



11/15/2024

MEMO

From: Bennie L. Cockerel, Jr, Manager – Office of Env. Laboratory Certification *BLC*
Through: Micheal Mattocks, Asst. Bureau Chief, Bureau of Regional and Laboratory Services
Re: Updated Allowances for verification of Hach residual chlorine meters using gel standards

The Office of Environmental Laboratory Certification is pleased to announce that effective immediately, gel standards are approved for daily verification of Hach residual chlorine photometers and colorimeters, subject to certain requirements. Please note that the current verification procedures using liquid standards remain valid and may continue to be used by laboratories that do not want to use gel standards for meter verifications.

To use gel standards for daily meter verifications, the requirements are listed below:

- 1) Initial calibration verifications (ICVs) must be performed every 6 months (e.g., biannually). The ICVs require the analysis of a liquid blank and five liquid standards (chlorine or potassium permanganate) as is currently required. The only change is that these ICVs will be required to be performed twice annually AND with any change in DPD lot number. One of the ICV standards must be an 0.05 mg/l standard if used for wastewater samples. Immediately after performing the ICV, the gel blank and 3 gel standards must be read and documented. The results of the gel standard analyses must be within the limits found on the certificate of analysis (COA) for that lot of gel standards. Please note that the acceptance limits on the COA are meter specific.
- 2) After #1 above has been completed, daily verifications with the gel blank and 3 gel standards must be performed prior to compliance sample analysis.
- 3) As noted above, any new ICV will also require analysis of the gel standards to complete the verification process. It is recommended that the laboratory purchase sufficient quantities of DPD lots to last at least 6 months, and preferably 12 months, to avoid needing to do more than 2 ICVs in a year.

This is an option for laboratories who wish to use gel standards for daily verification of chlorine meters. The laboratory may not want to use gel standards and that is perfectly acceptable. But if gel standards are to be used for daily meter verifications, the above process must be followed. If using the newly approved gel standard process, the laboratory must also update their SOP(s) accordingly to include the new meter verification procedures using gel standards.

Additional Notes

Residual chlorine meters and gel standards must be maintained so that all manufacturer's storage requirements are met. The SOP must clearly state how the field meters and associated standards will be stored.

Chlorine meter verifications using gel standards may be performed in the field. All current sampling, handling, analysis, and reporting requirements remain in place and have not been modified.

If you have any questions regarding this memo or the requirements listed above, please feel free to reach out to our Office at 803-896-0970 or by email at LabCertHelp@des.sc.gov