

## Earthquake and impact of soil type on content of the result spectrum

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**ABSTRACT:**

There are various factors which effect on spectrum of earthquake such as: soil type, magnitude of earthquake, distance to earthquake center, type of fault, duration and damping of earthquake. The research was aimed to investigate the effects of soil on the spectrum of earthquake. Therefore, several accelerograms for three different locations around the world have been selected from Berkeley University website. Then the selected accelerograms were scaled up with number 1 for scaling the spectrums. The spectrums of accelerograms and the records of earthquake were drawn by seismosignal software. Finally, the effect of different soil were investigated on the spectrum of response earthquake. For increasing the accuracy of results, similar effective parameter have been selected in choosing of accelerograms. Results of the research were as follows; the domain of spectrum was higher due to increasing the hardness of soil in harez um similar design factor in low periods and the domain of spectrum was higher due to increasing the softness of soil in higher periods. The diagrams are more gatherer and possess a greater amount in harder soil and are is more extent and possess a lower amount in the softer soil.

**Keywords:**

Response spectrum, Earthquake, Soil type, Accelerogram, Seismosignal.