

Hektoen Enteric Agar (HEA)

Principle:

A differential and selective medium for the isolation and differentiation of *Salmonella* spp. and *Shigella* spp. from gram negative enteric pathogens.

Purpose:

- Lactose positive organisms are differentiated from lactose negative organisms due to the presence of two indicators, bromthymol blue and acid fuschin.
- The combination of thiosulfate with the ferric ammonium citrate causes the H₂S producing colonies to become black.

Test Procedure:

- Inoculate the organism directly onto the surface of a HEA agar plate and streak for isolation.
- Incubate inoculated plate aerobically at 37°C.
- Examine for growth after 18-24 hours of incubation.

Interpretations:

- Poor to good growth of yellow to orange colonies with or without orange bile precipitate indicative of *Escherichia coli*.
- Poor to good growth of yellow to orange colonies with heavy orange bile precipitate indicative of *Klebsiella pneumoniae*.
- Excellent growth of greenish/blue colonies with or without black centers (H₂S production) indicative of *Salmonella typhimurium*.
- Good to excellent growth of green colonies indicative of *Proteus vulgaris*.

