

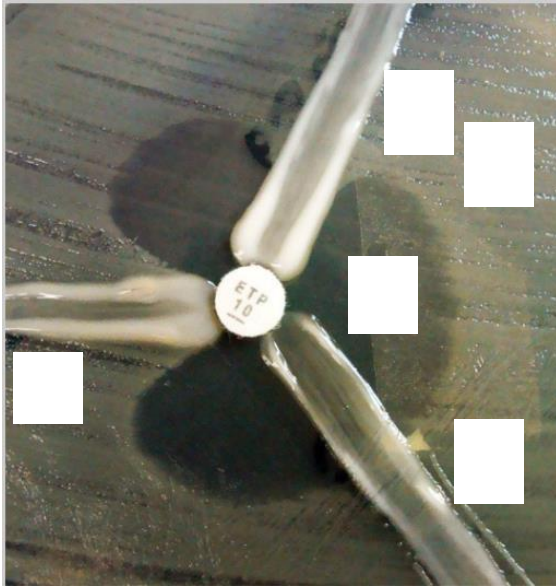
Test Key

A Hands-on Workshop for Indiana Labs: Carbapenemase-producing Carbapenem-resistant *Enterobacteriaceae*

1. True or False
CRE is reportable in Indiana for both isolates and condition.
2. Which of the following markers of carbapenem resistance are classified as carbapenemases?
 - a. AmpC + porin mutation
 - b. KPC
 - c. NDM-1
 - d. B & C only
 - e. All of the above
3. Which of the following carbapenemases are catalyzed by zinc, and thus may be better detected using zinc-containing medium? (select all that apply)
 - a. KPC
 - b. NDM-1
 - c. VIM
 - d. IMP
4. In a solution, hydrolysis of carbapenem antibiotics by a carbapenemase will cause the solution to become more:
 - a. Acidic
 - b. Basic
 - c. Neutral
5. Which of the following are limitations of testing for the Carba NP test?
 - a. Weak carbapenemase-producers are difficult to detect.
 - b. Mucoid strains may produce false-positive results.
 - c. Cultures must be incubated >48 hours for best results
 - d. All of the above

6. Which of the following are limitations of testing for the Modified Hodge test?
- a. For use only with members of the *Enterobacteriaceae*
 - b. Loss of sensitivity for the detection of MBLs (ex. NDM-1)
 - c. Some Carbapenemase-negative isolates demonstrate a minor indentation.
 - d. All of the above

7. Label the Modified Hodge Test:



- a. Carbapenemase-producing isolate
- b. Positive Control
- c. Carbapenem-resistant, non-carbapenemase producing organism
- d. Lawn of Carbapenem-susceptible *E. coli*
- e. Inhibition of Carbapenem-susceptible *E. coli*

Answers (clockwise from top):

B (or A), D, E, C, A (or B)

8. True or False

There are FDA-approved molecular-based tests for the detection of CP-CRE direct from a patient specimen.

9. True or False

There are FDA-approved molecular-based tests for the detection of CP-CRE directly from an isolate.

10. Who is the best person to contact at ISDH Laboratories with questions regarding CP-CRE testing?

- a. Shelley Matheson
- b. Mark Glazier
- c. Dr. Sara Blosser
- d. Jon Radosevic