Title (en)

DEVICES AND METHODS FOR PRODUCING ICE BEADS FROM AN AQUEOUS MIXTURE

Title (de)

VORRICHTUNGEN UND VERFAHREN ZUR HERSTELLUNG VON EISPERLEN AUS EINEM WÄSSRIGEN GEMISCH

Title (fr)

DISPOSITIFS ET PROCÉDÉS DE PRODUCTION DE BILLES DE GLACE À PARTIR D'UN MÉLANGE AQUEUX

Publication

EP 2403635 A2 20120111 (DE)

Application

EP 10706939 A 20100225

Priority

- EP 2010001161 W 20100225
- DE 102009011521 A 20090306

Abstract (en)

[origin: WO2010099893A2] The invention relates to a device (1) for producing ice beads (10). The device (1) comprises at least one cooling device (18) for cooling a hydrophobic liquid (20) to a temperature of at least -5° C and a receiving vessel (2, 102) for the hydrophobic liquid (20). The device (1) also comprises a pipette device (3) that is located on the receiving vessel (2, 102) and has a tank (4) for an aqueous mixture (11). A plurality of tapering delivery tubes (5) which are situated in a tank wall (4') extends into the receiving vessel (2,102). One delivery end of a delivery tube (5) lies at a distance of between 3 and 10 cm from a surface (20') of the hydrophobic liquid (20). The device (1) also comprises at least one unit for establishing a relative speed between the pipette device (3) and the hydrophobic liquid (20). The aqueous mixture (11) travels along a liquid path (a) from the vessel (4) of the pipette device (3) via the delivery tubes (5) to the hydrophobic liquid (20), where it forms ice beads (10). The invention further discloses a method for producing ice beads (10) using said device (1) and relates to ice beads (10) that can be produced by means of the method.

IPC 8 full level

B01J 2/02 (2006.01); **F25C 1/00** (2006.01)

CPC (source: EP US)

B01J 2/02 (2013.01 - EP US)

Citation (search report)

See references of WO 2010099893A2

Citation (examination)

US 5664422 A 19970909 - JONES CURT D [US]

Designated contracting state (EPC)

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 SE SI SK SM TR

DOCDB simple family (publication)

WO 2010099893 A2 20100910; **WO 2010099893 A3 20101118**; CA 2753653 A1 20100910; CA 2753653 C 20170613; DE 102009011521 A1 20100916; EP 2403635 A2 20120111; US 2012036871 A1 20120216; US 8720211 B2 20140513

DOCDB simple family (application)

EP 2010001161 W 20100225; CA 2753653 A 20100225; DE 102009011521 A 20090306; EP 10706939 A 20100225; US 201013203306 A 20100225