Antimicrobial susceptibility of listeria monocytogenes from food products

Antimicrobial susceptibility of listeria monocytogenes from food products

This study was conducted to determine the susceptibility of Listeria monocytogenes isolated from food products to antimicrobial agents commonly used for treatment of infections with gram-positive bacteria, and to disinfectants. A total of 114 L. monocytogenes retail isolates were tested for susceptibility to ceftiofur, chloramphenicol, ciprofloxacin, erythromycin, florfenicol, penicillin, spectinomycin, streptomycin, tetracycline, tiamulin, trimethoprim, and co-trimoxazole, and the disinfectants benzalkonium chloride and triclosan, by determination of minimum inhibitory concentrations (MICs). All isolates were resistant to ceftiofur, but susceptible to the other antibiotics. A single isolate had a MIC of 4 mg/L for ciprofloxacin. For tiamulin, the MIC values were around the breakpoint used. Most isolates had MICs for triclosan at 16 mg/L. The MICs for benzalkonium chloride formed a bimodal distribution, with 105 isolates having a MIC of 4 mg/L and 9 isolates MICs of 16 and 32 mg/L. This study showed that Danish isolates of L. monocytogenes have not developed or acquired resistance to antimicrobial agents used for treatment or disinfection, except for benzalkonium chloride. The MICs for triclosan was high compared to other gram-positive bacteria, suggesting that triclosan might not be useful against L. monocytogenes if incorporated in materials in the food industry.

General information
State: Published
Organisations: Division of Microbiology and Risk Assessment, National Food Institute
Contributors: Aarestrup, F. M., Knöchel, S., Hasman, H.
Pages: 216-221
Publication date: 2007
Peer-reviewed: Yes

Publication information
Journal: Foodborne Pathogens and Disease
Volume: 4
Issue number: 2
ISSN (Print): 1535-3141
Ratings:
BFI (2018): BFI-level 1
Web of Science (2018): Indexed yes
BFI (2017): BFI-level 1
Scopus rating (2017): CiteScore 2.47 SJR 1.063 SNIP 1.016
Web of Science (2017): Impact factor 2.476
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 2.46 SJR 1.062 SNIP 1.08
Web of Science (2016): Impact factor 2.12
BFI (2015): BFI-level 1
Scopus rating (2015): CiteScore 2.41 SJR 1.064 SNIP 1.035
Web of Science (2015): Impact factor 2.27
BFI (2014): BFI-level 1
Scopus rating (2014): CiteScore 2.16 SJR 0.953 SNIP 1.051
Web of Science (2014): Impact factor 1.905
Web of Science (2014): Indexed yes
BFI (2013): BFI-level 1
Scopus rating (2013): CiteScore 2.41 SJR 1.184 SNIP 1.129
Web of Science (2013): Impact factor 2.092
ISI indexed (2013): ISI indexed yes
Web of Science (2013): Indexed yes
BFI (2012): BFI-level 1
Scopus rating (2012): CiteScore 2.55 SJR 1.185 SNIP 1.144
Web of Science (2012): Impact factor 2.283
ISI indexed (2012): ISI indexed yes
Web of Science (2012): Indexed yes
BFI (2011): BFI-level 1
Scopus rating (2011): CiteScore 2.33 SJR 1.118 SNIP 1.037
Web of Science (2011): Impact factor 2.26
ISI indexed (2011): ISI indexed yes
Web of Science (2011): Indexed yes
BFI (2010): BFI-level 1
Scopus rating (2010): SJR 0.86 SNIP 0.94
Web of Science (2010): Impact factor 2.134
BFI (2009): BFI-level 1
Scopus rating (2009): SJR 0.864 SNIP 1.088
Web of Science (2009): Indexed yes
Scopus rating (2008): SJR 0.72 SNIP 0.682
Web of Science (2008): Indexed yes
Scopus rating (2007): SJR 0.611 SNIP 0.621
Web of Science (2007): Indexed yes
Scopus rating (2006): SJR 0.399 SNIP 0.318
Web of Science (2006): Indexed yes
Scopus rating (2005): SJR 0.198 SNIP 0.45
Original language: English
DOIs:
10.1089/fpd.2006.0078
Source: orbit
Source-ID: 214327
Research output: Research - peer-review › Journal article – Annual report year: 2007