

## **Colorimetric Detection Methods for Nitrate and Phosphate Monitoring Using Hand-Held, Portable Devices**

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### **Project Location:**

University of Rhode Island-Kingston

### **Project Description:**

The detection of certain key nutrients in marine environments can provide important clues about the overall health of an ecosystem, with too much or too little of these nutrients indicating significant problems with the ecosystem, and the ideal amount necessary for a healthy ecosystem to continue to function. We are developing sensitive, selective, and portable ways to detect two of these key nutrients, nitrate and phosphate, using color-changing functionalized paper combined with an integrated smartphone app that will enable effective detection.

*This project involves **primarily lab or computer work***

### **Required/preferred skills for student applicant:**

Willingness to learn new things and work as part of a collaborative team

### **Student transportation needed for project?**

No