

Bacterial Growth

Biology

The growth curve, and what limits each phase.

Phases of a closed batch culture.

Phase	What happens
Lag	Adapting; enzyme synthesis; no division yet
Log (exponential)	Constant maximum division rate
Stationary	Division equals death; nutrients limiting
Death	Death exceeds division

E. coli divides every ~20 minutes at optimum. Unlimited, one cell would exceed the Earth's mass within two days.