Antimicrobial susceptibilities of *Listeria monocytogenes* isolated from imported and domestic foods in Japan.

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***In vitro* antimicrobial susceptibility of *L. monocytogenes* isolated from imported and domestic foods in Japan was determined by plate dilution method. Eleven isolates from domestic meat, meat products, liver and seafood products and 16 isolates from imported meat and meat products were examined their susceptibilities against ampicillin, chloramphenicol, enrofloxacin, erythromycin, gentamicin, kanamycin, penicillin and tetracycline. According to the breakpoint from CLSI guideline, all isolates were susceptible to ampicillin, and penicillin. Only 1 isolates from domestic scallop showed resistance to kanamycin and gentamicin. The Minimum Inhibitory Concentration (MIC) for 50% of the strains and the MIC for 90% of the strains were comparable between the domestic and the imported food origins. These results suggest there were less differences of antimicrobial susceptibility between *Listeria* isolates from the domestic food and from the imported food.**

Materials and Methods

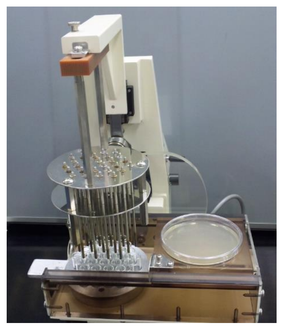
Table 1. *L. monocytogenes* strains used in this study

Origin	Type of foods	Number of isolates	Isolated year	Serotype
Domestic foods	Beef liver	1	2000	4b
	Pork liver	2	2000	4b
	Beef meat	3	2000	1/2b, 4b
	Pork meat	1	2000	1/2b
	Chicken sasami	1	2000	1/2b
	Pork cotlet	1	2008	1/2a
	Scallop	1	2008	4b
	Environment	1	2006	1/2b
	Total	11		
Imported foods	Raw ham	2	2007	1/2a, 1/2c
	Salami	4	2007	1/2a, 1/2b, 1/2c, 3b
	Chicken meat	10	2006-2008	1/2a, 1/2c, 3a, 4b
	Total	16		

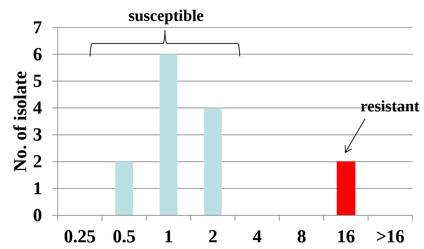
Guideline of CLSI for *L. monocytogenes*

Breakpoint for ABPC and PN
MIC of ≦2 μg/mL is susceptible
>2 μg/mL is non-susceptible

Microplanter (Sakuma, Japan)



Microbiological breakpoint for other antibiotics



Conclusion

****L. monocytogenes* strains isolated in Japan remain susceptible to many kinds of antibiotics.**
***However, one KM- and GM- resistant strain from scallop was isolated.**
***The distribution of MICs in Lm from domestic and imported foods were comparable in all antibiotics used in this study.**
*** These results suggest the importance of the continuous surveillance of antibiotic susceptibility of *L. monocytogenes*.**

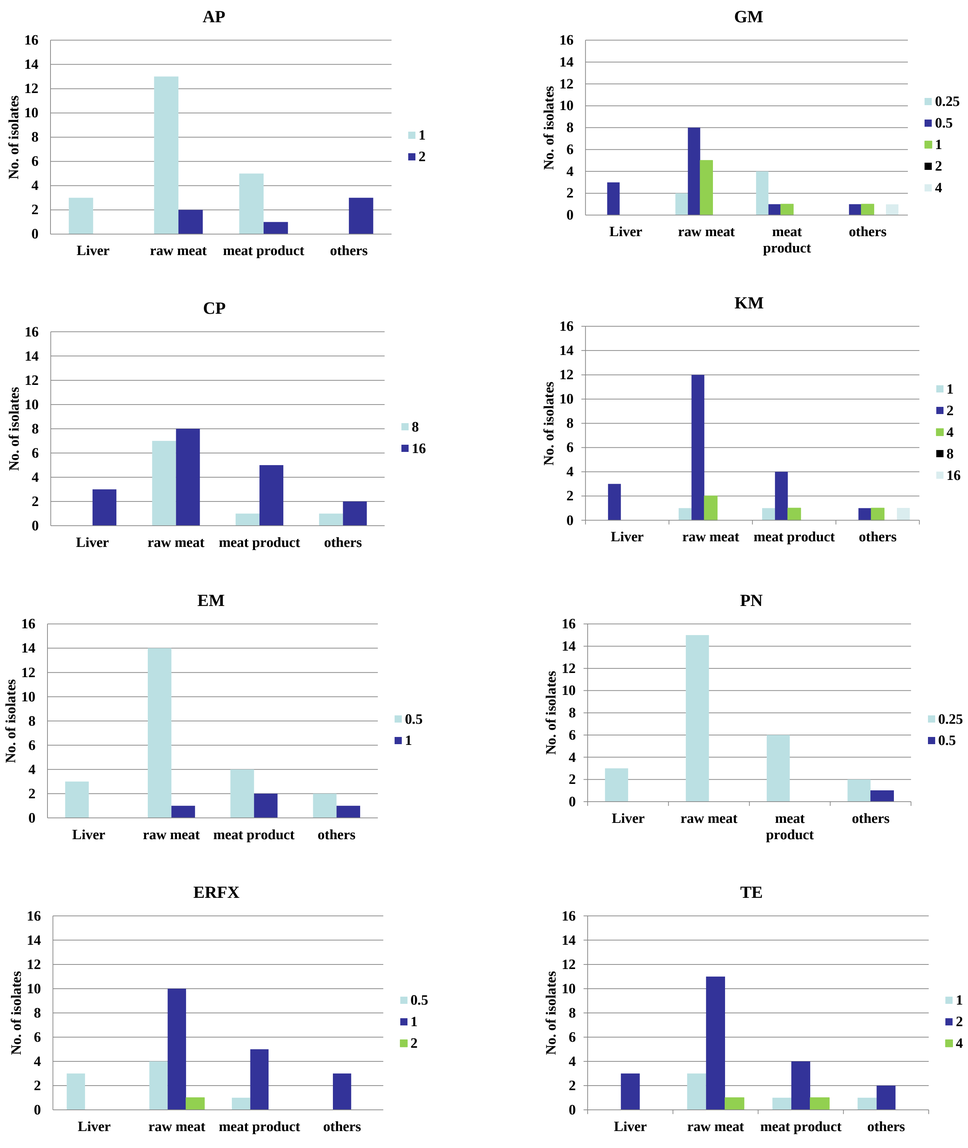
Results

Table 2. MIC distributions, MIC_{50} and MIC_{90} of *L. monocytogenes* isolates

		Number of strains with MIC (μg/ml) of									(μg/ml)	
Antibiotic	Origin	0.25	0.5	1	2	4	8	16	32	64	MIC_{50}	MIC_{90}
ABPC	D			7	4						1	2
	I			14	2						1	2
CP	D						1	10			16	16
	I						9	7			8	16
EM	D		9	2							0.5	1
	I		14	2							0.5	1
ERFX	D		4	6	1						1	1
	I		4	12							1	1
GM	D		6	4		1					0.5	1
	I	6	7	3							0.5	1
KM	D				7	3		1			2	4
	I			2	13	1					2	2
PN	D	10	1								0.25	0.25
	I	16									0.25	0.25
TE	D			1	10						2	2
	I			4	10	2					2	4

I: imported, D: domestic, number in red: resistant isolate

MIC distribution of *L. monocytogenes* isolates by food category



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