APPENDIX 1. *Serogroups and the MLVA Allele String of the sixty L. monocytogenes* ***isolates from retail outlets***

Isolate No.	Region/Area	Source of sample	Sample type	Beef type	Serogroup	MLVA allele string					
						LM-TR 1	*LM-TR 2*	*LM-TR 3*	*LM-TR 4*	*LM-TR 5*	*LM-TR6*
LM-1	Pretoria North	Retail-Chain	Vienna	RTE	IVb	3	2	20	3	21	93
LM-2	Pretoria North	Large-Retail	Minced Beef	Raw	11c	3	2	22	3	21	4
LM-3	Pretoria North	Chain-Retail	Minced Beef	Raw	IVb	3	2	20	3	21	93
LM-4	Pretoria North	Medium-Retail	Minced Beef	Raw	11a	3	2	22	3	21	4
LM-5	Pretoria North	Large-Retail	Wors	Raw	IVb	0	2	22	3	25	93
LM-6	Pretoria North	Small-Retail	Wors	Raw	IVb	0	2	22	3	25	93
LM-7	Pretoria North	Chain-Retail	Biltong	RTE	IVb	0	2	22	3	25	93
LM-8	Pretoria North	Medium-Retail	Minced Beef	Raw	IVb	0	2	22	3	25	93
LM-9	Pretoria North	Small-Retail	Kidney	Raw	IVb	0	2	22	3	25	93
LM-10	Pretoria North	Small-Retail	Chuck	Raw	11a	0	2	22	3	22	4
LM-11	Pretoria East	Chain-Retail	Rebate(Offal)	Raw	11a	0	2	22	3	22	4
LM-12	Pretoria East	Small-Retail	Minced Beef	Raw	11a	0	2	11	3	14	93
LM-13	Pretoria East	Chain-Retail	Beef Polony	RTE	IVb	0	2	22	3	25	93
LM-14	Pretoria East	Large-Retail	Intestine	Raw	11c	0	2	22	3	22	4

LM-15	**Pretoria East**	**Medium-Retail**	**Wors**	**Raw**	**IVb**	**0**	**2**	**22**	**3**	**25**	**93**
LM-16	**Pretoria East**	**Small-Retail**	**Beef Steak**	**Raw**	**11a**	**0**	**2**	**22**	**3**	**21**	**6**
LM-17	**Pretoria East**	**Chain-Retail**	**Minced Beef**	**Raw**	**11a**	**3**	**2**	**22**	**3**	**21**	**8**
LM-18	**Pretoria East**	**Small-Retail**	**Minced Beef**	**Raw**	**11a**	**3**	**2**	**22**	**3**	**22**	**4**
LM-19	**Pretoria East**	**Small -Retail**	**Beef Stew**	**Raw**	**11a**	**3**	**2**	**22**	**3**	**22**	**4**
LM-20	**Pretoria East**	**Small-Retail**	**Beef Brisket**	**Raw**	**IVb**	**3**	**2**	**20**	**3**	**22**	**93**
LM-21	**Pretoria West**	**Chain-Retail**	**Beef Polony**	**RTE**	**11a**	**3**	**2**	**22**	**3**	**22**	**4**
LM-22	**Pretoria West**	**Large-Retail**	**Beef Polony**	**RTE**	**11a**	**3**	**2**	**22**	**3**	**22**	**4**
LM-23	**Pretoria West**	**Large-Retail**	**Intestine**	**Raw**	**11a**	**3**	**2**	**22**	**3**	**22**	**4**
LM-24	**Pretoria West**	**Chain-Retail**	**Stir Fry**	**Raw**	**11a**	**3**	**2**	**22**	**3**	**22**	**4**
LM-25	**Pretoria West**	**Medium-Retail**	**Beef Polony**	**RTE**	**11a**	**3**	**2**	**22**	**3**	**22**	**4**
LM-26	**Pretoria West**	**Medium-Retail**	**Wors**	**Raw**	**11a**	**3**	**2**	**22**	**3**	**22**	**4**
LM-27	**Pretoria West**	**Chain-Retail**	**Wors**	**Raw**	**11a**	**3**	**2**	**22**	**3**	**22**	**4**
LM-28	**Pretoria West**	**Small-Retail**	**Vienna**	**RTE**	**IVb**	**3**	**2**	**22**	**3**	**25**	**93**
LM-29	**Pretoria West**	**Medium-Retail**	**Beef Polony**	**RTE**	**IVb**	**3**	**2**	**22**	**3**	**25**	**93**
LM-30	**Pretoria South**	**Chain-Retail**	**Biltong**	**RTE**	**IVb**	**3**	**2**	**22**	**3**	**25**	**93**
LM-31	**Pretoria Central**	**Chain-Retail**	**Minced Beef**	**Raw**	**IVb**	**3**	**2**	**22**	**3**	**25**	**93**
LM-32	**Pretoria Central**	**Chain-Retail**	**Brisket**	**Raw**	**11a**	**3**	**2**	**22**	**3**	**21**	**4**
LM-33	**Pretoria Central**	**Large-Retail**	**Wors**	**Raw**	**IVb**	**5**	**2**	**22**	**3**	**25**	**93**
LM-34	**Pretoria Central**	**Small-Retail**	**Wors**	**Raw**	**IVb**	**5**	**2**	**22**	**3**	**25**	**93**
LM-35	**Pretoria Central**	**Large-Retail**	**Beef Stew**	**Raw**	**IVb**	**5**	**2**	**14**	**3**	**14**	**93**
LM-36	**Pretoria Central**	**Small-Retail**	**Minced Beef**	**Raw**	**IVb**	**5**	**2**	**14**	**3**	**14**	**93**
LM-37	**Pretoria Central**	**Medium-Retail**	**Spleen**	**Raw**	**IVb**	**5**	**2**	**14**	**3**	**14**	**93**
ABATTOIRS											
LM-38	**Merafong**	**HT-Abattoir**	**Faecal Swab**	**Faecal**	**11b**	**0**	**2**	**22**	**3**	**21**	**4**
LM-39	**Merafong**	**HT-Abattoir**	**Pre-Envisceration Swab**	**Food**	**11c**	**0**	**2**	**22**	**3**	**21**	**4**
LM-40	**Merafong**	**HT-Abattoir**	**Environmental Sample**	**Enviromental**	**11a**	**0**	**2**	**22**	**3**	**21**	**4**

LM-41	Ekurluleuui	HT-Abattoir	Pre-Envisceration Swab	Food	11a	0	2	22	3	21	4
LM-42	Ekurluleuui	HT-Abattoir	Post-Envisceration Swab	Food	11a	0	2	22	3	21	4
LM-43	Ekurluleuui	HT-Abattoir	Environmental Sample	Enviromental	IVb	0	2	22	3	21	93
LM-44	Benoni	HT-Abattoir	Pre-Envisceration Swab	Food	11c	0	2	22	3	21	4
LM-45	Benoni	HT-Abattoir	Post-Envisceration Swab	Food	IVb	0	2	20	3	21	93
LM-46	Benoni	HT-Abattoir	Post-Envisceration Swab	Food	11c	0	2	22	3	21	4
LM-47	Benoni	HT-Abattoir	Chilled Swab	Food	11c	0	2	22	3	21	4
LM-48	Tswane	HT-Abattoir	Pre-Envisceration Swab	Food	11c	0	2	20	3	16	4
LM-49	Tswane	HT-Abattoir	Pre-Envisceration Swab	Food	11c	0	2	20	3	16	4
FARMS											
LM-50	Winterveld	Communal Farm	Pooled Faecal Sample	Faecal	11a	0	2	22	3	21	4
LM-51	Winterveld	Communal Farm	Fresh Faecal Sample	Faecal	11a	0	2	20	3	16	89
LM-52	Soshaguve	Communal Farm	Pooled Faecal Sample	Faecal	11a	0	2	22	3	21	4
LM-53	Diepsloot Nature Reserve	Cow-Calf Operation Farm	Fresh Faecal Sample	Faecal	11a	0	2	22	3	21	4
LM-54	Hammanskrasl	Cow-Calf Operation Farm	Fresh Faecal Sample	Faecal	IVb	0	2	20	3	21	93
LM-55	Doornrandjies	Cow-Calf Operation Farm	Feed Sample	Environmental	IVb	0	2	20	3	21	93

LM-56	**Doornrandjies**	**Cow-Calf Operation Farm**	**Feed Sample**	**Environmental**	**11a**	**0**	**2**	**22**	**3**	**21**	**4**
LM-57	**Moretele**	**Cow-Calf Operation Farm**	**Feed Sample**	**Environmental**	**11a**	**0**	**2**	**20**	**3**	**16**	**4**
LM-58	**Cullinan**	**Feedlot Farm**	**Fresh Faecal Sample**	**Faecal**	**IVb**	**0**	**2**	**20**	**3**	**21**	**93**
LM-59	**Cullinan**	**Feedlot Farm**	**Water Sample**	**Environmental**	**11a**	**0**	**2**	**22**	**3**	**21**	**4**
LM-60	**Onderstepoort**	**Feedlot Farm**	**Fresh Faecal Sample**	**Faecal**	**11a**	**0**	**2**	**22**	**3**	**21**	**4**

Serovars: IIa (1/2a-3a), IIb (1/2b-3b), IIc (1/2c-3c) and IVb (4b-4d-4e). RTE: Ready to Eat. HT: High throughput

APPENDIX 2. *Primers used for mPCR to serogroup L. monocytogenes in the study (10)*

PCR assay	Target Gene	Product Size (bp)	Primer Sequences (5′-3’)
mPCR1	*ORF2110*	597	*ORF2110*-F: *AGTGGACAATTGATTGGTGAA*
			ORF2110-R: *CATCCATCCCTTACTTTGGAC*
	ORF2819	471	*ORF2819*-F: *AGCAAAATGCCAAAACTCGT*
			ORF2819-R: *CATCACTAAAGCCTCCCATTG*
	Imo1118	691	*lmo1118*-F: *AGGGGTCTTAAATCCTGGAA*
			Imo1118-R: *CGGCTTGTTCGGCATACTTA*
	Imo0737	906	*lmo0737*-F: *AGGGCTTCAAGGACTTACCC*
			lmo0737-R: *ACGATTTCTGCTTGCCATTC*
	prs	370	*prs*- F: GCTGAAGAGATTGCGAAAGAAG
			prs-R*: CAAAGAAACCTTGGATTTGCGG*

APPENDIX 3. *Characteristics of selected TR loci for MLVA subtyping of L. monocytogenes (33)*

Primer	Sequence 5′ to 3′	Amplicon (bp)[a]	TR Sequence	TR size
LM-TR 1	-GGC GGA AAA TGG GAA GC- -TGC GAT GGT TTG GAC TGT TG	652	-TAAAACCTA-	9
LM-TR 2	-CCT AGA ACA AAT CCG CCA CCA T-	569	TATTTTTATTTAA	18
LM-TR 3	-TCG CCA TTG TAA ACA TCC CCTATT- -GCG TGT ATT AGA TGC GGT TGA G-	423	AAATG- -CCGGTAGAT-	9
LM-TR 4	-GCA TTC CAC TAT CCC CTG TTTT- -TCC GAA AAA GAC GAA GAA GTAGCA-	450	GAAGAACCAAAA	12
LM-TR 5	-TGG AAC GAC GGA CGA AAT AATAAT- -GTT TAT GCG AAT GGC GAG AT-	203	- -GTAGATCCG-	9
LM-TR 6	-CTG GCT TCA TAG GAT TTA CTGGAT- -AAA AGC AGC GCC ACT AAC G- -TAA AAA TCC CAA TAA CAC TCC TGA-	232	CCAGACCCAACA-	12