

# ANALYTICAL SERVICES

Silver Bullet's laboratory capabilities provide customers the mission critical resources to strategically evaluate cultivation systems so that disease is prevented, water quality is consistent, and plant health is optimized.



TREATING WATER. **BETTER.**

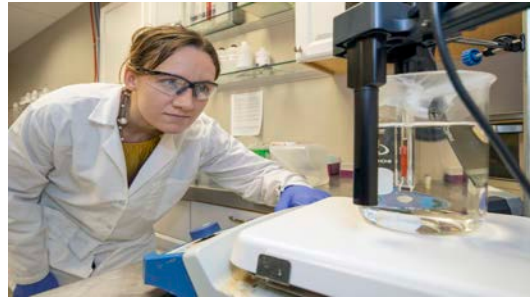
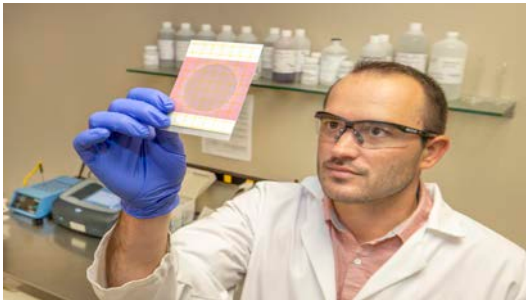
## ANALYSIS TYPES

**Mineral** – Silver Bullet's mineral analysis package provides a full range of tests to screen for contaminants and to ensure optimum micro- and macronutrient levels.

**Biological** – The biological analysis package determines the level of organics and evaluates bacterial populations so that unwanted microbial growth may be controlled.

**Genomic** – Polymerase Chain Reaction (PCR)-based technologies, coupled with sequencing, are used to identify pathogenic, benign, or beneficial organisms present within either the plant tissue or the irrigation water.

**Condensate/Heavy Metals** – The condensate analysis will test for harmful metals, organics, and bacteria typically found in condensate water to ensure it is safe for reuse.



**Customized** – Cultivation processes are dynamic and as such a "one size fits all" approach is not always the best option. Beneficial inoculants, hormone additions, and organic additives are examples where a customized monitoring approach may be appropriate.

**Plant Tissue Nutrient** – Plant tissue analysis allows for the direct determination of your plant's nutrient profile by looking at an array of common macro- and micronutrients.

**Grow Media** – Nutrient ion binding, microbial contamination, imbalances in the microbiome, salt accumulation and bioaccumulation are just a few of the challenges our analytical services and expert feedback will help you address.

## TESTING PACKAGES FOR EVERY NEED & BUDGET

These service packages are flexible and can be amended based on customer goals. Silver Bullet Water Treatment Analytic Services are offered at a reduced rate to our water management customers and are highly competitive in terms of turnaround time and cost when compared to other analytical laboratories.

## BENCH & PILOT STUDIES

Silver Bullet is uniquely positioned to leverage its expert staff, analytical services and in-house research facility to conduct customized bench-scale and pilot studies to explore and investigate complex processes and applications.

As growers face challenges of unknown cause, conduct evaluation of new technologies or seek to optimize current operations, we urge our partners to inquire about how Silver Bullet can assist in generating the data that will lead to more informed decisions.

## CONTACT SILVER BULLET!

Engage with us to experience first-hand how our expertise, engineering advantage, custom designed solutions, state-of-the-art technologies, and attention to YOU, allows Silver Bullet to **TREAT WATER. BETTER.**

# ANALYTICAL SERVICES HORTICULTURE DIVISION

# RESEARCH & DEVELOPMENT

*Our reputation has been forged through the hard work of a talented team of science, engineering and water management professionals who continue to invest their efforts on cutting-edge research initiatives.*



TREATING WATER. BETTER.™

## RESEARCH & DEVELOPMENT ACHIEVEMENTS

**AUTOMATION & REMOTE SYSTEM MONITORING (IOT):** Cloud-based remote viewing and control of integrated water treatment systems.

**ALEAE, BIOFILM & PLANT PATHOGEN REMEDIATION:** Custom solution for effective control and remediation.

**INTEGRATED GROW SYSTEM TREATMENT OPTIMIZATION:** Work with strategic partners to develop integrated treatment solutions.

**SELECTIVE NUTRIENT REMOVAL TO MEET DISCHARGE REQUIREMENTS:** New technologies to meet current and emerging discharge requirements.

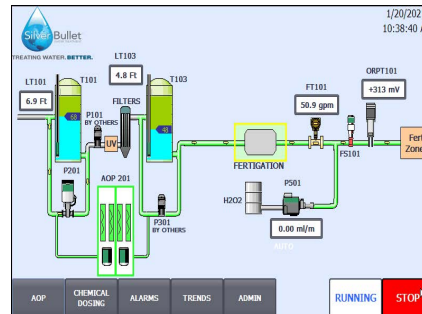
**OPTIMIZING LIQUID CHEMISTRY PROGRAMS:** Targeted guidance for growers to best achieve their water quality goals.

**NUTRIENT COMPATIBILITY:** Silver Bullet has optimized the disinfection treatment processes without sacrificing nutrient formulation

**CONDENSATE RECAPTURE:** Sustainable solutions to ensure safe and effective reuse.

**IRRIGATION WATER RECYCLING:** Solutions that meet water quality goals without introducing new phytotoxicity, nutrient compatibility or system compatibility issues.

**ION-BINDING OF SELECT GROWTH MEDIA:** We help customers promote nutrient delivery and bioavailability to plants by identifying and characterizing certain growth media that passively captured select nutrients such as calcium.



# RESEARCH & DEVELOPMENT HORTICULTURE DIVISION

## COLLABORATION WITH CSU



Along with in-house R&D projects, Silver Bullet has conducted valuable initiatives through collaboration with respected academic institutions. A primary partner in this program is Colorado State University's Department of Agricultural Sciences. These collaborations include academic department-based research projects, regular internship programs, and graduate thesis projects.

Silver Bullet and CSU's collaborative relationship has reinforces the respective technical backgrounds of the company and university and plays a role in supporting the next generation of STEM professionals.

## LEARN MORE:

For more information or to get started with how we can help to improve your water, email us at [info@silverbulletcorp.com](mailto:info@silverbulletcorp.com) or call us at (303) 552-2383. Find us online at: [www.silverbulletcorp.com](http://www.silverbulletcorp.com).