

Title (en)

METHOD AND DEVICE FOR MONITORING THE TEMPERATURE OF A CRYOPRESERVED BIOLOGICAL SAMPLE

Title (de)

VERFAHREN UND VORRICHTUNG ZUR TEMPERATURÜBERWACHUNG EINER KRYOKONSERVIERTEN BIOLOGISCHEN PROBE

Title (fr)

PROCÉDÉ ET DISPOSITIF DE SURVEILLANCE DE LA TEMPÉRATURE D'UN ÉCHANTILLON BIOLOGIQUE CRYOCONSERVÉ

Publication

**EP 3448152 A1 20190306 (DE)**

Application

**EP 17718477 A 20170331**

Priority

- DE 102016005076 A 20160427
- EP 2017000405 W 20170331

Abstract (en)

[origin: WO2017186332A1] The invention relates to a device for monitoring the temperature of a cryopreserved biological sample, comprising a sample container (1) having a receiving space (2) for receiving a biological sample (6) and a cover (3) for closing the receiving space. The device also comprises a chamber arranged inside the sample container, in particular in the receiving space and/or in the cover, the interior (12; 22; 32; 42) of which is not fluidically connected to the receiving space (2) and is only partially filled with at least one indicator substance (7) having a melting temperature in the region between -20 °C and -140 °C. The invention also relates to a method for monitoring the temperature of cryopreserved samples, comprising the following steps: providing a device (10; 20; 30; 40) for temperature monitoring; freezing the indicator substance/s, wherein the at least one chamber can be placed in a first position during the freezing of the indicator substance/s and in a second position after the freezing and when a temperature of the indicator substance/s is below the melting temperature, in which position a melting of the indicator substance/s leads to an at least partial shift and/or change in shape of the chamber filling, with the influence of the force of gravity.

IPC 8 full level

**A01N 1/02** (2006.01); **G01K 3/04** (2006.01); **G01K 11/06** (2006.01)

CPC (source: EP KR US)

**A01N 1/0236** (2013.01 - EP US); **A01N 1/0252** (2013.01 - US); **A01N 1/0268** (2013.01 - EP KR US); **A01N 1/0273** (2013.01 - KR);  
**G01K 11/06** (2013.01 - EP KR US); **G01K 2203/00** (2013.01 - EP KR US)

Citation (search report)

See references of WO 2017186332A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

**WO 2017186332 A1 20171102**; CN 109152355 A 20190104; DE 102016005076 A1 20171102; EP 3448152 A1 20190306;  
JP 2019515286 A 20190606; KR 20190004727 A 20190114; US 2019133111 A1 20190509

DOCDB simple family (application)

**EP 2017000405 W 20170331**; CN 201780025971 A 20170331; DE 102016005076 A 20160427; EP 17718477 A 20170331;  
JP 2018556920 A 20170331; KR 20187033936 A 20170331; US 201716095936 A 20170331