IMPROVEMENT OF DATA PROCESSING METHODS IN MODERN FT-IR SPECTROSCOPY

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Advances in digital signal processing, and progress in Audio-CD and DVD recording, have brought ”Delta-Sigma” ADCs with higher resolutions, but with the apparent disadvantage of a fixed digitization rate. These new ADCs were utilized to implement additional functionality, such as compensation of the detector’s frequency response and compensation of source fluctuations. Further advantages of ”Delta-Sigma” ADCs will be discussed with reference to signal-to-noise ratio for modern FT-IR spectrometers.