

## **Evaluation of The basalt aggregates for the (in north-west area ' Jesser Al-Shogoor ' ) use in concrete construction works**

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### **ABSTRACT**

Using different alternative materials in concrete mix, and expanding the area of using these materials, is considered very important from scientific, economic, and environmental point of view. Especially the diversity in number of used aggregates. As a result, reduction in the cost of transportation saving the environment, and improving the properties of concrete mix may occur

Basalt lava, and volcanic cines are widely present in Syria, but using lava is limited because the studies about Syrian basalt were not enough. The lack of proper mills or crushers to grind basalt to be good to prepare concrete mix. As a result, the investment of using Syrian basalt in preparing concrete mix was very limited.

Investigating, and classifying the basalt quarries, is needed to find out if the Syrian basalt is convenient to prepare concrete mix, or bitumen mix.

The purpose of this research in to use the natural resources in different Syrian areas in better engineering, environmental, and economical ways through the improvement of engineering sides, increasing the capability of concrete structures, better investment of quarries in Syria, and to get more economical benefit with minimum cost.

In this research, an experimental study was achieved to evaluate the basalt in north Syria according to international standards and codes. The composition of basalt Ore was determined by petrographic study, with focus on the content of olivine in basalt, and the degree of deterioration.

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**Keywords: Basalt; Olivine; Concrete mix**

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-For The paper in Arabic see pages (67-80)

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