The proposed device for measuring the magnetic susceptibility of material additionally contains amplifiers, a comparator, an add-subtract pulse counter, a clock oscillator, a digital-to-analog converter, a unit for torque compensation, and a torque compensation signal meter. The outputs of the amplifiers are connected to the corresponding inputs of the comparator. The output of the comparator is connected to the input of the counter. The input of the digital-to-analog converter is connected to the output of the counter, and the output is connected to the inputs of the unit for torque compensation and the torque compensation signal meter. The present invention allows the measurement errors to be reduced.