



Yersinia pestis Identification Flowchart

SAFETY: As soon as *Yersinia* is suspected, perform ALL further work in a Class II Biosafety Cabinet using BSL-3 practices

Major characteristics of *Yersinia pestis*:

Gram stain morphology: Gram negative rods, 0.5 x 1-2 μm

Colony morphology: Slow growing, pinpoint colonies after 24h; colonies are 1-2 mm, gray-white to slightly yellow and opaque on BAP after 48 h; non-lactose fermenter on MAC/EMB; growing both at 25-28°C and at 35-37°C.

Specimen is blood, sputum, or lymph node aspirate

Yes

Oxidase: Negative
Catalase: Positive
Indole: Negative
Urease: Negative

No

Not *Yersinia pestis*.
Continue identification per routine laboratory procedures.
May be other *Yersinia* spp.

Yes

Y. pestis is not ruled out. Contact LRN Reference Level Laboratory to refer isolate.

Report: *Y. pestis* cannot be ruled out; isolate referred to LRN Reference Level Laboratory.

WARNING: Some of the automated identification systems do not identify *Y. pestis* adequately.

Y. pestis has been falsely identified as *Y. pseudotuberculosis*, *Shigella*, H₂S negative *Salmonella*, *Acinetobacter* and *Pseudomonas* species.

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