

EVALUATING BROMINE SENSORS TO DETECT WATER TOXICITY

ASU Global
Launch
Arizona State University



Researched different bromine sensors on the market and provide recommendations to avoid the risk of bromine toxicity and increase the positive outcomes of the nanobubble technology.

GREEN PAPER

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CREATED BY GREENLIGHT SOLUTIONS AT
KAUST: ABDULLAH ALHEJJI |

RUFAIDAH

LABBAN | YAZEED ALHUDHAIF | MARYAH

ALBAHAR | IBRAHIM AL-DULAIJAN |

MONIRAH ALODAH

PROJECT PARTNERS:

ALARIVEAN | MICHAEL CORRIDAN

ASU GLOBAL LAUNCH | KAITLIN DECKER

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Challenges & Opportunities

The Project Partner's nanobubble technology aims to remediate water from pollutants and Algal Bloom and combat the associated risks, including bromine toxicity that can pose a serious threat to the aquatic ecosystem. However, the technology utilizes ozone which is associated with bromide production. Therefore, it was our opportunity to research and recommend different bromine sensors on the market to measure the concentration of bromine in the targeted regions; in order to avoid the accumulation of bromine at toxic levels. Our team based our analysis on value, the technology used, usability, and maintenance.

Recommended Solutions

We researched multiple bromine sensors aiming to choose a cost effective option to recommend. Our objective was to vet at least **2** instruments which we ended up comparing to find the best option. We concluded that **TempHion Multi-Parameter Water Quality Sensor** is the most cost effective of the two.

- Decrease the risk for people who work in marine industries
- Protect the Fisheries
- Having access to oceanside locations.

As Alarivean is working towards cleaning the ocean with the Nanobubbles filled with ozone the monitoring of bromine will help, too.

BENEFITS TO PROJECT PARTNER

- Cost-effective
- Less human resources
- More logistically feasible
- Good for business
- No compromise to the environment

BENEFITS TO SOLUTIONEERS

- Exposure to a new field
- Experience for future opportunities

BENEFITS TO THE COMMUNITY

- Better living conditions
- Cut the toxicity of Bromine