MANTECH

OPTIMIZE YOUR RESULTS. PROTECT OUR ENVIRONMENT.

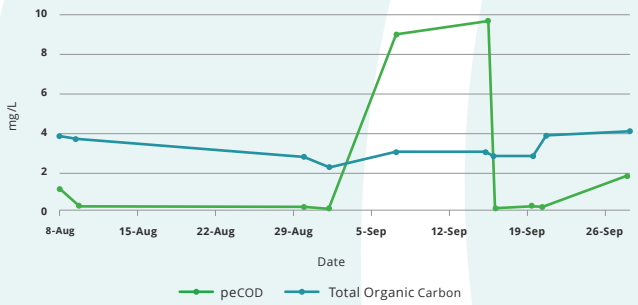
peCOD ANALYZER
OXYGEN DEMAND ANALYSIS FOR SOURCE & TREATED DRINKING WATERS

MANTECH

The revolutionary peCOD Analyzer technology measures the chemical reactivity and associated oxidative changes in Natural Organic Matter (NOM). As a result it is more sensitive than TOC and UV254 to changing NOM concentrations.

The peCOD method follows ASTM International method D8084, and is included in Health Canada's *Natural Organic Matter in Drinking Water* (2018) guideline.

EVENT DETECTION AT A TEXAS WTP



peCOD DETECTED CHANGES IN TREATMENT EFFICIENCY THAT TOC DID NOT. THE peCOD RESULTS ALLOWED THE OPERATORS TO MAKE DECISIONS WHICH LED TO FINANCIAL SAVINGS AND PROTECTION OF PUBLIC HEALTH.

NOM is a critical target for drinking water treatment.

It can be associated with:

- Taste, odour, colour issues
- Coagulant, oxidant demand
- Disinfection by products (DBP) precursors

NOM compounds are known to react with common disinfectants to produce harmful and potentially carcinogenic DBPs.

Traditional NOM surrogates (UV254, SUVA, TOC, DOC) may not be suitable for assessing NOM removal in all cases, as they are often calibrated or "tuned" to the specific site matrix. peCOD is independent of the matrix, therefore variations in NOM are clear and can be acted upon.

Pictured: L50 peCOD Analyzer with MT-30 Autosampler

peCOD ANALYZER BENEFITS

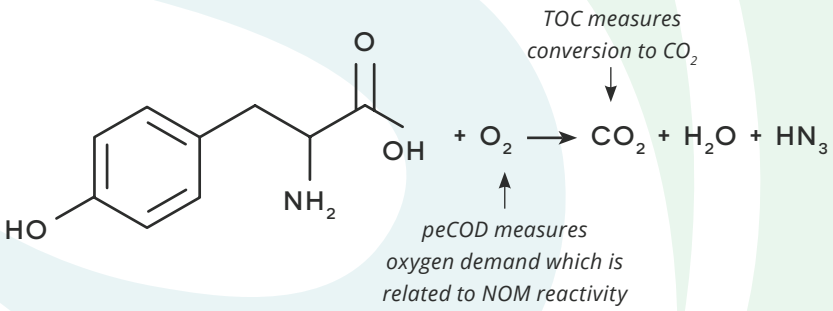
- Identify organic reactive changes that occur during treatment
- Can be combined with alkalinity to fully comply with US EPA guidelines (EPA 815-R-99-012, Section 2.3, Table 2-1)
- Measures oxidisability; replaces permanganate method in EU directive 98/83/EC
- Optimize coagulation and DBP formation potential
- Laboratory, portable and online configurations use identical technology and method
- Low detection limit (< 1 mg/L) with results generated in less than 5 minutes

Pictured: Online MO500 peCOD Analyzer

"MY peCOD IS MEASURING NOM CHANGES IN OUR SOURCE WATER WHICH ARE NOT PICKED UP BY OUR TOC OR UV254."

– UTILITY IN THE ROCKY MOUNTAINS

CHEMISTRY OF peCOD AND TOC



"TOC ON ITS OWN SHEDS NO LIGHT ON THE OXIDIZABILITY OF THE MEASURED CARBON OR THE AMOUNT OF OXYGEN NEEDED FOR ITS BIODEGRADATION."

– TOC MANUFACTURER

MANTECH's portable, online and laboratory peCOD Analyzers test thousands of samples every day for a wide variety of applications, including:

SOURCE WATER

WATER REUSE

MUNICIPAL DRINKING WATER TREATMENT

UNIVERSITY AND COLLEGE LABORATORIES

MANTECH PRO

MANTECH Pro software adds automation and a sleek user interface to the Benchtop L50 PeCOD® Analyzer.
*Requires PC for operation.

BENEFITS

1. Easy to use interface
2. Unit is ready to analyze samples when the work day begins. Automated calibration and control check can be scheduled ahead of time.
3. Customized sample names and batches
4. Customizable shortcut buttons

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