Explanation of Carbapenemase Testing Methods

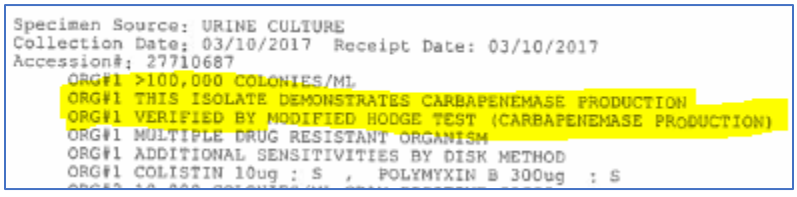
Laboratories can conduct specific tests to determine whether *Enterobacterales, P. aeruginosa*, and *A. baumannii* are positive for carbapenemases. There are generally two types of testing methods with different goals.

	Phenotypic	**Genotypic**
Goal of test	To identify presence of <u>any</u> carbapenemase	To identify presence of a <u>specific</u> carbapenemase
What report may say	"carbapenemase detected" and/or "mCIM positive" *(see example A, below)*	"KPC gene detected" or "KPC positive" *(see example B, below)*
Examples of methods*	• Biomerieux Rapidec® Carba NP • BD Phoenix™ CPO Detect • Modified Carbapenem Inactivation Method (mCIM) with or without EDTA Carbapenem Inactivation Method (eCIM)	• Cepheid Xpert® Carba-R • Hardy NG-Test® CARBA 5^ • Biofire® FilmArray® BCID Panel for positive blood cultures • VERIGENE® gene detection for positive blood cultures • Check-Points Check-Direct CPE for BD MAX™ • Real-Time PCR or Traditional PCR

**Note this list is not exhaustive nor an endorsement of specific products.*

^Phenotypic immunological assay that detects specific antigens associated with the 5 main carbapenemases.

Example A:



Example B: