

Abstract

The number of batteries, namely accumulators, is growing. Consequently, their take-away and a need of recycling is increasing too. It is thus necessary to find a suitable way to their optimization that can lead to the establishment of new waste collection machineries. This study deals with the data analysis by ECOBAT s.r.o. company, data processing and a model construction (in five different versions). The output of the diploma thesis is a model of the batteries collection enabling closer look on take-away routes, The model is based on the distances of take-away routes based on a principle of the utility areas and a role of a transport. The data are obtained from ArcGIS 10.5 and subsequently handled in Microsoft Excel. The outputs are the map schemes issuing from five different versions. The first one is showing the current situation, The other one is showing the version of treating units in three largest towns of the Czechia, the third one treating units in all the towns with above 100 000 inhabitants. The fourth one is showing a possibility to have a collection point in each of the county seats. The last one has the same location, but the treating units have higher capacities. The model is general, there is therefore a possibility of using it for other similar situations.