ALBERTA PRECISION LABORATORIES
Leaders in Laboratory Medicine

Antibiotic % Susceptibility
Blood Cultures
City of Calgary: Emergency, Urgent Care and Community
May -December 2023[a]

Data derived from routine susceptibility tests performed by Alberta Precision Laboratories

		N	Penicillin (IV)	Ampicillin	Cloxacillin	Amoxicillin/Clavulanate	Piperacillin/Tazobactam	Cefazolin	Ceftriaxone	Ceftazidime	Azithromycin	Trimethoprim-sulfamethoxazole	Vancomycin	Levofloxacin	Ciprofloxacin	Gentamicin	Tobramycin	Ertapenem	Meropenem
Gram Positive:																			
Enterococcus faecalis		53		100[b]				R	R	R		R	100						
Staphylococcus aureus	all	257			85			85					100						
	MSSA	219			100			100					100						
	MRSA	39			R			R					100						
Staphylococcus, coagulase-negative		60			68			68					100						
Streptococcus, group A		77	100	100				100	100				100						
Streptococcus, group B		32	100	100				100	100				100						
Streptococcus, groups C/G		35	100	100				100	100				100						
Streptococcus pneumoniae	Meningitis	102	77						92										
	Non-meningitis	123	99						100		65	79	100	100					
Gram Negative:																			
Enterobacter cloacae complex[c]		31		R				R				97			90	97	97	97	100
Escherichia coli	all	423		47		78	78	49	78			73			59	87	85		
	ESBL	81		R				R	R	R		46			7	66	53	99	100
Klebsiella pneumoniae complex		120		R		91	97	71	87			85			80	95	93	99	99
Proteus mirabilis		48		87		100	100	33	100			81			74	96	98		
Pseudomonas aeruginosa		35		R		R	94		R	97		R			94		100	R	100

[a]Due to launch of Connect Care in May 2023, data from Jan-April not included.

[b]For Enterococci, results of ampicillin susceptiblity testing can be used to predict the activity of amoxicillin-clavulanate, piperacillin-tazobactam and for E. faecalis only, additionally imipenem.

[c]Organism usually produces β-lactamase which can cause failure of 3rd generation cephalosporin therapy, despite in vitro susceptibility

Note: Percent susceptible for each organism/antimicrobial combination was generated by including the first isolate of that organism recovered from a given patient during the time period analyzed.
Abbreviations: MSSA - methicillin-susceptible Staphylococcus aureus; ESBL - extended spectrum beta-lactamase; R - intrinsic resistance

ALBERTA PRECISION LABORATORIES

Leaders in Laboratory Medicine

Antibiotic % Susceptibility Patterns: Blood Cultures
Emergency and Community - Calgary
January - December 2022

Data derived from routine susceptibility tests performed by Alberta Precision Laboratories

		N	Penicillin (IV)	Ampicillin	Cloxacillin	Piperacillin-tazobactam	Cefazolin	Ceftriaxone	Ceftazidime	Trimethoprim-sulfamethoxazole	Vancomycin	Ciprofloxacin	Levofloxacin	Gentamicin	Tobramycin	Ertapenem	Meropenem
Gram-positive																	
Enterococcus faecalis		72		**100**			R	R	R	R	**100**						
Enterococcus faecium[b]		33		**52**			R	R	R	R	**82**						
Staphylococcus aureus	All	362			**86**		**86**				**100**						
	MSSA	312			**100**		**100**				**100**						
	MRSA	51			R		R				**100**						
Staphylococcus, coagulase-negative		107			**58**		**58**				**100**						
Streptococcus anginosus group		52	**98**					**100**			**100**						
Streptococcus viridans group		46	**83**					**96**			**100**						
Streptococcus, group A		75	**100**	**100**			**100**				**100**						
Streptococcus, group B		45	**100**	**100**			**100**				**100**						
Streptococcus, group C/G[b]		57	**100**	**100**			**100**				**100**						
Streptococcus pneumoniae	meningitis	153	**82**					**97**			**100**						
	non-meningitis	153	**100**					**100**			**100**						
Gram-negative																	
Enterobacter cloacae complex[a]		32		R			R			**91**		**91**		**100**	**100**	**100**	**100**
Escherichia coli	All	574		**47**		**83**	**63**	**83**		**72**		**58**		**88**	**88**		
	ESBL	91		R			R	R	R	**38**		**1**		**59**	**55**	**100**	**100**
Klebsiella oxytoca		30		R		**93**	**17**	**93**		**93**		**93**		**97**	**100**		
Klebsiella pneumoniae complex		136		R		**93**	**85**	**93**		**94**		**87**		**96**	**96**		
Proteus mirabilis		50		**90**		**100**	**48**	**100**		**74**		**78**		**94**	**96**		
Pseudomonas aeruginosa		47		R		**98**		R	**98**	R		**87**			**100**	R	**98**
Salmonella, typhoidal[b]		30		**83**			R	**93**		**90**		**7**		R	R		

[a] These organisms usually produce β-lactamase which can cause failure of 3rd generation cephalosporin therapy, despite in vitro susceptibility

[b] Combined data (January - December 2021 and January - December 2022) due to the small number of isolates in 2022

Note: Percent susceptible for each organism/antimicrobial combination was generated by including the first isolate of that organism recovered from a given patient during the time period analyzed.

Abbreviations: MSSA - methicillin-susceptible Staphylococcus aureus; MRSA - methicillin-resistant Staphylococcus aureus; ESBL - extended spectrum beta-lactamase; R - intrinsic resistance