



A Fine Chemical
Manufacturer
Since 1928

ISO 9001:2000 Certified

CERTIFICATE OF TRACEABILITY AMCO CLEAR® STANDARDS


These certified reference standards are intended for use as stable primary calibration standards for turbidity measuring instrumentation. The narrow particle size distribution, average particle size, and spherical shape make these particle suspensions ideal for use in the calibration of instruments based on light scatter through a liquid medium. The certified concentrations of AMCO Clear standards are based upon the calibration of specific turbidity instruments (many of which are quite unique in their light source and detector systems) with freshly diluted formazin concentrate (4000 NTU/FNU). Since formazin concentrate will vary from lot to lot and manufacturer to manufacturer by as much as 5% or more, AMCO Clear standards are formulated to match a large batch of formazin that contained many individual batches to help eliminate this inherent deviation.

Each new batch of stable standard suspension is then formulated to match the previous batches, so the variability of the primary standard is greatly reduced. Cross-referencing to new batches of 4000 NTU/FNU formazin concentrate dilutions is completed quarterly to maintain traceability to formazin, although AMCO Clear standards are guaranteed to be within 1% of the true value lot to lot and maintain the certified value for 1 year.

Traceability to Formazin: These calibration standards were manufactured under an ISO 9001-2000 certified quality system. A formazin calibrated turbidity meter was used in the formulation and testing of the standards for each specific instrument design. The current formazin lot number R891765 is a combination of 5 formazin lots and well matches the bulk standard mentioned above. The formazin was diluted with filtered (0.03µm) 18 megohm de-ionized water to the instrument's calibration values utilizing calibrated Class A volumetric glassware.

NIST Traceability: Although there is no recognized NIST standard for turbidity, AMCO Clear® spherical styrene divinylbenzene (SDVB) co-polymer calibration standards are recognized for maintaining a consistent average particle size (0.2 µm) and size distribution (0.1-0.3µm) in aqueous suspension traceable to NIST SRM 1963 and SRM 1691. Each standard is also evaluated for lot to lot consistency and reproducibility utilizing a spectrophotometer certified twice yearly to NIST SRM 2031 and SRM 2034 and certified Hg lamp.

GFS Chemicals, Inc. Josh Crow: Manager, AMCO Clear Water Analysis Div.



Product Manager

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