

# Culturing HeLa cells

Created on: 20-03-2019 - Last modified on: 22-03-2019

## SCOPE OF THE METHOD

<b>Alternative method relates to</b>	Human health
<b>Alternative method is situated in</b>	Basic Research, Translational - Applied Research
<b>Type of alternative method</b>	In vitro - Ex vivo
<b>This method makes use of</b>	Human derived cells / tissues / organs
<b>Specify the type of cells/tissues/organs</b>	HeLa cells

## DESCRIPTION

### Method keywords

Culturing

Transfection

cell culture

cells

cancer cell line

mammalian

### Scientific area keywords

Cell culture  
virus studies  
cytotoxicity  
transfection

### **Method description**

HeLa cells are the first continuous cancer cell line and were isolated from the aggressive glandular cervical cancer of a 31-year old woman. It was the first aneuploid line derived from human tissue maintained in continuous cell culture. Knowledge of almost every process that occurs in human cells has been obtained using HeLa cells. The cells should be handled under laboratory containment level 2 and are identified as a contaminant in many other cell lines. Culture medium: EMEM + glutamine + NEAA + FBS; 5% CO<sub>2</sub>; 37 °C Growth mode: adherent Split sub-confluent cultures (70 % - 80 %) 1:3 to 1:10, seeding at 1.3x10,000 cells/cm<sup>2</sup> using Trypsin.

### **Lab equipment**

Biosafety cabinet  
Incubator  
Microscope  
T-flasks

### **Method status**

Still in development  
History of use

### **PROS, CONS & FUTURE POTENTIAL**

#### **Advantages**

Stable genome after years of cultivation  
Applying selection pressure is possible  
Grow rapidly given the right medium and space

#### **Challenges**

Can infect other cells

Can grow aggressively  
Avoid cross-contamination  
Use of serum

## REFERENCES, ASSOCIATED DOCUMENTS AND OTHER INFORMATION

**Associated documents**

## PARTNERS AND COLLABORATIONS

### Organisation

**Name of the organisation** Vrije Universiteit Brussel

**Department** Pharmaceutical and Pharmacological Sciences (FARM)

**Specific Research Group or Service** In Vitro Toxicology and Dermato-cosmetology

**Country** Belgium

*Coordinated by*



*Financed by*

