



SafePlate Technologies Inc.

SafePlate Technologies is utilizing the power of biosensors and automation to bring lab-grade contaminant testing directly to the food manufacturing facility.



Company Overview

Our company started in a Senior Project class from Cal Poly San Luis Obispo, where we realized we wanted to dedicate our effort improving the suffering food industry in America. After interviewing many people with food allergies and sensitivities, we realized the best way to improve safety in the food industry was by supporting change at the manufacturing level, and one sector that was archaic and often failing was contamination testing. After talking to many key players in the food manufacturing space, as well as scientists from testing labs and key personnel in food safety companies, we have honed in on our technology and are currently developing it to first break through in the gluten testing market, while looking to expand to pathogen testing, microplastics, heavy metals, and more. As a team of 5, we are dedicated to creating the ultimate testing solution, developing a device to test for all food contaminants while being simple enough to be operated by untrained personnel. Currently, we have raised \$50,000 total through accelerator funding and a friends & family round, and we are continuing to establish connections, develop our technology, and expand the team with experienced industry personnel. We have one partner who has signed an LOI to host our beta testing at their rice flour mill, where they produce gluten-free rice flour for many large, reputable brands, and we are continuing to pursue other connections. We have also proved that our electrochemical aptamer-based sensor (EAB) works, is reusable, and we can successfully extract gluten from food matrices. We will continue to reduce testing time, limit of detection, and improve extraction efficiency.

Financial Info

Raising
\$50K

Location

San Luis Obispo, CA, USA

Business Stage

Business Plan Mapped Out

Business Type

Future Tech, B2B,
Technology, Biotechnology,
Agriculture, Food

Meet the Team



Mitchell Dann
CEO

Problem

SafePlate Tech is solving the issue that food manufacturers are too restricted by cost and time to test diligently and output safe food products, leading to many of the major recalls seen in the past couple years. The problem is that contaminant testing is the last safeguard to catch dangerous products, and food manufacturers have two main options. The first option is using swab-type quick tests that use lateral flow technology to deliver quick results, but with the downside of lower reliability and only displaying pass/fail results. On top of this, they are prone to human error and each test kit can only test for one contaminant. The other option is sending food or beverage samples to be tested by a third-party lab, which can cost some companies \$5k-\$10k every time they want to test a batch, as well as forcing them to wait 24-48 hours for results to come back while the product ages in a warehouse. This leads companies to spend anywhere from tens-of-thousands to millions of dollars a year on thorough testing. What our team aims to do is bring a lab-grade testing device to the facility of the manufacture, maintaining the speed and ease-of-use of the quick test, while providing the accuracy and the quantitative results of lab-grade testing; all of this would happen while still being cost-effective compared to the quick-test, becoming more economical with increasing scale of testing frequency due to our single, daily-use consumables. These

reusable electrodes allow for this cost efficiency, being the natural evolution over the traditional antibody detection methods. Our device will allow more robust testing data to be input directly into company programs, increasing decision making speed, decreasing held inventory, preemptively catching food safety mistakes, and preventing multi-million dollars recalls and consumer harm.

Highlights

We have raised \$50,000 so far from grants, friends & family, and we have also applied to NSF grants which we are looking forward to receiving to fund our research.

Go-To-Market Strategy

The initial target market is the U.S. gluten-free testing sector, valued at approximately \$100 million. Market validation has been conducted through three primary channels. First, the team has engaged in over 100 direct interviews with food safety professionals across more than 75 food manufacturing companies, gaining critical insights into industry needs. Second, attendance at key industry conferences, including the Food Safety Consortium in the Fall of 2024, has provided additional validation through interactions with industry experts and stakeholders. Third, direct discussions with the two largest players in the food safety test manufacturing market have confirmed a strong demand for faster, more accurate testing methods, with expressed interest in investment contingent upon further technological development. These contacts have continued to stay in touch and have stated that acquisition is a strong possibility if a robust device emerges from the team's research.

The company's commercialization strategy follows a phased approach: establishing technical credibility through successful demonstrations, penetrating the market via pilot programs and trade shows, and scaling adoption among industry leaders. Upon completion of a factory-ready prototype, SafePlate Technologies will initiate 90-day pilot programs within the gluten-free manufacturing sector, with one rice flour producer already committed to early adoption. Following successful validation, market penetration will expand through industry journal publications (e.g., Journal of Food Protection) and participation in major food safety trade shows (e.g., Food Safety Summit).

Technology validation for the project will be done through a study conducted by the Association of Official Analytical Collaboration (AOAC). Completion of this study will enable regulatory approval and market readiness. Simultaneously, rigorous internal validation protocols will ensure benchmark accuracy and reliability, minimizing the risk of false results and ensuring consumer safety.

What Makes Us Special

SafePlate Technologies operates within a niche competitive landscape dominated by startups and existing allergen testing solutions. Legacy industry players have yet to integrate emerging technologies or effectively address new market demands. SafePlate aims to bring the benefits of lab grade testing to the manufacturer's facility with the ease and speed of the current lateral flow test that is used by manufacturers to test (somewhat unreliably) for allergens. Accurate and quantitative data is more useful than the pass/fail results given by current lateral flow tests, as this data can be used to identify trends that can preemptively prevent food safety disasters and recalls. The device is also a major

improvement over sending samples for 3rd party lab testing, as the device will deliver sophisticated results within 10 minutes as opposed to 24-48 hours of lab testing, and the device will be operable with no technical expertise which is a large hurdle a food manufacture would encounter if opening a full analytical lab in their factory. The team is planning on adapting the device to integrate with current food safety software programs on the market, allowing this data to seamlessly upload and integrate into these programs. When expanding to pathogen testing (which is the next priority), SafePlate aims to adapt the already proven sensor and device technology to address many of the current shortcomings in the pathogen testing industry. First, the company aims to be the first test to obtain lab-grade results in less than one hour. The only way this is currently possible is by obtaining results without the need for enriching pathogen cells or DNA, which would also make the testing process much safer to conduct within a food manufacturing facility. The level of automation would be carried over from the gluten testing device, and multiplexing of electrodes would allow the same device to test for allergens and pathogens, essentially creating a universal testing device (with plans to expand to other contaminants in the future).