Flexitips

Flexi-tips is a designed to address the limitations faced by current pipette tips in high-precision applications, like MALDI.

Team: Julie (MTM), Rushil (MTM), Danielle (MTM), Ran (MBA), Varsha (LLM), Kehan (MEng) Advisor(s): Kshitiz Gupta (Inventor), Robin Johnston (TPO), Leah Edwards (Fung)









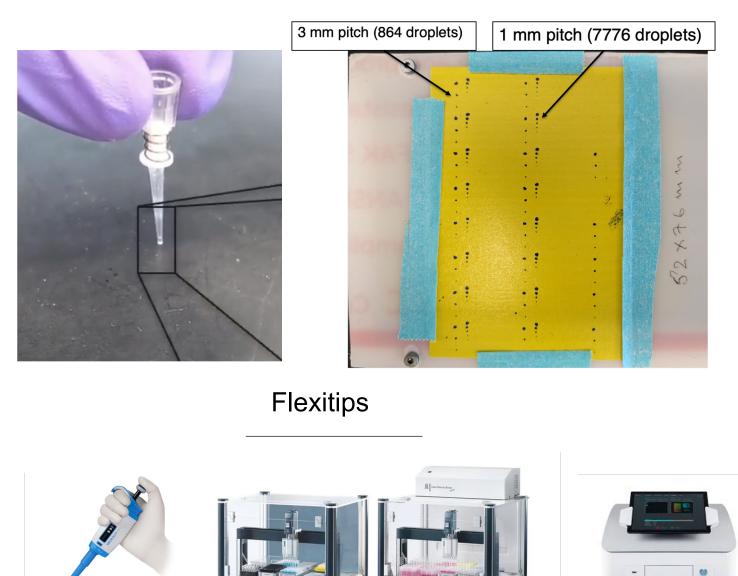
Tech Overview

Use Case: sample deposition, research

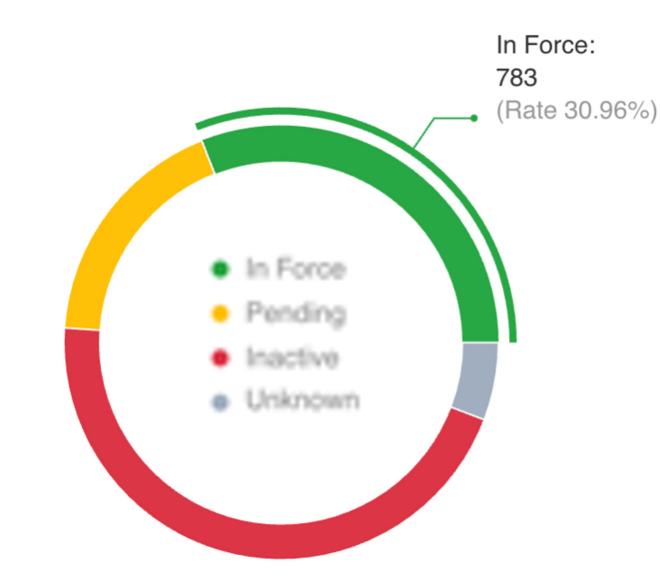
Flexitips Key Features

- Samples 40 plates simultaneously (2.5x more samples than current).
- Contact-based deposition.
- Can handle 100nl with no dead volume, diff volume requires diff pipette size.
- Reduces time to 1.2-1.5 min/sample.

Existing Solutions: Manual pipette, robotic handlings, Echo, IDOT



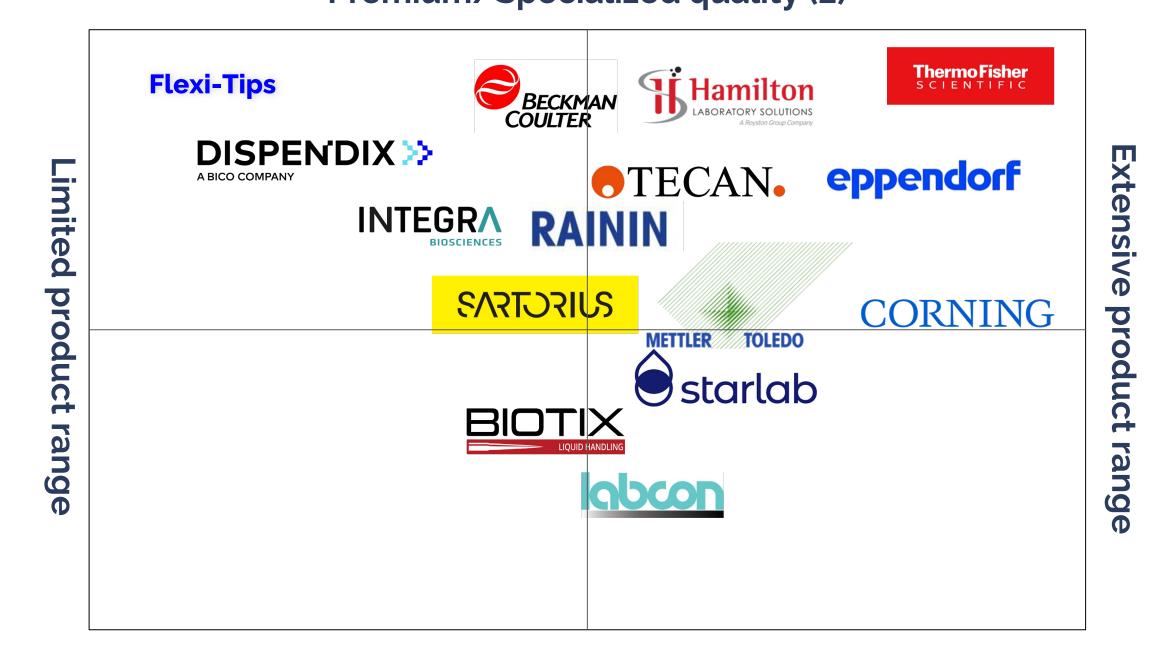
Patent Landscape for contact-based pipette tips



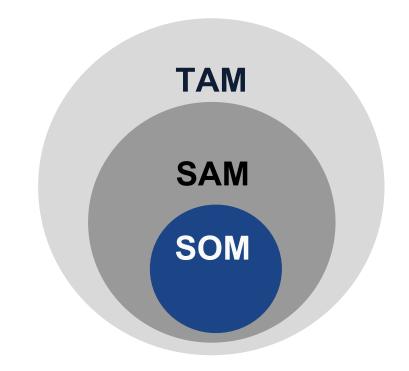
- Novel technology
- High volume of patents indicates multiple players in the market investing in R&D
- Patent landscape is evolving with a clear emphasis on precision, user-centric design, and smart technology integration
- Innovations in this area suggest a trend towards reducing downtime and enhancing reliability

Market Analysis

- Market participants: raw materials, R&D, manufacturers (both tips and lab instruments), end users (biotech, pharma, research institutes, clinic, etc)
- Pipette tips market is very competitive with incumbents dominating.
- Flexitips is at TRL-5, targeting premium quality market to develop product based on specific customer needs. Premium/Specialized quality (2)



Market size estimation



Source: Global Newswire, Future Market Insights, company websites

Basic/Standard quality

TAM: \$588M

Global pipette tip market (projected at \$1.4B in 2024). Roboticcompatible tips accounts 43.6%, 75% of them are for highthroughput analysis.

SAM: \$161M

Geography segmentation: US+EU at 67.5% Customer segmentation: ~40% outsourcing

SOM: \$16M

10% adoption for innovators and some early adopters based on Diffusion of Innovation Theory.

Commercialization Potential Assessment

18 interviews from manufacturers, research institutes, and biotech companies



eppendorf

RAININ



CORNING











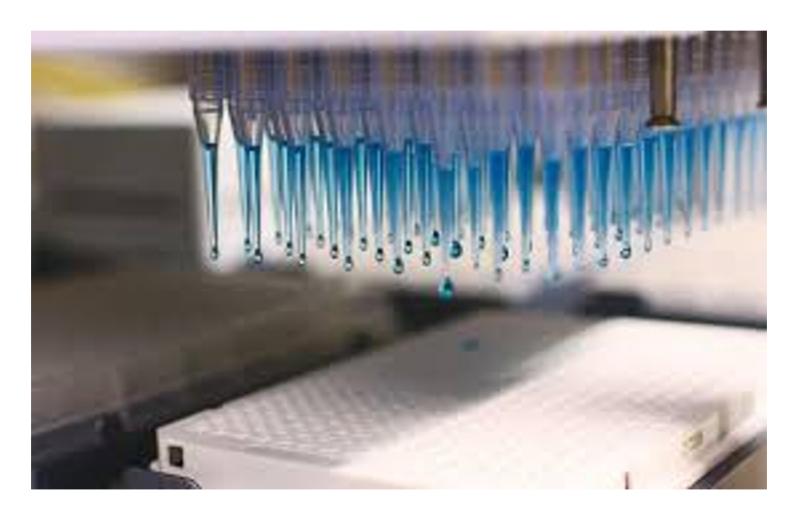




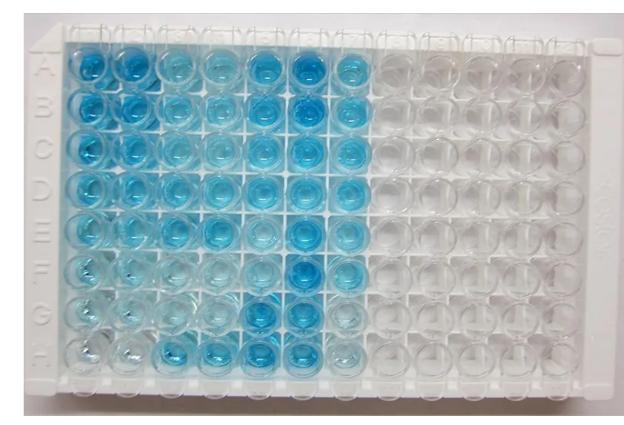
Success Metrics

- 1.Significant improvement over existing technologies
- 2. Exponentially more cost effective
- 3. Have a clear market entry
- 4. Ability to be licensed to a lab tools company

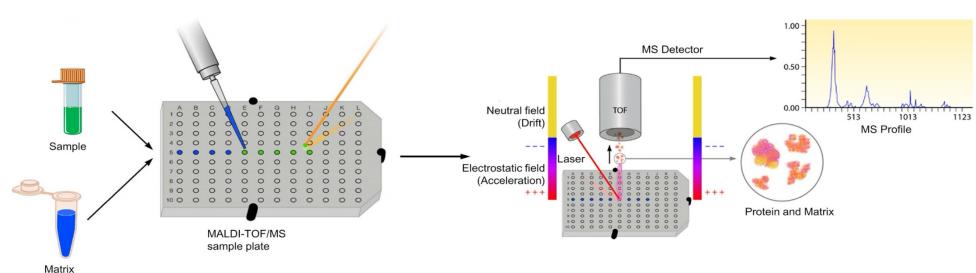
Potential Applications



High-Throughput Screening



Chemical Assays



MALDI Proteomics