

Cell Collection Device from Mucosal Tissue

Minimally invasive and repeatable cell collection from mucosal tissues

Overview

By analyzing the status of the biological clock of living cells, it is expected to be useful for one's own physical condition, disease diagnosis and prevention. Conventional methods for collecting cells include skin biopsy, liposuction, hair collection, and oral mucosa collection with a cotton swab, but all of these methods are highly invasive. The present invention relates to a device capable of collecting cells from the mucosa minimally invasively using ultrasound.

To repeatedly collect cells from the mucosal tissue, a minimally invasive cell collection device was fabricated using a Langevin type vibrator, a metal rod, and a jig with a flow path. In a cell collection experiment from porcine esophageal mucosal tissue, approximately 3,000 cells were collected per minute.

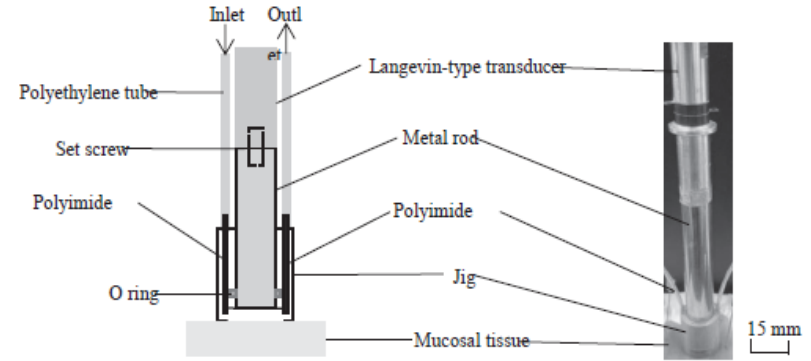
Product Application

- Medical devices (cell collection devices)

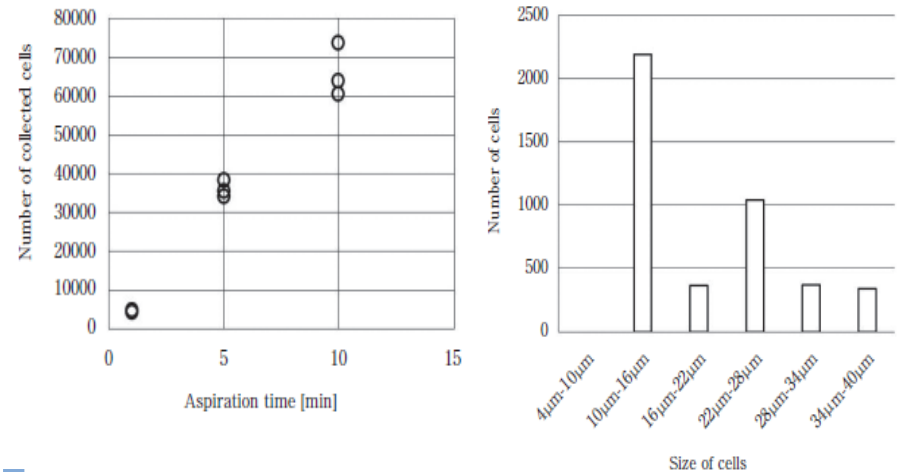
IP Data

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【 Structure of the device 】



Cell collection experiment from porcine isolated esophageal tissue



Related Works

[1]J JSCAS, Vol. 24, No. 4 (2023), pp. 217-225

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