

ABSTRACT

DROPLET DISCHARGE DEVICE AND METHOD

A droplet discharge device includes a discharge path (12) having an end that constitutes a discharge opening (11), a plunger (30), a liquid chamber (50) into which the plunger (30) is inserted, a plunger driving mechanism that moves the plunger (30) forward and backward, and a plunger position determining mechanism that specifies a position of a tip portion of the plunger (30). The liquid material is discharged in a droplet state by applying inertial force to the liquid material with forward movement of the plunger (30) in a state where the tip portion of the plunger (30) and an inner wall of the liquid chamber (50) are not contacted with each other. A minute droplet is formed by moving the plunger (30) forward to push the liquid material out of the discharge opening (11) in an amount necessary to form a droplet of a desired size, and then by moving the plunger backward to divide the liquid material having been pushed out of the discharge opening (11). A droplet discharge method practiced using the droplet discharge device is also provided.

[Fig.1]