SUPPLEMENT C

ANALYSIS OF THE DATA IN THE GOLD SENSOR.

In supplement B it can be seen that about 40% of the data from the gold-based sensor is removed. For this reason, we analyze it in depth. In that case, 1480 points were eliminated out of the range [650.00, 900.00] out of a total of 2430. As shown in Figure 1-C, the variance explained corresponds to 60% of the data measured in the laboratory.
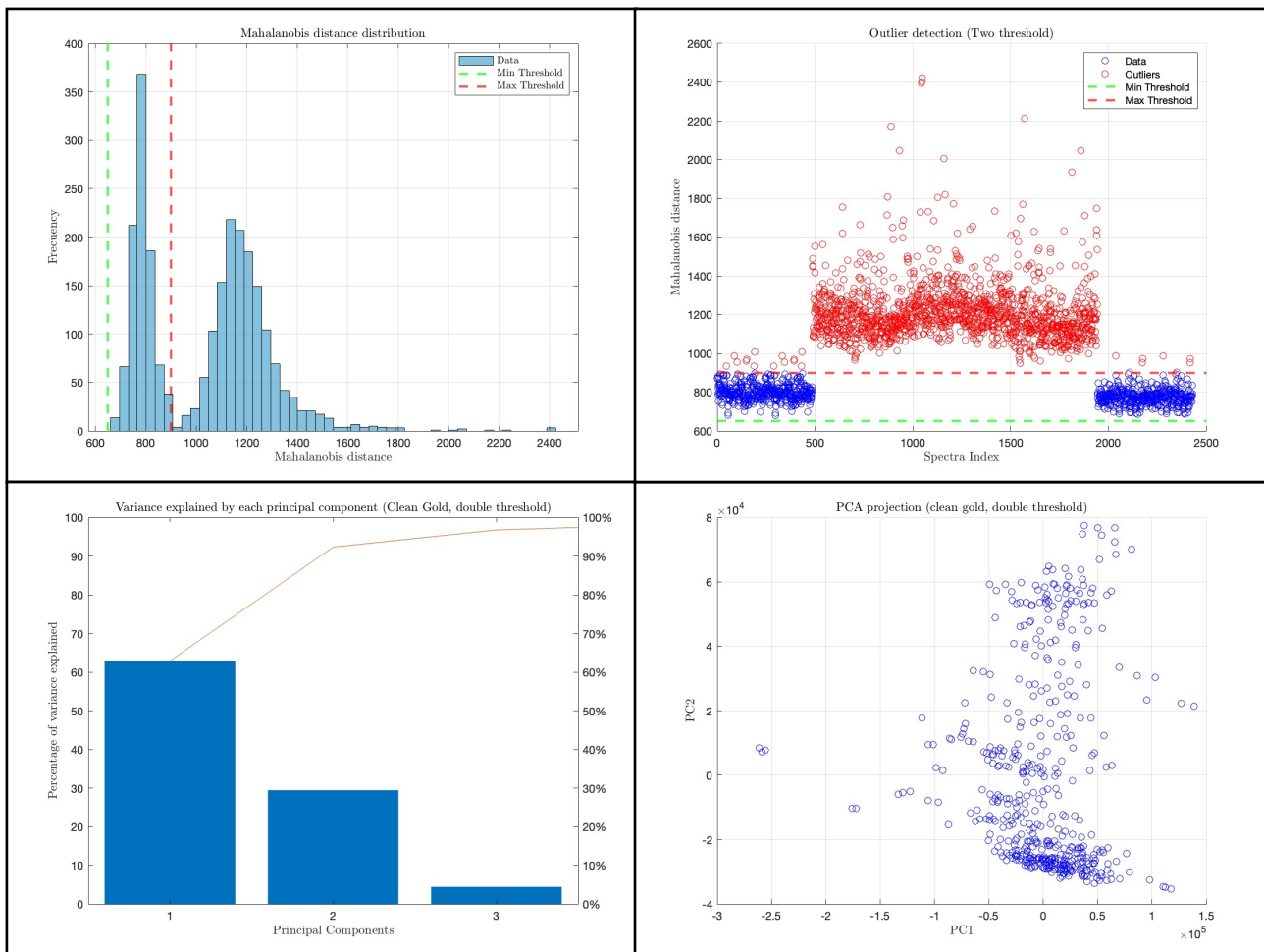

 Fig 1-C. Distribution data, outliners, variance and PCA.

In this case, the two births of the gold are joined to observe if they have a correlation and another PCA is made with the Gold data of supplement B with the data of supplement C and as can be seen in figure 2-C the variance explained in the first component is 90%, for this reason it can be said that the data correlated.
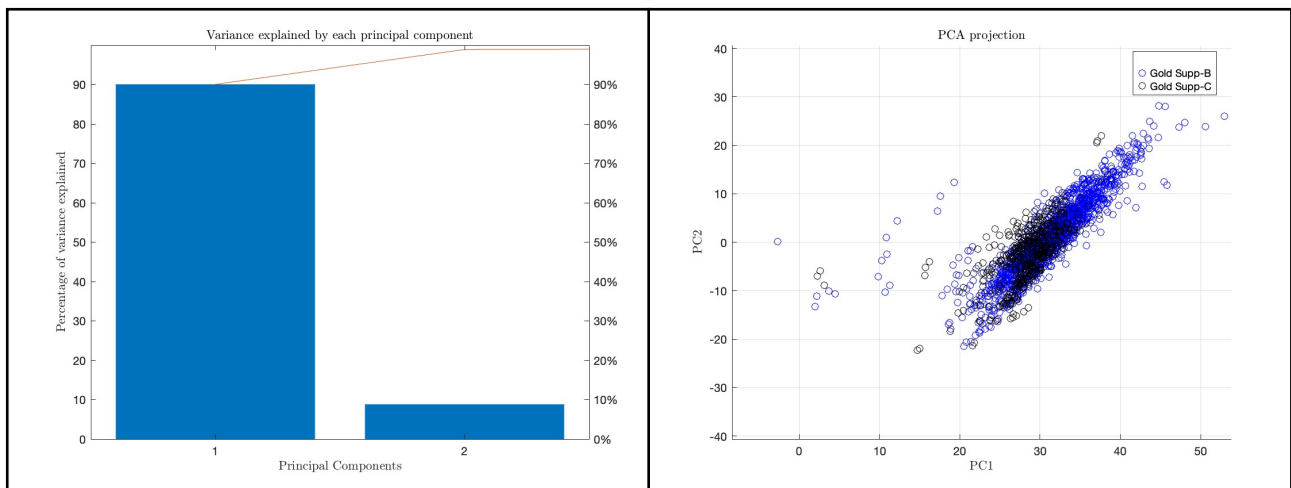
Fig 2-C. Variance and PCA.

The data are grouped to the same gold family. In this way it can be concluded that the gold data correspond to 90% and are the same family. In that way we created a single clean data matrix with both matrix.