ECACC
European Collection of Cell Cultures
A Health Protection Agency Culture Collection

KAC
URL: http://www.kacnet.co.jp

Quality Control of ECACC DNA Products

High quality, high molecular weight genomic DNA is extracted from cell lines using an automated extraction unit employing silica coated magnetic bead technology. The DNA is quantified using the PicoGreen® fluorescence method for accurate reproducible results. ECACC is accredited to International Quality Standard ISO 9001:2008, and all procedures are managed in accordance with the requirements of the standard. To ensure the highest quality, all ECACC DNA products are subjected to defined quality control procedures which include:

DNA Size and Integrity

Agarose gel electrophoresis is used to verify the high molecular weight and integrity of the DNA. Our DNA extraction procedure consistently produces genomic DNA between 20–30Kb in size.

Purity

UV spectrophotometry at 260/280nm and 230/260nm wavelength ratios is used to determine purity of the extracted DNA.

Authenticity

Short tandem repeat (STR) PCR, using a commercially available forensic kit consisting of 10 markers plus amelogenin, is used to verify the identity of each batch of DNA against source material.

Performance Trials

The performance of ECACC DNA products has been independently assessed using a selection of assays. These include the 5' nuclease assay (also known as the Taqman assay), HLA typing, and STR PCR.

Long Term Stability and Performance Trials

ECACC has performed stability and performance trials on samples of DNA from each of the Human Random Control DNA panels over several years. This involves repeated agarose gel electrophoresis and repeated use as a template for PCR analysis. No reduction of PCR product has been observed in tests on samples stored at 4° C for up to 28 months.