

خطوة توضح تحول البكتريا

The diagram illustrates the isolation and identification of *E. coli* from a mixed culture through three steps:

- Step 1: Inoculation and Growth**
 A mixed culture of *E. coli* and *Staphylococcus aureus* is inoculated into a nutrient agar plate. The *E. coli* grows as a confluent lawn, while *S. aureus* forms distinct colonies. The text indicates that *E. coli* is the target organism for isolation.
- Step 2: Isolation of Pure Culture**
 A single colony of *E. coli* is picked and inoculated into a fresh nutrient agar plate. This results in a pure culture of *E. coli*, where the lawn is uniform and free of other organisms.
- Step 3: Identification**
 The pure culture is subjected to biochemical tests. The text mentions that *E. coli* is identified by its characteristic gas production (indicated by bubbles in the medium) and its ability to ferment lactose (indicated by a color change from red to yellow).