

A METHOD OF ESTIMATION OF THE CELL DOUBLING TIME ON BASIS OF THE CELL CULTURE MONITORING DATA

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Abstract

Investigation with time-lapse microscopy of the clonal growth of stem cells provides to the analysis of image sequences, which document development of a single clone in constant time increments. The cell doubling time (T_2) determines the dynamics of the cell culture development as average time taken for a cell to complete the cell cycle and is typically estimated with cytometric measurements within several days.

However our monitoring of the cell culture lasts shorter, so the dependence of T_2 from measurements available from image sequences has been found and applied to the collected data. The results are compared with the cell doubling time estimated and published for the cell line by the lab, in which it has been established.

Keywords: cell culture, cell doubling-time, time laps microscopy