Adaptation of an osmotically pumped continuous in situ water sampler for application in riverine environments

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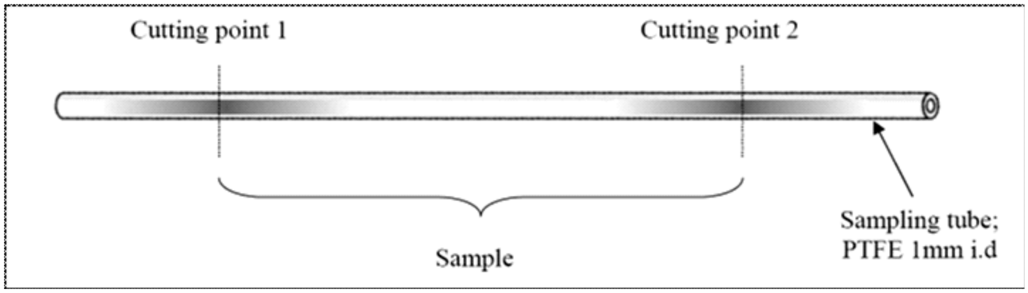

Figure 1: Segmentation of the sampling tube using a tracer

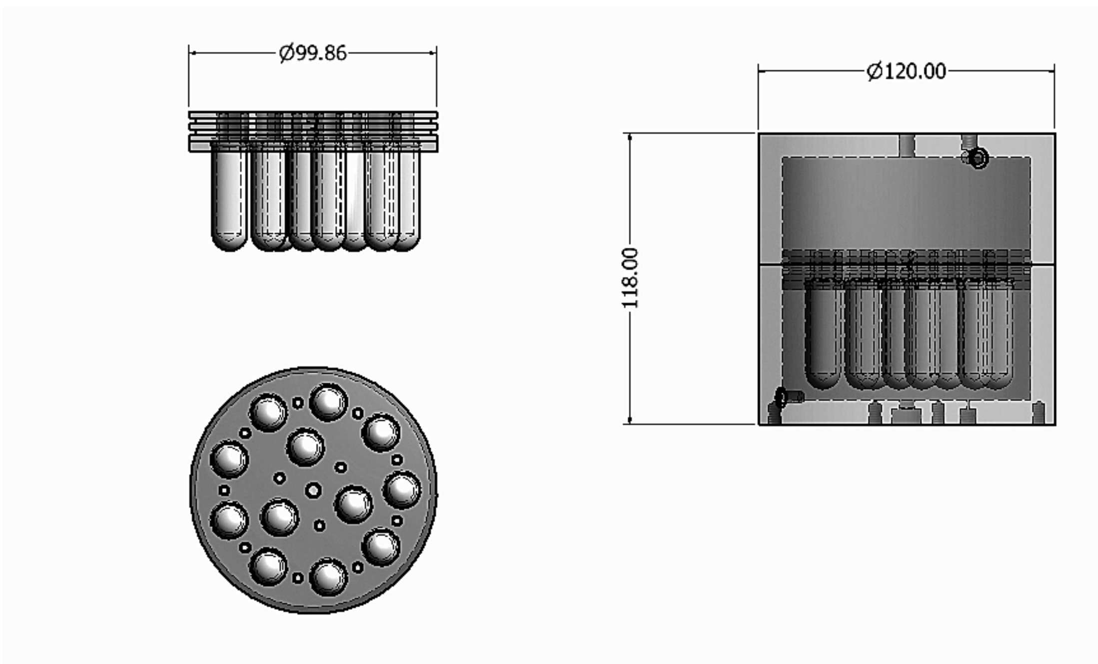

Figure 2: Osmotic sampler main pump

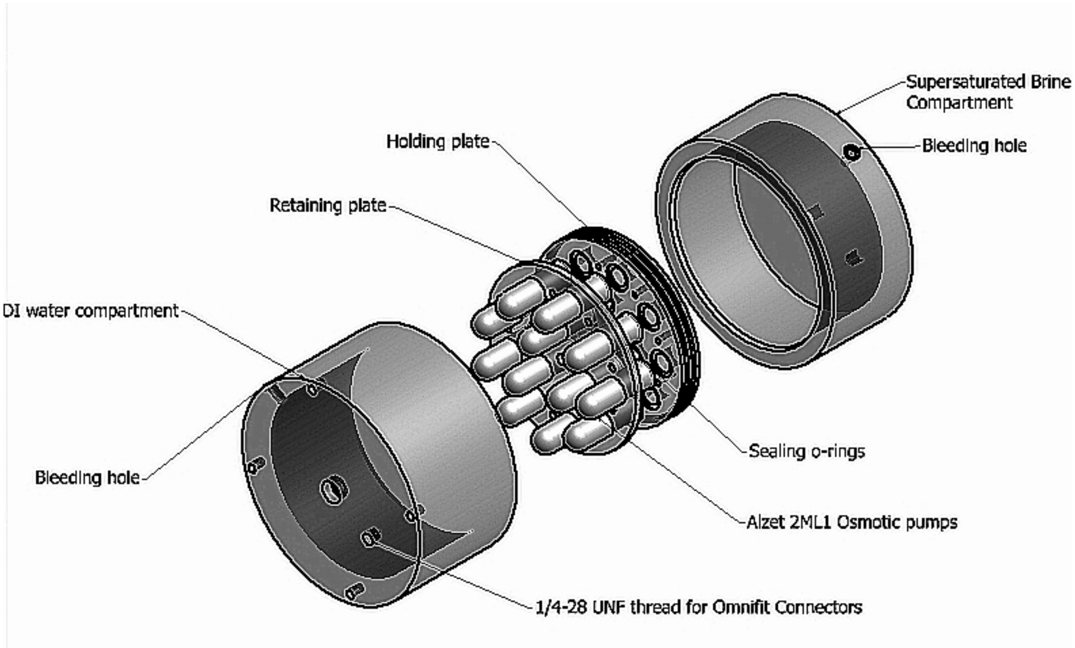

Figure 3: Osmotic sampler pump assembly.

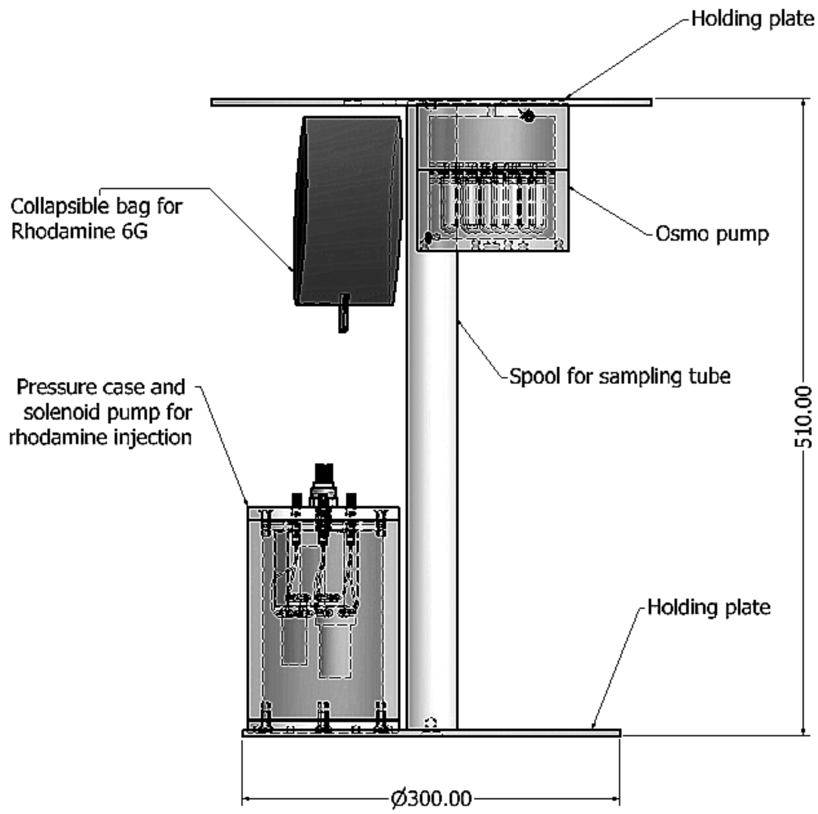

Figure 4: Basic configuration of NOCS Osmotic sampler as configured for this study.

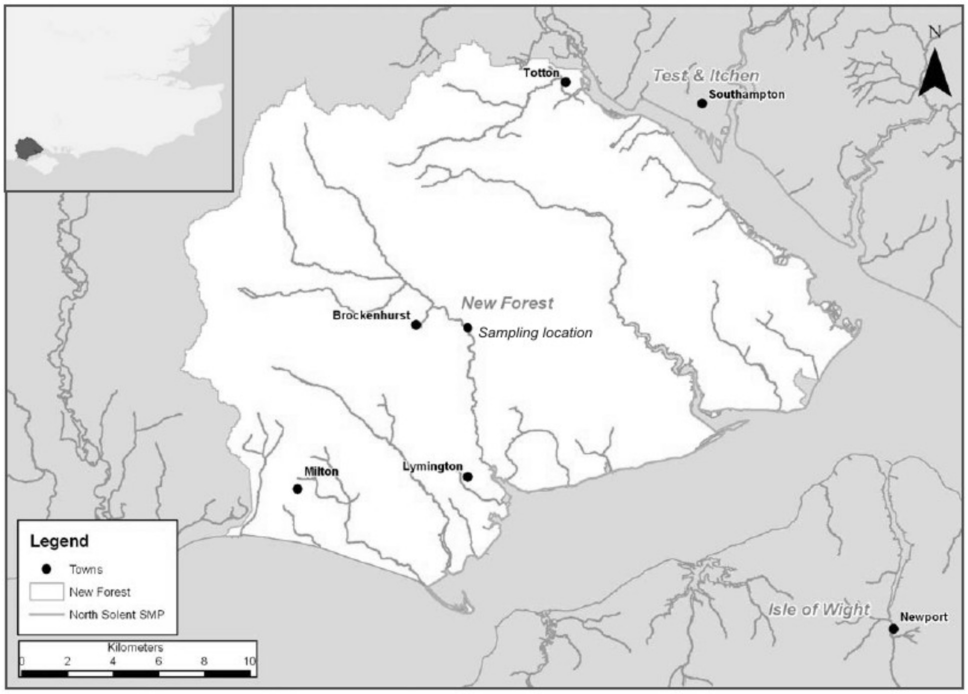

Figure 5: Map of the area near the deployment site.

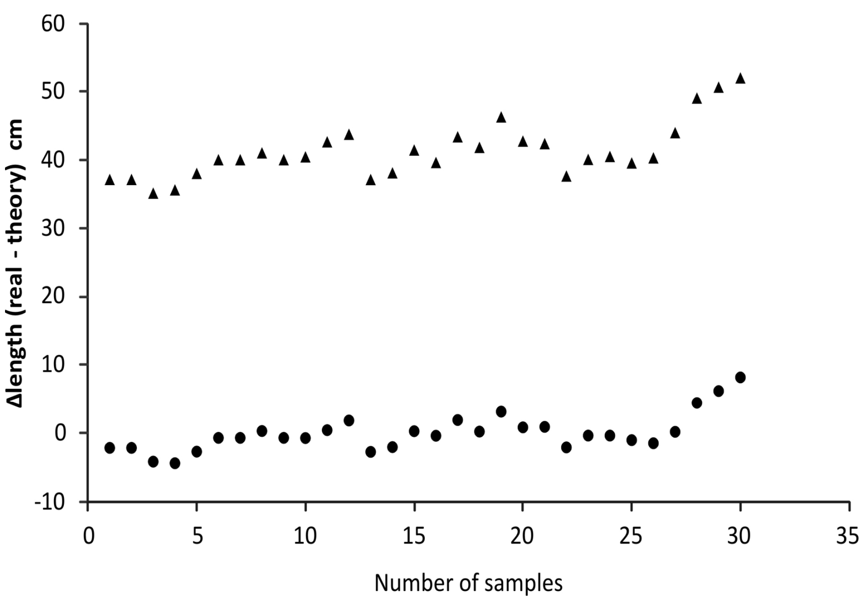

Figure 6: Error in calculated segment length using recorded temperature and i) equation 1 without calibration (black triangles) and ii) equation 1 corrected with known T0 condition and total length of sample (black circles)

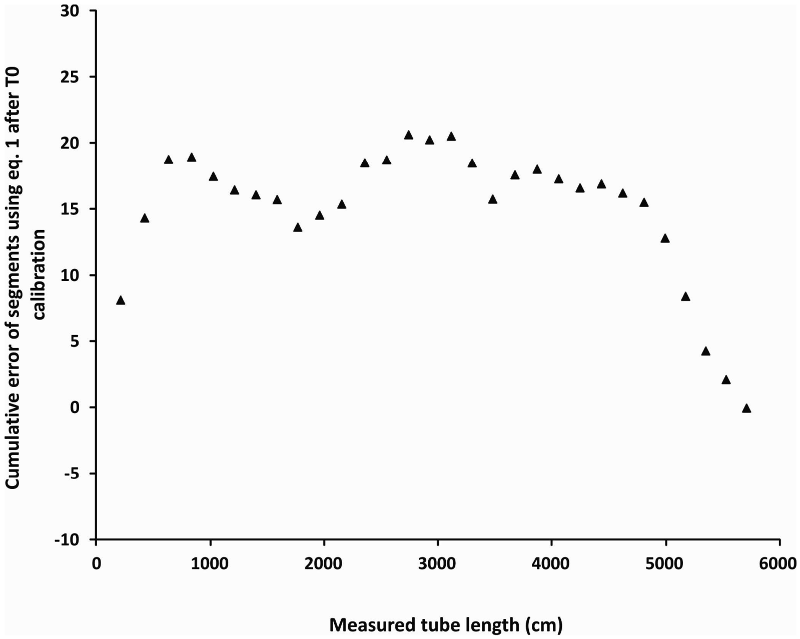

Figure 7: Cumulative error in segmentation of the sampling tube using eq. 1 with a T0 and endpoint calibration. As expected the error is reduced significantly (less than 10%).