

Nitrogen pollution has led to widespread ecological degradation and algal blooms in freshwater bodies worldwide. Grab sampling techniques are unlikely to provide representative data for nutrient concentrations. Therefore, alternative techniques capable of providing more representative measurements are required. Diffusive gradient in thin films technique (DGT) can not only provide time-weighted average concentrations over relevant time-scales, but also integrate short-term variations in analyte concentrations. This article reports the alternative methods for measuring nitrate and ammonium using commercially available AMI and CMI anion and cation exchange membranes as DGT binding layers. Compared with conventional resin-based DGTs, membrane-based DGTs are easier to prepare, have a consistent composition, avoid use of toxic chemicals and provide good performances.