

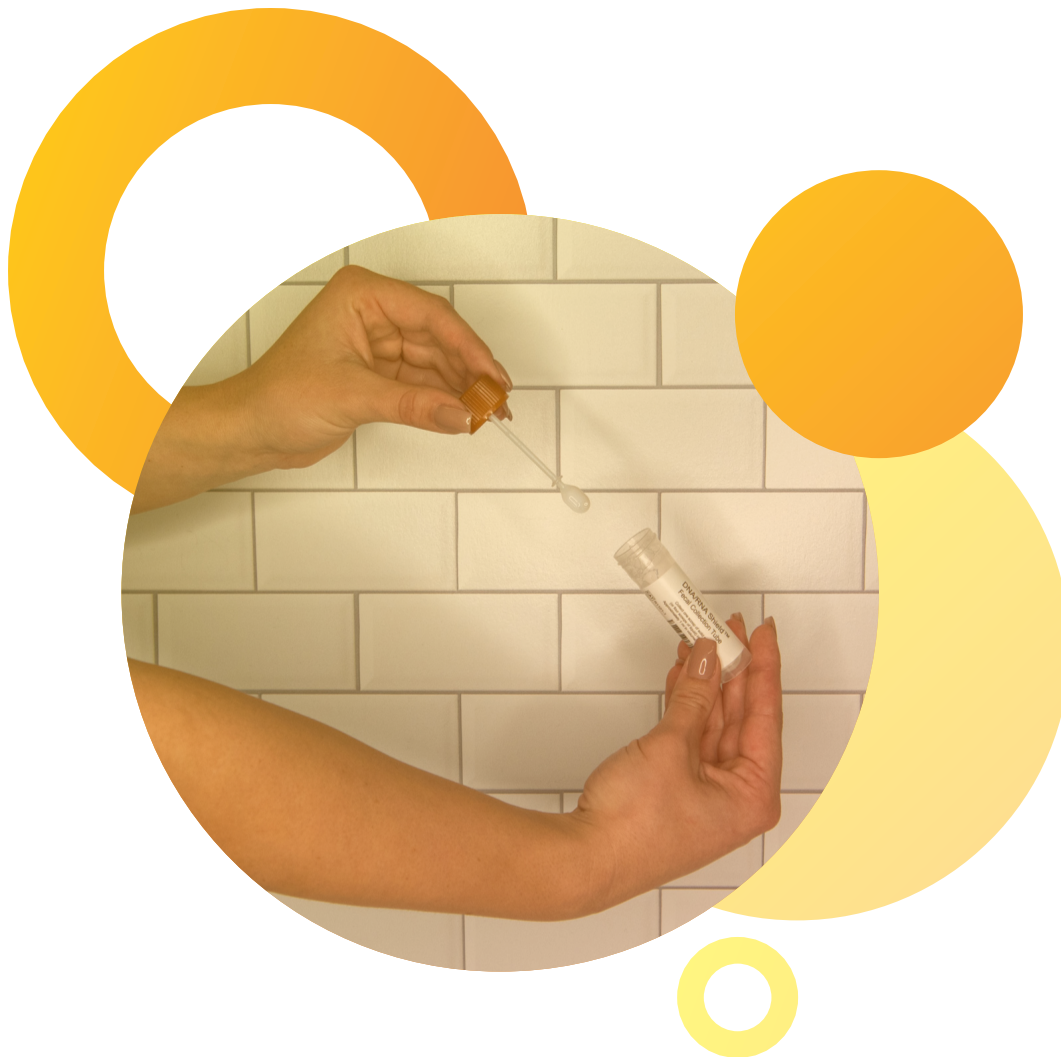


ZYMO RESEARCH

The Beauty of Science is to Make Things Simple

Subscription-Based Business Models for Direct-to-Consumer Testing

Starting a Scalable At-Home Testing Service



Two in ten Americans have taken an at-home DNA test.¹ Ancestry testing had a quick rise to fame when the prices became reasonable enough to be purchased as gifts. In 2017, a leading personal genomics company sold around 1.5 million tests between Black Friday and Cyber Monday alone.² But in the following year, this new avenue fell about as quickly as it rose.³

This precipitous drop was the result of a business model that had no room to retain users. Ancestry genetic data remains static and offers no reason for consumers to retest. This makes ancestry testing companies reliant on new customer acquisition instead of customer retention. What happens when everyone has taken an ancestry test?

Rise of Health-Conscious Consumers

The market for health-conscious consumers is booming, since the pandemic there has been a 68% increase of people prioritizing their health, a 40% rise of those considering wellness a top priority,⁴ and 70% of wellness spending focusing on products that emphasize mental and physical health.⁴

A large part of this mindset shift can be attributed to the COVID-19 pandemic, as traditional views on health were reexamined, and people were saturated with messages on the importance of personalized preventative care.⁵

In turn, telehealth also challenged the traditional structure of healthcare and COVID-19 revolutionized at-home testing. Now, the idea of at-home testing is starting to be expected rather than just accepted.⁶

This mindset shift has also come with an increased demand for direct-to-consumer (DTC) brands. In the past year over a third of consumers report buying directly from a manufacturer's website⁷ and 40% of consumers expect that in the next five years over 40% of their spending will go toward DTC brands.⁷

Microbiome Health Is Mainstream

Diet culture is out and microbiome awareness is in. #GutTok videos have amassed 705.2 million views on TikTok, delivering educational microbiome content to the masses.

With up to 40% of people suffering from gastrointestinal disorders,⁸ healing one's gut microbiome has become a priority. Many DTC microbiome testing companies have benefitted from this cultural trend, offering consumers the chance to understand and improve their microbiome through at home tests.

Here to Stay

At first glance, the at-home microbiome testing trend seems to be on the same trajectory as ancestry tests, but their staying power comes from their subscription-based business models. Unlike traditional ancestry genetic testing, successful DTC microbiome companies build their business model around returning customers through

subscriptions. With the cost of sequencing ranging from \$75 to \$250 per sample, it can be difficult to maintain a healthy margin upfront while staying competitive on the price of the test.

Selling directly to consumers is a win-win as consumers achieve a more personalized experience and companies achieve higher customer retention through subscription-based services.⁹ Strong personalization strategies can also increase growth rates by 6% to 10%,¹⁰ thus, this model provides DTC companies a lot more opportunity to scale.

Personalized Health

Scientific sequencing advancements have also made it possible to create products that offer individuals tailored solutions. Thanks to DTC testing companies, consumers now have an alternative option to learn about and improve their health, especially when it comes to which vitamins and supplements are right for them.¹¹

Additional Subscription Opportunities

In addition to subscribing to a DTC microbiome test, many testing companies offer an array of supplements and recommendations based on test results.

Instead of taking shots in the dark with random vitamins consumers can now subscribe to microbiome testing companies that tailor their probiotics according to their test results. These companies do not leave consumers to aimlessly scour the internet for answers to their problems. Instead, they provide guidance and results, in turn, providing the perfect upselling opportunity. Personalized subscription-based vitamin services offer convenient solutions and guidance to help people achieve their health goals.

Two notable companies that are excelling in upselling vitamins based on testing results include Floré and Ombre.

» Floré¹²

- Floré offers custom probiotics and prebiotics that are formulated based on the individuals gut microflora data. They start with an at-home stool sample then offer an analysis of it and a custom probiotic formulation based on the results and the opportunity to discuss the report with a Floré Care Scientist. Progress can also be tracked through their mobile app or web portal and free retesting is offered every four months.

» Ombre¹³

- Ombre's goal is to merge science and self-care for a personalized experience. Their at-home fecal tests give users a quantified view of their microbiome. The results are then analyzed and Ombre will provide personalized evidence-based recommendations on lifestyle, food, and probiotics. They also offer savings for those who choose to subscribe for retesting and supplements.

The audience for these types of personalized DTC tests continues to expand. Fecal samples are critical as they can provide insight into the gastrointestinal microflora and how the microbiome impacts health.

Check out the top two considerations for fecal sample collection below.

Collection

To ensure the microbial profile of a sample does not change after collection, a sample collection device with a stabilization solution is critical. [Zymo Research's DNA/RNA SafeCollect™ Swab Collection Kit](#) is the top choice for all types of fecal sequencing. These devices are filled with Zymo Research's proprietary DNA/RNA Shield™ stabilization solution, which preserves DNA and RNA for a minimum of 30 days at room temperature—giving plenty of time for samples to reach the lab for analysis and eliminating the need for cold-chain shipping. The kit offers a positive user experience and has safety features that prevent users from spilling or mishandling the stabilization solution.

Types of Fecal Collection

When it comes to feces a little goes a long way and most tests do not require large amounts of biomass. Stool samples are naturally very rich in bacterial DNA content as 100 mg typically yields 2.5 ug of DNA.

Although there are various types of fecal collection available, it is critical to look at items like user-experience and cost when deciding which route to go. Check out the breakdown on [Zymo Research's Fecal Collection Devices](#):

- [DNA/RNA SafeCollect™ Swab Collection Kit](#) is the most user-friendly collection kit that stabilizes the nucleic acid content of samples collected with a swab. This kit is cost effective and is ideal for unsupervised collection as the spill-free design prevents spillage and exposure. Transport is also simple as harmful pathogens are immediately inactivated at the point of collection and the DNA and RNA of the sample is stabilized without the need of cold-chain.
- [Bunny Wipe™](#) is a great alternative that simplifies the process by mimicking the experience of toilet paper. It is a flushable item that is coupled with the DNA/RNA Shield™ Fecal collection tube for safe collection
- [DNA/RNA Shield™ Fecal Collection Tubes](#) are ideal for applications that require a large sample input volume. They offer a microbial snapshot of a sample while inactivating viruses and making samples safe and ready for transport. Samples are stable at ambient temperature and can be frozen for longer-term storage. This collection is a spoonful of the specimen into the stool collection tubes prefilled with preservative and shake vigorously to ensure proper stabilization.
- [DNA/RNA Shield™ Fecal Collection Tube \(with beads\)](#)

is the same but comes pre-filled with five glass beads to help facilitate homogenization.

Method

A DTC fecal collection testing company can use different analysis methods to make recommendations based on various characteristics. The choice of sequencing technique determines the ability of the test to detect bacteria and other microorganisms relevant to the gut microbiome.

- [16S/ITS gene sequencing](#) is a type of amplicon sequencing that targets a specific region of the bacterial and fungal gene and yields the names of microbial groups to even the species level. Normally the primers target regions V3-V4 for bacteria or ITS2 for fungi. This type of analysis readily demonstrates the diversity and relative abundance of groups of bacteria and fungi, which makes it appropriate for helping consumers find out whether a product modifies these factors.
- In [Shotgun Metagenomic](#), DNA from the entire community of microbes is sequenced. This yields comprehensive information on genera, species, and strains of bacteria as well as fungi, archaea, and viruses, and allows insights into the functional potential of the microbiome and how this might be impacting health. Given the high resolution of the analysis, this type of sequencing sets up a company to identify biomarkers from its database of gut microbiome analysis customers and may open a path for developing diagnostic tests that can be used by health professionals in the future.
- [Metatranscriptomic](#) is a type of sequencing that provides a comprehensive profile by identifying all active microbes, their functions and how they interact with one another. Metatranscriptomic analysis shows the genes that archaea, eukaryotes, DNA and RNA viruses are expressing.

Connect With Direct-to-Consumer Testing Experts

Zymo Research has a specialized team that works with microbiome testing companies, providing recommendations, custom solutions, sample collection devices, services and more. [Set up a free consultation today.](#)

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