The Development of a Simple and Small Device for Measuring Faraday Constant

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Since Michael Faraday developed the laws of electrophoresis (1833), Faraday constant has been used to determine the magnitude of electric charge per mole of electrons. Many tools and techniques have been invented to measure Faraday constant with electrophoresis. Most measuring tools were developed before the 1960s, and they used a specific amount of current (0.1~1.0 amperes). In this experiment we tried to reduce the amount of current, and the size of the measuring tool, by adopting the constant volume method through the use of a one-chip microcomputer.