

## Latex Agglutination Test for the Detection of *Burkholderia pseudomallei*

### Purpose:

To identify *B. pseudomallei* colonies following growth on solid media. The latex agglutination test is based on specific reaction between monoclonal antibody (MAb) and exopolysaccharide of *B. pseudomallei*<sup>1, 2, 3, 4</sup>.

### Kit contents:

**Latex Reagent:** Latex particles coated with MAb against *B. pseudomallei* antigen (2.5 ml-milky solution).

**Positive control:** Suspension of killed-*B. pseudomallei* in phosphate buffer saline (2.5 ml).

**Negative control:** Suspension of killed-*B. thailandensis* in phosphate buffer saline (2.5 ml).

**Storage condition:** Store at 2-8 °C.

**Materials required but not provided:**

a) glass slides b) micropipette and tips c) microbiological loops or toothpicks d) disinfectant.

### Test procedure:

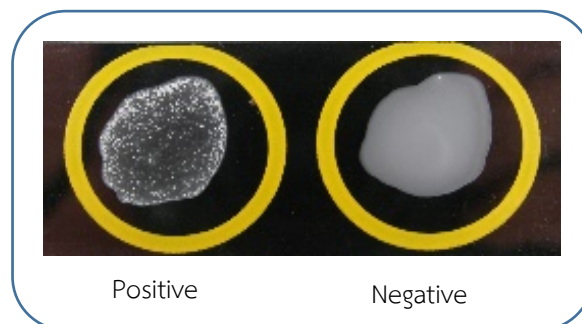
1. Warm reagents to room temperature before use.
2. Just prior to use, thoroughly mix reagents.
3. One drop (approximately 10 µl) of latex reagent onto a glass slide  
Note: Positive control should be run once on every testing day by mixing one drop of positive control with the drop of latex reagent.
4. Use a toothpick to obtain suspected colonies and emulsify in the latex reagent.
5. Rotate the slide to allow the reaction to occur
6. Observe agglutination result within 2 minutes

**Note:** Agglutination may be rapid or may take up to 20 seconds for *B. pseudomallei*.

### Interpretation:

**Negative:** No agglutinate with milky solution

**Positive:** Fine agglutinate with clear solution



### Precautions:

1. False-positive result for this latex test may occur in these following organisms *Staphylococcus aureus*, *Acinetobacter baumannii*, and *B. cepacia*. However, they are different from *B. pseudomallei* in that *S. aureus* is gram positive cocci, some *B. cepacia* strain resists to amoxicillin/clavulanic acid and *A. baumannii* is oxidase test-negative.
2. Latex reagent is not recommended for use with clinical samples directly.
3. *B. pseudomallei* is classified as Category B bioterrorism agent by CDC, creating of aerosol may occurred. This test is recommended to perform in biosafety cabinet. Glove and gown should be worn.
4. Contaminated glass slide should be decontaminated with proper disinfectant before dispose in sharp container

### References:

1. Anuntagool N, et al. 2000. J Med Microbiol. 49:1075-1078.
2. Wuthiekanun V, et al. 2002. Am J Trop Med Hyg. 66(6):759-61.
3. Amornchai P, et al. 2007. J ClinMicrobiol. 45(11):3444-6.
4. Duval BD, et al. 2014. Am J Trop Med Hyg. 90(6): 1043 – 1046