**PROTOCOLS FOR THE MEASUREMENT OF CDOM ABSORPTION USING DIFFERENT TECHNOLOGIES AND TECHNIQUES: RESULTS FROM THE THIRD NASA CDOM WORSKSHOP ROUND ROBIN**

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Chromophoric Dissolved Organic Matter (CDOM) is a major optical constituent of inland waters, estuaries, coastal ocean, and open ocean. This significant contribution of CDOM to aquatic optical properties requires quantitation and characterization of CDOM spectral absorption for development and evaluation of ocean color satellite remote sensing algorithms. CDOM absorption can be quite high in coastal regions; however from coastal to open ocean waters, the CDOM decreases significantly and becomes much more difficult to quantify accurately. UltraPath instruments (long-pathlength spectrophotometer) and Liquid Waveguide Capillary Cell (LWCC) technology were developed to resolve the CDOM absorbance sensitivity issues and have been in use for over a decade to quantify CDOM absorption. However, developing a correction method to account for the spectral offset caused by the refraction index of dissolved salts has been challenging. As part of the NASA CDOM absorption protocol working group, a third Round Robin experiment was carried out in 2015 with U.S. and international participants. Extremely low CDOM seawater collected from the South Pacific near Tahiti was distributed to the group and measured following the same protocol within the same 48 hour period. Three different salt correction methods were evaluated using NaCl dissolved in Ultrapure water. In addition, two freshwater solutions of different concentrations of Suwanee River Fulvic Acid (SRFA) were measured in order to characterize them for the use as consensus reference material to monitor the performance and relative accuracy of absorbance measurements from various instruments. These samples were measured with Ultrapath and LWCC instruments as well as conventional double-beam spectrophotometers, ac-meters, and an a-sphere. The results were analyzed to ascertain the amount of error and variability associated with these instruments and technology and in development of a community consensus protocol.

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