

ABSTRACT

An automatic material supplementing method based on a real-time dynamic measurement result includes: collecting a real-time dynamic measurement result, and calculating a rate of change of each component within a unit time, where the rate of change is a consumption rate or a generation rate; selecting a component having the highest rate of change as a marker for a current time period; collecting historical measurement data, and calculating a cell growth rate in a logarithmic growth phase and a target product expression rate in a culture harvest phase; taking, as a component concentration set value for the current time period of the logarithmic growth phase, a concentration level of the marker when the cell growth rate in the logarithmic growth phase is highest; taking, as a component concentration set value for the current time period of the culture harvest phase, a concentration level of the marker when the target product expression rate in the culture harvest phase is highest; and calculating an addition amount of the marker for the current time period based on the rate of change of the marker and/or based on a difference between a real-time measured concentration of the marker for the current time period and the component concentration set value of the marker for the current time period, and calculating an addition amount of a culture medium based on the addition amount of the marker to obtain a material supplementing strategy.