Salt Tolerance Broth

Intended Use:
Salt tolerance broth is intended to differentiate non-beta-hemolytic strains of streptococci.

Principle of Use:
Brain Heart infusion (BHI) broth is supplemented with 6.5% sodium chloride and bromcresol purple as a pH indicator. The indicator is included to make reading the test results easier. The broth also includes dextrose. The fermentation of dextrose (glucose) results in the production of acid. This changes the pH of the media causing the media to turn from purple to yellow.

Test Procedure:
1. Select no more than 2-3 colonies (preferably from an overnight culture) to inoculate a tube of salt tolerance broth.
    - It is important to lightly inoculate the tube otherwise you may get a false positive.
2. Loosen the cap and incubate aerobically for 24 hours at 37°C.
3. Continue incubation up to 72 hours if you get a negative result at 24 hours.

Results:
A positive reaction is indicated by obvious turbidity in the media with or without a color change. A negative result is indicated by no growth after 72 hours. Enterococcus spp. typically changes the media color within 24 hours.

Limitations:
- Many staphylococci can grow in media containing 10% salt. Mannitol salt agar has 7.5% salt.
- Salt tolerance media was intended to differentiate catalase negative gram-positive cocci. Be sure to perform a catalase test before you proceed with the salt tolerance broth test.
- Other species of catalase negative gram-positive organisms can grow in this media.