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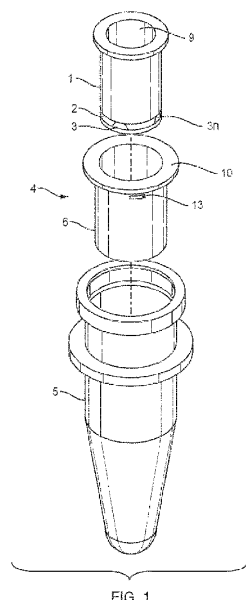
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(54) Title: EMULSIFICATION DEVICE



(57) Abstract: The disclosure herein relates to a microfluidic emulsification device capable of being injection molded. The device may be used for digital droplet polymerase chain reaction (ddPCR). The emulsification device comprises: (a) a cylindrical outer part (4) with two open ends; (b) a cylindrical inner part (1) with a solid bottom and having a circumference sufficient to allow the inner part to be nested within the outer part of the emulsification device, wherein the inner part and the outer part are capable of sliding freely; (c) at least one groove on an interior surface of the outer part or on an exterior surface of the inner part, the groove having a height greater than a gap between the outer part and the inner part when nested; (d) at least one hole (3) in the inner part adjacent to the solid bottom; (e) a radial distribution channel (2) on the interior surface of the outer part or on the exterior surface of the inner part; and (f) a radial nozzle channel at the base of the interior surface of the outer part or at the base of the exterior surface of the inner part.

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