

Title (en)

Pump device for liquid samples

Title (de)

Flüssigkeitsproben-Fördervorrichtung

Title (fr)

Dispositif de pompage pour échantillons liquides

Publication

**EP 1621768 B1 20080430 (DE)**

Application

**EP 04018193 A 20040731**

Priority

EP 04018193 A 20040731

Abstract (en)

[origin: EP1621768A1] The liquid sample delivery unit (10) comprises a pump (16) functioning in a pulse mode, with the pump and the delivery line (18) constituted so that the expansion volume of the line during a delivery pulse forms at most 50 % of the pulse volume.

IPC 8 full level

**F04B 23/02** (2006.01); **F04B 39/00** (2006.01); **F04B 39/16** (2006.01); **F04B 43/02** (2006.01); **F04B 53/20** (2006.01)

CPC (source: EP US)

**F04B 49/00** (2013.01 - EP US); **F04B 2201/0203** (2013.01 - EP US); **F04B 2205/50** (2013.01 - EP US); **Y10T 436/2575** (2015.01 - EP US)

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

**EP 1621768 A1 20060201**; **EP 1621768 B1 20080430**; AT E393878 T1 20080515; DE 502004007004 D1 20080612; ES 2305628 T3 20081101; US 2006024210 A1 20060202; US 7854894 B2 20101221

DOCDB simple family (application)

**EP 04018193 A 20040731**; AT 04018193 T 20040731; DE 502004007004 T 20040731; ES 04018193 T 20040731; US 19402205 A 20050729