

Title (en)
Mixing device

Title (de)
Mischvorrichtung

Title (fr)
Appareil mélangeur

Publication
EP 1815905 A3 20080312 (DE)

Application
EP 07001573 A 20070125

Priority
DE 202006001514 U 20060201

Abstract (en)
[origin: US2007177457A1] An apparatus for mixing of liquid substances or distribution of solid substances in liquid substances in a plurality of sample containers arranged in a microplate (7) is supported on a horizontally displaceable support plate (2). A motor (3) that is provided with an unbalance is held via its stator (3 A) above a base (1) directly on the underside of the support plate (2), the rotational axis (D) of the rotor (3 B) being disposed perpendicular to the support plate (2). The support plate (2) with the motor (3) rests on at least three horizontally elastically movable bearing elements (6), whose points of attachment to the base (1) and to the support plate (2) are chosen such that the support plate (2) with the microplate (7) in the idle position assumes a specified position in the X-Y plane due to the reset force of the bearing elements (6), and in the shaking mode, as a result of the lateral, directionally identical deflection of the bearing elements (6) effected by the unbalance of the motor (3), performs a horizontal, non-torsional shaking movement against the reset force of the bearing elements. In the process, all sample containers of the microplate (7) describe an identical orbit in the X-Y plane and an identical energy for mixing is imparted to all sample containers.

IPC 8 full level
B01F 11/00 (2006.01); **B01L 99/00** (2010.01)

CPC (source: EP US)
B01F 31/22 (2022.01 - EP US); **B01F 31/265** (2022.01 - EP US); **B01F 2101/23** (2022.01 - EP US); **B01L 99/00** (2013.01 - EP US)

Citation (search report)

- [X] JP S51114767 A 19761008 - FUJI ZOKI SEIYAKU, et al
- [X] DE 1913374 A1 19691009 - JACOT SIMON
- [E] WO 2007054646 A1 20070518 - MAXMAT SA [FR], et al
- [X] EP 0679430 A1 19951102 - FLETCHER DAVID JOHN [GB]
- [X] US 2247978 A 19410701 - ARKEL JOHN L VAN
- [A] EP 1393797 A2 20040303 - HEIDOLPH INSTR GMBH & CO KG [DE]
- [PA] DE 202006005813 U1 20060706 - FRANZ BANKE GMBH [DE]
- [A] US 4118801 A 19781003 - KRAFT JACK A, et al
- [A] NL 43283 C

Cited by
CN107855053A; CN107746949A

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)
AL BA HR MK RS

DOCDB simple family (publication)
DE 202006001514 U1 20060406; EP 1815905 A2 20070808; EP 1815905 A3 20080312; US 2007177457 A1 20070802; US 7338199 B2 20080304

DOCDB simple family (application)
DE 202006001514 U 20060201; EP 07001573 A 20070125; US 70094707 A 20070201