

Supplementary Information

Low-Cost Rapid Prototyping of Flexible Microfluidic Devices using a Desktop Digital Craft Cutter

Po Ki Yuen* and Vasiliy N. Goral

Science and Technology, Corning Incorporated, Corning, New York 14831-0001

* Corning Incorporated

Science & Technology

Corning, New York 14831-0001

Phone: (607) 974-9680

Fax: (607) 974-5957

Email: yuenp@corning.com

In this supplementary information, the protocol for overnight C3A cell culture is provided.

Overnight C3A cell culture

Cryopreserved C3A cells a derivative of HepG2/C3A human hepatoblastoma cell line (CRL-10741™, American Type Culture Collection (ATCC), Manassas, VA, USA) were first thawed and cultured in Eagle's Minimum Essential Medium (EMEM) (ATCC® No.: 30-2003, ATCC, Manassas, VA, USA) supplemented with 10 % fetal bovine serum (Catalog No.: 16000-077, Invitrogen Corporation, Carlsbad, CA, USA) and 1% Penicillin-Streptomycin (Catalog No.: 15140-163, Invitrogen Corporation, Carlsbad, CA, USA). Then, the inside and outside of the microchannel cell culture devices were thoroughly washed with 70 % ethanol, rinsed with deionized water and blown dry with air before cell seeding. Next, C3A cells were seeded inside the microchannel cell culture devices using Minimum Essential Medium (MEM) (Catalog No.: 41090-036, Invitrogen Corporation, Carlsbad, CA, USA) and incubated overnight in a CO₂ HEPA incubator (Model: 3130, Forma Scientific, *Inc.*, Marietta, OH, USA) at 37 °C, 95 % humidity and 5 % CO₂. After overnight incubation, the LIVE/DEAD® Viability/Cytotoxicity Assay Kit for mammalian cells (Molecular Probes, *Inc.*, Eugene, OR, USA) was used to determine viability (live and dead) of the C3A cells inside the microchannel cell culture devices. Finally, fluorescent live and dead staining images were collected using a Zeiss Axiovert 200 inverted fluorescence microscope (Carl Zeiss MicroImaging, *Inc.*, Thornwood, NY, USA).