What is the Science Behind Developing Skin Care Products with a High Safety Profile?
LifeVantage’s new skin care regimen was developed to ensure it efficacy and safety, and that its ingredients are globally accepted. The efficacy of the TrueScience regimen has been demonstrated with an 8-week clinical study. The global nature of the ingredients is clearly established. LifeVantage’s formulas have been registered and sold through North America, Central America and Asia-Pacific. This means that several governments recognize LifeVantage’s products—and all their constituent ingredients—to be safe and acceptable for use in their countries. The product formulas must also be stable to endure across fluctuations in temperature, pressure, and humidity, which can vary across regions and even within countries.

How is the Highest Possible Safety Profile Achieved?
The concept of a high safety profile means that the purity and quality of ingredients are tested to be safe. LifeVantage has performed clinical sensitivity tests with every product. But achieving a copacetic slate of safe ingredients requires an advanced knowledge of chemistry and an understanding of natural substances and synthetic compounds. To start, it is helpful to know the basic categories of substance origin. A candidate ingredient may be viewed as one of the following:

- Natural (e.g., from plants)
- Naturally-derived (e.g., cetearyl alcohol is derived from palm oil)
- Synthetic (e.g., phenoxyethanol as a synthetic compound)

Each of the four TrueScience formulas contain all three of these types of ingredients. Although a large amount of the active ingredients in the TrueScience skin care regimen are plant-based, some base ingredients are not.

Why can the “natural” claim be misleading?
Natural claims can be misleading because many natural product lines actually contain synthetic ingredients. In fact, many people wrongly believe natural or organic molecules are safer than synthetic molecules. A June 2014 survey by the Consumer Reports National Research Center reported that two-thirds of Americans misunderstand the meaning of “natural,” believing that products labeled as such do not have any synthetic ingredients when in fact they do.

What is the Difference in Safety Between “Synthetic” and “Natural”?
The National Center for Complementary and Alternative Medicine (a department of the US National Institutes of Health) has long-urged consumers to use dietary supplements wisely, reminding them that “‘natural’ does not always mean ‘safe.’”

“The idea that a chemical is ‘safe’ because it is natural, is not correct,” wrote Lois Gold and colleagues in a 2001 study of natural vs. synthetic chemicals in the human diet. “Among the agents identified as human carcinogens by the International Agency for Research in Cancer, 62% occur naturally: 16 are natural chemicals, 11 are mixtures of natural chemicals, and 10 are infectious agents.” Consider the safety of a fragrance in a topical cosmetic product. It is a misconception that natural fragrances are safer or more effective than synthetic. Natural fragrances actually contain more allergens than the isolated synthetic molecule and exposure to one or more allergens has been shown to cause contact dermatitis (eczema). This is one reason why the European Union (EU) regulates 26 flavor and fragrance allergens, and has mandated that cosmetic manufacturers test their products and submit for approval. A synthetic fragrance molecule is just as effective and safer because it mimics the natural fragrance—often identically—while minimizing the risk of allergic sensitivity.

Should I be concerned about Polysorbate 20?
Polysorbate 20 is a synthetic ingredient used in the TrueScience Eye Corrector Serum (1.1%) and the TrueScience Anti-Aging Cream (0.09%). Polysorbate 20 functions as a very effective emulsifier, which allows oil and water to combine to create a uniform emulsion in a complex system. This ensures the active ingredients do not separate and the active ingredients are evenly spread throughout, ensuring homogeneity and efficacy with every use. Polysorbate is a very commonly-used ingredient, even in skin care products sold in leading health food stores.

The concern of polysorbate 20 is the presence of ethylene oxide. Concentration of every individual ingredient is a very important concept. Concentration refers to the amount or percentage as a part of total product of any given ingredient. In the case of polysorbate 20, LifeVantage uses this emulsifying agent only if it has less than 1 part per million of ethylene oxide. This means that for every 10 milliliters of a product, the total amount of ethylene oxide will be less than 0.00000011 grams. This trace amount of ethylene oxide is so low that it cannot be measured. These levels are far below the maximum amount allowable. This is yet another reason to choose products from such a reputable company as LifeVantage, whose strong focus on ingredient quality control ensures the purity and safety of all its ingredients.
Should I be concerned about Phenoxyethanol?
Phenoxyethanol is a synthetic preservative found in all four TrueScience products. Why was this synthetic preservative used instead of natural essential oil? The answer is that it is known to be one of the safest preservatives for cosmetics when used at low concentrations and least likely to cause contact dermatitis. To be an effective preservative, phenoxyethanol needs only be used in a very small percentage of the entire product equaling less than 1% of the total. This is a stark contrast to a natural essential oil, such as Tea Tree Oil, which must be used in much higher concentrations of 5% to 10% or more. While essential oils can kill some microbes very well at those concentrations, it can’t kill others or prevent them from growing, including bacteria, fungus or mold. And these oils are known to contain allergens that can cause skin sensitivity reactions, such as contact dermatitis. The concentration of phenoxyethanol in each LifeVantage TrueScience product is less than 1%:

- TrueScience Ultra Gentle Facial Cleanser: 0.5%
- TrueScience Perfecting Lotion: 0.92%* (*a slightly higher concentration is necessary because of the higher water content necessary in this product)
- TrueScience Eye Corrector Serum: 0.50%
- TrueScience Anti-Aging Cream: 0.45%

Other important reasons why essential oils are not used in the TrueScience regimen:

- Allergic Reactions / Contact Sensitivity
  Some people are allergic to them and may have an increased risk of allergic reaction, such as rash or contact dermatitis.

- Overly Oily—Uncomfortable—Rancid
  Another reason is that a product with high percentages of an essential oil would be, well, overwhelmingly oily. While there might be a moisturizing benefit, there would be no anti-aging benefit and be uncomfortable. And without proper storage, oils will turn rancid. All these factors would significantly undermine the safety and efficacy of any cosmetic product.

Still the Best Option
Phenoxyethanol is still the best option to preserve our formulas that contain a variety of ingredients including botanical extracts. Phenoxyethanol is commonly found in skin care products sold at leading health stores. So called “natural” essential oils, while known to function as a preservative, nonetheless have significant limitations that pose risks to safety and may not be soluble in water based system such as a lotion. There are no other known effective preservative to do a similar job. Parabens are a bad alternative. It is better to use an ingredient that is well-characterized with a known safety profile than to take a risk with an ingredient just because it is “natural.”

Have TrueScience Skin Care Regimen Ingredients been tested for safety?
Yes, because LifeVantage is an international company distributing in many different countries and climates, the company and its consumers must have confidence that product quality will not deteriorate in storage, in transport to the consumer. LifeVantage has selected the highest purity and quality of substances at effectively low concentrations, including the aforementioned synthetic ingredients polysorbate 20 and phenoxyethanol, that strike the optimal balance to maximize product safety and efficacy.

The purity and quality of ingredients raises product safety and efficacy to the highest possible level. These high standards are attainable because of the individual characteristics that are known and proven by each ingredient, specifically giving careful attention to the amount or concentration used in any given product. Altogether, they must be verified safe in clinical sensitivity tests, which LifeVantage has performed with every product.

i. As part of an eight week clinical study, participants were asked to complete a self-assessment survey based on their use of the TrueScience products. Individual results may vary.
viii. Hagvall L et al. Lavender oil lacks natural protection against autooxidation, forming strong contact allergens on air exposure. Contact Dermatitis 2008;59: 143-150.