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SedPacWin - SedPacMac - Characterization of Sediments by Grainsize Analysis

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The software program SedPacWin/SedPacMac calculates sedimentology and hydrogeology parameters from sieve analysis and hydrometer data of sediments and generates graphs of grainsize distribution.

Sieve analysis data is used to classify sediments according to their grainsize distribution, the software allows any desired number and combination of sieve sizes. Weight results of sieve analysis are interpolated by corrected spline interpolation to generate a grain size distribution curve. The interpolated distribution curve is used to calculate the percentage of weight proportion in different grainsize classes and to assign class terms such as silt, sand or gravel. Statistical parameters such as mean, standard deviation, skewness, kurtosis and mean-cube deviation are calculated, the standard deviation is used to classify the sorting quality of the sediment sample. For each sample the percentiles are interpolated, they are used to estimate permeability parameters for hydrogeology applications. Several chart types, for example a probability plot, are provided in phi and metric scale for graphical representation of the sample data. Text and graphical output can be transferred to standard office applications for further customization and report generation. An interface to database management systems is provided to retrieve the sample data for the analysis.