 1