

Household & Personal Care wipes

A Supplement to HAPPI and Nonwovens Industry

Fall 2020

DISINFECTANT WIPE:

Industry Responds to Covid-19 Crisis

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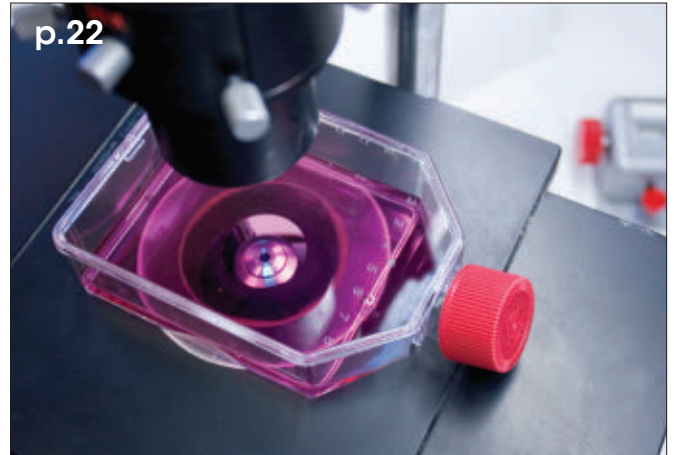
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Fast Times for Wipes

During the first half of 2020, it has truly been a tale of two cities when it comes to how certain industries have fared in response to the Covid-19 pandemic. Some have crumbled while others have thrived. Wipes, particularly disinfectant products, is definitely one of the latter.

Due to increased cleanliness practices and consumer hoarding, makers of disinfectant wipes like Clorox and Lysol are reporting unprecedented demand that has led to serious supply shortages of many cleaning products. This situation could last well into 2021, according to Clorox CEO Benno Dorer, who told Reuters last month that the company has been unable to keep up with demand for many of its disinfectant products. Wipes, he said, have been particularly challenged because of their complex supply chain.

Readers of this magazine are well aware of the complexity of the wipes supply chain. From nonwoven to converted substrate to the juice to packaging, there are many pieces in this puzzle. That being said, companies throughout the supply chain are working overtime to get these wipes back on store shelves.

Last month, Rockline Industries, one of the world's largest manufacturers of wet wipes, announced a \$20 million investment that would double capacity in Sheboygan, WI. Meanwhile, on the nonwovens front, there has certainly been ambitious investment in spunlaced materials—one of the key types of substrate material used in wipes—in recent months with companies in the U.S., Europe and Asia announcing in new lines. Of course, it does take time for these investments to come onstream, meaning that the supply chain will continue to be challenged, which is something nonwovens manufacturers aren't necessarily used to. In fact, one industry executive recently commented that it is the first time he's seen a sellers' market in spunlace in his two decades in the business.

That will change of course. With nearly every major supplier of wipes material in expansion mode, it won't be long before the supply chain balances out. However, market experts are expecting this surge in demand to continue as consumers continue to place increased emphasis on hygiene and hospitals and healthcare facilities increase their use of disposable wipes.

Let's hope that means that good times will continue for wipes and their suppliers.



Karen McIntyre
Editor

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Editor

Karen Bitz-McIntyre,
kmcintyre@rodmanmedia.com

Associate Editor

Tara Olivo,
tolivo@rodmanmedia.com

Editorial Director/Vice President

Tom Branna,
tbranna@rodmanmedia.com

Chief Marketing Officer

Robert Keenan,
rkeen@rodmanmedia.com

Art Department

Emily Fitterman, efitterman@rodmanmedia.com

President/Publisher

Rodman J. Zilenziger, Jr.,
rzilenziger@rodmanmedia.com

Executive Vice President

Matthew Montgomery,
mmontgomery@rodmanmedia.com

Publishers

Matt Carey, mcarey@rodmanmedia.com
Art Largar, alargar@rodmanmedia.com

Production Manager

Cheryl Coviello, ccoviello@rodmanmedia.com

Sales Managers

Kathleen Scully, kscully@rodmanmedia.com
Brian Barnes, bbarnes@rodmanmedia.com

Circulation Manager

Rich DeVoto, rdevoto@rodmanmedia.com

Audience Development Manager

Joe DiMaulo, jdimauro@rodmanmedia.com

European Sales Representative

Ria Van den Bogaert, BVBA Vandenbo
Treff 27, 1853 Strombeek-bever, Belgium
Tel.: +32 2 569 8905; Fax: +32 2 569 8906
Mobile: +32 497 05 0754; ria@rodmanmedia.com

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25 Phillips Pkwy, Suite 200
Montvale, NJ 07645
Tel: 201-825-2552 | Fax: 201-391-1008
E-mail: nonwovens@rodmanmedia.com
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Wipes Market Watch

Rockline Doubles Wipes Capacity

Rockline Industries is installing a new state-of-the-art \$20 million disinfecting wipe production line that will nearly double the company's production capacity. The new production line, known as the XC-105 Galaxy, when complete, will be one of the largest production lines for disinfecting wipes in the private brands wet wipes industry.

"The COVID-19 pandemic has created a new level of awareness among the American people about the importance of proper surface disinfection," says Randy Rudolph, president of Rockline Industries. "We are making a huge investment in the future by installing the Galaxy line to ensure that our customers will be able to meet consumers' increasing demand for disinfecting wipes."

The Galaxy line is being custom designed by Rockline's Global Engineering Group and built in partnership with several of the world's leading converting equipment manufacturers and is expected to be fully operational at Rockline's Sheboygan, WI, plant in mid-2021. The size of the line will require the company to relocate a number of existing production lines within the facility to accommodate the Galaxy. Rockline anticipates that it will increase its workforce as the line becomes operational and production volume increases though exact job numbers are not immediately available.

Rockline opened the Sheboygan plant in 1976 and since then it has grown to become one of the largest manufacturers of wet wipes and disinfecting wipes in the world with a reputation for developing some of the industry's most innovative and sought-after products.

Alaska Airlines, EO Provide In-Flight Wipes

Alaska Airlines announced a partnership with personal care brand EO, extending Alaska's Next-Level Care commitment

to health and safety and taking self-care to new heights. Starting Aug. 21, guests on all Alaska flights will be offered a complimentary, single-use EO hand sanitizing wipe, which is 99.9% effective against common germs, scented with pure organic French lavender, chamomile flower and white tea essential oils,



and 100% biodegradable.

"Our Next-Level Care program is designed to give our guests peace of mind when they fly," says Sangita Woerner, senior vice president of marketing and guest experience for Alaska Airlines. "Hand sanitizer is essential when you're on-the-go, and EO's sanitizing wipes with pure essential oils are a handy and pleasant way to know you're staying safe against 99.9% of common germs when in-flight."

Alaska Airlines Next-Level Care program is keeping guests safe from booking to boarding and beyond, with 100 new measures including open middle seats through Oct. 31, a pre-travel wellness assessment, a face covering requirement and use of electrostatic disinfectant sprayers and hospital-grade HEPA filters combined with an air filtration system that refreshes the cabin with outside air every three minutes. Alaska's partnership with EO elevates the travel experience by providing guests with an uplifting and calming moment in the air,

thanks to the addition of pure lavender essential oil.

"Our mission is to provide premium options for consumers to practice clean hand safety wherever they are, so we are honored to team up with Alaska Airlines," says EO Products CEO Tom Fee-gel. "With travel-related anxiety high, our hand sanitizing wipes offer greater peace of mind while traveling. Whether you are flying for work or re-connecting with loved ones, EO is delivering on our core commitment to create a healthier and happier future under one goal of clean, healthy hands for all."

According to the CDC, cleaning hands often is one of the most important things people can do to stop the spread of the Covid-19 virus, along with wearing a face mask. When soap and water aren't readily available, the CDC recommends using a hand sanitizer with at least 60% alcohol—EO's Hand Sanitizing Wipes are formulated with a 62% alcohol content derived from non-GMO sugar cane.

EO's profound commitment to sustainability was another key reason both brands aligned for this partnership. EO is a zero-waste, B-corp, certified green business, and EO's Hand Sanitizing Wipes are made from biodegradable plant-based cloth. They are also infused with ingredients like vegetable glycerin and an organic herbal blend of chamomile and calendula for an eco-friendly alternative that helps replenish skin for softer and moisturized hands. Alaska is an industry leader in sustainability, as the first airline to eliminate plastic straws and stir sticks on board, the first to compost, and a decades-long history of in-flight recycling. Alaska also launched the #FillBeforeYouFly movement last year, to encourage employees and passengers to bring reusable water bottles and help reduce the number of plastic cups used on board.

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Wipes Market Watch



Karweb Adds Spunlace Line

Machinery and technology specialist Andritz has received an order from Karweb Nonwovens to supply a complete neXline spunlace line for its plant located in Gaziantep, Turkey. The line is scheduled for installation and start-up at the beginning of 2021.

This new neXline spunlace eXcelle line is dedicated to the production of viscose and polyester wipes as well as biodegradable wipes. The production capacity can reach 18,000 tons per year.

Andritz will provide a full line with state-of-the-art equipment—from web forming to drying. The scope of supply includes the complete opening and blending machinery, two inline high-speed TT cards, a proven JetlaceEssentiel unit (including a water filtration unit) for hydroentanglement, a neXdry through-air dryer, and a neXecodry S1 system for energy saving.

This order confirms the strong and successful relationship between Andritz and Karweb Nonwovens. In 2017, Andritz supplied a spunlace line to Karweb for production of roll-goods made from several types of fibers, such as polyester, viscose, Tencel, cotton and polyamide.

Karweb Nonwovens, founded in 2013, is a division of Kara Holding and the first and only Turkish manufacturer of airlaid products for health care, hygiene and special disposable materials. The company serves customers worldwide.

Nature's One Introduces Plant-Based Wipes, Diapers

Nature's One has introduced Baby's Only Premium Diapers and Wipes. True to Nature's One commitment to purity, these sustainably sourced, plant-based diapers and wipes are made for baby's sensitive skin. The diapers and wipes are made with only the safest, sustainable, most gentle and natural materials without the use of harsh synthetic chemicals.

Baby's Only Premium Diapers are clinically proven hypoallergenic. The materials are not chlorine bleached, nor do they contain chemical dyes, inks, fragrances, harsh chemicals, latex or lotions. Nature's One diapers are "simply white" with no fancy printing where harsh dyes or inks can leach unnoticed onto skin causing rash, allergic reactions, skin sensitivities or leach into water supply once discarded.

Utilizing the latest in sustainable moisture absorption technology, Nature's One Premium Diaper uses spherical absorption found in natural ingredients to achieve maximum moisture absorption. The enhanced absorbency clusters promote rapid fluid-wicking away from baby's sensitive skin. After locking away wetness deep into the protective layers, the diaper assures sensitive skin stays dry up to 12 hours.

Jay Highman, founder and CEO of Nature's One, says, "A baby's skin is its largest organ. It is 33% thinner than adult skin at birth and continues to develop the first year of life. Any product touching the skin should be carefully designed to preserve the infant skin barrier. This is important to reduce atopic dermatitis and allergic reactions." Highman continues, "We are proud to offer premium diapers and wipes designed to meet our highest 'baby-sensitivity' standards. Every child deserves a better start for life and that includes a better diaper!"

Baby's Only Premium Diapers are available exclusively through the Nature's One website at www.NaturesOne.com.

BCNonwovens Adds Spunlace Line

Andritz has received an order from BCNonwovens, Spain, to supply a neXline

spunlace line as a turnkey project to meet growing needs from customers globally. The line is scheduled for start-up early in 2021.

This new state-of-the-art line will help BCNonwovens to better serve its customers and position the company for current and changing requirements in the marketplace.

"The choice of spunlace line supplier was based on a thorough evaluation of the technologies available on the market. The combination of Andritz process engineers' expertise and our in-depth market knowledge has enabled us to define the appropriate line configuration for current and future market needs. The fully equipped Andritz spunlace pilot line and expertise have played a key role in the order being awarded to Andritz," says Marko Rajamaa, general manager of BCNonwovens.

The line features the best-in-class technologies available on the market and will be installed in a dedicated new building, meeting the highest hygiene and environmental standards. Due to its versatility, it will enable BCNonwovens to widen its product portfolio and process a broad range of raw materials, including sustainable fibers.

This line will also be equipped with Andritz's self-developed Metris UX platform, enabling predictive maintenance based on Andritz's new Vibe sensors and the risk-based maintenance app. It will improve the line's efficiency by reducing downtime and thus help BCNonwovens to achieve its strategic objectives in terms of quality and sustainability.

"With its wide range of applications, Metris will assist us in our operating activities, and we can already envisage a wide range of new possible developments with this extremely powerful Andritz tool," says Rafael Dufour, Strategy and Business Development Director of BCNonwovens.

Over the past few years, the Andritz service team has supported BCNonwovens' continuous improvement initiatives to push performance to new levels.

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Suominen to Boost EU Capacity

Suominen is increasing its spunlace capacity in Europe by upgrading and re-starting one of its existing production lines in Cressa, Italy. The investment will strengthen Suominen's capabilities in Europe and it is made inline with a strategy aiming for growth.

"Demand for nonwovens products is increasing in all regions. With this investment we are able to support our customers in responding to the growing demand," says Petri Helsky, president and CEO of Suominen. The total value of the investment is approximately €8 million and the investment project will be finalized during the second half of 2021.

Jacob Holm Launches Widespread Investment Program

Following a review of its existing production lines to identify opportunities for expansion, Jacob Holm has launched "Project Boost," an investment program that has been approved by its board of directors. Implementation began in May 2020, and the project is expected to be completed by the second quarter 2022. Jacob Holm intends to leverage learnings from market studies and several key proprietary technology advances to fast-track implementation.

"After a detailed analysis of market and business needs, we completed a reorganization in 2019 into clearly defined business units and significantly strengthened our executive management group with the addition of three new positions. I am very proud to see recognition of the efforts of this new team by the board of directors with their approval of Project Boost," says Martin Mikkelsen, CEO.

The Project Boost investment program is significant in scope, affecting all production lines of the company across all global production sites. The investment is expected to lead to the creation of at least 57 new full-time positions across the group's global manufacturing footprint and add 500 million square meters

to the group's annual capacity.

True to Jacob Holm's commitment to sustainability, the investment will target a clear upgrade of the capabilities for using renewable raw materials. Additionally, the upgraded production methodology will further reduce waste and improve production efficiency, thus lowering the carbon footprint of the entire Jacob Holm and Sontara product portfolios.

"Project Boost is our response to the needs of our partners across the globe for increasing capacity, providing more sustainable substrate choices and continuing to uphold our position as an innovation leader in nonwovens," says Mikkelsen.

Chinese Spunlace Line Announced

Machinery supplier Group Andritz has received an order from Zhejiang Baoren Hezhong Technology Co., Ltd, China, to supply a complete neXline spunlace line. The line is scheduled for installation and start-up during the third quarter of 2021.

This high-capacity spunlace eXcelle line can process various types of fiber, such as polyester, viscose, Tencel, and bleached cotton and is dedicated to the production of hygiene fabrics such as disinfecting wipes. The final products will have fabric weights ranging from 30 -80 gsm, and the annual production capacity will be up to 20,000 tons per year.

Andritz will provide a complete line with state-of-the-art equipment – from web forming to drying. The scope of supply includes the complete opening and blending machinery, two inline high-speed TT cards, a proven JetlaceEssentiel unit for hydroentanglement and a neXdry through-air dryer with double drum. A high-speed winder from A. Celli will complete the line.

Zhejiang Baoren Hezhong Technology is a big player in China in the production of nonwoven goods and has several spunlace lines in operation. The final products are applied in many fields, such as medical care, cleaning, and so on, and are exported to South Korea, Japan, and

the U.S., among other countries. As the Andritz equipment is recognized as the benchmark for production of premium spunlace roll goods, Baoren Hezhong chose the neXline spunlace for this new investment.

Study Tracks Antibacterial Wipes

The global market for antimicrobial wipes is expected to witness surging demand in upcoming years. Recent study projects to record a CAGR of 10% between 2020 and 2030.

According to a study from Future Market Insights, antimicrobial wipes have gained traction as an effective way of decontaminating. With governments across the world taking initiatives to spread awareness on the importance of hygiene, the demand for different kinds of sanitizers is expected to rise.

While antimicrobial wipes are extensively used across hospitals and health-care centers, it is also witnessing increasing demand in the household and commercial sectors. Study foresees the market to benefit from the rising focus on innovations among leading players.

In its recent study, FMI offers exhaustive information on the prevailing trends in the global antimicrobial market. It offers insights into hidden opportunities within the market, besides providing recommendations to help the market players plan future growth strategies.

Some of the key factors highlighted in the report are:

- The global antimicrobial wipes market is expected to surpass \$ 7 billion by the end of 2020
- North America, followed by Europe is expected to dominate the global antimicrobial wipes market over the forecast period. Despite North America's dominance, South Asia is expected to emerge as a lucrative market for antimicrobial wipes
- South Asia is expected to emerge as a lucrative market, exhibiting growth at a higher CAGR. The rising use of antimicrobial wipes across schools, Hospitals, offices, gyms, and other



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Wipes Market Watch

organizations will aid the expansion of the market in the region

- Study projects ecommerce penetration to be a key game changer for the market. With consumers showing a higher degree of inclination towards shopping online an increasing number of companies are expected to spend on creating a robust online presence

Most antimicrobial wipes are meant for single use, which means once used they are to be disposed of. This adds to carbon footprint, aggravating already pressing issues of landfill. Consumers today are also driven by environmental concerns, which has made them more conscientious about components used in their products.

Antimicrobial wipes made from biodegradable materials will gain brownie points since they will serve the dual pur-

pose of decontaminating without causing harm to the nature. This is a defining trend, compelling manufacturers to expand their existing product portfolio.

Some of the key players operating in the antimicrobial wipes market are Crosstex International, Inc., ConvaTec Inc., coVita, Procter & Gamble, Nootie, Hopkins Medical Products, CleanTex, Prodene GmbH, GAMA Healthcare Ltd., Teampac Oyand, Edgewell Personal Care and others.

Manufacturers are significantly spending on product development and ascertaining to safety parameters to gain edge in the market. This has resulted into a slew of product launches. For instance:

- In 2019, Eisai Co., Ltd., a Japanese pharmaceutical company launched ETAK antimicrobial wipes (wet) at drug and pharmacy stores worldwide.

- In 2019, Edgewell Personal Care developed wet antibacterial hand wipes containing active ingredient Benzalkonium Chloride which is an antimicrobial agent helping to kill bacteria on skin.

"An increasing number of companies are introducing sustainable antimicrobial wipes. They are also eliminating the use of harmful compounds to make their products eco-friendlier. However, owing to the recent COVID-19 outbreak, the focus on the production of alcohol-based wipes has surged since they offer better disinfection," says a lead analyst.

Eruslu to Add Fourth Spunlace Line

Andritz has received an order from Eruslu Nonwoven Group to supply a complete neXline spunlace line for its plant located in Gaziantep, Turkey. The



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line has an annual production capacity of 18,000 tons and is scheduled for installation and start-up at the beginning of 2021.

This new spunlace eXcelle line will be able to process a wide range of fibers, like polyester, viscose, lyocell and bleached cotton, with grammages ranging from 30-75 gsm. It will produce high-quality wet wipes for cosmetics applications, fem care and baby diapers, dust wipes, hair dressing towels, medical bandages and gauzes and many other products. The new line will enable Eruslu to diversify its product portfolio into new technical applications.

Andritz will deliver a complete line, from web forming to drying including one complete set of Laroche opening and blending machinery; two inline high-speed TT cards, one JetLace Essentiel unit, which is the benchmark for hydroentan-

glement processes, including an Andritz full filtration unit, one neXdry double drum through-air dryer and one neXecodry S1 system for energy saving

Andritz has supplied Eruslu with three other lines. The first one started production in 2009.

Wellness Company to Develop Wipes

Neptune Wellness Solutions Inc., a diversified and fully integrated health and wellness company focused on natural, plant-based, sustainable and purpose-driven lifestyle brands, announced that its subsidiary, Neptune Health & Wellness Innovation, Inc., has received a company number from the U.S. Environmental Protection Agency (EPA) for surface disinfectant wipes.

With receipt of the EPA Company Number, Neptune now has the ability to

develop new surface disinfectant products for EPA regulatory approval and to distribute existing surface disinfectant products in the U.S. leveraging its white label turn-key product development capabilities.

"This process is an essential step for Neptune to expand beyond hand sanitizing products and into surface disinfectants to support supply shortages driven by the COVID-19 pandemic," says Michael Cammarata, chief executive officer of Neptune Wellness Solutions.

"Consumers are seeing empty shelves and some surface wipes will not be restocked in stores until next year. We are mobilizing on the regulatory, product development and supply chain fronts to rapidly bring effective and sustainable surface disinfectant wipes to market to support demand and restock store shelves so consumers can have access to these critical products." ■

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Disinfectant Wipes' Next Step

Companies are seeking EPA approval to make claims that their wipes can kill SARS-CoV-2

By Tara Olivo, Associate Editor

Several months into the Covid-19 pandemic, disinfectant wipes continue to be a hot commodity. Despite limits on the number of wipes consumers can buy, as well as an aggressive ramping up of capacity by wipes producers, product shortages remain.

It's been widely reported that Clorox doesn't expect store shelves to be fully stocked with its disinfecting wipes until 2021. CEO Benno Dorer told Reuters last month that the company has been unable to keep up with a six-fold surge in demand for many of its disinfectant products.

As wipes makers continue to tackle this challenge and work around the clock to meet unprecedented demand, they're also seeking SARS-CoV-2 EPA label claim approval to verify that the virus is being inactivated on surfaces.

On March 5, the U.S. Environmental Protection Agency (EPA) released a list of EPA-registered disinfectant products that have qualified for use against SARS-CoV-2. Products appearing on EPA's list of registered disinfectant products, called "List N: Disinfectants for Use Against SARS-CoV-2," have qualified for use against Covid-19 through the agency's Emerging Viral Pathogen program. This program, according to EPA, allows product manufacturers to provide EPA with data, even in advance of an outbreak, that shows their products are effective against harder-to-kill viruses than SARS-CoV-2. It also allows additional communications intended to inform the public about the utility of these products against the emerging pathogen in the most expeditious manner.

According to EPA, disinfectants can qualify for inclusion on List N in three ways: The product has been tested against the coronavirus SARS-CoV-2 (Covid-19); the product has demonstrated efficacy against a different coronavirus similar to SARS-CoV-2 (Covid-19); and the product has demonstrated efficacy against a pathogen that is harder to kill than SARS-CoV-2 (Covid-19).

As of the printing of this issue, the EPA announced that 15 products on List N have completed laboratory testing for use specifically against SARS-CoV-2, the novel coronavirus that causes Covid-19. The specific products approved include three Lysol

products from Reckitt Benckiser and 12 unique products from the manufacturer Lonza. While these products were already on List N, the EPA says they now carry additional weight against the virus that causes Covid-19 based on testing performed by the manufacturer and confirmed by EPA.

Lonza

Lonza's range of disinfectant wipes are used in the household retail, institutional, healthcare and food processing/food service markets. Among the products that were recently approved by the EPA to kill SARS-CoV-2 are four wipe registrations including Lonza Disinfectant Wipes (EPA Reg. No. 6836-313); Lonza Disinfectant Wipes Plus (EPA Reg. No. 6836-336); Lonza Disinfectant Wipes Plus 2 (EPA Reg. No. 6836-340); and NUGEN Low Streak Disinfectant Wipes (EPA Reg. No. 6836-382), according to Lonza marketing manager Kiran Kulkarni.

In addition to having wipes products tested against SARS-CoV-2, since the start of the pandemic Lonza has also gradually ramped up production by optimizing its product mix. "[The] pandemic has triggered significant demand surge," Kulkarni says. "We expect the demand to continue into 2021 and beyond. Supply is being prioritized for healthcare and food processing markets."

Nice-Pak/PDI

Sister wet wipes companies Nice-Pak and PDI have been testing products for efficacy against SARS-CoV-2. In July, Nice-Pak announced that it has generated data showing its products (EPA Reg. No. 9480-5) demonstrated efficacy against SARS-CoV-2. Nice-Pak's wipes are sold under the Grime Boss brand, as well as under private labels.

The testing was conducted in early May by Microbac, a testing laboratory that offers antimicrobial/antiviral testing for disinfectants, antiseptics, sanitizers and medical devices, and was completed in line with EPA test methods and guidelines. The data is being sent to the EPA for review and approval. If approved, Nice-Pak will update its products' labels, providing consumers with

a proven effective solution to kill the SARS-CoV-2 virus, when used according to label instructions.

Meanwhile, PDI announced its Super Sani-Cloth wipes are effective against SARS-CoV-2. The data have been submitted to the EPA for review. This is one of several of the company's hospital-grade disinfecting products being tested for efficacy against SARS-CoV-2 for submission to the EPA for approval. Testing of the additional disinfecting products is still underway and results are expected in the upcoming months, the company says.

According to the data, PDI's Super Sani-Cloth wipes demonstrated a 3-log reduction against the virus. The wipes were tested in compliance with "Disinfectants for Use on Environmental Surfaces, Guidance for Efficacy Testing," the EPA's threshold for deeming a disinfectant effective.

"This was an important step in furthering our mission to protect patients and those on the front lines of preventing the transmission of Covid-19," says Sean Gallimore, senior vice president and general manager for PDI Healthcare. "We are seeking SARS-CoV-2 EPA label claim approval for Super Sani-Cloth wipes to officially verify that the virus is being inactivated on surfaces, and ultimately protecting caregivers, patients and communities."

Microbac Laboratories performed the efficacy testing using a multi-step process, PDI says. First, the lab applied the virus to a surface and let it dry. Then, they wiped the surface with a Super Sani-Cloth wipe, recovered the residual liquid, and applied the liquid to cells in culture. How viable the cells remained told Microbac how effective the cloth was in inactivating the virus.

"This is an important step in understanding how SARS-CoV-2 responds to hospital-grade disinfectants," says James Clayton, director of Laboratory Sciences for PDI. "The ability to reduce surface transmission of the virus is an important tool in the growing arsenal of preventative measures."

Clayton says the EPA's review process would normally take six months, but PDI is hopeful that the timeline will be expedited given the continued urgency of the pandemic.

"Being in the infection prevention space, we knew a global pandemic was always a possibility (if not an inevitability)," he says. "As such, we had an emergency preparedness plan in place, drawing on lessons from past outbreaks such as H1N1. One of our big advantages was that we manufacture in the U.S., so the early global supply issues didn't affect us as acutely."

"That said, no one was fully prepared for the surge in demand caused by this pandemic," he adds. "We had facilities using in excess of 200% of their normal inventory, so there were some major decisions that we had to make early on."

In response to the pandemic, PDI quickly transitioned to around-the-clock manufacturing, adding shifts and line capacity to increase output. The company also shifted resources to manufacture high-priority products, on the EPA's List N, while pausing other product lines not relevant to SARS-CoV-2. It also prioritized healthcare facilities and limited the size of new orders to prevent stockpiling.

"Our team has been working incredibly hard to fill in any gaps

that arise," Clayton adds. "We've helped with education and training customers. And, while we ship seven days per week, there have been times when a member of our team has personally delivered products to a hospital to cover them during the upcoming shifts."

PDI disinfectant wipes are designed for use in healthcare settings. While there has definitely been interest from other sectors and even consumers, Clayton confirms the company's priority remains protecting healthcare workers and people on the frontline of the pandemic.

"For us, SARS-CoV-2 has highlighted the importance of taking a layered approach to infection prevention," he explains. "It's not enough to use one product and hope that it will eliminate both existing and emerging pathogens. There are a range of threats and areas where an infection can creep in. So, to be safe, we need multiple layers of defense. That includes having the proper staff training, evidence-based policies and procedures and, where possible, no-touch room decontamination via UVC light. We have these amazing technologies, so let's use them."

Diversey

Diversey, Inc., a manufacturer of healthcare and infection prevention products and solutions, makes products that are effective against many enveloped and small, non-enveloped viruses. Many of its products have been tested for efficacy against SARS-CoV-2, which causes Covid-19, and these results will be or have been submitted to the EPA for approval, according to Larinda Becker, healthcare marketing, Diversey.

"The EPA has announced that this test data will not replace the EPA List N and guidelines for disinfectants for use against SARS-CoV-2 at this time," she says. "All products on this list meet EPA's criteria for use against SARS-CoV-2, the virus that causes Covid-19. The testing will provide added assurance for specific efficacy against this virus. Until there is further EPA guidance, disinfectants found on the EPA's List N should continue to be



Diversey's Oxivir Disinfectant Wipes offer disinfection in one minute.

used according to their label instructions.”

Diversey has several wipes in its offering, including prewetted and dry wipes. The prewetted wipes are offered with a variety of disinfectant technologies, including Accelerated Hydrogen Peroxide (AHP), quat alcohol and sodium hypochlorite (bleach). The company offers several size and packaging options based upon the application, including 6" x 7" wipes for clinical application and 11" x 12" wipes for cleaning larger surfaces, such as beds and operating room tables.

Among Diversey's products on List N are Oxivir Disinfectant Wipes, using its AHP technology. These wipes offer fast and effective disinfection in one minute, helping reduce turnover time. Effective against a broad spectrum of pathogens, including bacteria, viruses, TB, and fungi, Oxivir disinfectants provide excellent cleaning action and stay wet for the required label contact time, ensuring disinfection compliance with one easy pass.

“The Oxivir family of disinfectants has the best possible safety rating (category IV), and the one-step solution, designed for use in healthcare environments, is tough enough to clean and disinfect surfaces and equipment in one pass while being gentle on staff and surfaces,” Becker says.

This range of disinfectants is non-irritating to skin, eyes and respiratory tracts, making it pleasant for use by staff and around patients, Becker adds. “Oxivir wipes raise the bar by reducing turnover time while keeping costs in line. Staff can safely increase efficiency and effectiveness, streamlining the process,” she adds.

In response to increasing demand for wipes, over the past several months Diversey has increased its wipes supply capacity by adding shifts, increasing line efficiency and deploying new manufacturing lines. Additionally Diversey has launched several of its market leading disinfectants in larger formats to address the significant increase in demand during the pandemic. An expansion of its offering of dry wipe solutions are also helping address shortfalls in supply, offering customers an on-demand solution that can be mixed on site.

“We recognized that due to component constraints, new solutions would be required, which lead to several of our new launches, including the larger formats and dry wipe offering expansion,” Becker says. “We want to do everything possible to help our customers.”

CleanWell

CleanWell is another company that holds EPA registrations for products that are on EPA's List N. Its wipes, sold as CleanWell Botanical Disinfecting Wipes, can be used against SARS-CoV-2, the virus that causes Covid-19, by following the disinfection directions for Rhinovirus. In addition to Rhinovirus, CleanWell Botanical Disinfecting Wipes are registered to kill Influenza A virus, H1N1, *Pseudomonas aeruginosa*, *Salmonella enterica*, *Staphylococcus aureus*, Methicillin Resistant *S. aureus* (MRSA), and *Enterobacter aerogenes* on hard, nonporous surfaces, as documented by third-party testing.

Since third-party testing against the SARS-CoV-2 pathogen only recently became available for commercial products, Clean-



CleanWell's Botanical Disinfectant Wipes kill 99.99% of germs and viruses botanically.

The disinfecting effectiveness of the company's proprietary 0.05% Thymol formula. CleanWell's products can be used on any hard, nonporous surface, and—unlike most conventional disinfectants—they do not require special PPE or ventilation during use or rinsing after use, Lawrence adds.

“CleanWell's Botanical Disinfectant Wipes kill 99.99% of germs and viruses botanically without the use of bleach or harsh chemicals that can have negative health and/or environment impacts,” says Lawrence.

CleanWell sold through nearly a year's worth of planned product in the first four months of 2020. “Like all disinfectant wipe manufacturers, we are doing our best to increase production runs and shipments to keep up with demand,” he says. “The challenge has been exacerbated by the duration of the Covid-19 outbreak as well as supply issues associated with the wipe fabric and packaging.”

The fabric challenge, he says, is compounded by the time and resources the company must invest to qualify any potential alternative fabrics. “Though the EPA is working with manufacturers to lessen the required registration burden during the pandemic, we still have to ensure that any new material passes stability testing and is compatible with production filling lines,” he explains. “We continue to work with our suppliers to address these issues in an attempt to replenish our inventory as quickly as possible.”

CleanWell recently left the personal care category, so it is no longer making hand sanitizers and soaps. It's now focusing entirely on the disinfecting side of the business—both wipes and sprays—“because we believe that is where we can make the biggest difference,” Lawrence says. “The overwhelming majority of products in the household cleaning space are made with bleach or other harsh chemicals that present increased health and environmental risks. CleanWell provides a less toxic alternative (based on EPA toxicity category ratings) and is one of only a handful of botanical-based products on the EPA's List N. This gives us a strong differentiator at a time when Covid has prompted consumers to pay closer attention to personal and household hygiene and dramatically increased the use of household cleaning products.” ■

Well is in the queue to begin this testing as soon as possible, according to Stew Lawrence, CEO of CleanWell.

CleanWell's active ingredient is Thymol, a plant-based antibacterial derived from the essential oils of thyme and other herbs. Third-party testing data that is registered with the EPA proves

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Personal Care Wipes: COVID-19-Driven Demand and Future Opportunities in Wellness Redefined

High demand has led to SKU shortages

By Svetlana Uduslivaia, *Euromonitor International*

In 2020, wipes have seen a spike in demand in retail across many markets with bulk of sales still generated in the developed regions due to higher disposable incomes, wider product access and more product variety. The retail sales of home care and personal care wipes are expected to reach \$15 billion by the end of 2020. The best performers in retail include disinfecting wipes for surfaces and general purpose wipes, especially with antibacterial claims, for hand and body cleansing. Stronger than usual performance has also been noted in categories like moist toilet wipes and baby wipes, as households have been looking for additional convenient ways to handle enhanced at-home hygiene routines.

The economic fallout of COVID-19 might impact household ability to spend on higher priced products like wipes, due to depressed incomes. Euromonitor International Industry Fore-

cast Model and its recently updated COVID-19 Pessimistic 1 scenario (assuming global GDP ranging from -7.5% to -5.5%) estimates a potential drop in value growth for global wipes in 2020 and 2021 (see chart 2). Less financially secure emerging and developing markets are expected to be affected more than the developed regions. The model projects the impact of the scenario to wear off by 2023.

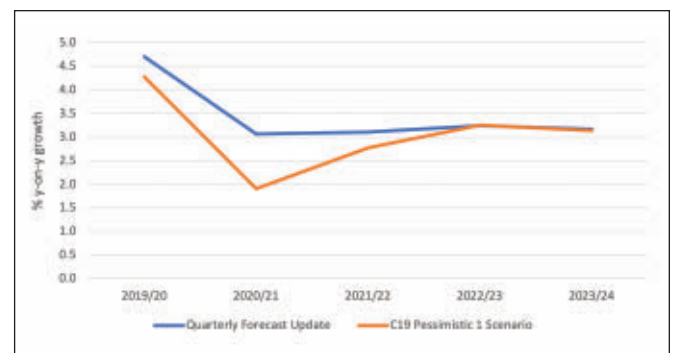


Table 2: World, retail sales, home care and personal care wipes, COVID-driven Pessimistic 1 scenario

Source: *Euromonitor International Industry Forecast Model*

Note: updated COVID-19 Pessimistic 1 scenario assumes global GDP growth in 2020 to range from -7.5% to -5.5%

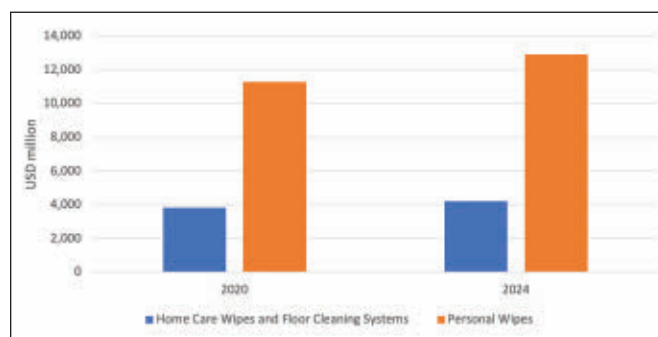


Table 1: World, retail sales, home care and personal care wipes, 2020/2024, USD, 2019 fixed exchange rate, real value

Source: *Euromonitor International*

Concerns over virus containment and potential interruption to the supply chain led households to stockpile staples and disinfecting supplies, resulting in spikes in sales and product shortages in the first quarter of 2020. However, high demand continues well past Q1 of 2020, as protracted home seclusion

and heightened hygiene routines fuel the demand beyond just panic buying.

While a number of concerns have been raised with respect to effectiveness of wipes in combatting COVID-19, some of the brands have made it onto the list compiled by, for instance, The American Chemistry Council's Center for Biocide Chemistries. The list includes products pre-approved by the U.S. Environmental Protection Agency for use against emerging viral pathogens and can be used during the COVID-19 outbreak. While products listed tend to come from the professional space, some of the consumer products are featured too, such as Clorox Disinfecting Wipes—one of the leading consumer disinfecting wipes in the US, still often out of stock.

As high demand led to persistent SKU shortages for the leading brands, many markets see the resurgence of smaller brands that fill the void on store shelves. Examples include Bye Bye Germs All Purpose Sanitizing Wipes by Double Dare Spa, which took up a far more prominent place at some of the leading retailers in the U.S., such as Walgreens. New products are also scheduled to enter the market, such as Cleanitize by Albaad, to capture opportunities created by high demand.

The COVID-19 pandemic is accelerating wellness-related

trends, with the basic principles of health and keeping diseases at bay as a core priority. Wellness redefined touches upon preventative health, the concepts of a resilient body and mind and an antidote to times of uncertainty. These trends also bring with them further scrutiny over ingredients and supply chain, transparency and assurance of safety. Demand for authenticity and provenance is set to intensify, so is the need for real expertise and science-backed results and efficacy.

Additionally, the shift in consumption to prioritize necessities over non-essentials by many households would mean wider considerations of price sensitivity, accessibility, environment, social responsibility and inclusivity as vital in hygiene and wellness proposition.

All in all, with the COVID-driven consumer shifts and approaches to hygiene and wellness, 2020 is a time to assess longer term innovation opportunities, beyond immediate needs and responses to supply chain challenges. Global untapped potential for disposable wipes is estimated to be over \$12 billion in incremental sales, opening up possibilities to tap into the future demand with the right products that speak to consumer wellness management. ■

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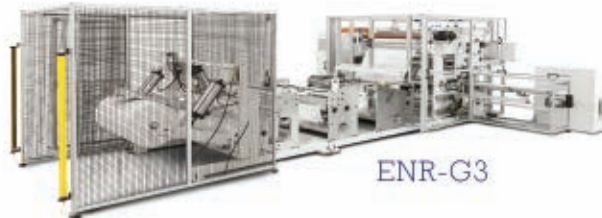
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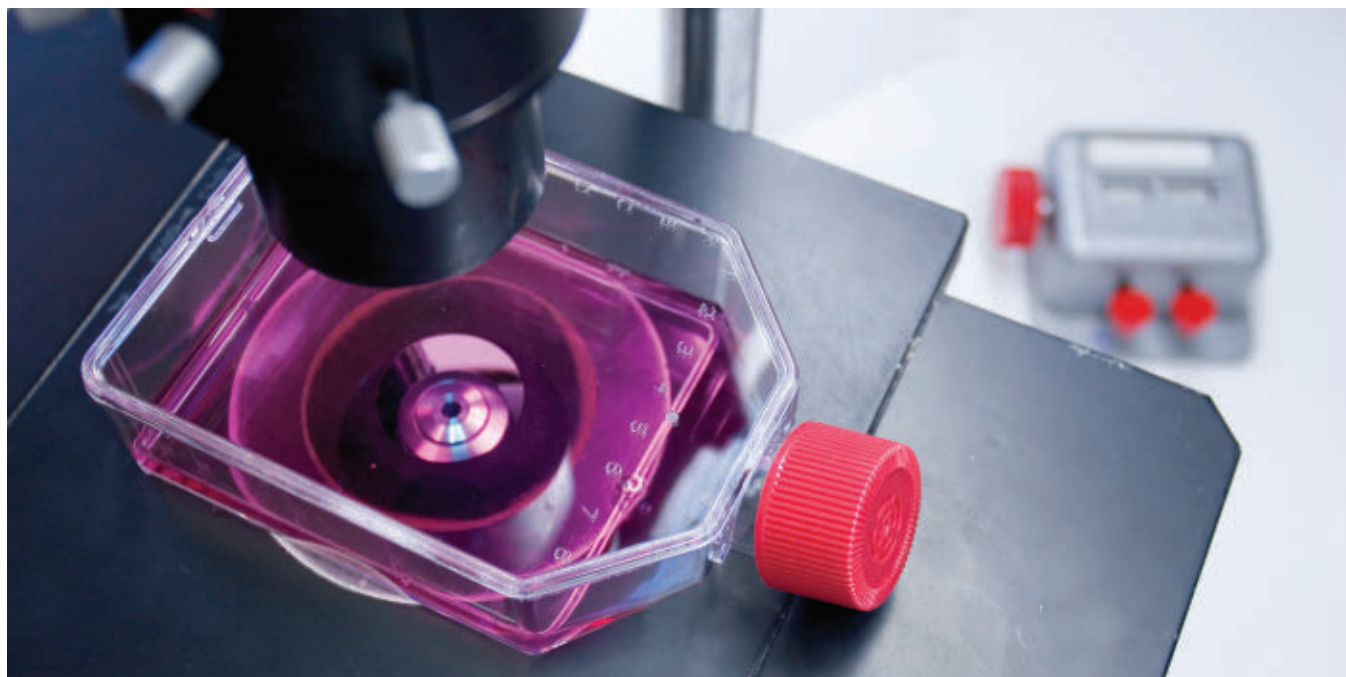
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How Are Disinfectant Wipes Being Tested Against SARS-CoV-2?

Efficacy of products designed to fight infection needs to be proven

James Clayton, Director of Laboratory Sciences at PDI



As the COVID-19 pandemic continues to strain our communities, our economies and our healthcare systems, our understanding of how the virus can be controlled is paramount. The early scientific consensus was that the virus would be sensitive to disinfectants due in large part to its lipid envelope [1]. This protective layer of fat breaks down relatively easily when exposed to disinfectants, inactivating the virus. Early data supported this hypothesis—but much more research was needed to reliably inform our infection control practices. We need to arm both our healthcare professionals and community with disinfectants that we know are effective.

Emerging Pathogens

When a new pathogen emerges, it takes time to get the or-

ganism in the hands of researchers who can safely handle and study its behavior in a controlled manner. Typically, the Centers for Disease Control and Prevention (CDC) or the National Institute of Allergy and Infectious Diseases (NIAID) catalogs the organism and prepares it for dissemination to a specific set of scientists. In the case of SARS-CoV-2, the virus was handled by the Biodefense and Emerging Infections Research Resources Repository (BEI Resources), which is managed by the NIAID [2].

In the absence of direct testing data, the EPA's Emerging Pathogen program takes effect. Disinfectants that had been proven effective against similar viruses could be registered and added to the EPA's List N [3]. These products were deemed likely to work against SARS-CoV-2 because they in-

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activate a harder-to-kill virus or another human coronavirus [4]. While this list served as a practical and necessary guide during the initial months, it relied on scientific assumptions and not hard data. Research was still needed to show how each disinfectant reacts when it encounters SARS-CoV-2 for them to be deemed effective.

Testing Protocol

Unlike bacteria, viruses require a host cell in order to infect and replicate. While related coronaviruses have proven difficult to grow in the lab, SARS-CoV-2 adapted to cell culture quickly. In the U.S., the virus became available for research in March to a select number of Biosafety Level 3 containment laboratories that have proof of eligibility from the CDC or the United States Department of Agriculture (USDA) [5].

To demonstrate the efficacy of a disinfectant, companies need to follow the guidance of the EPA – specifically, OCSPP 810.2200 - Disinfectants for Use on Environmental Surfaces: Guidance for Efficacy Testing. Viral testing is supported using an ASTM International standard test method, ASTM E1053 ‘Test Method for Efficacy of Viricidal Agents Intended for Inanimate Environmental Surfaces.’ [6]

To perform the testing, the SARS-CoV-2 virus is grown in cell culture until a sufficient number is reached (typically more than 63,000 viable viral particles). Soil, in the form of animal serum, is added to the virus ‘stock’ in order to replicate the environmental conditions the virus favors. Soil is known to deactivate certain disinfectants, which creates an additional challenge. The mixture of virus and soil is then applied to the bottom of a glass petri dish and allowed to dry. This again simulates how the virus may be found in the environment. Disinfectants are applied to the dried virus in a manner that mimics a real-world situation. In the case of disinfectant wipes, they are folded and wiped across the surface in a controlled manner. Following the contact time, which can vary based on the wipe, the virus is scraped from the bottom of the petri dish and collected for regrowth in cell culture. Studies have shown the incubation time for SARS-CoV-2 is approximately seven days under specific temperature and atmospheric conditions.

Unlike bacteria, viruses cannot be seen by the naked eye or even under high microscopy. Instead, scientists use a microscope to look for the infectivity of the virus upon its host cell – the cytopathic effect. Using the resulting microscopy, a reduction from the initial population can be determined. The EPA requires a 99.9% reduction to prove effectiveness [3].

Status of PDI Hospital Grade Disinfectant Wipes

PDI began testing on its first product, Super Sani-Cloth® wipes, in April. Super Sani-Cloth wipes are a hospital-grade disinfectant wipe, which have been proven effective against three viruses that are harder to kill than SARS-CoV-2—rhinovirus, adenovirus and rotavirus—thereby qualifying the product for EPA’s List N: Disin-

fectants for Use Against SARS-CoV-2 (COVID-19). The active ingredients in Super Sani-Cloth wipes are a mixture of quaternary ammonium compounds and isopropanol.

Testing on the Super Sani-Cloth wipes was performed by Microbac Laboratories, Inc., an independent laboratory that performs environmental, food, and life science testing. Microbac has been at the forefront of testing for many emerging pathogens, such as Influenza H1N1 (2009), SARS, and MERS. They were one of the first laboratories to test directly against SARS-CoV-2, drawing on both their knowledge of pathogenic viruses and EPA testing expertise. They performed testing using the protocol described above.

Microbac’s results showed that Super Sani-Cloth wipes achieved a three-log reduction (99.9%) against the virus, in compliance with the EPA’s OCSPP 810.2200 — Disinfectants for Use on Environmental Surfaces: Guidance for Efficacy Testing.

After receiving positive data from Microbac in June, the data were submitted to the EPA in early July. If approved by the EPA, Super Sani-Cloth wipes will receive label approval that the product has been tested as effective against the virus. Testing of additional PDI products on EPA’s List N is underway.

Conclusions

While we may assume that SARS-CoV-2 is easy to disinfect because it is an enveloped virus, we cannot guarantee efficacy until it is tested directly against the specific strain of the virus. We want to arm our healthcare professionals and community with disinfectants that we know work against SARS-CoV-2, with specific protocols and robust science. ■

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While the wipes market continues to grow in the personal care segment, the move to more environmentally friendly systems continues. Some changes, like the increased use of cellulosic based wipes, present new preservation challenges. At the same time, global regulatory changes limit the preservatives available to formulators. To combat preservation issues,



Vertellus offers Cetylpyridium Chloride (CPC) to personal care and cosmetic formulators as a versatile, safe and cost-effective preservative with an excellent safety and environmental profile.

Due to its excellent safety profile, CPC has been used for decades in US FDA approved oral care applications to combat plaque and gingivitis in the oral cavity. CPC is recognized to be effective at concentrations of 0.05% to 0.1% against *Streptococcus mutans* and has also demonstrated similar success against other varieties of Gram-positive bacteria. CPC is also approved by the USDA for use in the food industry as a poultry wash.

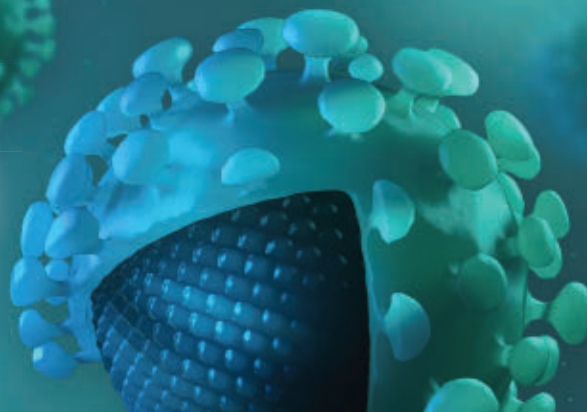
Cetylpyridinium Chloride is colorless, odorless, and formaldehyde free. CPC exhibits broad anti-microbial efficacy against Gram positive and Gram negative bacteria, enveloped viruses and mold. Using various PCPC/CTFA Test Methods, CPC has been found to be effective against all of the common micro-organisms tested including: *S. aureus*, *E. coli*, *P. aeruginosa*, *C. albicans*, and *A. brasiliensis*. CPC has also proven effective at inhibiting various strains of *Corynebacterium*, partially responsible for odor production on the skin.



CPC is an excellent preservative alternative to formaldehyde donors, such as phenoxyethanol, isothiazolinones, alcohols and parabens. It is effective over a broad pH range (4-10) and therefore its efficacy is not pH dependent. CPC is very water soluble and well suited for aqueous based personal care formulas, allowing for crystal clear formulations. In most water-based systems, very low use levels are needed (0.1-0.2%). For systems known to have raw materials of natural origin or prone to higher counts of contamination, higher amounts of CPC >0.1% may be required. For anionic surfactant systems, adding an anti-fungal may be necessary. There is improved performance with EDTA or other chelating agents.

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Used as an oral health care antimicrobial product, CPC has shown reduction in bacterial oral plaque that contributes to hospital acquired pneumonia (VAP). Comprehensive oral care procedures can address bacterial colonization of the oral cavity, dental plaque, and aspiration with the assistance of CPC



In Conversation with National Wiper Alliance

Owner and president Jeff Slosman discusses the impact of Covid-19 and what's on the horizon for NWA

By Tara Olivo, Associate Editor

The global coronavirus pandemic has had a huge impact on the wipes market. Consumers, businesses and healthcare facilities are all using wipes as an effective way to clean hands and disinfect hard surfaces. Six months into the pandemic, major wipes converters continue to ramp up capacity to try and meet the extraordinary demand for wipes as quickly as possible.

As a leader in the wipes business for 25 years, Swannanoa, NC-based National Wiper Alliance (NWA) reacted early and quickly—ordering new machines even before the novel coronavirus was declared a global pandemic on March 11.

“This pandemic has been game-changing for the whole industry and the demand has been unprecedented,” says Jeff Slosman, owner and president of NWA.

Nonwovens Industry recently spoke with Slosman about the surge in demand for wipes due to the Covid-19 pandemic and what's next for his company.

NWI: Tell us about your business and which types of products have seen the strongest demand over the last several months?

Jeff Slosman (JS): Since cleaning and sanitizing plays such a critical role in preventing the spread of the Covid-19 virus, the demand caused by the pandemic for our wipes is unprecedented.

Dry wipes have always been our main focus. The largest order requests we receive are for perforated rolls to make wet wipes, along with our Infinity Refillable Wiping System. The Infinity Refillable Wiping System offers both buckets and canisters, utilizing a nonwoven substrate that is compatible with quaternary ammonia (quat) and other cleaning solutions. We offer this both branded and in private labeling.

We run substrates that are approved for certain chemistries, and we have customers that are making wet wipes out of the rolls that we produce. Currently, we are making rolls, putting them in buckets or canisters, labeling them. Customers will be filling them with the appropriate solutions, once they're received.

NWI: How has your company responded to the unprecedented demand for wipes?

JS: Before the pandemic we were running two shifts, Monday-Friday. Now, we are running 24 hours per day, seven days a week. We have seven new production lines on order with the first going online later this month. We've hired over 75 new employees and will continue to increase our workforce to staff the seven new production lines expected to be in place by fourth quarter.

NWI: How was NWA able to react so quickly?

JS: Our dedicated workforce stepped up to meet the challenge, as have our key supply partners. All have gone above and beyond what was asked of them to make sure we meet our customers' needs. We have had some production workers putting in over 70 hours a week to make sure we are shipping to our customers on a timely basis.

NWI: What challenges have wipes converters faced in this environment?

JS: Material shortages, higher raw material prices, longer lead times for raw material and packaging supplies, keeping employees healthy, increasing machine output to meet the higher demand for products, training the new workforce additions have all been constant challenges.

Our entire industry is facing an unprecedented demand for wiping products. Wipes converters have faced shortages of raw material because many roll goods suppliers took their roll goods capacity for wipes and redirected their output dedicating it to higher margin material, which they could sell to be used to produce PPE items, masks and gowns. This created a world-wide raw material shortage for wipes. We have had to pay higher prices in order to source and purchase enough raw material to meet the needs of our customers.

NWI: How is National Wiper Alliance overcoming these challenges?

JS: We are fortunate to have good raw material, equipment and supply partners. Because of these strategic relationships, we have been able to

quickly react and meet the needs of our customers. Being an Essential Supplier, it is imperative we remain operational, constantly producing and shipping product. Our number one goal has been to keep our team of employees safe and healthy, in order to ensure we are able to maintain production for our customers. Early on, we mandated all employees wear face covering masks. We take every employees' temperatures at the start of their shift and we have crews that continuously clean and sanitize all hot spots, as well as the production equipment.

NWI: Does NWA focus on sourcing materials in the U.S., or are you sourcing from all over the world?

JS: Our key focus is always U.S. sourcing but we have partners all over the world. Historically, if there was a catastrophe in the United States and all the mills were over sold, we could then source from another country. This is a worldwide pandemic, so it has strained the entire supply chain. Thankfully, we have a very strong worldwide network of strategic partners. They have reacted, meeting the demand of our 10-fold, 20-fold increased orders.

NWI: Is this for particular substrates or all kinds?

JS: All kinds. We're seeing inexperienced businesses who don't know what they're doing trying now to compete/sell into this area. We're very conscious of the fact that you need to use substrates that are compat-

ible with chemistries. There are some converters out there right now using cellulosic substrates who are telling people that it's compatible with quat—but it's not—it will bind the quat. When the customers go to use it, all they're doing is spreading water and not sanitizing. It's scary and it's dangerous. Sadly, there's a lot of that going on right now.

NWI: This is not what 2020 was supposed to be like...

JS: I was in China in December, when everything was just starting. In January, we realized what was developing with the viral spread and started reacting late January/early February. We were quickly able to place seven machines on order before equipment suppliers backed up. Typically, equipment suppliers take 12-14 months to deliver new lines. We have lines set to arrive in three to four months. Our raw material and equipment suppliers are great partners—we couldn't do it without them, and we appreciate the great efforts and collaboration.

NWI: How are you thinking short-term and long-term? Will the wipes market continue to grow?

JS: We think cleaning, sanitizing and disinfecting are here to stay. We see the new protocols for schools, restaurants, airlines, and the travel industry as long term. Even if the virus goes away in 2021, wipes are here to stay. ■



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Take a Closer Look at Labels

As consumers look to wipes to protect from Covid-19, ingredient quality cannot be ignored

By Susan Stansbury, *Industry Consultant*

While hustling to produce wet wipes that address the Covid-19 pandemic, it's as important that producers address quality and clarity. The labels that users rely on can confuse, or even mislead. Consequences of mis-labeled products may also render them mis-used. Just as many users do not understand the differences between KN95 and N95 masks, which filter at different levels, the difference between cleansing and sanitizing wipes is also important.

Nuances in understanding what claims are made affect the level of confidence applicable to fighting against the Covid-19 virus. Many wet wipes are said to kill 99.99% of many common bacteria. According to Mindy Costello, Registered Environmental Health Sanitarian and NSF International's Consumer Product Certification Specialist:

There are numerous products tested and certified to specific kill rates, from wet wipes to dishwashers, and they are generally tested on the most common bacteria or other microbes we might encounter, such as staphylococcus aureus, klebsiella pneumoniae, and pseudomonas aeruginosa. It's important to

always read the label or check the product website to learn exactly what it has been tested to kill. Because the virus that causes Covid-19 (SARS-CoV-2) is a novel virus, it's not very likely that a product like a wet wipe has been thoroughly tested for this specific virus. While an independently-tested high kill rate on the label is good news, it's only an indicator of the product's potential performance, and we can't automatically assume that it will perform as well on SARS-CoV-2 until the science of testing catches up to the current situation.

(Also, see associated article, "Wet Wipes Sold Out" for producers' comments on effectiveness against Covid-19.)

Beyond claims and kill rates, product labels need to meet several other standards for identity, ingredients, responsibility, usage, storage conditions and disposal. Even font sizes, graphics and logos are among requirements. It's not always widely known that products are not examined and recalled by the FDA unless there is a complaint brought to the FDA's attention. One industry expert asserts that, with a flood of products coming from all over the world, mis-labeled products can get





to store shelves. "It's frustrating for some of us as long-term reputable suppliers," he said. In the case of masks, dozens of recalls occurred with a more focused spotlight on them.

When products are recalled, retailers like Walmart base the recall on manufacturers' and regulatory agencies press releases. According to Walmart, that information includes products involved and steps on what you should do if you have a recalled item. One resource is U.S. Product Safety Commission and another is the website www.recalls.gov where it includes:

- Which agency is responsible for the recall
- Details about the recalled product
- Additional safety information
- Ability to sign up for email alerts

In the case of liquid sanitizers, according to a sanitation specialist, the EPA relaxed some rules under the Covid-19 emergency. One industry person commented, "Certain companies had no business making hand sanitizers." Things like stability testing did not occur. Some liquid sanitizers even contained methanol (wood alcohol) and other non-compliant ingredients, resulting in a number of recalls. A liquid hand sanitizer was recently recalled for "undeclared methanol sold at Walmart and Sam's Clubs." Potential nausea, vomiting, headache and other consequences could occur. Meanwhile, standards for wet wipes were not relaxed.



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The importance of correct labeling not only gives users confidence when buying wet wipes, it is a key feature in marketing advancements and differentiates offerings. During these critical times for sanitization, imparting knowledge has grabbed new attention. When compared with some hasty offerings with related products, the wet wipes industry looks to meet its promises.

Wipes Face Shortages

Did we ever think that this bastion of nonwovens applications would be so backlogged that store shelves are empty, and buyers are seeking any means to find them? That's the status of wet wipes, especially sanitizing and antibacterial wipes. At the same time, did we ever imagine a pandemic that would call for a higher level of cleanliness to fight a new viral threat?

Today pandemic anxiety continues. Schools and sporting activities are opened, and sometimes later closed. Travelers pack up their sanitizers and find out which states (or nations) have rules for entering "their" borders. Hotels tout their updated protocols. Those planning to fly study which airlines are more restrictive. People venturing out to eat may choose outdoor terraces where wipes canisters sit at the entrance, or tableside.

When your good friends in the wet wipes converting industry cannot answer the phone for days since they are so busy. When contract manufacturers do not want to be quoted or receive any notice while they are working day and night on backlogs. The stress from retail, healthcare and other markets has rippled into and throughout the wet wipes industry and the nonwovens supply stream.

There are some in the industry beginning to comment at the brand level. Clorox CEO and Chairman Benno Dorer, in August, said that although supplies will improve over the next four to six months, its disinfectant wipes remain unavailable until some point in 2021. Currently, stocks of disinfectant wet wipes are often only available for first responders or health-

care professionals. For Clorox, often seen as the first major entrant in the wet wipes cleansing marketplace around the year 2000 and whose brand led the way to acceptance, the current situation has to be trying, despite a surge in sales. For families eyeing cold and flu season, forget these wipes says Prevention magazine.

Behind the scenes, an effort to increase output is occurring too. Rockline Industries, for example, has announced a \$20 million investment that is projected to double its disinfectant wipes capacity with a state-of-the-art production line. According to Randy Rudolph, president, the investment is targeted "to meet consumers' increasing demand for disinfecting wipes." The "Galaxy" line has been custom designed by Rockline engineers in conjunction with leading equipment manufacturers and will be operational in mid-2021.

In another case, Neptune Wellness Solutions Inc., a company focused on natural lifestyle brands, has received a company number from the U.S. Environmental Agency for surface disinfectant wipes, moving the company beyond its hand sanitizing portfolio. Michael Cammarata, CEO, commented on consumers "seeing empty shelves" with restocking waiting until next year. "We are mobilizing on the regulatory, product development and supply chain fronts," he said.

Several companies have reached out to meet critical needs. Rockline Industries and others have donated to hospitals. Nice-Pak recently generated data showing its EPA Reg. products demonstrated efficacy against SARS-CoV-2, the virus that causes Covid-19, sold under brand and private labels. Its sister company PDI, with Super Sani-Cloth wipes, are also effective against the virus. Also affirming its effectiveness against Covid-19 is Diamond Wipes International with its HandyClean Steridol wipes for hard, non-porous surfaces. The company is shifting its production focus to its sanitizing products.

At the converter level, one wipes manufacturer principal said that much of their production is committed for some 18 months! At the nonwovens level, many variations are sought:

- Spunlace nonwovens, the major player in the wet wipes industry, are under increasing tight supply with long lead times. Some spunlace nonwovens producers are "not taking any new orders" according to one wipes converter.
- Meltblown nonwovens, which are also crucial elements in N95 and other masks, also have long lead times for wipes. Some converters have seen "some ease in availability, but still not near normal" even with new tonnage coming on line.
- SMS (spunbond-meltblown-spunbond), spinlace and similar nonwovens are also in play with wet wipes manufacturers casting for alternatives.

While liquid sanitizers have come in as alternatives, some in this category have also been recalled because of novice and noncompliant producers. Here to stay are higher levels of usage, from schools, public transit, restaurants and retailers, and of course healthcare facilities, which have all driven demand sky high. ■

Perfect day hair fresh micellar wipe liquid

Released by Evonik	
INGREDIENTS	WT%
<i>Phase A</i>	
Tego Solve 61 MB (polyglyceryl-6 caprylate; polyglyceryl-3 cocoate; polyglyceryl-4 caprate; polyglyceryl-6 ricinoleate)	6.00
Persea Gratissima (avocado oil)	0.20
Tego Solve 90 MB (polyglyceryl-6 caprylate; polyglyceryl-4 caprate)	1.60
Perfume	0.10
<i>Phase B</i>	
Water	86.80
Tego Cosmo C 100 (creatine)	0.50
Propylene glyco	3.00
<i>Phase C</i>	
Abil Quat 3272	1.00
<i>Phase D</i>	
Verstatil PC (phenoxyethanol; caprylyl glycol)	1.00
Citric Acid (30% in water)	q.s.

PROCESS: Blend all the ingredients in phase A well. Blend all the ingredients in phase B until a clear solution is obtained. Add phase B to phase A and stir for 30 minutes until uniform. Add phase C and stir for 30 minutes until uniform. Add the preservative and adjust the pH with citric acid to 5.

REMARKS: Water thin, clear micellar wipe solution Antimicrobial effectiveness testing ; challenge test passed Micellar size distribution: 5.7 nm Anti-pollution—deep cleaning on PM 2.5 and sebum on hair fibers.

Fragrance	q.s.
Preservative	q.s.

PROCESS: Add ingredients in order listed with moderate mixing. Dissolve each ingredient completely before adding the next.

Bathroom Wipes Supplied by BASF

Bathroom wipe ideally suited to address the unique soil challenges present in the bathroom including touch shower scale and hygiene product soils around the sink.

INGREDIENTS	WT%
Water	q.s. to 100
Lutensol XL 80 guerbet alcohol alkoxyate 8	1.0
Glycolic acid (70%)	1.2
Citric acid	1.5
Propylene glycol n-Propyl ether	1.5
Propylene glycol n-Biutyl ether	1.5
Fragrance	q.s.
Preservative	q.s.

PROCESS: Add ingredients in order listed with moderate mixing. Dissolve each ingredient completely before adding the next. Use sodium citrate to adjust the pH.

Pore Refining Wipe Supplied by Coast Southwest Inc.

<i>Phase A</i>	
Deionized Water	61.35
Endiquet™ GLDA (Coast Southwest) (Tetrasodium Glutamate Diacetate)	0.10
3V Allantoin (Coast Southwest, 3V Sigma-USA) (Allantoin)	0.05
Glycerin 99.7% USP (Coast Southwest) (Glycerin)	5.00
<i>Phase B</i>	
Enditeric® COAB (Coast Southwest) (Cocamidopropyl Betaine)	8.00
Sopalteric CBS (Coast Southwest, Southern Chemical & Textiles) (Cocamidopropyl Hydroxysultaine)	8.00
Endisil® FS-193 (Coast Southwest) (PEG-12 Dimethicone)	1.50
Polysorbate 20 (Coast Southwest) (Polysorbate 20)	3.00

Glass Wipe Supplied by BASF

Optimized, high performance glass cleaner wipe utilizing key BASF ingredients including Glucocon 420 UP, dehyponad advanced and trilon M

INGREDIENTS	WT%
Water	q.s. to 100
Glucocon 420 UP (caprylyl/myristyl glucoside (50%))	0.15
Isopropanol	3.0
Dehyponad Advanced	0.2
Trilon M Liq. T trisodium methylglycinediacetic acid (40%)	0.05

Formulary

GlyAcid® 70 (Coast Southwest, CrossChem LP) (Glycolic Acid) 2.00

Phase C

Sharomix 703 (Coast Southwest, Sharon-Laboratories Ltd.) (Potassium Sorbate (and) Sodium Benzoate (and) Benzyl Alcohol (and) Aqua) 1.00

Phase D

Sodium Hydroxide (30%) w/w (Sodium Hydroxide) q.s.
Olivatis® 15 (Coast Southwest, Medolla Iberia S.L.) (Olive Oil Glycereth-8 Esters) 8.00

PROCEDURE: Add Phase A in order until homogenous. Add Phase B in order to Phase A until homogenous. Allot time for ingredients to get into solution. Add phase C and phase AB and check pH. In phase D, neutralize phase ABC with NaOH 30% to pH of 4.5 before adding Olivatis 15 with continuous mixing. Transfer to a holding vessel once uniform.

Create a Clean Slate Facial Wipe Supplied by Coast Southwest Inc.

INGREDIENTS	WT%
<i>Phase A</i>	
Deionized Water	61.20
Endiquest® GLDA (Coast Southwest, Inc.) (Tetrasodium Glutamate Diacetate)	0.30
Glycerin (Coast Southwest, Inc.) (Glycerin)	2.00
Endinol® MILD B-SF65 (Coast Southwest, Inc.) (Sodium Cocoyl Isethionate (and) Cocamidopropyl Hydroxysultaine (and) Lauryl Glucoside (and) Cocamidopropylamine Oxide (and) Caprylyl/Capryl Glucoside)	25.00
Endamide® MIPA (Coast Southwest) (Cocamide MIPA)	2.00
<i>Phase B</i>	
Olivatis® 20 (Coast Southwest, Inc., Medolla Limited) (Olive Oil Polyglyceryl-6 Esters (and) Lauryl Glucoside)	7.50
Endicare DLP-50 (Coast Southwest) (Panthenol)	0.50
<i>Phase C</i>	
EndiMoist® HA Solution (Coast Southwest, Inc.) (Sodium Hyaluronate)	1.00
Sharomix Amplify AM-24 (Coast Southwest, Sharon-Laboratories Ltd.) (Caprylyl Glycol (and) Methylpropanediol (and) Didecyltrimonium Chloride (and) Polyquaternium-80)	0.50

PROPERTIES: pH: 6.5 to 6.8

Viscosity: spindle 02 @ 100 rpm = < 300 cst.

PROCEDURE: Add Phase A in formula order to main vessel under shear mixing. Combine Phase B in a separate vessel under continuous mixing. Once uniform, add Phase B to Phase A with shear mixing. Add Phase C in formula order to main vessel under shear mixing. Once a solution is uniform and clear, transfer to final container or soak wipe.

All Natural Cleansing Liquid for Wet Wipes Supplied by Rita

INGREDIENTS	WT%
Water	q.s. to 100
Ritafactant CLS-2 (polypropylene glycol, polyglyceryl-2 caprate, disodium cocoglucoside citrate, sodium lauroyl sarcosinate)	1.5
Ritapan D (pantheonol)	0.1
Pitaloe 1X (aloe barbadensis leaf juice)	0.5
Quiditat SRBGOP (hypnea musciformis extract, gelideiella aceros extract, butylene glycol)	0.5
Amitos R (dihydroxypropyl arginine HCl) France	0.5
Phenoxyethanol	1.0

PROCEDURE: Combine all ingredients.

Wet Wipe Basic Formulation with Emulgade CM Supplied by BASF

INGREDIENTS	WT%
Water	89.80
<i>Phase A</i>	
Sodium Benzoate	0.50
Emulgade CM Emulsion base	9.50
<i>Phase B</i>	
Citric Acid (50% solution) pH Adjustment	0.10
<i>Phase C</i>	
pH Value (23°C)	4.8-5.0

PROCEDURE: Cold preparation. Mix phase A until homogenous. Add Emulgade CM (phase B) to Phase A while stirring. Adjust the pH value to 4.8-5.0. No microbiological testing carried out.

Sneaker Wipes



- **Indie brand Green Sneaker LAB** wipes clean more than just shoes—it can clean devices, countertops, toys, hands, car interiors, even clothing! You know that good kind of bacteria that nature uses to biodegrade organic waste? Sneaker LAB converted it into a formula that cleans at a hyper-accelerated rate. Utilizing biotechnology, the solutions are biodegradable and packed in materials all suited for recycling. They are also officially Green Tag certified.

Ultimate Cleansing Cloths by Noodle & Boo

- **The super-popular petal-soft** wipes Ultimate Cleansing Cloths by Noodle & Boo are a favorite to many. Available in fragrance-free or Crème Douche varieties, sizes are 72 cloths for \$6.50; 288 cloths, \$22; and 576 cloths are \$38. These luxuriously thick, petal-soft cloths are soaked in a mild, alcohol-free, plant-based, no-rinse solution consisting of gentle cleansers and nourishing moisturizers that tenderly soothe and hydrate sensitive skin, leaving it clean and supple. Natural and gentle preservatives safeguard wipes from waterborne contamination. The wipes also soothe and hydrate skin with vitamin E, aloe and chamomile.



Makeup Remover from Laura Geller

- **Laura Geller Makeup Remover Cleansing** Towelettes (\$16) come in three varieties—Brightening, Hydrating and Sensitive Skin. Brightening is formulated with orange, bergamot, and licorice extracts to help revive dull looking skin and melt away make-up, dirt, and oil. Hydrating is formulated with hyaluronic acid, centella asiatica and coconut water to help soothe and condition dry skin while easily melting away make-up, dirt, and oil for a clean and refreshed complexion. Sensitive Skin features calming ingredients like green tea extract, chamomile, and aloe vera to help soothe sensitive skin without disruption.



Madeca Derma Touts Cotton Sheet Masks

- **K-beauty** skin care brand Madeca Derma offers a Revitalizing Face Sheet Mask. The 100% pure cotton sheet mask is perfect for all skin types—normal, dry, damaged, sensitive, or a combination type, according to the firm. Key ingredients include Centella asiatica, which has skin-soothing, hydrating, and potent antioxidant properties; niacinamide, which helps minimize redness, pores, and gives protection from sun damage; and red-algae, which aids in firming and lifting.



No Shine on Top

- **A new premium personal care brand for bald and balding men**, Mantl offers No-Shine Sheets. Made with bamboo charcoal and wood fibers, these sheets instantly neutralize excess oil and dirt to absorb shine for a refreshed, clean look, according to the company. They come in a refillable dispenser that allows users customize their perfect sheet size every time.

Meetings Calendar

September

Sept. 9-23

Cleaning Products Intermediate Formulations Short Course Webinars

Location: Online

Contact: clarussa@thehcpa.org

Website: www.thehcpa.org

Sept. 23-25

Outlook 2020

Location: Online Webinar

Contact: Delphine Rens

Email: delphine.rens@edana.org

Website: www.edana.org

Sept. 24-26

CIDPEX2020

Location: Nanjing, Jiangsu, China

Venue: Nanjing International Expo Center

Phone: +86-10-64778184

Email: cidpex@cnhpia.org

Website: en.cnhpia.org

November

Nov. 16-19

ISSA Show North America

November 16 - 19, 2020

Venue: Online

Website: www.show.issa.com

Nov. 17-19

Hygienix 2020

Location: All Virtual Format

Contact: INDIA

Phone: 919-459-3726

Email: info@inda.org

Website: www.inda.org

December

Dec. 2-3

"World of Private Label"

International Trade Show

Location: Amsterdam, NL

Venue: RAI Exhibition Centre

Contact: info@plma.com

Phone: (212) 972-3131

Website: plma.com

Dec. 8-10

GO Wipes Europe

Location: Amsterdam, The Netherlands

Venue: Steigenberger Airport Hotel, Amsterdam

Website: www.go-wipes.com

Dec. 15-16

Society of Cosmetic Chemists (SCC)

Annual Meeting

Location: New York, NY

Venue: Sheraton

Website: www.scconline.org

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Vertellus	25	www.vertellus.com

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