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[54] APPARATUS AND PROCESS FOR DETERMINING PARTICLE SIZE BY X-RAY ABSORPTION ANALYSIS  
11 Claims, 2 Drawing Figs.

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[51] Int. Cl. .... G01n 23/12  
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**ABSTRACT:** An apparatus and process for measuring and automatically recording the particle size distribution of material in fluid suspension, which is based on the application of laws of sedimentation, and which uses a digital-programmed controller. A beam of X-rays is used to measure particle concentration in terms of the transmittance of the beam in the suspension relative to the suspending fluid. This transmittance measurement is continuously converted to a quantity proportional to the concentration of suspended material in the X-ray beam at a particular instant. The programmed digital controller continuously decreases the sedimentation distance while at the same time continuously positioning a recorder to indicate the particle size being measured at that time. The use of a digital program controller provides for a high degree of accuracy and reliability.

