



Starna scientific
'Setting the Standard'

Quality Assurance in the Analytical Laboratory

Starna Microvolume DNACON References

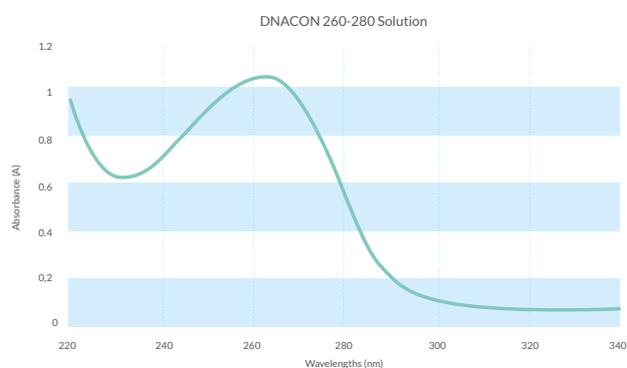
Purpose

These reference materials have been specially developed for the validation of DNA purity measurements when performed with the dedicated low volume (< 5 ul) and short path length (< 1 mm) instrumentation offered by several vendors for use in genomics and proteomics, when sample is often at a premium. They are also ideal for qualifying conventional instruments when they are used with ultra- low volume cells such as the Starna DMV - Bio cell.

Description and Discussion

Dedicated low-volume instrumentation using drop technology or other measurement techniques is usually incompatible with reference materials presented in conventional spectrophotometer cells or as solid filters. Nevertheless quality control is just as important in this field, and these specially packaged versions of established Starna reference materials are designed to meet this need. The references are supplied in vials with screw-cap closure for ease of handling, from which it is easy to transfer them to the instrument under test using a micropipette or syringe.

The DNACON reference from Starna was developed as a reliable, stable and NIST traceable reference material for the validation of this method. The reference consists of a solution of a synthetic material whose spectral characteristics closely mimic those of pure DNA, but does not suffer from the instability and other difficulties associated with DNA itself. Two concentrations are available in vial format, to give absorbances of approximately 1 A or 0.5 A at a nominal path length of 1mm.



Absorbance values are certified at 260 nm, 280 nm and 330 nm for spectral bandwidths of 1.0, 2.0, 3.0, 4.0 and 5.0 nm . The value at 330 nm is used as a "background" correction, as in the normal methodology. From these values a corrected 260/280 ratio is calculated and reported for each bandwidth using the formula:

$$\text{Ratio} = \frac{(A_{260} - A_{330})}{(A_{280} - A_{330})}$$

The typical calculated ratio is 1.9

Starna Microvolume DNA CON References

Certification and Documentation

A Certificate of Calibration and Traceability and full instructions for use are provided with each Reference Material. The certificate is supplied in electronic format, on a USB drive in the same box as the references, allowing hard copy to be produced on demand and giving easy interface to the user's own IT systems. Certification measurements are made on a reference spectrophotometer that has been qualified using Standard Reference Materials certified by the National Institute of Standards and Technology (NIST) in the USA, or against primary physical references such as elemental emission lines.

Accreditation

Starna Scientific is accredited to both ISO 17034 as a Reference Material producer, and ISO/IEC 17025 as a Calibration Laboratory for optical reference measurements. Starna Scientific's manufacturing facility is accredited to the ISO 9001 Quality Management System with BSI. For details see www.starna.com/accreditations.

How to Order

	CATALOGUE NUMBER
Starna Microvolume DNA CON Reference, 5X concentration : 1 x 1,5ml vial	DNA CON5X -SC1
2 x 1.5 ml vials	DNA CON5X -SC2
4 x 1.5 ml vials	DNA CON5X -SC4
Starna Microvolume DNA CON Reference, 10X concentration :1 x 1,5ml vial	DNA CON10X -SC1
2 x 1.5 ml vials	DNA CON10X -SC2
4 x 1.5 ml vials	DNA CON10X -SC4

Warranty

The certification is valid for a maximum period of one year from the date of issue or until the seal on the vial is broken, whichever occurs first.

Once the seal is broken, responsibility for the control of the reference is now assigned to the user. If it is anticipated that the reference may be required to be used in the future, then it is recommended that it be sub-sampled into appropriate containers, e.g. PCR tubes, at this time.

Note: If sub-sampling is performed, then the user should verify the validity of the protocol, with respect to value assignment, stability, homogeneity, storage and handling of these derived references



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