

Title (en)

APPARATUS AND METHOD FOR DETECTING PARTICLES

Title (de)

VORRICHTUNG UND VERFAHREN ZUM DETEKTIEREN VON PARTIKELN

Title (fr)

APPAREIL ET PROCÉDÉ DE DÉTECTION DE PARTICULES

Publication

**EP 4034858 A1 20220803 (EN)**

Application

**EP 20786003 A 20200924**

Priority

- FI 20195801 A 20190924
- FI 2020050628 W 20200924

Abstract (en)

[origin: WO2021058873A1] A method for detecting particles, the method comprising at least providing a sample flow comprising particles, providing the sample flow with a saturating agent, directing at least a portion of said sample flow to an expansion chamber, sealing at least the expansion chamber from the environment, and increasing a pressure inside at least the expansion chamber from a first pressure to a second, higher pressure. The method additionally comprises decreasing the pressure inside at least the expansion chamber from the second pressure to the first pressure to produce activated particles by inducing supersaturation of the saturating agent and thus condensation of the saturating agent onto the particles of the sample flow to increase the size of selected particles from a first size to a second size, unsealing at least the expansion chamber, directing the sample flow comprising the activated particles of second size from the expansion chamber to a detector, and detecting at least an amount of single activated particles in the sample flow.

IPC 8 full level

**G01N 15/02** (2006.01); **G01N 15/06** (2006.01)

CPC (source: EP FI)

**G01N 15/0205** (2013.01 - FI); **G01N 15/0211** (2013.01 - EP); **G01N 15/065** (2013.01 - EP FI); **G01N 2001/2223** (2013.01 - EP); **G01N 2015/0038** (2013.01 - EP); **G01N 2015/0046** (2013.01 - EP); **G01N 2015/0238** (2013.01 - EP); **G01N 2015/0681** (2013.01 - EP)

Citation (search report)

See references of WO 2021058873A1

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 2021058873 A1 20210401**; EP 4034858 A1 20220803; FI 130261 B 20230517; FI 20195801 A1 20210325

DOCDB simple family (application)

**FI 2020050628 W 20200924**; EP 20786003 A 20200924; FI 20195801 A 20190924