

BAUSCH+LOMB

INFUSE™

Silicone Hydrogel One-Day Contact Lenses

INFUSED FOR BALANCE

Bausch + Lomb INFUSE™ – the only silicone hydrogel daily disposable with a next-generation material infused with ProBalance Technology™ to help maintain ocular surface homeostasis for exceptional clarity and comfort

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CAPTURING THE SILICONE HYDROGEL DAILY DISPOSABLE OPPORTUNITY

Seeking out contact lens technologies that support our patients' lifestyles

REASONS WHY CONTACT LENS WEARERS BEGAN WEARING CONTACT LENSES¹

45%

"don't like wearing glasses all the time"

47%

"better for an active lifestyle"

43%

"appearance, look better/younger without glasses"

The popularity of daily disposable lenses has grown steadily over the last 15 years or so. According to a 2019 consumer survey, the proportion of soft contact lens wearers in daily disposable lenses grew from 2% in 2003 to 14% in 2019.¹ This growing trend toward daily disposable lenses appears to be driven by the consumer perception that daily disposable lenses are a healthy choice for the eyes, and by convenience, with ocular health narrowly edging out convenience as a reason for consumers preferring daily disposable lenses (60% vs 56%, respectively). Perhaps not surprisingly, when asked which soft contact lens category had the highest growth potential for 2020, 64% of eye care practitioners (ECPs) surveyed in 2019 by *Contact Lens Spectrum* said daily disposable lenses.²

PRESCRIBING TRENDS

It's understandable why ECPs would see the potential for growth in the daily disposable category, both because of convenience for patients and better anticipated adherence to the replacement schedule.

CONTACT LENS WEARERS IN DAILY DISPOSABLE LENSES GREW FROM

↑ 2%
in 2003

↑ 14%
in 2019

(ECPs estimated that 80% of their daily disposable contact lens patients adhered to the replacement schedule, vs 48% and 61% in 1- to 2-week or monthly lenses).² Not only are wearers of daily disposable lenses significantly more likely to replace their lenses as indicated, they also return more frequently for eye exams than wearers of 2-week or monthly lenses.^{3,4}

ECP survey data also point to the growth of the daily disposable modality, which ranged from 35% to 50% of fits and refits in 2019, followed by the monthly replacement category (range 32% to 36%), which has been declining. Regardless of replacement frequency, ECPs said that silicone hydrogel (SiHy) materials made up the majority (65%) of their contact lens fits and refits.²

WHAT PATIENTS WANT

Forty-two percent of vision-corrected teens and adults not currently wearing contact lenses report an interest in trying them.¹ Strong interest is highest among consumers age 25 to 44 (56%) and those 18 to 24 (51%). Seven-in-ten prospective wearers (71%) cite convenience for their interest in contacts. Other significant factors driving interest include appearance (39%) and dislike of wearing eyeglasses (38%). Of all contact lens modalities, prospective wearers are most aware of daily disposables.¹

When asked about attributes they look for in contact lenses, current wearers agreed that advanced optics, comfort when using digital devices, ease of cleaning, convenience, and value for money were

all important. The three highest-ranked attributes were general comfort, quality vision correction, and being healthy for the eyes. Contact lenses that offer comfort, high-quality vision correction, and properties that help maintain ocular health, therefore, can be expected to have an impact on overall satisfaction.¹ Furthermore, a 2017 online survey found that patients would think more highly of their ECP if they offered new products that were good for their eye health.⁵ And in a separate survey, 70% of contact lens wearers said they wish their doctor would share information on contact lens advancements.¹

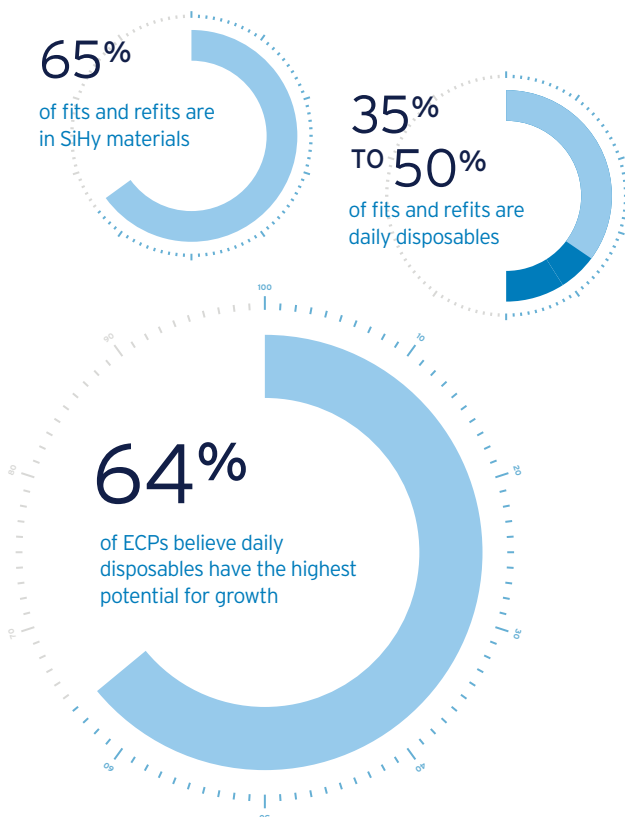
As with other advancing technologies (eg, smartphones, video conferencing), patient expectations around the contact lens-wearing experience have increased. Indeed, one-third of contact lens wearers report an awareness of contact lens brands designed for a positive wearing experience with computers/digital devices, while 15% report currently wearing contact lenses that provide digital viewing benefits. This suggests a recognition among patients that regular use of digital devices may lead to symptoms of discomfort, and that patients are actively seeking out contact lenses that support their increasingly digital lifestyles.¹ This is especially important because heavy users of digital devices may also be at increased risk of contact lens dropout.⁶

A NEED FOR INNOVATION

Since the introduction of SiHy contact lenses around 20 years ago, these materials have undergone innovations aimed at preserving their high oxygen permeability, while increasing water content and wettability with the goal of further enhancing wearer comfort and ocular health.⁵ Developments in SiHy materials and the increasing adoption of daily disposable lens wear have converged, with an array of SiHy daily disposable lenses now available.

While the introduction of SiHy daily disposable lenses has been a game changer, combining the benefits of this replacement frequency with the oxygen transmissibility of SiHy materials, there is still opportunity for continued innovation in contact lens materials. A survey of symptoms experienced by 318 current wearers of SiHy daily disposable lenses found that over half of them experience contact lens dryness, and that 69% are settling for less comfort to wear contact lenses for the entire day. Although 76% of patients reporting contact lens dryness said they had a way of coping with/reducing their dryness symptoms, SiHy daily disposable lens wearers nevertheless said they may stop using contact lenses or reduce their wearing time because of dryness symptoms. Additionally, 82% said they would be interested in an option that could help reduce contact lens dryness.

ECP SURVEY AND MARKET DATA²



We cannot expect patients to alter their lifestyle to fit with contact lens technology; rather, it's time to seek out lens technologies that support our patients' lifestyles

Survey respondents attributed their contact lens dryness symptoms to too much screen time, working too much on the computer, and watching too much TV—in other words, a “digital lifestyle.” However, the pervasive use of digital devices is unlikely to change. We cannot expect patients to alter their lifestyle to fit with contact lens technology; rather, it is time to seek out lens technologies that support our patients' lifestyles.

The Bausch + Lomb INFUSE™ contact lens is a SiHy daily disposable that applies innovative technologies to help minimize the impact of the lens on the ocular surface homeostasis, thereby providing exceptional clarity and comfort. With the environment and lifestyle challenges many patients face, as well as the shifts in the balance on the ocular surface inherent to contact lens wear, the ability to prescribe Bausch + Lomb INFUSE™—with its unique attributes designed to help maintain ocular surface homeostasis—seems like an opportunity not to be missed.

DIGITAL DEVICE USAGE AND THE OCULAR SURFACE IN CONTACT LENS WEAR



Today, digital device use is ubiquitous for work and leisure. 90% of US households have at least one digital device, and use of multiple connected digital devices is common, with many consumers owning three to four.^{7,8} The average daily digital media use is accelerating; adults spend over 6 hours per day on digital devices.⁹ So what does all this mean for contact lens wearers?

Discomfort and visual disturbance

- Contact lens wearers in one survey reported an average of 6.8 hours of daily digital device use, and nearly two-thirds said their eyes bothered them after spending time using the computer or other digital devices¹
- Visual disturbance or discomfort associated with digital device usage is highly prevalent, and sustained screen time has been associated with reduced blink rate and amplitude, which can impact tear film stability and lead to visual fluctuation and dryness symptoms¹⁰⁻¹²

Reduced wear time

- A relationship has been identified between digital device usage and contact lens drop-off (reduction in wearing time or cessation of lens wear)⁶
- Researchers surveyed current and former soft contact lens wearers about their ocular symptoms, as well as their usage of digital devices, then later followed up with a subset
 - For those identified as heavy digital device users (10+ hours/day), the rate of contact lens drop-off was 2x higher than for those who were light digital device users (1 to 4 hours/day)
 - Those who had reported symptoms (dry eyes, sensitive eyes, redness, tearing) were also more likely to reduce or discontinue their contact lens wear
 - Having to look at a computer screen all day was cited, along with dryness symptoms, as a top reason for contact lens drop-off

CONTACT LENS WEARERS REPORT¹

6.8 HOURS

on average of daily digital device use



63%

say their eyes bother them after spending time using the computer or other digital devices

Sustained visual tasking on digital devices puts a strain on ocular surface homeostasis and can impact the comfort and longevity of contact lens wear. Both the frequency and completeness of blinks are shown to be reduced while viewing digital devices; the reduction in blink rate can lead to increased tear evaporation, while incomplete blinking affects the distribution of tears on the ocular surface, shortening tear film breakup time.^{13,14} As the embrace of these technologies shows no signs of slowing down, we must offer other ways to support the day-to-day experience for contact lens wearers. And indeed, wearers themselves are interested in lenses designed to provide excellent comfort and/or optics with digital viewing.¹ Bausch + Lomb INFUSE™ lenses are an excellent option for patients; the lens performance is outstanding, even for patients who report spending much of their days looking at screens.¹⁵



As the embrace of these technologies shows no signs of slowing down, we must offer other ways to support the day-to-day experience for contact lens wearers

NEXT-GENERATION MATERIAL + PROBALANCE TECHNOLOGY™

Working together to help maintain ocular surface homeostasis for exceptional clarity and comfort



FIGURE 1

In a two-phase polymerization process, long- and short-chain silicone polymers create a flexible matrix for oxygen transmission and hydrophilic DMA is integrated into the silicone backbone; then, humectant PVP is permanently grown throughout the lens matrix.

Homeostasis of the ocular surface is a delicate and dynamic system. Any changes in the complex components can alter the balance of the ocular surface environment, including the insertion of a contact lens.^{16,17} Thus, an aim of innovation in contact lens designs has been to reduce the impact on the ocular environment—through increasing wettability or oxygen transmission, changing the replacement frequency, or mitigating protein/lipid deposition.¹⁸⁻²¹ An outgrowth of these efforts, Bausch + Lomb INFUSE™ contact lenses have been specifically designed with a next-generation material infused with ProBalance Technology™ to help maintain ocular surface homeostasis for a comfortable lens wearing experience.

NEXT-GENERATION SILICONE HYDROGEL MATERIAL

A balance of moisture, modulus, and oxygen permeability to help minimize impact on the ocular surface and provide excellent comfort

An early focus of ocular health in contact lens wear was on oxygen delivery; indeed, it was oxygen transmissibility, in part, that motivated the development of SiHy contact lens materials.¹⁸ However, to achieve this goal of increased oxygen transmissibility, early-generation SiHy lenses tended to have lower water content and higher moduli. Bausch + Lomb INFUSE™ lenses are made from an innovative SiHy material (kalifilcon A) that balances moisture, modulus, and oxygen to help minimize the impact of the lens on the ocular surface.

The development of this next-generation lens begins with innovations in material chemistry, focusing on oxygen permeability, water content, modulus, surface wettability, and moisture retention. Innovative approaches to manufacturing play an important role in assembling the building blocks of the material through a two-phase polymerization process. The resulting breakthrough lens material is then infused with ProBalance Technology™—a proprietary combination of ingredients that are released and retained during lens wear to help maintain ocular surface homeostasis.*¹⁵

In the first phase of polymerization, a unique combination of long- and short-chain silicone polymers creates a flexible matrix for oxygen transmission. The long-chain silicone provides low modulus, while the short-chain silicones provide the majority of oxygen transport capability and structural integrity (for great handling characteristics). During phase 1, a hydrophilic component, dimethylacrylamide (DMA), is integrated into the silicone backbone, along with a Class II ultraviolet (UV)-blocking agent.[†] In the second phase, polyvinylpyrrolidone (PVP), a humectant, is permanently grown throughout the silicone matrix (**Figure 1**).

*Analysis of worn lenses demonstrated poloxamer 181, erythritol, glycerin, and potassium were retained for 16 hours.

[†]**WARNING:** UV-absorbing contact lenses are NOT substitutes for protective UV-absorbing eyewear, such as UV-absorbing goggles or sunglasses, because they do not completely cover the eye and surrounding area. The effectiveness of wearing UV-absorbing contact lenses in preventing or reducing the incidence of ocular disorders associated with exposure to UV light has not been established at this time. You should continue to use UV-absorbing eyewear as directed. **NOTE:** Long-term exposure to UV radiation is one of the risk factors associated with cataracts. Exposure is based on a number of factors such as environmental conditions (altitude, geography, cloud cover) and personal factors (extent and nature of outdoor activities). UV-blocking contact lenses help provide protection against harmful UV radiation. However, clinical studies have not been done to demonstrate that wearing UV-blocking contact lenses reduces the risk of developing cataracts or other eye disorders.

Bausch + Lomb INFUSE™ lenses are made from an innovative silicone hydrogel material (kalifilcon A) that balances moisture, modulus, and oxygen to help minimize the impact of the lens on the ocular surface



Incorporating the dual hydrophilic components DMA and PVP into the polymerization process of Bausch + Lomb INFUSE™ contact lenses results in a water content of 55% (Figure 2). The ability of a contact lens material to resist dehydration is important for precision optics. Bausch + Lomb INFUSE™ lenses maintain 96% of their water content for a full 16 hours.¹⁵

First-generation SiHy lenses made from high modulus materials were associated with conditions such as superior epithelial arcuate lesions, contact lens papillary conjunctivitis, and changes in corneal curvature.²² The innovative chemistry of the Bausch + Lomb INFUSE™ lens material results in a modulus of 0.5 MPa (about half the modulus of

first-generation SiHy materials) (Figure 3).¹⁵ The low modulus of Bausch + Lomb INFUSE™ lenses helps reduce the impact on the ocular surface and provide a comfortable lens-wearing experience.²³

Along with a high water content and low lens modulus, oxygen delivery remains a focus of the lens material design. To help maintain ocular surface homeostasis, and for the open eye to remain healthy and white, a contact lens material must allow sufficient oxygen to reach the cornea.¹⁸ The Bausch + Lomb INFUSE™ lens material was designed to be highly oxygen-permeable, with an oxygen transmissibility (Dk/t) of 134 at the center of a -3.00 D lens.

FIGURE 2
Most Moisture Among Leading Silicone Hydrogel Lenses^{†15}

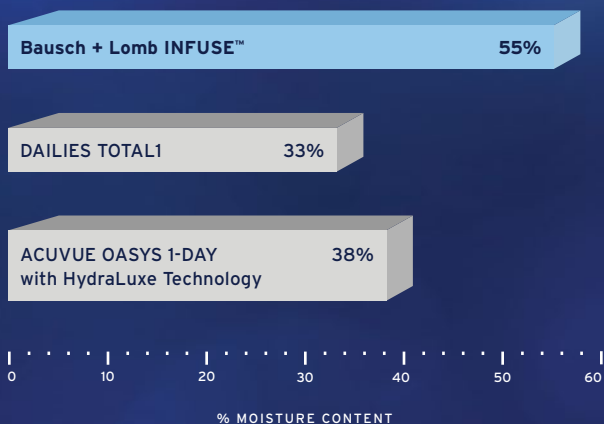
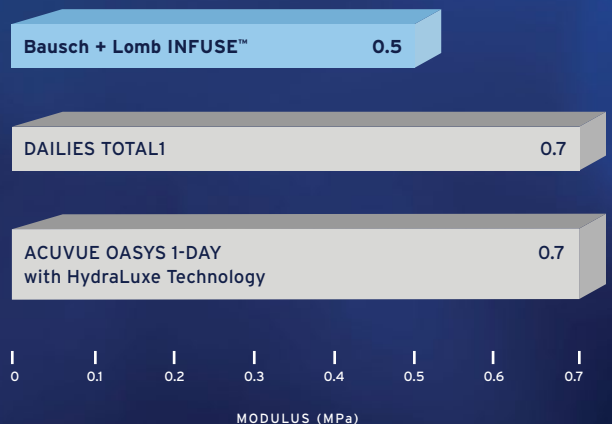


FIGURE 3
Lowest Modulus Among Leading Silicone Hydrogel Lenses^{†15}



[†] Versus leading SiHy daily disposables, DAILIES TOTAL1 and ACUVUE OASYS 1-DAY, based on dollar share of segment.

BAUSCH + LOMB INFUSE™ CONTACT LENSES WITH PROBALANCE TECHNOLOGY™

A CLOSER LOOK

KALIFILCON A

Moisture
water content of 55%

Modulus
0.5 MPa

Oxygen
134 Dk/t (at the center
of a -3.00 D lens)

PROBALANCE TECHNOLOGY™

Two osmoprotectants - erythritol and glycerin - help maintain homeostasis under hyperosmotic stress¹⁵

The electrolyte potassium plays an important role in ocular surface homeostasis¹⁵

Two surfactant moisturizers - Poloxamine 1107 and Poloxamer 181 - work synergistically to help retain hydration, provide a smooth, wettable lens surface, and maintain tear proteins in their healthy state¹⁵

BREAKTHROUGH PROBALANCE TECHNOLOGY™

A proprietary combination of ingredients infused into the lens material and released to help maintain ocular surface homeostasis for comfortable lens wear

The next-generation lens material and ProBalance Technology™ were developed to work together to help maintain ocular surface homeostasis. ProBalance Technology™ is a proprietary combination of ingredients inspired by the Tear Film and Ocular Surface Society's DEWS II report,²⁴ and includes osmoprotectants, electrolytes, and moisturizers for contact lens comfort. This breakthrough technology is infused into the lens material during the manufacturing process, and the proprietary ingredients are released during lens wear. Select ingredients are also retained in the lens throughout a 16-hour wearing experience (**Figure 4**).*

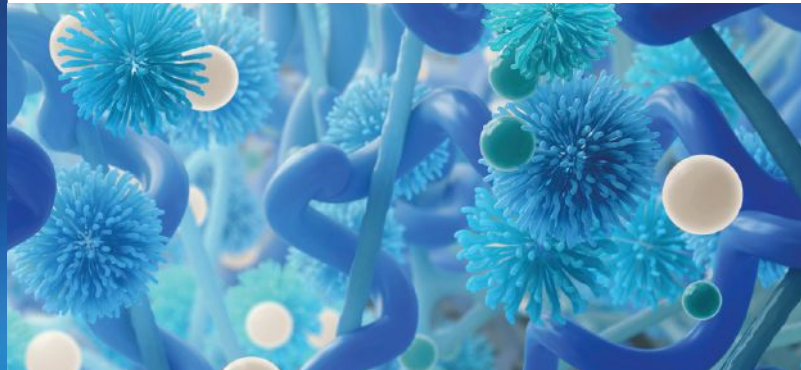


FIGURE 4

The proprietary combination of osmoprotectants, electrolytes, and surfactant moisturizers in ProBalance Technology™ are infused into the lens material, then retained and released during wear.

Differential dehydration associated with contact lens wear can result in changes to tear osmolarity.²⁵ Osmoprotectants are a group of compounds that help maintain ocular surface homeostasis under hyperosmotic stress.^{24,26} ProBalance Technology™ contains two osmoprotectants—glycerin and erythritol.

Electrolyte balance is important to tear film and ocular surface homeostasis because it helps maintain cell volume and fluid balance. The main contributors to tear film osmolarity include sodium, potassium, chlorine, magnesium, and calcium.^{17,24}

*Analysis of worn lenses demonstrated poloxamer 181, erythritol, glycerin, and potassium were retained for 16 hours.



Next-Generation Material

A unique silicone hydrogel daily disposable lens material designed to minimize the impact on the ocular surface¹⁵



Ocular Surface Homeostasis

Balanced ocular environment to reduce contact lens dryness and discomfort



ProBalance Technology™

Proprietary combination of ingredients infused into the lens material and released to help maintain ocular surface homeostasis¹⁵

Based on this current science, ProBalance Technology™ contains potassium to help maintain ocular surface homeostasis.

Exploring the Proprietary Ingredients of ProBalance Technology™

Conserving moisture on the contact lens surface helps to maintain the integrity of the tear film and contributes to ocular surface homeostasis. Ingredients that can enhance lens wettability, such as surfactants, are often added to contact lens solutions.¹⁹

Contact lens solutions with added surfactants can help maintain the activity of tear film proteins, allowing them to continue performing their roles in maintaining balance on the ocular surface.²⁷ To help retain lens hydration, provide a smooth, wettable surface, and maintain the activity of tear proteins in their healthy state, ProBalance Technology™ includes two surfactant moisturizers: poloxamer 181 and poloxamine 1107.¹³ The unique combination of osmolytes and moisturizers in ProBalance Technology™ help stabilize tear proteins under chemical conditions that would typically denature them—ie, when they

become bound to a contact lens surface. Indeed, laboratory studies show that ProBalance Technology™ maintains the activity of tear proteins in their natural, non-denatured state.¹⁵

PUTTING THE LENS AND SOLUTION TOGETHER

Bausch + Lomb INFUSE™ contact lenses are the only silicone hydrogel daily disposables with a next-generation material infused with ProBalance Technology™ to help maintain ocular surface homeostasis for comfort and clarity. The material, kalifilcon A, balances moisture, modulus, and oxygen to help minimize the impact of the lens on the ocular surface. It works together with ProBalance Technology™—the proprietary combination of ingredients infused into the lens material and released to help maintain ocular surface homeostasis. The result for wearers is an outstanding wearing experience. Indeed, early clinical performance data show that Bausch + Lomb INFUSE™ contact lenses provide exceptional patient satisfaction and help reduce symptoms of contact lens dryness.



The lens works together with ProBalance Technology™—the proprietary combination of ingredients infused into the lens material and released to help maintain ocular surface homeostasis for exceptional comfort and clarity

EXTRAORDINARY HIGH-DEF OPTICS FOR OUTSTANDING VISION

Aspheric optics to reduce spherical aberration across the entire power range

Vision correction is the primary directive in contact lens design, and high-quality vision is a top priority for contact lens wearers! With visual demands perhaps greater and more varied than ever before, wearers benefit when lenses are designed to correct not just defocus and astigmatism, but also to minimize the impact of higher-order aberrations in the optical system.

Spherical aberration occurs when light entering from the outer edges of a lens focuses at different points than the light striking the inner portions of the lens (**Figure 5**), and is a feature of eyes, contact lenses, and other optical systems with spherical lenses, such as microscopes and telescopes. In the presence of spherical aberration, images appear blurred because peripheral light rays are focused either anterior or posterior to those coming through the center.

CHALLENGES ASSOCIATED WITH SPHERICAL ABERRATION

Spherical aberration can be a barrier to high-quality vision, particularly in low-light conditions, when pupil size is increased and more light is admitted through the periphery. The result can be symptoms of blurred vision, halos, and glare.²⁸

While optical systems such as contact lenses correct defocus and astigmatism, they do not always incorporate spherical aberration control. Soft contact lenses are made to correct vision in a wide variety of individual eyes, which limits the ability to correct all higher-order aberrations. Research from a large

population study has found that compensating for average spherical aberration can improve image quality at distance, especially under low light.²⁹

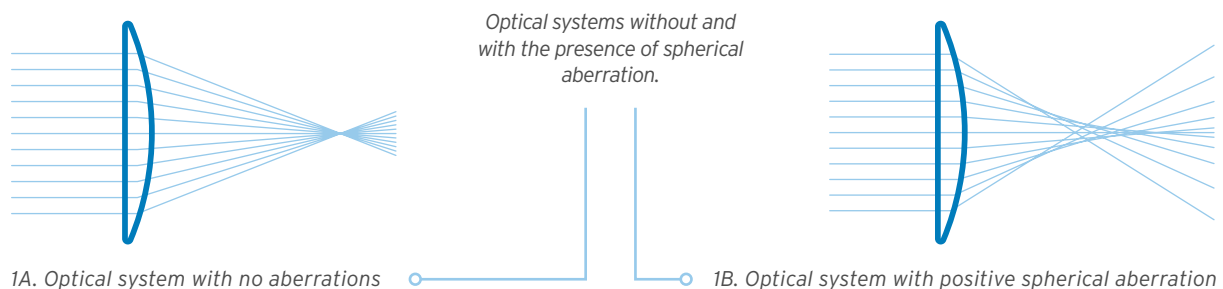
BAUSCH + LOMB INFUSE™ OPTICAL DESIGN

Bausch + Lomb INFUSE™ lenses are available in a broad range of sphere powers (+6.00 D to -6.00 D in 0.25 D steps, and -6.50 D to -12.00 D in 0.50 D steps) with a base curve of 8.6 mm and a diameter of 14.2 mm. A great deal of attention was given to ensuring that the material and solution of Bausch + Lomb INFUSE™ lenses would help maintain ocular surface homeostasis, and help minimize symptoms of contact lens-related dryness and discomfort. Just as much attention has been given to the optical design, providing wearers with a high-quality visual experience.¹⁵ The Bausch + Lomb INFUSE™ contact lens design also features aspheric anterior and posterior optical surfaces, which provide spherical aberration control across the entire power range.¹⁵

CONTROLLING SPHERICAL ABERRATION

For contact lenses, there are two sources of concern for spherical aberration: inherent and induced. On average, eyes tend to have a positive spherical aberration; a large population study of ametropic eyes (n=1124) found an average value of +0.18 μm inherent spherical aberration, over a 6-mm pupil.²⁹ Based on the findings of this study, Bausch + Lomb INFUSE™ lenses

FIGURE 5



have been designed to produce an on-eye spherical aberration equal to $-0.18 \mu\text{m}$, counterbalancing the inherent average positive spherical aberration of the eye itself. The aspheric design of Bausch + Lomb INFUSE™ contact lenses is applied across the power range, with the goal being to produce a lens-eye system with a net spherical aberration smaller than that of the eye alone (**Figure 6**). This has the potential to improve image quality and diminish unwanted effects, such as halos and glare.

The optical design also must take into account aberrations induced by the standard spherical optics of contact lenses. Conventional single-vision lens optics induce spherical aberration that varies with lens power (as a function of the radius of curvature of the lens), being approximately zero for a plano lens, increasing in the positive range with higher plus powers and in the negative range with higher minus powers (**Figure 6**). The aspheric optical design of Bausch + Lomb INFUSE™ lenses takes both inherent and induced spherical aberration into account across the entire power range.

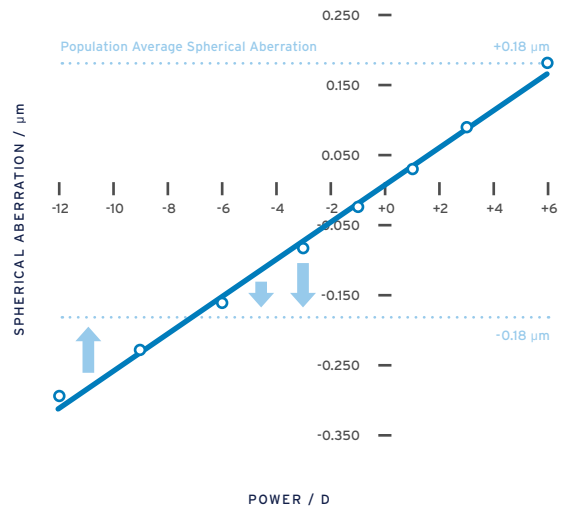
An analysis of Bausch + Lomb INFUSE™ contact lenses, Dailies Total1, and Acuvue Oasys 1-Day was performed to determine the presence of an aspheric optical design intended to produce spherical aberration control. Spherical aberration values were measured for the three lens types at powers of -9.00 D , -6.00 D , -3.00 D , -1.00 D , $+1.00 \text{ D}$, $+3.00 \text{ D}$, and $+6.00 \text{ D}$. The analysis found that of the three lenses, only Bausch + Lomb INFUSE™ was found to incorporate asphericity for spherical aberration control into the optical design. For the remaining two lenses (Dailies Total1 and Acuvue Oasys 1-Day), the measurements revealed that spherical aberration adjustments did not appear to have been incorporated into the lens designs, as evidenced by the expected linear trend of increasing residual spherical aberration with increasing lens power (**Figure 7**).¹⁵

SEEING CLEARLY

Patients want a contact lens that is comfortable, provides quality vision correction, and is healthy for their eyes.¹ Bausch + Lomb INFUSE™ contact lenses with ProBalance Technology™ have been designed with these goals in mind—offering aspheric optics for high-quality vision, excellent comfort, and support for helping to maintain ocular surface homeostasis. With all the visual information we process each day, morning through night, high-definition vision correction is meaningful to contact lens wearers. Indeed, wearers agreed that Bausch + Lomb INFUSE™ contact lenses allowed them to focus on every detail, and allowed them to see and experience this visual world.

FIGURE 6

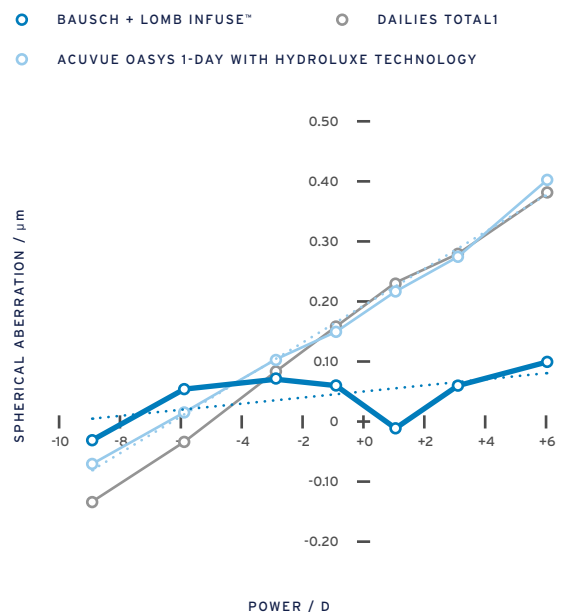
Induced Spherical Aberration for a Traditional Spherical Design (without aspheric optics)



The population average spherical aberration and the level of spherical aberration induced by varying powers of contact lenses with spherical surfaces.

FIGURE 7

Residual Spherical Aberration as a Function of Power



Residual spherical aberration calculated by adding the average positive spherical aberration of the eye ($+0.18 \mu\text{m}$) to the average measured spherical aberration of the lens for Dailies Total1 and Acuvue Oasys 1-Day versus Bausch + Lomb INFUSE™ lenses.

EXCEPTIONAL PATIENT SATISFACTION

Early experience with Bausch + Lomb INFUSE™ contact lenses



Contact lens technology has come a long way over the last two decades, with advances that reflect a deeper understanding of the ways in which lenses can impact the dynamic ocular surface environment. Improvements to SiHy lens materials specifically include modifications that preserve their high oxygen permeability while increasing water content, lowering moduli, and, in general, supporting interactions between the lens and the eyelid, ocular surface tissues, and the tear film.³⁰

The way we use our eyes has also changed over this same period, with increased visual demand from digital device use. Intense concentration on digital devices can lead to reduced blink rates and

an increase in the number of incomplete blinks, which may result in lens dehydration and symptoms of dryness and discomfort.^{11,31-32} Given this elevated demand on the ocular system, it is not surprising that even with the advances in contact lens technology, patients are still experiencing contact lens-related dryness and discomfort. In one survey, over 50% of SiHy daily disposable contact lens wearers reported contact lens dryness, and nearly 70% said that they settle for less comfort in order to wear their lenses all day.³³

Bausch + Lomb INFUSE™ contact lenses are Bausch + Lomb's latest innovation, inspired by the Tear Film and Ocular Surface Society's DEWS II Report. The lenses marry a next-generation SiHy daily disposable lens material, kalifilcon A, with ProBalance Technology™ to help minimize symptoms of contact lens-related dryness and discomfort.¹⁵



The way we use our eyes has changed over the last two decades with increased visual demand from digital device utilization.

EVALUATING THE PATIENT EXPERIENCE

A large multisite study evaluated the performance of Bausch + Lomb INFUSE™ lenses among habitual SiHy daily disposable lens wearers. Participants were aged 18 to 40 and willing to wear test lenses for at least 8 hours each day for 2 weeks. At baseline, a symptoms survey found that 180 participants self-identified as having contact lens-related dryness with their habitual lenses. Participants completed an online survey after at least 7 days of lens wear, rating lens performance across a range of attributes using a 6-point agree/disagree scale and reporting hours spent on various daily activities.¹⁵

PATIENT-REPORTED OUTCOMES

Demographics of the 180 patients are presented in **Table 1**. This group of patients reported involvement in a variety of visually demanding activities, including substantial average daily screen time (**Table 2**).

TABLE 1
Patient Demographics

Mean Age	30.6 years
Gender	72% Female 28% Male
Average Daily Wear Time of Bausch + Lomb INFUSE™ Lenses	14.0 ± 3.44 hours
Average Number of Days Per Week Bausch + Lomb INFUSE™ Lenses Were Worn	6.6 ± 0.86 days

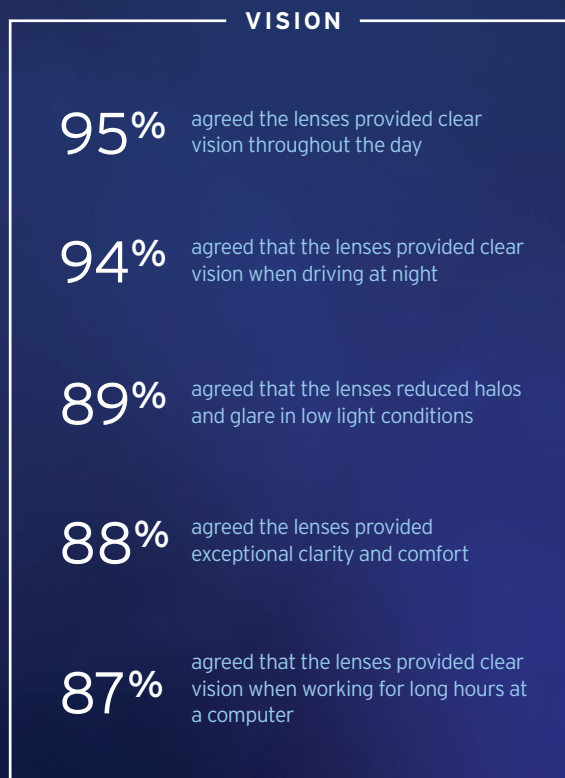
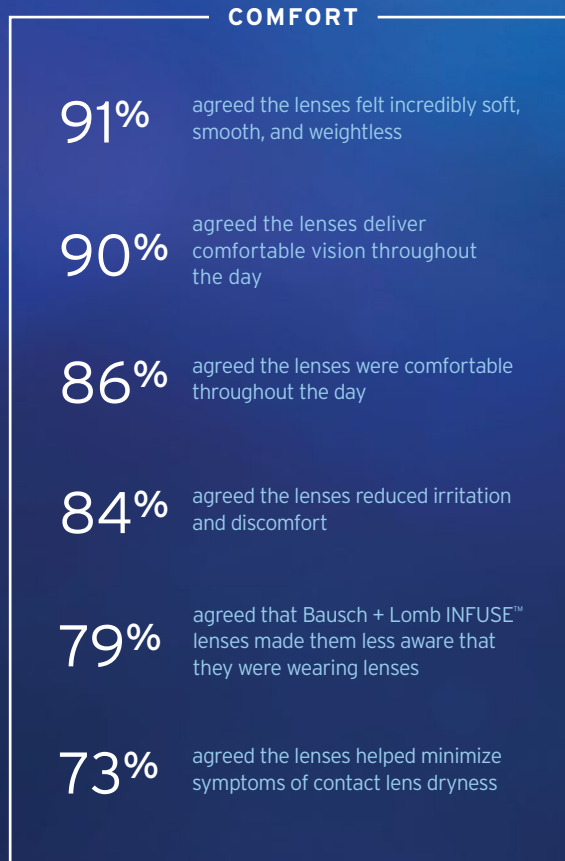
TABLE 2
Time Spent in Habitual Daily Activities

ACTIVITY	MEAN (SD) HOURS/DAY
Working in an office in front of a computer	5.6 (4.64)
Using a smartphone or tablet	4.9 (4.77)
Watching TV	2.6 (2.22)
Working at home in front of a computer	2.0 (3.04)
Engaging in physical activity	2.0 (2.66)
Driving at night	1.6 (1.68)

Survey findings showed that 95% of patients had a positive overall impression of Bausch + Lomb INFUSE™ lenses, and performance was rated highly across several specific attributes (**Figure 8**). In terms of comfort, even for these wearers who habitually experienced contact lens-related dryness, 86% agreed that Bausch + Lomb INFUSE™ contact lenses were comfortable throughout the day, and 79% agreed that Bausch + Lomb INFUSE™ lenses made them less aware that they were wearing lenses.

FIGURE 8

Performance of Bausch + Lomb INFUSE™ contact lenses among participants who habitually experienced contact lens dryness¹⁵



This contrasts starkly with the survey data noted above, in which nearly 70% of SiHy daily disposable wearers said they had to settle for less comfort in order to keep wearing lenses throughout the day.¹⁵

95% of patients had a positive overall impression of Bausch + Lomb INFUSE™ lenses

Wearers in this study (89%) also agreed that Bausch + Lomb INFUSE™ lenses made their eyes feel comfortable and healthy, and 91% agreed that the lenses helped maintain healthy, white eyes.¹⁵ Considering the visually demanding lifestyles of the patients in this study, it is remarkable that 90% agreed Bausch + Lomb INFUSE™ lenses delivered comfortable vision throughout the day, and 87% noted that the lenses provided clear vision when working for long hours at a computer.¹⁵

ADVANCING INNOVATION IN PRACTICE

The SiHy contact lens category has been evolving over the last 20 years, with the goal of minimizing the impact on the ocular environment. Materials with higher moisture content, lower modulus, and excellent oxygen permeability have become available and been paired with the daily disposable modality, which helps to achieve the goal of helping to maintain ocular surface homeostasis.^{21,34}

Nevertheless, contact lens wearers—even those in SiHy daily disposables—may experience discomfort or dryness symptoms that may be related to alterations in ocular surface homeostasis. In addition to the insertion of the lens itself, a number of patient-specific and/or environmental factors—tear quality, frequency and completeness of blinking, and/or environmental exposures—can change the balance on the ocular surface.^{11,35}

Bausch + Lomb INFUSE™ contact lenses combine a next-generation lens material with the innovation of ProBalance Technology™, to help maintain ocular surface homeostasis in contact lens wearers and help reduce symptoms of contact lens dryness and discomfort. The impact of this engineering is evident in the performance of Bausch + Lomb INFUSE™ lenses. Patients with a history of contact lens dryness had an exceptionally positive wearing experience, rating lenses highly across comfort and vision parameters. These promising early data suggest that Bausch + Lomb INFUSE™ contact lenses could become the SiHy daily disposable lens of choice for many of our patients.¹



TEAR FILM OSMOLARITY DYNAMICS

Just as the tear film is dynamic, always changing, so osmolarity is not a fixed, static measurement. It changes throughout the day and even differs depending on the “compartment” or portion of the ocular surface from which a sample is taken. This variable osmolarity across the ocular surface (increasing from the upper meniscus to the lower conjunctival sac) is influenced by tear secretion, drainage, and blink/spreading dynamics. There may also be localized increases in osmolarity, for example, in areas overlying tear thinning/breakup between blinks.¹⁴

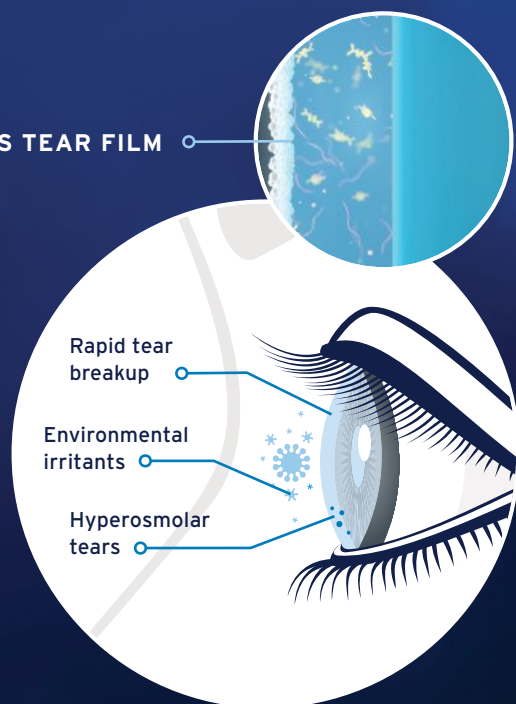
Contact lens wearers who experience dryness symptoms often report that they worsen toward the end of the day, and indeed, tear film osmolarity has been shown to increase from the beginning to the end of the day in wearers of daily soft contact lenses.¹⁴

Throughout the day, the eye is exposed to environmental irritants—wind, dust, smoke, allergens—to which the ocular surface must respond, in order to maintain a homeostatic balance. Adding a contact lens represents a further change to this ocular surface microenvironment. In addition to environmental exposures, a loss of contact lens wettability over the wearing day can be related to patient factors such as tear quality and the frequency and completeness of blinking—the latter of which are often reduced during sustained visual tasking, as on digital devices.¹⁴ Protein or lipid deposition on the lens surface can also decrease wettability and increase evaporative tear loss, which may

result in tear hyperosmolarity. The presence of inflammatory mediators in the tears could also further contribute to lens surface soiling, frictional damage, and symptoms, in what may be an “amplifying cascade” of responses.³⁶

A lens that is replaced every day, with an innovative material and solution system designed to retain moisture throughout the wearing day and help keep other elements of the tear film and ocular surface in balance, may help reduce this symptomatic cascade in contact lens wearers.³⁶

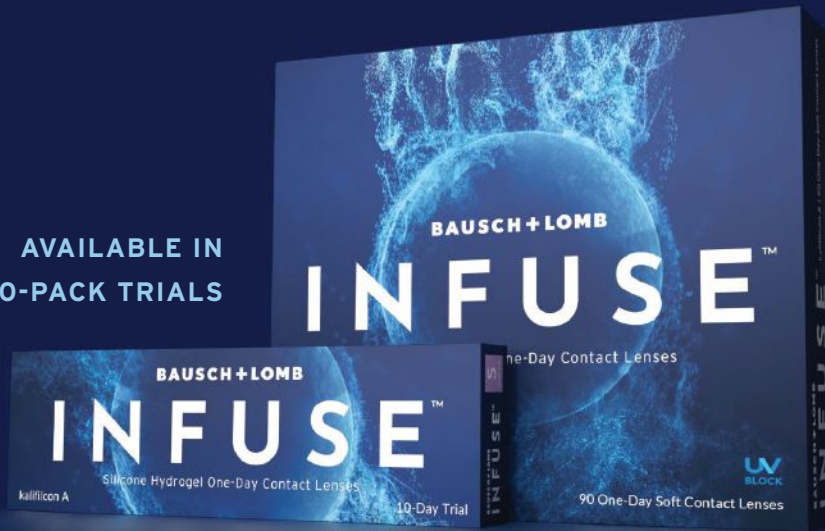
LENS TEAR FILM



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AVAILABLE IN
10-PACK TRIALS



PRESCRIBE BAUSCH + LOMB INFUSE™ CONTACT LENSES

MATERIAL	kalifilcon A	BASE CURVE	8.6 mm
WATER CONTENT	55%	DIAMETER	14.2 mm
OXYGEN TRANSMISSION	134 Dk/t @ -3.00 D	CENTER THICKNESS	0.08 mm @ -3.00 D
VISIBILITY TINT	Light blue	POWERS	+6.00 D to -6.00 D in 0.25 steps -6.50 D to -12.00 D in 0.50 steps
MODALITY	Daily disposable Daily wear indication	SPHERICAL ABERRATION CONTROL	Yes
UVA/UVB*	Class II	MODULUS	0.5 MPa

***WARNING:** UV-absorbing contact lenses are NOT substitutes for protective UV-absorbing eyewear, such as UV-absorbing goggles or sunglasses, because they do not completely cover the eye and surrounding area. The effectiveness of wearing UV-absorbing contact lenses in preventing or reducing the incidence of ocular disorders associated with exposure to UV light has not been established at this time. You should continue to use UV-absorbing eyewear as directed. **NOTE:** Long-term exposure to UV radiation is one of the risk factors associated with cataracts. Exposure is based on a number of factors such as environmental conditions (altitude, geography, cloud cover) and personal factors (extent and nature of outdoor activities). UV-blocking contact lenses help provide protection against harmful UV radiation. However, clinical studies have not been done to demonstrate that wearing UV-blocking contact lenses reduces the risk of developing cataracts or other eye disorders.

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