

Title (en)

METHOD AND DEVICE FOR DETERMINING THE CONDITION OF CELLS IN REACTORS

Title (de)

VERFAHREN UND VORRICHTUNG ZUR BESTIMMUNG DES ZUSTANDS VON ZELLEN IN REAKTOREN

Title (fr)

MÉTHODE ET DISPOSITIF DE DÉTERMINATION DE L'ÉTAT DE CELLULES DANS DES RÉACTEURS

Publication

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Application

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Abstract (en)

[origin: WO2021069428A1] The invention relates to a method for determining the condition of cells (1) in reactors (3) and to a device for carrying out the method. The invention can be used in particular to assess the viability and degree of contamination of cell suspensions. The invention can advantageously be used in mammal cell culture and other cultivation or fermentation processes in which the proportion of living cells in the total cell concentration changes during cultivation or which have a particular risk of contamination. In the described method, at least one ambient condition of a luminescent dye (5) in a reactor (3) is influenced by at least one condition of the cells (1), wherein: polarised light (7) from at least one light source (6) is radiated into a medium (2) cultivated in the reactor (3) and excites the at least one luminescent dye (5) to luminescence; at least some of the light (8) emitted by at least one luminescent dye (5) exits the medium (2) and is polarised by at least one polariser (9); the polarised emitted light (10) thus obtained is sensed by at least one light sensor (11); the polarised emitted light (10) is sensed at at least two different polarisation angles as at least two luminescence values (12.1, 12.2); and at least one anisotropy value (14) is determined from the at least two luminescence values (12.1, 12.2) by means of suitable mathematical methods (13), said anisotropy value correlating with at least one condition of the cells (1).

IPC 8 full level

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