

Title (en)
DEVICE AND METHOD FOR ATTENUATING AND/OR KILLING MICROORGANISMS, VIRUSES, VIRIONS, PRIONS, ALLERGENS AND PSEUDOALLERGENS AND/OR FOR BLOCKING THEIR TRANSMISSION PATHS

Title (de)
VORRICHTUNG UND VERFAHREN ZUR ATTENUIERUNG UND/ODER ABTÖTUNG VON MIKROORGANISMEN, VIREN, VIRIONEN, PRIONEN, ALLERGENEN UND PSEUDOALLERGENEN UND/ODER ZUR BLOCKIERUNG IHRER ÜBERTRAGUNGSWEGE

Title (fr)
DISPOSITIF ET PROCÉDÉ POUR ATTÉNUER ET/OU DÉTRUIRE DES MICRO-ORGANISMES, DES VIRUS, DES VIRIONS, DES PRIONS, DES ALLERGÈNES ET DES PSEUDOALLERGÈNES ET/OU POUR BLOQUER LEURS VOIES DE TRANSMISSION

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Abstract (en)
[origin: WO2022083895A1] The invention relates to a device (1) according to figure 2 shielded against emissions of actinic radiation for attenuating and/or killing and/or chemically and/or physicochemically modifying microorganisms, viruses, virions, prions, allergens and pseudoallergens and/or residues and/or decomposition products thereof and/or for blocking the transmission paths thereof with the aid of actinic radiation and subsequent acoustophoretic treatment, comprising (i) an intake region (2) with an intake opening (2.3) for contaminated air (2.2), (ii) an air-conveying region (3) with an axial rotor (V) or a fan, (iii) an irradiation region (4) with a radiation source (4.1), (iv) a power supply region (5) with holder (5.2) with power lines for the power supply (5.1) to the radiation source (4.1), and with (v) openings (6.5) for the entry of irradiated air (6.5.1) into an acoustophoresis region 6 with an acoustophoresis device (6.6) for generating a stationary acoustic ultrasound field, the acoustophoresis device (6.6) representing a wall-free flow region (6.6.1) or a flow tube (6.6.2) with a closed wall (6.6.3) which encloses a flow channel (6.6.4), (vi) an electronics unit (E) for generating, monitoring and stabilising a feedback loop for setting and stabilising the stationary acoustic ultrasound field, (vii) an air exit region (7) shielding the actinic radiation, and (viii) an air outlet region (8) for treated air (8.2) containing the attenuated and/or killed and/or chemically and/or physico-chemically modified microorganisms, viruses, virions, prions, allergens and pseudoallergens and/or residues and/or decomposition products thereof (8.2.1). The invention also relates to a method for attenuating and/or killing and/or chemically and/or physico-chemically modifying microorganisms, viruses, virions, prions, allergens and pseudoallergens and/or residues and/or decomposition products thereof (8.2.1) and also to the use of the device (1) and of the method.

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