

Species	Strain / isolate	Type of exposure	Increase in MIC	MIC _{max} (mg/l)	Stability	Associated changes	Ref
<i>B. cereus</i>	MRBG 4.21 (kitchen drain biofilm isolate)	40 d at various concentrations	None	14.5	Not applicable	None described	[41]
<i>B. cereus</i>	Domestic drain biofilm isolate MBRG 4.21	14 d at various concentrations	None	1.9	Not applicable	None reported	[36]
<i>B. cereus</i>	4 biocide-sensitive strains from organic foods	Several passages with gradually higher concentrations	6fold – 16fold	80	Stable for 20 subcultures (1 strain)	Cross-adaptation* to benzalkoniumchloride (\geq 100fold; 3 strains), triclosan (4fold – 36fold; 3 strains) and didecyldimethylammonium bromide (6fold; 2 strains); cross-resistance* to imipenem (4 strains), sulfamethoxazole (2 strains), ampicillin and tetracycline (1 strain each)	[43]
<i>B. licheniformis</i>	2 biocide-sensitive strains from organic foods	Several passages with gradually higher concentrations	4fold – 10fold	50	Unstable	Cross-adaptation* to benzalkoniumchloride (40fold - 75fold; 2 strains) and triclosan (8fold; 1 strain); cross-resistance* to imipenem (2 strains), cefotaxime and tetracycline (1 strain each)	[43]
<i>B. subtilis</i>	2 strains and 3 derivatives	2 h at 0.00005%	No data	No data	Not applicable	No increase of transfer of the mobile genetic element Tn916, a conjugative transposon	[56]
<i>Bacillus</i> spp.	4 biocide-sensitive strains from organic foods	Several passages with gradually higher concentrations	4fold – 8fold	40	Unstable	Cross-adaptation* to benzalkoniumchloride (15fold – 100fold; 4 strains), triclosan (8fold; 4 strains) and didecyldimethylammonium bromide (4fold - 6fold; 2 strains); cross-resistance* to imipenem and sulfamethoxazole (4 strains each), cefotaxime and ceftazidime (1 strain each)	[43]
<i>C. pseudogenitalum</i>	Human skin isolate MBRG 9.24	14 d at various concentrations	4fold	3.9	No data	None reported	[36]
<i>C. renale</i> group	Human skin isolate MBRG 9.13	14 d at various concentrations	4fold	31.2	No data	None reported	[36]
<i>C. xerosis</i>	WIBG 1.2 (wound isolate)	40 d at various concentrations	None	3.6	Not applicable	None described	[41]
<i>E. casseliflavus</i>	3 biocide-sensitive strains from organic foods	Several passages with gradually higher concentrations	8fold – 20fold	100	Stable for 20 subcultures (1 strain)	Cross-adaptation* to benzalkoniumchloride (30fold - 100fold; 4 strains), triclosan (> 100fold; 1 strain) and didecyldimethylammonium bromide (4fold - 6fold; 2 strains); cross-resistance* to imipenem (3 strains), cefotaxime and tetracycline (1 strain each)	[43]
<i>E. durans</i>	Biocide-sensitive strain from organic foods	Several passages with gradually higher concentrations	10fold	50	Unstable	Cross-adaptation* to benzalkoniumchloride (\geq 100fold), triclosan (10fold) and didecyldimethylammonium bromide (16fold); cross-resistance* to imipenem and ampicillin	[43]
<i>E. faecalis</i>	1 strain of unknown origin	14 passages at various concentrations	2fold	7.8	Stable for 14 d	None reported	[37]
<i>E. faecalis</i>	Strain SS497	10 passages at various concentrations	3.7fold	11		Significant increase of surface hydrophobicity	[57]
<i>E. faecalis</i>	WIBG 1.1 (wound isolate)	40 d at various concentrations	6.7fold	24.2	Unstable for 14 d	None described	[41]
<i>E. faecalis</i>	Biocide-sensitive strain from organic foods	Several passages with gradually higher concentrations	10fold	50	Unstable	Cross-adaptation* to benzalkoniumchloride (80fold) and didecyldimethylammonium bromide (8fold); cross-resistance* to imipenem and ceftazidime	[43]
<i>E. faecium</i>	9 biocide-sensitive strains from organic foods	Several passages with gradually higher concentrations	2fold – 16fold	80	Stable for 20 subcultures (1 strain)	Cross-adaptation* to benzalkoniumchloride (10fold - 100fold; 9 strains), triclosan (4fold - 100fold; 6 strains) and didecyldimethylammonium bromide (4fold - 8fold; 7 strains); cross-	[43]

						resistance* to imipenem (9 strains), tetracycline (4 strains), ampicillin (2 strains) cefotaxime and ceftazidime (1 strain each)	
<i>E. faecium</i>	VRE strain 410 (skin and soft tissue infection isolate)	21 d at various concentrations	4fold	19.6	No data	Subpopulation with reduced susceptibility* to daptomycin including significant alterations in membrane phospholipids	[58]
<i>E. faecium</i>	3 vanA VRE strains	15 min at MIC	No data	No data	Not applicable	≥ 10fold increase of vanHAX encoding VanA-type vancomycin resistance and of liaXYZ associated with reduced daptomycin susceptibility; vanA upregulation was not strain or species specific; VRE was more susceptible to vancomycin in the presence of subinhibitory chlorhexidine	[59]
<i>E. saccharolyticus</i>	Domestic drain biofilm isolate MBRG 9.16	14 d at various concentrations	None	1.9	Not applicable	None reported	[36]
<i>Enterococcus</i> spp.	6 biocide-sensitive strains from organic foods	Several passages with gradually higher concentrations	2fold – 10fold	50	Unstable	Cross-adaptation* to benzalkoniumchloride (30fold - 100fold; 6 strains), triclosan (4fold - 15fold; 5 strains) and didecyldimethylammonium bromide (4fold - 6fold; 4 strains); cross-resistance* to imipenem (6 strains), ceftazidime and sulfamethoxazole (5 strains each), cefotaxime (4 strains), tetracycline (3 strains) and ampicillin (2 strains)	[43]
<i>Eubacterium</i> spp.	Domestic drain biofilm isolate MBRG 4.14	14 d at various concentrations	None	31.2	Not applicable	None reported	[36]
<i>M. phyllosphaerae</i>	Domestic drain biofilm isolate MBRG 4.30	14 d at various concentrations	None	15.6	Not applicable	None reported	[36]
<i>M. luteus</i>	MRBG 9.25 (skin isolate)	40 d at various concentrations	None	3.6	Not applicable	None described	[41]
<i>S. aureus</i>	ATCC 6538	40 d at various concentrations	None	3.6	Not applicable	None described	[41]
<i>S. aureus</i>	ATCC 6538	100 d at various concentrations	None	0.6	Not applicable	None described	[60]
<i>S. aureus</i>	NCTC 6571 plus 2 MRSA strains	Several passages with gradually higher concentrations	1.3fold – 2fold	1	“unstable”	None described	[61]
<i>S. aureus</i>	NCIMB 9518	0.00005% for 30 s, 5 min and 24 h	2fold – 5fold	20	Stable for 10 d	No increase of MBC	[45]
<i>S. aureus</i>	ATCC 6538	7 d of sublethal exposure	2.5fold	2.5	Unstable for 10 d	None reported	[52]
<i>S. aureus</i>	3 clinical MRSA strains	10 passages at various concentrations	≤ 4fold	8	No data	No change of PHMB susceptibility**	[62]
<i>S. aureus</i>	ATCC 6538	14 passages at various concentrations	4fold	7.8	Unstable for 14 d	None reported	[37]
<i>S. aureus</i>	ATCC 25923 and 14 clinical isolates	14 d at various sublethal concentrations	4fold - 6fold (6 isolates)	6.3	No data	Increased tolerance* to ciprofloxacin (4fold - 64fold; 10 isolates), tetracycline (4fold - 512fold; all isolates), gentamicin (4fold - 512fold; 8 isolates), amikacin (16fold - 512fold; 11 isolates), cefepime (8fold - 64fold; 11 isolates) and meropenem (8fold - 64fold; 9 isolates)	[63]
<i>S. aureus</i>	NCTC 4163	12 w at various concentrations	16fold	No data	No data	None described	[46]
<i>S. aureus</i>	Strain SAU3 carrying plasmid pWG613	10 min at 0.00005%	No data	No data	Not applicable	No significant reduction of plasmid transfer frequency	[64]
<i>S. capitis</i>	MRBG 9.34 (skin isolate)	40 d at various concentrations	1.7fold	6	Stable for 14 d	None described	[41]
<i>S. capitis</i>	Human skin isolate MBRG 9.34	14 d at various concentrations	None	7.8	Not applicable	None reported	[36]
<i>S. caprae</i>	MRBG 9.3 (skin isolate)	40 d at various concentrations	None	3.6	Not applicable	None described	[41]

<i>S. caprae</i>	Human skin isolate MBRG 9.30	14 d at various concentrations	None	7.8	No data	None reported	[36]
<i>S. cohnii</i>	Human skin isolate MBRG 9.31	14 d at various concentrations	None	3.9	Not applicable	None reported	[36]
<i>S. epidermidis</i>	MRBG 9.33 (skin isolate)	40 d at various concentrations	None	9.7	Not applicable	None described	[41]
<i>S. epidermidis</i>	Human skin isolate M 9.33	14 d at various concentrations	None	7.8	Not applicable	None reported	[36]
<i>S. epidermidis</i>	CIP53124	1 d at various concentrations	No data	No data	Not applicable	Significant increase of biofilm formation at various sublethal concentrations	[65]
<i>S. haemolyticus</i>	Human skin isolate MBRG 9.35	14 d at various concentrations	None	15.6	Not applicable	None reported	[36]
<i>S. haemolyticus</i>	MRBG9.35 (skin isolate)	40 d at various concentrations	2.1fold	3	Unstable for 14 d	None described	[41]
<i>S. hominis</i>	Human skin isolate MBRG 9.37	14 d at various concentrations	None	7.8	Not applicable	None reported	[36]
<i>S. kloosii</i>	Human skin isolate MBRG 9.37	14 d at various concentrations	None	7.8	Not applicable	None reported	[36]
<i>S. lugdunensis</i>	Human skin isolate MBRG 9.36	14 d at various concentrations	None	15.6	Not applicable	None reported	[36]
<i>S. lugdunensis</i>	MRBG 9.36 (skin isolate)	40 d at various concentrations	4fold	3.6	Stable for 14 d	None described	[41]
<i>S. saprophyticus</i>	Human skin isolate MBRG 9.29	14 d at various concentrations	None	3.9	Not applicable	None reported	[36]
<i>S. saprophyticus</i>	4 biocide-sensitive strains from organic foods	Several passages with gradually higher concentrations	2fold – 10fold	50	Unstable	Cross-adaptation* to benzalkoniumchloride (25fold - 100fold; 4 strains), triclosan (4fold - 8fold; 3 strains) and didecyldimethylammonium bromide (6fold - 12fold; 2 strains); cross- resistance* to ceftazidime (4 strains), imipenem, sulfamethoxazole and cefotaxime (2 strains each) and tetracycline (1 strain)	[43]
<i>S. warneri</i>	MRBG 9.27 (skin isolate)	40 d at various concentrations	None	29	Not applicable	None described	[41]
<i>S. warneri</i>	Human skin isolate MBRG 9.27	14 d at various concentrations	2fold	15.6	No data	None reported	[36]
<i>S. xyloso</i>	Biocide-sensitive strain from organic foods	Several passages with gradually higher concentrations	4fold	20	Unstable	Cross-adaptation* to benzalkoniumchloride (> 100fold), triclosan (8fold) and didecyldimethylammonium bromide (20fold); cross-resistance* to ceftazidime, imipenem, sulfamethoxazole, cefotaxime and tetracycline	[43]
<i>Staphylococcus</i> spp.	3 biocide-sensitive strains from organic foods	Several passages with gradually higher concentrations	4fold – 10fold	50	Unstable	Cross-adaptation* to benzalkoniumchloride (4fold - 10fold; 3 strains), triclosan (8fold - 100fold; 3 strains) and didecyldimethylammonium bromide (6fold - 20fold; 3 strains); cross- resistance* to ceftazidime (1 strain)	[43]
<i>S. mutans</i>	Strain UA159	10 passages at various concentrations	None	3	Not applicable	None reported	[57]