***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*

**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.

**Yes**

**No**

**Yes**

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*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.

Oxidase: Negative

Catalase: Positive

Indole: Negative

Urease: Negative

Not Yersinia pestis.

Continue identification per routine laboratory procedures.

May be other Yersinia spp.