

The Ordinary Growth Factors AMA on Reddit with Rita

On Thursday 16th Rita from The Ordinary hosted an AMA on Reddit. You can find the whole [Q&A on Reddit here](#). But for those of you who are not on Reddit, here are some of the questions posted and answered by Rita.

The Ordinary Growth Factors - You can buy it here direct at The Ordinary

<https://tidd.ly/405zQ32>

Here's your quick simple guide.

- An age-support serum containing a 15% solution of growth factors to help minimize and repair visible skin damage to regenerate the look of aging skin.
- Advanced Signs of AgingG
- Waterbased serum
- Apply after cleansing. It's quite thin so apply before other water-based products if they're slightly thicker.
- Avoid Direct Acids & Direct Vitamin C
- You can use morning and evening
- Just a few drops is all you need.
- Buy it here <https://tidd.ly/405zQ32> * free delivery on orders over 25€\$

Which product should you not use with GF15%

Great question! As growth factors are structurally similar to peptides, we recommend avoiding applying our GF 15% Solution in the same regimen as formulations containing direct acids and direct vitamin C. This is because the acidic nature of the formulas can lead to the hydrolysis (breakdown) of the growth factor molecules. Read more here <https://tidd.ly/405zQ32>

Can GF15% be used with Tret?

When it comes to using our products alongside prescription products, I always recommend checking with your dermatologist or doctor just to be on the safe side ;) Cosmetic retinoids can be easily combined with this formulation, so my guess is that it should be ok, but when it comes to medications I always err on the side of caution! Read more here <https://tidd.ly/405zQ32>

How is the growth factors that are plant based compare to non-plant based?

To know this, we need to go back in time ;) The first growth factors introduced to skincare in the 90's were derived from the fibroblasts of neonatal foreskin (harvested from a single circumcision many years ago). You can imagine many people were not comfortable with this ingredient sourcing, so scientists started working on producing growth factors through biotechnology. To produce our growth factors, our supplier uses a plant called *Nicotiana benthamiana* as a biofactory! The instructions for the production of these growth factors are put inside tiny capsules and mixed with silica particles; this mixture is then rubbed by hand (!) on the plant leaves, and the silica particles create micro-tears that allow for those instructions to enter the cells of the plant. The plant is then ready to produce these growth factors indefinitely, so they can be extracted and included in formulations. Read more here <https://tidd.ly/405zQ32>

How does the growth factors in this product compare to pricey brands like allies of skin for example? How is The Ordinary able to source for such a less amount?

I can't comment on other brands' business practices, as we really don't know what's going on behind the curtain! What I can say is that The Ordinary has always been committed to democratizing ingredients, both familiar and novel, by pricing them fairly in a way that brings accessibility to the consumer, while allowing us to run our business in a sustained way. For novel ingredients that may be pricier to get from a supplier, it really is a numbers game--and we would not be able to order high volumes of these ingredients at a competitive price if it wasn't for our community supporting our growth over the years :) We started by bringing you ingredients that were already accessible to us as a small company at the time, and now that we have grown we want to continue passing on that accessibility whenever possible! We do use from 2.5 to 3 times the minimum concentration of these actives recommended by the supplier to achieve good results, so we are definitely not saving costs there ;) Read more here <https://tidd.ly/405zQ32>

What's the difference between Growth Factors and Peptides? I've heard they work better together is this true?

What is important to remember is that "peptide" is a general term for a chain of amino acids :) Peptides in skincare products can be identical to peptides that naturally occur in the body or not, and they can have many different functions and modes of action. More specifically, growth factors are a class of biomimetic (nature-identical) peptides

that, in the body, are involved in natural mechanisms of skin repair. So growth factors ARE peptides! Read more here <https://tidd.ly/405zQ32>

As we age, the skin's natural growth factor content is depleted, which can lead to uneven texture, and signs of aging including wrinkles, and loss of firmness and elasticity. The growth factors in this formulation have been found to help repair visible skin damage by minimizing signs of aging. Some peptide-based products can contain multiple peptide technologies to target signs of aging through a multi-pathway approach, while our GF 15% Solution is formulated with 3 skin-identical growth factors, providing a triple action approach to multiple age-related concerns of the face and neck. Read more here <https://tidd.ly/405zQ32>

When in doubt, we recommend giving peptide- and growth-factor-based formulations a try for at least a month, and assess which formulation suits your needs best. You can also combine them in a regimen, as each of these molecules will have its own mode of action, so using them in combination means that you will be targeting signs of aging through multiple pathways. Read more here <https://tidd.ly/405zQ32>

I've had great results with the GF Solution. However, it's difficult to apply because it's very runny. Can I mix it with another serum, such as Matrixyl, to make it thicker?

We always recommend applying our formulations directly to the skin as that is how they were tested during our clinical studies. but I do agree this formulation is quite runny! If you wish to mix it with another peptide serum (I personally also love to apply multiple peptide-based products in one regimen!), do so every time you apply the product. Don't mix a big batch of these two, as it could compromise the stability of the formulas ;)

There have been some concerns about growth factors being linked to cancer. It's the reason why I've personally been hesitant to try the new growth factors serum. How do we know that they're safe enough to be used in skincare?

I've heard their safety be justified by claims of them being unstable in room temperatures and quick to degradation, and their size too large to penetrate the epidermis, but does that then compromise their effectiveness?

We have received many questions on a link between growth factors and cancer, and I was the scientist tasked with putting together a response. This is what I found in collaboration with our in house toxicologists: the growth factors in our product are cosmetic ingredients, engineered to provide age supporting benefits to the surface of the skin. Because they are structurally identical to growth factors found in the skin, they are indeed quite large molecules. While their size does not affect their efficacy (which we have demonstrated through clinical testing), it does mean that they won't be able to penetrate through multiple layers of the skin and become systemically available.

Additionally, cosmetic ingredients must undergo safety assessments to be approved for cosmetic use in multiple jurisdictions—and part of this assessment includes exploring the possibility of carcinogenicity and mutagenicity. Known carcinogens are identified, and banned from use in cosmetics in the European Union, for example. The raw materials providing the growth factors present in this formulation have been directly tested and demonstrated to be non-mutagenic. Additionally, before placing our GF 15% Solution on the market, our Product Safety team conducted a literature review and safety assessment to ensure this product is safe to use. The concentration at which growth factors are included in this formula is well below the safety threshold and our team identified data demonstrating that topical application of EGF is not associated with increased cancer cell proliferation (growth) or increased incidence of cancer.

We know that the pathophysiology of cancer is a complex topic, and so is the study of the effects of chemical substances on the human body. While our toxicologists have not identified evidence of topical growth factors having an effect on cancerous cell growth, we understand consumers may have concerns, and advise those with a past history of cancer to contact their doctor before introducing growth factors to their skincare routine.

As for the second question, in terms of stability, our formulas undergo stability testing at high temperatures (40 C) before being placed in the market. As for their molecular size, the growth factors in our formula range from 7kD-27kD. We understand this large molecular size may pose questions regarding their ability to penetrate the skin,

however there are multiple pathways for skin penetration, some of which may allow for penetration of larger molecules. While the exact mechanism of action is still under investigation for this group of molecules, their efficacy has been documented in published scientific literature and confirmed by in vivo and in vitro testing by both the ingredient supplier, and DECIEM working with third party independent labs. Specifically, a third party lab has conducted a clinical study on a panel of 42 participants for 10 weeks, where they observed that our GF 15% Solution provided improvements in multiple signs of aging in as little as 1 week—including wrinkle reduction, and firming of the face and neck. These are some of the best results I've seen for an age-supporting formulation in my 7 years at DECIEM!

Esté producto funciona en piel de color también?

Hola :) El efecto de estos ingredientes no se ve afectado por el tono de piel. Sin embargo, puedo confirmar que este producto fue clínicamente comprobado en 42 personas en Brasil y, de ellas, 10 personas tenían un tono de piel perteneciente a los tipos Fitzpatrick IV-VI.

What is the difference between this, retinal, and retinol? Thanks!

Indeed with so many products to choose from, it's good to know the differences and similarities, to know what is most suited for your skin concerns! While both growth factors and retinoids are known for targeting the appearance of signs of aging, they do so through a different approach. Retinoids work by supporting the skin's natural collagen and elastin content, but also primarily by supporting skin cell turnover, which naturally slows down with age. This will provide you with that fast, skin-smoothing effect. As for growth factors, they are skin-identical molecules that are involved in the skin's natural mechanisms of repair, making them a great option to repair visible skin damage. They not only support the skin's natural collagen and elastin content, but also the organization of these molecules into a sturdy scaffold, promoting younger-looking, firmer skin. While retinoids should only be used in the evening, GF 15% Solution can be used both in the morning and evening, for round-the-clock age support. Both ingredients can be combined in a regimen (for example GF 15% Solution morning and evening, and our Retinal 0.2% Emulsion a couple of nights a week).

Can I use growth factors with microneedling?

Thanks for the question :) We haven't tested GF 15% alongside microneedling, so we can't advise on its efficacy, unfortunately! If you wish to do so, we recommend doing a small patch test first to see how your skin reacts before applying anything to your whole face. Hope this helps!

Our safety assessments are always done with intact skin in mind, so it's hard to understand if they would be suitable for microneedling, which is essentially creating micro-wounds on the skin. When in doubt, I always recommend patch testing before going for a full application :) You can find our guide to patch testing here:

<https://theordinary.com/en-us/patch-test.html>

Is this safe for pregnant or breastfeeding moms? When it comes to using our products during pregnancy or breastfeeding, we always recommend consulting your doctor, especially before introducing a new product into your skincare routine during such a crucial time for the parent and baby <3

This is water-based, so it can be applied after cleansing. But are there any other water-based products that you think should come specifically before or specifically after this? It is quite watery. This is totally anecdotal and not based on any science whatsoever 😊 but I usually go thinnest to thickest. Since this serum is probably the thinnest in my current rotation, it goes on first thing after cleansing (and toning, if I do use a toner). Hope this helps!

Hi, very interested in this. How to use this in my routine? Currently also using T.O. Power Peptides (should I keep this?), as well as an epigenetic hyaluron filler serum. Ty!

Hello! You should definitely give it a go, it's been a firm favourite for me! As it is a water-based serum just layer it with other water-based serums in your routine, before oils or creams. You can definitely layer it with Multi-Peptide + Copper Peptides 1% Serum as each of these molecules will have its own mode of action, so using them in combination means that you will be targeting signs of aging through multiple pathways. But you can also replace it with the new GF 15% Solution and see how you get on ;)

Considering these are large molecules, would use of skin care devices like microneedling, micro currents etc assist with penetration? They very well could! However, as a scientist, since we have not tested the efficacy of this product alongside

these devices, I can't (within good conscience) confirm or deny this :(maybe something to keep in mind for future clinical studies!

Which products would be a match made in heaven for a regimen for ageing skin, in the morning and evening?

It really can depend from one person to another, as signs of aging can manifest themselves in different ways and at different ages, but as a 34 year old who's trying to keep signs of aging at bay this is what I do: In the morning, I start with a hydrating serum (something like our Amino Acids + B5), followed by an antioxidant serum (I'm currently OBSESSED with our Pycnogenol 5%), a moisturizer to lock everything in (my favourite is Natural Moisturizing Factors + PhytoCeramides) and of course SPF (I use a lot, at least two finger-lengths' worth). In the evening I really focus on active age-supporting technologies so I usually layer some peptide serums with either my favourite retinoid or exfoliating product! I'm currently using GF 15% Solution followed by Retinal 0.2% Emulsion and a moisturizer, or our Saccharomyces Ferment 30% Milky Toner followed by again GF 15% Solution and a moisturizer. I feel like the golden rule for me is Antioxidants + SPF during the day and age-supporting actives at night <3

Great question! We'd recommend the following routine: GF 15% Solution, Hyaluronic Acid 2% + B5, Retinol 0.2% in Squalane (PM), 100% Organic Cold Pressed Rose Hip Seed Oil (PM). We really hope this helps <3

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Would you recommend this for someone in their 20s? While there is nothing wrong with using any age-supporting product in your 20s, one thing to note is that, if you have no visible signs of aging, you won't see any visible benefits when a product like GF 15% Solution, which I know can be enough for someone to stop using a product. On the other hand, due to their skin renewal benefits, retinoids do give you that smooth skin with a radiant appearance, so even if you don't have wrinkles to reduce, you can see a difference when using retinoids as a younger person! If you don't mind not seeing visible results, and want to prevent signs of aging like fine lines and wrinkles down the line, you can definitely include this product in your routine :) However, make sure you have your SPF and antioxidants covered, as they are the best way to prevent premature aging <3

So it's okay to use GF with a non prescription retinal in the same routine? Yes, our GF 15% Solution can be combined with any non-prescription retinoid :)

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