SRM 2372 Human DNA Quantitation Standard

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SRM 2372 is intended to enable the comparison of DNA concentration measurements across time and place. Manufacturers can use SRM 2372 to validate the values assigned to their own reference materials. Individual forensic laboratories can use SRM 2372 to validate new DNA quantitation methods as well as to verify the assigned DNA concentration of their in-house calibration standards.

The availability of SRM 2372 provides a Quality Assurance tool for those laboratories that desire to make their DNA quantitation measurements traceable to a National Standard.

Components

A: Male/single donor/RNased/NIST
B: Female/multiple donors/NIST
C: Mixture/male & female/commercial

re-extracted DNA
in the final ethanol wash

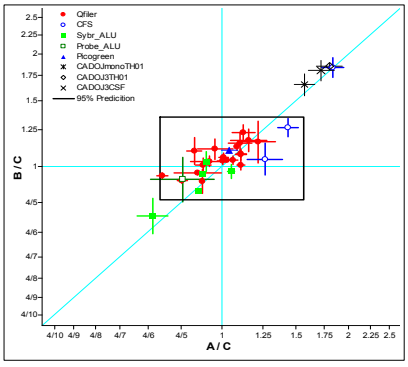
Quantities supplied

110 µL of Human Genomic DNA ≈ 50ng/µL

Certification

Decadic Attenuance (**Absorbance**) by a US National Reference Spectrophotometer
Homogeneity by a Cary 100 Bio Spectrophotometer
Validation of conventional [DNA] by Interlaboratory Study and NIST qPCR studies.

Interlaboratory Data



32 laboratories participated
This limited study was advertised at the NIJ Grantees meeting, June of 2006 **Net result of the study**: the SRM materials are appropriate for use with different qPCR methods

Overview of SRM 2372 Values and Use

Attenuance (λ_{260}) → **Certified Values**

1 OD = 50 ng/µL

DNA Concentration (ng/µL) → **Informational Values**

SRM 2372 Components: A, B, C

Sources of Error:
- Assay variability
  - dynamic range
  - locus probed
- Instrument variability
- Pipetting variability

Quantifiler, Alu qPCR, Other assays → **Different Assays Different Calibrants**

Interlab Study Confirms Assay Relative Bias

Adjust calibrant values for each lot

Forensic Labs

"Calibrated" NIST-Traceable Calibrant for Use in Daily Work

Measure Unknown DNA Samples

For more information please contact:
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Laboratories are required to make appropriate dilutions and must be aware of their role in the errors that may contribute to overall results

Funding: Interagency Agreement 2003-IJ-R-029 between the National Institute of Justice and NIST Office of Law Enforcement Standards