

USING UV ABSORPTION TO MONITOR ORGANICS IN DRINKING WATER

Organic material is one of the most prevalent impurities in source water, and it affects the colour, taste, and odour of water. Organics in source water come from naturally occurring organic matter (NOM) as well as introduced organics coming from pollution. By monitoring NOM in raw water, you can get an early indication of unexpected events, which allows you to respond quickly in adjusting your treatment process.

A well-established method for monitoring organic load is to measure UV absorption at 254nm, as many organics absorb UV light at that wavelength. The amount of absorbed UV light is used to monitor NOM levels.

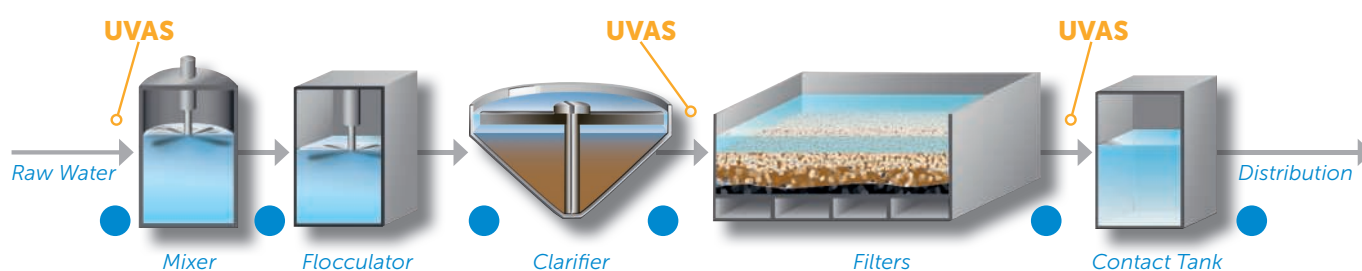
The Hach® UV process probe **UVAS plus** is specifically designed for the continuous measurement of the UV absorption of dissolved organic substances in water. The measured value is available without delay and can be expressed as the spectral absorption coefficient (SAC) in m^{-1} . In addition to the drinking water plant inlet, it is helpful to measure organics at various treatment steps as:

- During the chemical oxidation process in raw water
- During the coagulation process using aluminium, iron or polymer compounds
- During activated carbon filtration
- During final disinfection

Hach's **DR6000 spectrophotometer** allows you to easily verify the online measurements that you get from the UVAS probe at your inlet or other parts of your treatment process. The verification is an absorption measurement at 254nm which does not require any sample preparation or additional chemistries. Therefore, DR6000 utilizes the same measurement method as UVAS plus, which allows you to have exact comparison of the values of the organics. Furthermore, the UV absorption method is preprogrammed in your instrument, which makes it easy to do the test and get results immediately.

In addition to SAC, a UV direct measurement for nitrate is also preprogrammed. Further, DR6000 makes it possible to measure other drinking water specific parameters with ready to use test kits (i.e. chlorine, ammonia, nitrite, etc).

Monitoring Organics in Drinking Water



● Grab sample for verification of online measurement



Be Right™

Complete Solutions for Event Monitoring

Continuously protect plant treatment processes from high influent organic loads

The **Hach UVAS plus sc digital UV probe** is designed for the reagent-free determination of the organic load via the spectral absorption coefficient (SAC) in the medium or in the bypass. Reliable measurement values are immediately available due to the direct UV measurement.

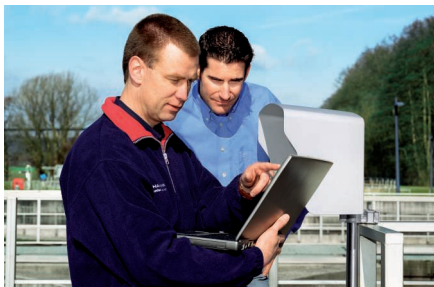


- Reagent-free determination of the organic load by SAC 254nm
- Self-cleaning enables reliability in harsh environmental conditions
- Direct UV measurement, no moving parts, reagents, set up

Your water testing needs, all in one advanced lab spectrophotometer

With UV and Visible Spectrum capabilities, over 250 pre-programmed methods including the most common testing methods used, guided procedures, and integrated quality assurance software, the **Hach DR6000** ensures you are ready to handle your comprehensive water testing needs.

- Pre-programmed UV application (SAC and NO_3)
- All remaining main parameters with ready-to-use test kits for drinking water pre-programmed
- Simplified self-programming for standard methods
- Sipper option for series analysis



Be confident with Hach Service

Increase your confidence and peace of mind, knowing you've put your instrument maintenance and repair in expert hands. Be certain in your measurements with a first-class service partner.



Be Right™