



Brucella spp. Identification Flowchart

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

Major characteristics of *Brucella* species:

Gram stain morphology: Small (0.4 x 0.8 μm), Gram negative coccobacillus
THINK BRUCELLA

Growth: Subculture positive aerobic blood culture to BAP, CHOC. Incubate in 5-10% CO₂ at 35°C, Spot BAP with *S. aureus* ATCC 25923 for satellite test. Note poorly growing colonies after 24hour incubation on BAP and CHOC.
Incubate plates for at least two additional days if no growth in 24 hours.
Organism does NOT grow on MAC/EMB. (Pinpoint colonies infrequently after extended Incubation; 7 days)

Yes

Is the organism only growing on BAP without the need to satellite around the *S. aureus* at 24-48 hours?

No

Consider *Haemophilus*

Yes

Oxidase positive and catalase positive?

No

Think *Francisella* (see procedure)

Yes

Urea positive?

No

Reincubate and see written procedure

Yes

Brucella not ruled out.

Contact LRN Reference Level Laboratory to refer the isolate.

Inform physician that *Brucella* species cannot be ruled out.
Antimicrobial therapy: Rifampin or Streptomycin plus Doxycycline