



Laboratory for Food Safety,
Maisons-Alfort location

Unit *Salmonella* and *Listeria* (SEL)
Team Reference



EURL Lm

European Union Reference Laboratory for
Listeria monocytogenes
<http://eurl-listeria.anses.fr>

Participant Results Formats in the Typing WGS PT for *Listeria monocytogenes*

Maroua SAYEB

Project leader in bacterial genomics

eurl-listeria@anses.fr

THE MATRIX DISTANCE

A distance matrix is a table that shows the distance between pairs of objects. By definition, an object's distance from itself, which is shown in the main diagonal of the table, is 0. Distance matrices are sometimes called dissimilarity matrices.

This format should be respected for the matrix distances and the file sent should be in the format .csv or .tsv

Strains	403	295	224	256	55	143	142	299	287	156	397	204	377	339
403	0	1659	1659	1659	1062	1065	1063	1063	1162	1125	1661	1661	1659	1661
295	1659	0	1	12	1662	1661	1663	1662	1655	1661	1327	1329	1329	1327
224	1659	1	0	11	1662	1661	1663	1662	1655	1661	1327	1329	1329	1327
256	1659	12	11	0	1662	1661	1663	1662	1655	1661	1327	1329	1329	1327
55	1062	1662	1662	1662	0	27	19	19	1146	1154	1662	1662	1660	1662
143	1065	1661	1661	1661	27	0	25	25	1149	1156	1661	1661	1659	1661
142	1063	1663	1663	1663	19	25	0	2	1149	1156	1663	1663	1661	1663
299	1063	1662	1662	1662	19	25	2	0	1147	1156	1662	1662	1660	1662
287	1162	1655	1655	1655	1146	1149	1149	1147	0	1132	1658	1658	1656	1658
156	1125	1661	1661	1661	1154	1156	1156	1156	1132	0	1662	1662	1660	1662
397	1661	1327	1327	1327	1662	1661	1663	1662	1658	1662	0	40	54	0
204	1661	1329	1329	1329	1662	1661	1663	1662	1658	1662	40	0	48	40
377	1659	1329	1329	1329	1660	1659	1661	1660	1656	1660	54	48	0	54
339	1661	1327	1327	1327	1662	1661	1663	1662	1658	1662	0	40	54	0

THE PHYLOGENETIC TREE

The Newick Standard for representing trees in computer-readable form makes use of the correspondence between trees and nested parentheses, noticed in 1857 by the famous English mathematician Arthur Cayley.

For the phylogentic tree, the newick format should be respected like in the exemple and the file should be with .nwk

```
arbee_phylogenetique_1.nwk Bloc notes
Fichier Edition Format Affichage Aide
(((403:0.3152456572279334,((142:5.705703709584972E-4,299:6.170781368079284E-4):0.004863142326939851,55:0.0058256934862583876):0.0014190070796757936,143:0.008388266200199723):0.309816367691
```