



Personal Care

SMARTMOUTH™

Mouthwash

Critical Decisions to Enhance the Consumer Experience. The Good, the Bad and the Ugly.

Enhancing the consumer experience influenced every decision made on a mindful path to successful manufacturability and commercialization of SmartMouth™ from Triumph Pharmaceuticals Inc. According to the team at Triumph, innovation had to equal ease of use rather than be innovation simply for the sake of innovation. They knew they could count on TricorBraun to get them there. “There’s a technology and a science in what we do and that’s why we’re the superior oral care product. We’ve had a long term, ongoing business relationship with TricorBraun because of their superior service, support, communication and willingness to do whatever it takes. They are an amazing partner,” explained Ron Kappauff, VP of Sales & Marketing at Triumph Pharmaceuticals.

How Does it Work?

SmartMouth™ Mouthwash is a unique, dual-bottle delivery system that allows you to mix the two solutions together prior to dispensing so that each time you rinse you have freshly activated the ingredients for lasting results. Solution #1 contains an odor eliminator and solution #2 contains zinc. When you mix the two together, it releases a huge number of zinc ions. Zinc-ion technology blocks germs’ ability to ingest protein particles which means no new sulfur gas production and

therefore no new bad breath. Prior to use, the two solutions must be stored in two separate PETE (polyethylene terephthalate) bottles to avoid cross contamination.

For Triumph, the objectives and success criteria targeted to enhance the consumer experience included ease of use and aesthetic appeal. Also important were maintaining the current retail footprint and having a cool design that set them apart on shelf. Brent Dellay, VP of Product Management & Development at Triumph explains, “It looked a bit cumbersome before and it didn’t always function like it should. Customer complaints were 100% about function. Not the product. So, we knew if we alleviated this, our customers would be willing to use our product and keep using it. And alleviating objections would lead to increased market share. The challenge was that in order for the product to work, we had to have two solutions stored in separate bottles that are combined for the science to work.”

“TricorBraun folks are experienced, knowledgeable and know what is possible. They are relentless until they get there. They have the right resources and the right people to get the job done.”

—Andrew Burch, CEO,
Triumph Pharmaceuticals Inc.

“Keeping our retailers happy was important,” according to Kappauff. He explains further that retailers were interested in a trade up by consumers, a high margin, repurchase rate and maintaining the current footprint. And although the package ended up slightly taller, it fortunately did not affect the footprint. SmartMouth™ Mouthwash is available in 3 SKUs; Original, Gum & Plaque, and Dry Mouth.

Never Say Never

Nottingham Spirk was hired to redesign the existing package and the result was something consumers had never seen before – it involved eight different components. These included two PETE bottles, a PETG stage (patent pending), a foil seal, a foil protector, a spout (patent pending), an overcap and a shrink sleeve.

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Previous to this new design, the bottles were not connected by a shrink sleeve but were sold together in one box.

While Nottingham Spirk was confident that the design was doable, several manufacturers (about one half dozen) thought not. That's when TricorBraun's team stepped in to lead the way. A packaging consultant, a project manager, a quality engineer, and the technical services team along with the engineering team in Asia that could build unit cavities, provided the knowledge, experience and resources needed. But TricorBraun still needed a partner that was willing to take on the manufacturing challenge that so many had turned down. Currier Plastics, Inc. was that partner. Dellay explains, "TricorBraun never gives up and Currier was willing to take on the challenge. That was just the combination that we needed."

Eight different package components meant six different potential leak points requiring extensive testing and validation. Leak analysis, dimensional analysis, foil analysis and spout application were just a few of the areas that were tested and adjusted as needed. Communication and interaction by all parties including TricorBraun's US and China offices, Triumph, Nottingham Spirk, Currier and the co-packer were crucial. "TricorBraun folks are experienced, knowledgeable and know what is possible. They are relentless until they get there. They have the right resources and the right people to get the job done," Andrew Burch, CEO, Triumph Pharmaceuticals.

The Million Dollar Question

According to Matt Ramsdell, Director of Project Engineering at TricorBraun, the million dollar question asked repeatedly by the team was, "Is it functional?" TricorBraun validated the dimensions of every part and fit. "The stage was definitely the most difficult. The product wasn't blowing out the tubes so we had to open the gate in the tools so that more plastic could go in. Even though the manufacturing would be done here, we were able to keep costs down with molds and injection parts by utilizing Asia location. The tweaks to the design took

about three months and functional testing took about seven months," explains Ramsdell.

Ramsdell goes on to say, "It was definitely a unique situation. The challenges could not be viewed in isolation of one another and every component needed changes. We knew from the start that the PETE bottle material with a PETG plug seal would be a challenge. While polypropylene would have worked well because of its pliability, it was not compatible with the product's ingredients so there really was no other option. We had to grow the diameter of the plug seal to avoid leakage. The foil was also changed for a cleaner pull. The bottle overflow capacity had to be increased by .25 oz. so the bottle size got slightly bigger. The snap of the spout on to the stage had to be improved for customer experience. We removed locator posts on the foil protector so that the capping force is more centralized and interference of the snap bead had to be optimized for manufacturability. Our focus was to validate that all changes made did what we intended them to do."

Triumph knew that they were technically challenged and would make many decisions during the course of a full year. Tweaks were left to TricorBraun to handle and there were continuous face-to-face interactions and weekly calls with all parties. Chief Engineer, Jim Lo and the TricorBraun team in Asia owned improvement and were able to keep cost of molds and injection parts down. Gregg Aukeman, Packaging Quality Engineer, exclaims, "It was great to see improvement happen!" Ramsdell adds, "The changes we are making now are critical to the consumer experience. We brought the right manufacturer to the table and made the package feasible. Patience was definitely required due to the limited range we had to work within where all of the components could function together."

According to Jay Baum, COO at Triumph, "Teamwork, communication and collaboration were key for testing and retesting. Everyone's input was important. TricorBraun took us to the next level and provided a really good product in the time that we needed it." Further, he explains, "Rachel Moffat (Packaging Consultant at TricorBraun), spearheaded the

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project and made it all work together. She was our go-to person. And Matt, he taught me a lot about plastic – he is a phenomenal teacher.”

Per Triumph’s direction, TricorBraun has continued to tweak the package throughout the process to enhance the consumer experience and the CIP (Continuous Improvement Program) will focus on improving line speed. All changes will be implemented in January with the start of production. According to the Triumph team, it is important to consider that the consumer has never seen this design before. It is also important to note that while experienced consumers can open the package in 35-40 seconds, a novice might take a few minutes. Ease of use becomes essential to repeat purchases. In this regard, the continuous improvement program is that much more important.

Triumph goes on to note that one of the biggest challenges has been the multiple iterations of the shrink sleeve where the use instructions are explained. To further clarify how to use the product, a video has also been developed and can be found on their website. SmartMouth bottles and components will be warehoused and distributed from TricorBraun in St. Louis.

About SmartMouth

Triumph Pharmaceuticals (d/b/a SmartMouth), makers of the SmartMouth™ line of products, was established in the mid-1990s, in St.

Louis, Missouri. SmartMouth™ oral care consumer products are sold in more than 50,000 retail stores, including chain drug, supermarkets and mass merchandiser stores. With SmartMouth™ mouthwash, one rinse in the morning delivers all-day fresh breath. One rinse at night, and consumers wake up with clean fresh breath. No morning breath! Learn more at www.smartmouth.com.

About TricorBraun

TricorBraun Design & Engineering Group is a business unit of TricorBraun, one of North America’s leading providers of rigid, corrugated and flexible packaging. Our team’s primary mission is to design, engineer and manage the development, production and commercialization of custom packaging solutions for personal care, cosmetics, healthcare, food and beverage, industrial household chemical and animal health products. It is supported by TricorBraun’s more than 40 offices globally, holding one of the largest inventories of rigid packaging components worldwide.

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