



Information Sheet 1

BDOC Testing

Basis of the Method

The BDOC method used by Research Laboratory Services is the “traditional” method developed by Joret in France at Anjou Recherche Laboratories. I am one of only three people in Australia that have undergone professional hands-on training in these labs.

Principle of the Method

This method determines the “total” biodegradable dissolves organic carbon (BDOC) content of the water without the limitations of time and oxygen. The procedure involves placing a sample of water in contact with a biological substrate (in this case biologically active sand) in the presence of air, and monitoring the DOC decrease with time. Depending on the amount of BDOC present within the water sample, the time required to reach DOC stabilisation varies but is typically 7 to 10 days.

Suitability of the Method

The method has traditionally been used to evaluate the effectiveness of treatment processes (mainly biologically active carbon) to reduce the regrowth potential within drinking water treatment distributions. One of the common by-products of ozonation is an increase in BDOC which if left untreated can cause increased biofilm growth within pipelines, which in turn increases chlorine demand and trihalomethane formation potential.

Skills and Experience of RLS

Research Laboratory Services conducts all its BDOC analysis in a temperature controlled clean room facility. Our DOC analysis was the closest to the mean certified value (with z scores of 0.00 and 0.03) in the NLLNCT (National Low Level Nutrient Collaborative Trials) Round 10 ensuring low accumulative error in DOC analysis. All samples are conducted in duplicate (inclusive in the per sample cost) to ensure maximum reproducibility of the data.