AHAs
What is an AHA? Small, mildly acidic molecules that have a hydroxyl group on the alpha carbon next to the acid group; literally an alpha-hydroxy acid. AHAs are known as fruit or sugar acids because many are found naturally occurring in plants and sugar. Glycolic acid is found in sugar cane, lactic acid is found in the body and sour milk, malic acid is in apples, citric acid is in citrus fruit, and tartaric acid is in wine.
PHAs/Bionic acids are the next generation of AHAs. Gluconolactone derives from glucose (from corn), and Lactobionic acid derives from milk sugar.
How do AHAs work? AHAs increase collagen and GAGs
(hyaluronic acid) to plump and smooth skin. They exfoliate the surface layers making skin soft, stimulate cell turnover, and improve clarity and skin tone by helping to even pigmentation. AHAs do not promote blood vessel growth.
What are the advantages to using AHAs?
<ul> <li>AHAs are used for skin aging (and adjunctively in acne) to promote normal cell turnover, reduce pore size, and provide anti-aging effects. (Improved clarity, increased skin plumpness/skin volume reduced appearance of fine lines &amp; wrinkles, increased collagen, firmness and elasticity, etc.)</li> </ul>
<ul> <li>The advantage to using AHAs is their proven benefits for anti-aging and acne, relative to most other ingredient technologies, which are largely untested.</li> <li>In addition, AHAs provide perceivable benefits</li> </ul>

The retinoids are generally not suitable for skin that is prone to developing or already has telangiectasia, such as rosacea. In some severely photodamaged people, telangiectasia is apparent; retinoids would generally not be used in these individuals.	<ul> <li>quickly relative to other anti-aging ingredients (even retinoids) due to their immediate effects on the stratum corneum producing softness and a velvety feel.</li> <li>Further, AHAs do not increase telangiectasia as retinoids can.</li> <li>PHAs/Bionics, a newer class of AHAs, offer the additional benefits of: gentleness, moisturization, antioxidant/chelator, barrier strengthening, compatibility with sensitive skin.</li> </ul>
What are the side effects of retinoids?	What are the side effects of AHAs?
Many people experience skin sensitivity, redness, dryness/tightness, scaling. Telangiectasia (visible blood vessels) can be caused or worsened. It is recommended to start with application a few times a week and increase usage as tolerated.	<ul> <li>Conventional AHAs such as glycolic acid and lactic acid cause stinging and burning in some users. Occasionally, there can be transient redness and peeling.</li> <li>PHAs/Bionics do not cause stinging, burning or redness even in sensitive skin users</li> </ul>
What are the alternatives to retinoids?	What are the alternatives to AHAs?
The alpha-hydroxyacids (AHAs) provide similar benefits to skin for anti-aging, cell turnover and skin smoothing. They do not promote the development of blood vessels, so AHAs are a preferred treatment alternative for aging skin where telangiectasia is a concern. The milder PHA/Bionics are the ideal option for sensitive skin, offering the same benefits as AHAs, without stinging (i.e., for rosacea and eczema prone skin)	<ul> <li>Since few ingredient technologies have significant data to support their use in antiaging, there are few well-supported alternatives. Retinoids are the best alternative. Other newer technologies may be considered alternatives but their effects have yet to be proven relative to AHAs: peptides, kinetin, vitamin C, etc.</li> <li>Most other ingredient technologies do not have the breadth of skin benefits as the AHAs and retinoids, which are multifunctional in skin, and provide benefits to all of the layers of the skin (not just exfoliation or just collagen building for example).</li> </ul>

What are the critical "watch-outs" with	What are the critical "watch-outs" with AHAs?
<ul> <li>what are the critical watch-outs with retinoids, i.e. sun exposure?</li> <li>Retinoid use increases the skin's sentivity to sunlight. Diligent sunscreen use and sun avoidance is recommended.</li> <li>Watch for irritation and scaling; reduce use as needed to improve tolerance.</li> <li>Prescription retinoid products are tested and known to be stable. However, many cosmetic formulations contain retinol, which is unstable to heat and light, and is quick to degrade, if not formulated and handled under appropriate conditions.</li> <li>Retinol, generally used in cosmetic products, is highly unstable and requires a high degree of care during manufacturing. [It is likely that many skin care companies do not manufacture under the right conditions.]</li> </ul>	<ul> <li>AHAs cause stinging is some people. After a couple of weeks of use, this sensation usually subsides.</li> <li>To a lesser extent, there can be some visible exfoliation. If this becomes uncomfortable or skin is red and irritated, reduce frequency of use or use a lower concentration of AHA</li> <li>AHA use can make the skin more sensitive to sunlight. Use sunscreens daily. PHAs/Bionics do not increase the skin's sensitivity to UV light.</li> <li>AHAs must be formulated properly to deliver exceptional benefits without stinging and irritation. Products must be formulated at the optimum concentration and pH to deliver best effects. [Most companies don't understand the intricacies of developing effective, quality AHA products; rely on <i>NeoStrata</i> as a source.]</li> </ul>
How do retinoids interact with more aggressive procedures, i.e. lasers? Retinoids are good complementary topical to more aggressive procedures in a preparation and maintenance situation. However, after a procedure the skin may become very sensitive to the retinoid. Alternate moisturizers/anti-aging treatments such as the PHAs/Bionics should be used immediately post-procedure until the skin is no longer sensitive.	How do AHAs interact with more aggressive procedures, i.e. lasers? AHAs provide strong complementary skin smoothing and anti-aging benefits to cosmetic procedures. Due to the risk of heightened skin sensitivity following procedures, use of PHAs/Bionics is recommended over AHAs. The PHA/Bionics do not irritate the skin, and provide additional benefits including moisturization, antioxidant effects and barrier strengthening. Once skin has healed from a procedure, use of AHAs can resume.
How often and frequently can/should you use a retinoid? Retinoids are frequently applied once daily as tolerated. Application is reduced when irritation is present. Cosmetic formulations are often formulated to be used twice daily.	How often and frequently can/should you use an AHA? AHAs can be used twice daily. If skin is sensitive, use once daily, or use PHAs/Bionics.

Does use of a retinoid make other products obsolete, or does it increase necessary number of products used? Retinoids offer good benefits to skin. But, they have drawbacks too. The dryness and irritation that results from their use is often countered by using other, gentler emollients.	Does use of an AHA make other products obsolete, or does it increase necessary number of products used? AHAs make other non-performing moisturizers obsolete. Why use a product that doesn't offer significant benefits when you don't have to - the days of simply moisturizing are over. Now, continuous rejuvenation is possible for all skin types with either AHAs, PHAs or bionics
Can you use a topical combination therapy with retinoids? Retinoid use is frequently combined with other emollients to help improve tolerability. In addition, to achieve additional anti-aging effects, retinoids are often paired with PHAs/Bionics (one in the am, one in the pm) to promote anti- aging and skin smoothing effects without irritation.	Can you use a topical combination therapy with AHAs? AHAs can be combined with and complement the activity of most other ingredient technologies/products and procedures.