



“Vyv’s LED technology solves the biggest problem with humidifiers, keeping them clean.”

— Design Engineer, Safety 1st

**Dorel Juvenile
Makes an Old
Product New
Again with Vyv
Technology**

Safety 1st Solves their Customers' Biggest Challenge with 21st Century Technology Innovation.

It began with the search for a solution to the biggest problem with standard humidifiers — how to keep their interior spaces clean and bacteria- and mold-free.

99.9%

Safety 1st developed a humidifier that kills 99.9% of most common bacteria* with Vyv's continuous antimicrobial light technology.

The team at **Safety 1st**, a division of Dorel Juvenile, the world's largest manufacturer of juvenile products, found that keeping humidifiers clean and free of mold was a major issue, with 40% of parents saying that they typically threw their humidifier away and replaced it, rather than clean its foul insides.

Kellee Senic, Director of Product Marketing at Dorel Juvenile, said, "We began with a customer view and looked at a lot of moms' challenges. When we first looked for a better way to address the cleanliness of humidifiers, we looked at what products were already on the market. There were a few that claim to be germ-free or antimicrobial, but there was always some kind of catch. One uses **UV light**, which is dangerous to a person's eyes and skin, and definitely not something that should be anywhere near a child."

Dorel design engineer Lukas Tubby was on the hunt for a highly effective alternative. "I did research on different ways to achieve the end result of safely killing bacteria within humidifiers. I found an article that mentioned Vyv antimicrobial technology. We got in touch and started the process of getting to know Vyv's team and evaluating whether their technology would work in our system. We introduced the idea, after which we started closely investigating the actual microbiology of Vyv's approach and went from there."





The result: the **Stay Clean™ Humidifier** with Vyv Continuous Antimicrobial Light — what one customer called ‘a total game-changer’ in their home — a humidifier that kills 99.9% of the most common bacteria* with Vyv’s continuous antimicrobial light technology. And all without UV light.

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Lukas Tubby
Design Engineer
Dorel Juvenile

The steps from idea to launch are a great illustration of the **power of partnership in product innovation**.

Success Through Co-Engineering Collaboration and Development

When asked about what made the product co-development process work so well, Lukas described a partnership with clear, ongoing communication and a highly collaborative spirit. “The integration of the Vyv technology, or the **co-engineering**, was at the core of our partnership. I worked pretty regularly with Vyv’s engineering team. We communicated many times a week, making sure that we were getting the maximum potential out of the design through proper angles of plastics and the optimal positioning of the antimicrobial lights. The development of plastics was critical, so we had to keep reshooting in different plastic combinations and have Vyv test them for us. It was constant communication and continual learning.”

“In terms of the microbiology,” Lukas continued, “we really had no idea what to do. We don’t have any microbiologists on staff because we typically don’t do a ton of sterilization products. And we also don’t have the capabilities to do the testing, which is a huge part of the co-development. Having **Vyv’s microbiology team** do all the testing for us was game-changing and made a potentially difficult situation a breeze. They are the market leaders in non-UV **antimicrobial light technology**, so we relied on them heavily to achieve the outcomes we were striving for.”



Kellee echoed the view of what made the Vyv-Dorel partnership work. “It’s been very collaborative; we couldn’t ask for a better partner. The communication has been amazing. Vyv is a gem of a company to work with.”

Innovation Drives Results

The collaboration resulted in a true leap forward in the product category. The core innovation of a technology that continuously cleans and kills* microorganisms around the clock took this product to a new level of value for the customer. As a result, the humidifier was given the **Juvenile Product Manufacturers Association** prestigious innovation award when the product was ready for market launch. In addition, the Safety 1st's Stay Clean Humidifier has received many accolades, such as inclusion in the Best Baby Gear list on *Fatherly*.

Since its launch in October 2020, the product has been remarkably well received. Customers love it. According to Kellee, people really like that they don’t have to clean it as often. As one customer said in his five-star review: *“Practically cleans itself! I love that as long as I keep the unit’s LED lights on, I know that it is killing 99% of the bacteria and mold. Always my biggest pet peeve with humidifiers, cleaning them! Thank you for thinking of us parents here. Now me and my child can breathe better through the night, too!”*

“This was perfect,” Kellee continued, “because not only are we solving a problem, but we’re also really offering back time, which is what moms and dads are looking for with everything else going on. There’s not enough time to homeschool; there’s not enough time to work; not enough time to clean. We’re offering this great option for parents to be able to get a little bit more time back and know that their kids are safe. Net-net, it’s a big help for parents.”

And the outlook for the future?

Safety 1st is a leader in delivering safe, high-quality products for babies and kids in the juvenile product category, but with product innovations like this, Safety 1st sees their opportunities as much broader. This is a terrific product to sell through pharmacies and other outlets — even tech websites. It’s a brand that initially resonates with moms, but there is a natural opportunity to transition our brand to be more for kids and for everybody.

With the ability to improve air quality while reducing cleaning, the Stay Clean Humidifier with built-in continuous-use antimicrobial technology can help us all breathe a little easier and eliminate the nuisance of having to clean the humidifier before every use.

Visit www.vyv.tech to learn more.

Steamy Facts

24/7 Sanitization using advanced LED Technology.**

No filter needed.

No UV light.

Kills 99% of the bacteria and mold when LED light is on.***

*MRSA and *E. coli* showed 90%+ reduction in controlled laboratory testing in 24 hours.

**Sanitization will only function when unit is plugged in and LED lights are on 24/7. It is normal for all but 1 LED light to turn off when the tank is removed. Use distilled water for optimal performance.

***+99.9% of MRSA and *E. coli* bacterial concentrations killed within 24hrs; growth of mold (*Aspergillus*) prevented (in laboratory-controlled studies with prolonged use).