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Applying Jaccard Cluster Analysis To Emphasis The Geochemical Anomalies, Case Study: Iran- Sarab

Abstract

Heavy Mineral study is a applicable complementary method for geochemical investigation based on stream sediment samples. Regarding to mineralogy studies and data processing, it is possible to identify mineralization type, emphasis geochemical anomalies and determine new anomalous areas. Multi variaty statistics analyses, as main the stage in such study, need at least 10 samples. However, some heavy minerals are rarely observed in samples and can't be processed by statistics methods. Applying Jaccard cluster analysis which is based on being or not being the variables, and is not changeable by the numbers of the samples, is applicable.

This study is based on heavy mineral samples from Sarab area. 230 samples have been taken from this area and analyzed by clustering methods. Some minerals like Cuvelite, Realgar, Sphalorite and Native lead are observed in a few numbers of the samples and analyzed by Jaccard method. The result of this method identifies the probable mineralization in Sarab. Based on these studies, there is meaningful relation between Au mineralization with Pb, Zn and Cu. Regarding to identified correlation, Cu, Pb- Zn Skarns and Au veins are probable in studied area.

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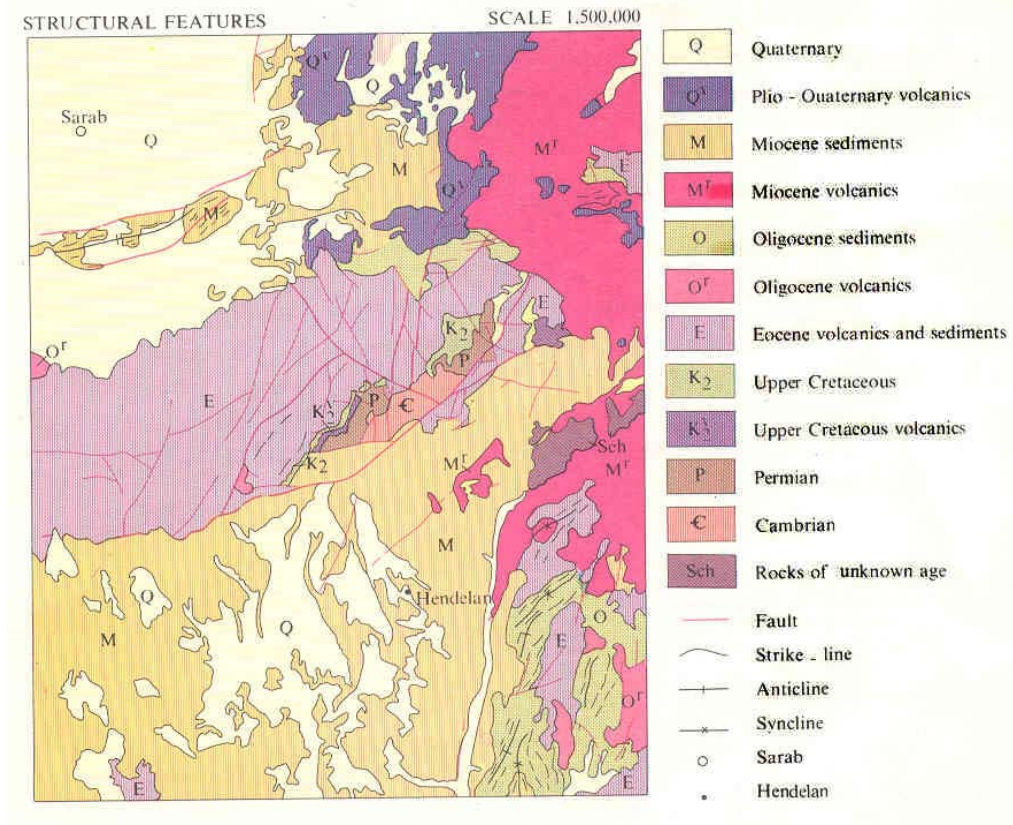
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$$J_{AB} = \frac{a}{a+b+c}$$

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(binary)

B A

:a
 :b
 :c

A B
 B A
 A B

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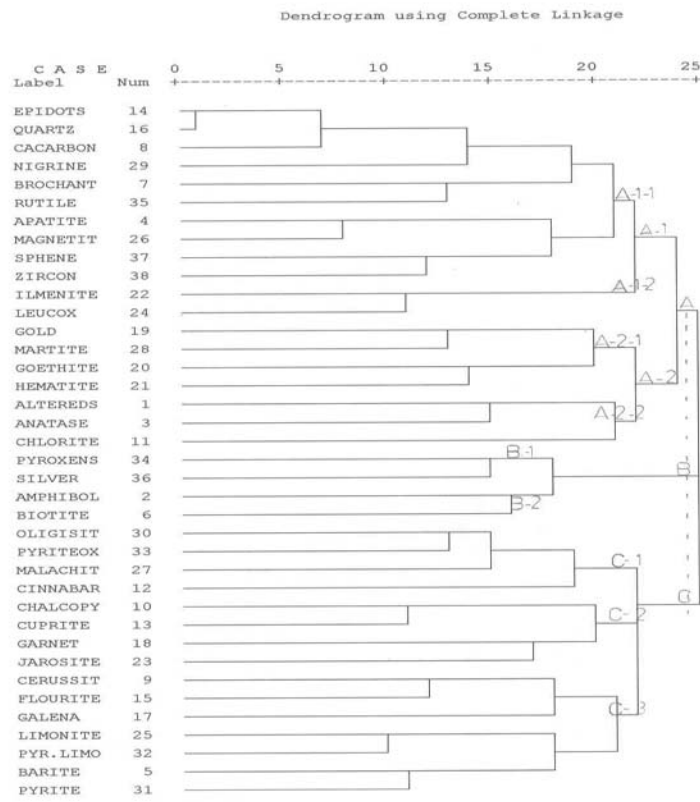
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SPSS 11.5

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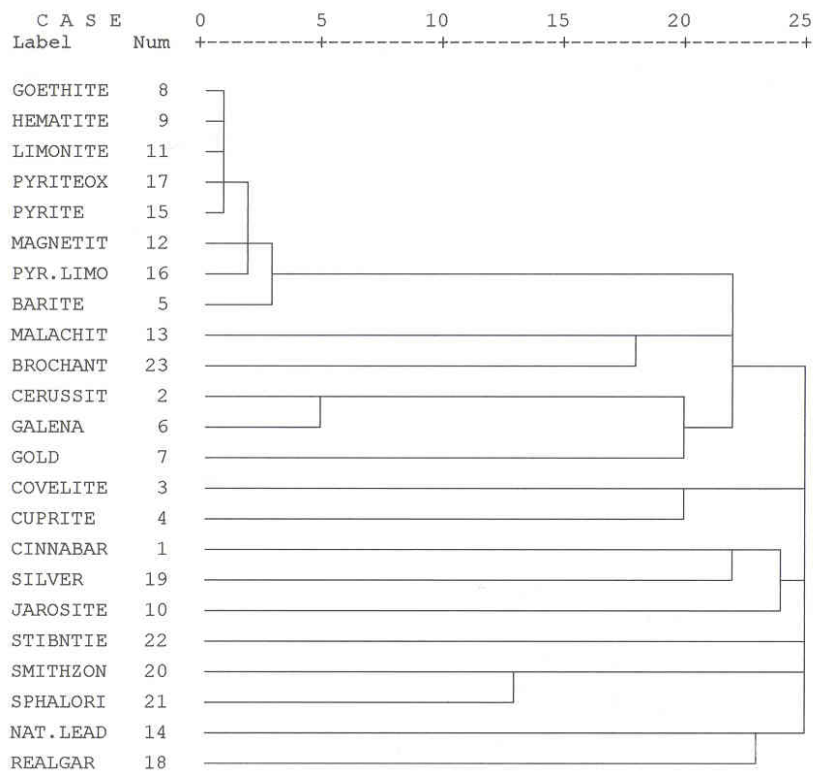
A . C B,A
A 1 2 A 1 1 A 2 A 1
B A 2
B 2 B 1 B 2 B 1
C B C 1 C 3 C 2 C 1
C 2 C 3



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Dendrogram using Complete Linkage



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مراجع

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