

What are Calibration Standards and when should they be used

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Calibration Standards are known concentrations of components of interest used to confirm or determine concentrations in samples. Calibration Standards should be used anytime it is important to know the composition of samples and to determine if your process is performing as expected. DCG prepares a wide variety of standards from gas standards to LPG standards to liquid standards.

N.I.S.T. Traceability

N.I.S.T. traceability validates the link between DCG calibration weights and the U.S. standard (N.I.S.T.) or the international standard (BIPM). NVLAP is the National Voluntary Laboratory Accreditation Program for Precision test weights and mass standards to accuracy classes I, II and III. This accreditation assures DCG's calibration standard customers that our lab procedures and standards meet ISO Guide 25 and ANSI/NCSL Z540-1 requirements.

Physical Constants

DCG uses the Physical Constants from GPA 2145 (most recent version) Table of Physical Constants for Hydrocarbons and Other Compounds of Interest to the Natural Gas Industry, TP-17 (most recent version) Table of Physical Properties of Hydrocarbons for Extended Analysis of Natural Gases, and ASTM DS 4 B L (most recent version) Physical Constants of Hydrocarbon and Non-Hydrocarbon Compounds.



Statistical Process Control-Masses

DCG uses only Class 1 masses for monitoring and calibrating balances in accordance to ASTM Method E617 **Standard Specification for Laboratory Weights and Precision Mass Standards*. All DCG's masses are stored in protective cases and handled with gloves on proper lifting devices. These masses are evaluated annually by a NVLAP accredited metrological laboratory with traceability to NIST and BIPM.

Statistical Process Control-Balances

Each Balance at DCG used for the manufacture of Calibration Standards is evaluated daily by a Class I check mass to determine fitness for use. All data is then entered into Statistical process control chart for trend analysis. Should the Balance not be within tolerance it is removed from service and evaluated by an outside accredited Metrological company and repaired. Upon its return, DCG tests the balance according to ASTM method E-898 **Standard Test Method of Testing Top-Loading, Direct-Reading Laboratory Scales and Balances for suitability* to use. All DCG balances are tested bi-annually according to the same method.