

The Acceptability of Discrete Analyzer Technology as Applied to EPA Methods

Florida Department of Environmental Protection, Environmental Assessment Section

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The Department of Environmental Protection (FDEP) has been reviewing technical information concerning the use and application of discrete analyzers to environmental analysis. The purpose of the review was to determine if method applications using discrete analyzers could be considered equivalent to cited EPA methods. A method that is found to be equivalent to a cited EPA method does not require approval through the EPA alternate test procedure (ATP) programs. The use of discrete analyzers should dramatically reduce the laboratories waste stream for routine wet chemistry methodologies.

The following discussions do not apply to Safe Drinking Water Act compliance activities.

Based on the review of analytical information from manufacturers of three discrete analyzers, the FDEP believes that discrete analyzer method applications have the potential of being equivalent to EPA approved analytical methods. The specific method proposals from the manufacturers indicate that, for the proposed methods, the chemistries are equivalent to the methods that were cited by the manufacturers.

Instrument manufacturers who provide application notes utilizing this technology for a specific EPA method application and laboratories that purchase this technology should ensure that:

- the cited (or reference EPA method) is identified as an acceptable method by the program for which data will be generated (e.g., method as approved under 40 CFR Part 136, table II for NPDES).
- the proposed method uses the same reagents and chemical reactions (except surfactants, which are optional and may be different);
- the instrument uses the same technology for the determinative step (unless the EPA method specifically allows the use of other technologies);
- the final chemical ratios are the same where critical;
- the range of use is similar
- the number of recommended calibration standards equals or exceeds method requirements;
- the precision, accuracy and method detection limit for the manufacturer's method is equal to or better than the cited method. In cases where the reference method does not provide quality control information, the targets listed in the December 1996 Streamlining Guide (<http://www.epa.gov/waterscience/methods/guide/flex.html>) should be used;
- if provided, the manufacturer's method discussions are consistent with the cited method including but not limited to identifying the approved method(s), the cited current applicability (e.g., identifying whether method is acceptable for either SDWA or CWA or both); current preservation and holding requirements; interferences, and required quality control measures as specified in the cited method, required by EPA or various certification agencies; and
- the documentation demonstrating that the above criteria have been met is available for review.

If the above criteria are met, the discrete analyzer technology is an acceptable modification to the EPA methods and does not require approval through the EPA ATP process.