**Appendix 1.** Summary integration tables for integrated attributes “Other Chemical Attributes”, “Orography” and “Macro Elements” that were changed based on data mining results. \* denotes all possible levels on the scale “low”, “medium”, “high”.

**Other chemical attributes**

C:\Users\taru00\AppData\Local\Temp\notesA1E4B1\Other_Chemical_v1_rules.tif

**Integration table before data mining**

C:\Users\taru00\AppData\Local\Temp\notesA1E4B1\Other_Chemical_v2_rules.tif

**Integration table after data mining**

**Macro Elements**

C:\Users\taru00\AppData\Local\Temp\notesA1E4B1\Macro_elements_v1_rules.tif

**Integration table before data mining**

C:\Users\taru00\AppData\Local\Temp\notesA1E4B1\Macro_elements_v2_rules.tif

**Integration table after data mining**

**Orography**

C:\Users\taru00\AppData\Local\Temp\notesA1E4B1\Orogrpahy_v1_rules.tif

**Integration table before data mining**

C:\Users\taru00\AppData\Local\Temp\notesA1E4B1\Orogrpahy_v2_rules.tif

**Integration table after data mining**