Soils that exceed 40 percent gypsum are referred to as gypseous soils. The 40 percent threshold, used to define gypseous soils, was established because the range of 15 bar water retention for such soils is very narrow and more predictable compared with soils having less than 40 percent gypsum. A soil taxonomy proposal recommends defining coarse and fine classes for gypseous soils, based on whether more or less than 50 percent of the < 2 mm fraction comprises 0.1 mm particles or larger. The standard particle size method, being conducted on the mineral fraction after gypsum removal, is not applicable to determine texture. A novel method is proposed to measure the sand size particle distribution of whole gypseous soils in order to determine the texture class according to the taxonomic proposal. The whole, < 2 mm sample is disaggregated in ethanol by sonication or by shaking, then dried and sieved through a nest of sieves. Results by this method are discussed.