

## ***Characterization and shale oil yield evaluation of Jordanian oil shale***

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Oil shale characterization is a basic step for evaluation of the potential use of oil shale in Jordan. It is an important task in selecting the appropriate processing technology. In this work, various geochemical tests were carried out to investigate the characteristics of El-Lajjun oil shale and to evaluate the shale oil yield using various organic solvent extractions. Results show that the major mineral fraction is calcite, with minor quantities of quartz and trace amounts of dolomite and fluorapatite. Allochems or bioclasts are mainly foraminifera and shell fragments mostly invaded by organic matter. The average elemental composition of the total solid sample shows high content of carbon (25.8%). The highest bitumen yield was obtained by tetrahydrofuran (THF) and toluene mixture (51%). Grain size variation has a minor effect on shale oil yield. The main bitumen fraction consists of resins. Considering the previous results and that of Fisher Assay, the El-Lajjun oil shale is of good quality and promising for future extraction.