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An Analysis of Private Label Contact Lens Solutions

I/We, Jordan Pinozek and Morgan Schuiteman, hereby release this Paper as described above to Ferris State University with the understanding that it will be accessible to the general public. This release is required under the provisions of the Federal Privacy Act.

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4/28/15

Date

AN ANALYSIS OF PRIVATE LABEL CONTACT LENS SOLUTIONS

by

Jordan Anne Pinozek and Morgan Nichole Schuiteman

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by

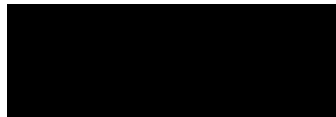
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ABSTRACT

Background: It is estimated that contact lens patients purchase generic solutions as much as 30% of the time. With so many patients purchasing private label products, it is important to verify the ingredients in private label solutions and determine if they are comparable to the solutions that eye care practitioners are recommending.

Methods: Private label solutions were purchased from ten national retailers and one regional chain in the Midwestern United States. Ingredient lists on package labels were analyzed and compared to FDA approved, equivalent brand names.

Results: The ten national retail stores and one regional chain that were investigated in this study do not manufacture their own private label lens care solutions. Instead, they contract with major manufactures that produce FDA approved contact lens solutions to be used under their store's private label. It was also found, that these products were often earlier generation products that may not be compatible with the newest contact lens materials.

Conclusions: The analysis of these private label solutions will provide future practitioners with a useful tool when interacting with their contact lens patients. Patients can be easily misled by labels that are designed to look like certain brand-name solutions, when in fact, the actual formulation is not comparable. With many patients choosing to purchase private label solutions, eye care practitioners need to be aware of the differences to help educate their patients that not all solutions are the same.

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CHAPTER 1

INTRODUCTION

The sales of private label contact lens solutions are a multi-billion dollar industry. Many contact lens wearers choose to go against the recommendation of their eye care provider and purchase private label solutions based on cost. Even more worrisome is that up to 76% of optometrists either always recommend the same solution regardless of lens modality or don't recommend any solution at all¹. This leaves patients to navigate the endless lens care options on their own. Consumers can often be swayed in the store by advertising on the packaging. Most private label packaging will have a statement such as "compare to" or "similar to" a particular brand name solution, but what is actually in the bottle may not be anything like the claimed comparison.

Large retailers generally do not make their own solutions². They contract with solution manufacturers to produce FDA-approved solutions that are then repackaged under the store's brand. At the end of the contract, the retailer will then use the formulation of the solution from the company with the lowest bid. This means that every few years, the formulation of solution in a private label package may change, but the external packaging of the solution will remain the same. This can make troubleshooting contact lens complications difficult if patients report they are using the same solution they always have, when in fact they are unknowingly using a different formulation. Large

retailers will also often attempt to make their packaging resemble that of name brand solutions by using similar color schemes and designs².

According to Forister et al., patients using generic or private label solutions had the highest rate of contact lens related complications³. Possible complications can include solution toxicity, lens intolerance, superficial keratitis, and infection. Treating complications caused by generic solutions can be difficult for eye care providers because patients often do not know what kind of solution they are using or what store it was purchased from. The goal of this study was to examine private label solutions to determine the composition of the solutions, and to organize them into a useful guide for practitioners to use while dealing with contact lens patients who use private label solutions.

CHAPTER 2

METHODS

Private label solutions of different types were purchased from nine major retailers in the Midwest United States. The types of solutions purchased were multi-purpose solution, peroxide-based cleaning solution, gas permeable conditioning solution and gas permeable cleaning solution. Depending on the retailer, one or many solutions were available. After the solutions were purchased, the ingredient lists on the package or insert were analyzed. An internet search was conducted for the active and inactive ingredients. Brand name solution ingredient lists as well as U.S and U.K. patents were examined in order to compare and match the ingredients of the private label solutions to brand name solutions. After a match was made between the ingredients in a private label solution to a brand name solution, they were organized by category and formulation.

CHAPTER 3

RESULTS

After obtaining 22 private label contact lens solutions from nine national retail stores and comparing the ingredients and patents, the following results were found. We have organized them in table form (table 1) to show the different private label solutions that were found to be the same. Additionally, we organized them in figure form (figure 1 and 2) which list the ingredients and shows a picture of the solution bottles in an easy to use format for eye care practitioners.

Private Label Solutions	Comparable To:
Meijer Green Multi-purpose	Sauflon All In One Lite Solution
Meijer Blue Multi-purpose	
Our Family Blue Multi-purpose	
CVS Light Blue Multi-purpose	
Kirkland Multi-purpose	AMO Complete Multipurpose Solution
Simply Right Multi-purpose	
CVS Dark Blue Multi-purpose	Bausch + Lomb Renu Sensitive
Our Family Green Multi-purpose	Ciba Vision Aquify
Rite Aid Dark Blue Multi-purpose	Bausch + Lomb Renu Fresh
CVS Blue/green Multi-purpose	
Target Purple Multi-purpose	
Walgreens Green Multi-purpose	
Equate Blue/green Multi-purpose	
CVS Hydrogen Peroxide Solution	Sauflon One Step Peroxide
Walgreen Hydrogen Peroxide Solution	
Equate Hydrogen Peroxide Solution	
Meijer Hydrogen Peroxide Solution	
Target Hydrogen Peroxide Solution	
Rite Aid Hydrogen Peroxide Solution	
Equate Conditioning Solution	Bausch + Lomb Boston Conditioner
CVS GP Contact Lens Cleaner	Lobob Optimum Extra Strength Cleaner
Target GP Contact Lens Cleaner	

Table 1: Private Label Contact Lens Solution Comparable

Soft Lens Solutions



Ingredients: A sterile, isotonic solution that contains Poloxamer, sodium phosphate buffer, sodium chloride, and disodium edetate; preserved with polyhexanide 0.0001%. **Comparable to: Sauflon All in One Life**



Ingredients: A sterile, isotonic, buffered solution, preserved with polyhexamethylene biguanide (0.0001%), a phosphate buffer, Poloxamer 237, edetate disodium, sodium chloride, potassium chloride, and purified water. **Comparable to: AMO Complete Multipurpose Solution**



Ingredients: A sterile, isotonic solution that contains boric acid, edetate disodium, polyoxyethylene polyoxypropylene block copolymer with ethylene diamine, sodium. **Comparable to: Bausch + Lomb Renu Sensitive**



Ingredients: Sterile Aqueous Solution Containing Sorbitol, Tromethamine, Pluronic F127, Sodium Phosphate Dihydrogen, Dextran 5 (Dextranthenol), Edetate Disodium Dihydrate and Preserved with Polyhexanide 0.0001%. **Comparable to: Ciba Vision Aquify**



Ingredients: A sterile, isotonic solution that contains hydroxyalkylphosphonate, boric acid, edetate disodium, polyoxyethylene polyoxypropylene block copolymer with ethylene diamine, sodium borate and sodium chloride; preserved with polyaminopropyl biguanide 0.0001%. **Comparable to: Bausch + Lomb Renu Fresh**

Hydrogen Peroxide Solutions



Ingredients: Sterile 3% Hydrogen Peroxide Solution, containing 0.00025% poloxamer, stabilized with phosphonic acid and buffered with phosphates. **Comparable to: Sauflon One Step Peroxide**

See reverse side for explanation of the Private Label Lens Care Guide



Figure 1: Private Label Contact Lens Care Guide



Ingredients: A sterile, aqueous buffered, solution containing a cellulosic viscosifier, cationic cellulose derivative polymer and polyvinyl alcohol as wetting and cushioning.
Comparable to: Bausch + Lomb Boston Conditioner



Ingredients: Sterile alkaline aqueous solution of cocamidopropyl diacetate and glycols preserved with 0.1% disodium edetate and 0.01% benzalkonium chloride
Comparable to: Lobob Optimum Extra Strength Cleaner

This guide has been developed to aid eye care practitioners in identifying what actual formulations are in private label lens care solutions and its comparable FDA approved brand name. Purchases of these products were made from national, regional and local retailers, then their ingredients were verified by the package insert or bottle labeling. The ingredients were then cross-referenced by either an online search of the ingredients or from the listed patent # when available.
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Figure 1: Private Label Contact Lens Care Guide continued

CHAPTER 4

DISCUSSION

The analysis of these private label contact lens solutions show that patients have numerous choices when shopping for contact lens care systems. With the wide variety of contact lens solutions available in stores, it is easy to see why a patient may be confused about the products that they are buying. It can be made even more confusing when solution labels state that they are comparable to a name brand system when in many cases they are not.

It has been proven through this study that not all private label solutions have the same ingredients nor are they always the same as what they claim to be comparable to. In fact, some retail stores sell multiple private label solutions with different brand name equivalents printed on their packaging that are in fact composed of the same ingredients. For example, the blue Meijer Multi-purpose solution box states that “if you like Bausch & Lomb Renu, try me” where the green Meijer Multi-purpose solution box states that “if you like Opti-Free Express, try me”. This can make consumers believe that these solutions are the same as the name brand counterpart, when in fact these solutions are neither. Instead, these solutions were found to be the exact same as each other and the same as Sauflon All In One Lite solution. It was also noticed that some labels were designed in a way that is likely misleading to contact lens patients. Labels were designed by private label companies to look like their comparative name brand product. This can

easily mislead patients to believe that the products are essentially the same when in fact the formulations can be very different.

It has also been noted, that some of these multipurpose solutions are older generation solutions that are not compatible with the newer silicone hydrogel lens materials. A study conducted by Lyndon Jones et al. found that silicone hydrogel lenses used in combination with a polyaminopropyl biguanide based solution, like Renu Fresh, resulted in abnormally high levels of corneal staining ⁴. It was also found that solutions containing polyhexamethylene biguanide, or polyquad were less effective at reducing the adhesion rate of *Acanthamoeba* trophozoites to silicone hydrogel lenses ⁵. The solution included in our study that contained these ingredients was the AMO Complete multipurpose solution.

With so many patients choosing to use a variety of private label contact lens solutions, the eye care practitioners need to be aware of what is available to patients. Practitioners also need to be able to help educate their patients about the differences in these formulations and complications that can be associated with using older generation solutions. This study has helped to categorize the solutions by their brand name equivalents to be used by eye care practitioners when their patients are using private label solutions.

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