

Trey: Hello everyone and thank you all for joining us. Today's webinar, InuMax Advanced Retinol Cosmetic Active is brought to you by Air Products. Your presenters today are Joaquin Perez Sanchez and Michael Zucker. Joaquin Perez Sanchez is the EMEA Regional Marketing Manager for the Personal Care Business unit at Air Products. He is based in Germany and is responsible for strategies and tactics that deliver value to our customers in the region.

Joining Joaquin is Michael Zucker. Michael is the Global Technology Lead for the Personal Care Business unit at Air Products. He has 16-plus years of experience in the development of delivery systems, technology platforms, cosmetics actives, cosmetic formulations in general. He is the inventor of four international patent applications, and provided multiple co-authored articles in the field of cosmetic science.

My name is Trey McDonald with you all, and I'll be moderating today's event. You can send us questions by typing them in the question box that's located on your screen and our panelists will answer them at the end of the presentation. We're recording today's event and we'll send you a link by email when the slides and video have been posted to the UL Prospector Knowledge Center. With that, I'll let the presentation over to Joaquin. Joaquin.

Joaquin: Thank you, Trey. Hello and thank you for joining Air Product's presentation about InuMax Advanced Retinol Cosmetic Active. As Trey already introduced me, my name is Joaquin Perez, and I will start illustrating the functions, the usage and the trends of retinol in the personal care business, as well as the challenges affecting retinol-based products. Afterwards, my colleague Michael Zucker will present our proprietary delivery system called InuMax, and our new product which is called InuMax Advanced Retinol Cosmetic Active. And he will illustrate some of the benefits of our new product, and how you can leverage these benefits in your formulation.

Inumax's advanced retinol uses a patent-pending delivery technology which helps to reduce the risk of skin irritation, even in high retinol-containing formulations, while at the same time provides a superb retinol stability profile, and enhancing the epidermal viability retinol. But let's get this started looking into the retinol functions in the skin. As you can see in these slides, retinol is among the best well known and well-studied cosmetic ingredients available to use for formulators. And consumers believe in the reliability of retinol as a solution to improve the appearance of their skin.

So let's review the functions of retinol and why it is an essential ingredient for the formation and maintenance of the skin. The first thing is that retinol is also known as all-trans retinol belongs to the family of endogenous natural retinoids. Therefore, it's not a synthetic ingredient, and it's one of the lipid soluble compounds that constitutes the vitamin A. So also, including retinyl esters,

retinaldehyde and retinoic acid. And many of the functions of the vitamin A are mediated by retinoic acid, which regulates gene expression by activating the skin cell retinoic acid receptors.

Therefore, the anti-aging effect of topical retinol is mainly linked to the conversion of retinol into retinoic acid in the skin, which requires several oxidative steps. And we show here in the retinoic acid metabolic pathway, retinol is a precursor of synthesis of endogenous retinaldehyde and retinoic acid. The oxidation of the retinol results in the formation of an aldehyde, which is called all-trans retinaldehyde, or mostly commonly known as retinol. Which can be further oxidized in a keratinocyte to a carboxylic acid, which is called all-trans retinoic acid or tretinoin. The retinoic acid is synthesized and can be either initiate a signal event that regulates the transcription of the target genes, or can be further oxidized to four-hydroxyl retinoic acid, driving its degradation and activation.

The gene activation induced by retinoic acid in the skin cell, mainly modulates the thickening of the epidermis, the UV induction of extra-cellular matrix metalloproteinase, the stimulation of collagen synthesis, and the regulation of keratinocyte terminal differentiation. So proliferation of keratinocyte. Retinol seems to play a key role in the aging process of the skin, since many aging-dependent changes may be reversed by topical application. These changes are associated with an increase of the smoothness of the skin, or can be changes associated with the improvement of the coarse wrinkling. For instance, through the compaction of the stratum corneum, the thickening of the granular layers, the increase of intracellular new skin deposition, or simply by increasing the synthesis of collagen and inhibiting its degradation.

As we can see in the next slide, retinol is widely used in personal care, and is an ingredient which commonly is used in anti-wrinkle products for facial care, for body care, for hand care, and some other reason or even green source application. Most retinol-based cosmetic formulations are used to counteract skin aging and photoaging. There are many references and literature related to the applications, both in the skin aging as well as in photoaging. And the intention is to prevent the oxidative stress or to control cutaneous bacterial flora. It is in the field of repair of the damage caused either by the age, chronological aging, or by overexposure to the sun, that retinol has proven to be extremely active.

And this effectiveness is well known and enhancing the appearance of the skin by reducing wrinkles, by allowing dryness, roughness or even helping to reduce and minimize the thickness of the skin.

In the sense of the global market drivers, according to several market researchers, the global market of vitamins is always increasing, and in particular the retinol demand is increasing as well. Which in personal care, we estimate at a compound, an annual growth rate of 6.6% by the next three, four years. The

drivers for this growth seem to be related to, of course, as everyone knows, demographical changes, and the increasing life expectancy in a world population that is rapidly growing and aging in many of the Western countries. And also, the spread of the social media, which is increasingly raising the consciousness of the benefits of retinol.

I think it's an exercise that anybody can do just googling and looking at how many reference happens about the benefits of retinol in anti-aging routines, which is very well known actually everyone in the business knows. And the rise, of course, in the stress caused by the lifestyle, by pollution, which are affecting in many cases the developing countries, and this is driving also the growing demand of retinol. However, increasingly, there are brands which are differentiating their products through using claims relating to retinol, and particularly in reference to the percentage of retinol contained in the formulation.

Some companies are using concepts like super-charged retinol and fortified retinol, and this is becoming much more of use and extensively in use for, particularly for the hardworking anti-aging products. In order to reinforce their clinical or high performing nature. In some countries, consumers are increasingly demanding more professional-grade or OTC cosmetics. I think in the US, it's particularly of great interest for consumers, and the high use levels of retinol with this high express retinol claim, is becoming crucial to gaining share in this market segment. But formulating these kind of systems can present unique challenges. Advantages as well, but challenges. And many retinol solutions in the market have not been optimized to address these challenges.

And we say about challenges, for instance the regulatory limits in the use of levels of retinol, have pushed through the outcome of the challenges like consumer expectations and expectations and requirements from the industry. But concerning the regulatory limit in the use of levels of retinol, in some countries, there are currently national regulations setting maximum outright concentrations of retinol for the cosmetic products. For instance, in Canada, retinol is restricted for use in cosmetic products by the Canadian hot list, which permits retinol at concentrations equal to or less than 1% retinol equivalent. Also in Brazil. And these are the health agencies regulate the products containing retinol, has to be in a percentage below 1%, otherwise if exceeding might be considered drugs.

And in the US, the conventional maximum concentration of retinol that formulators use is 1%. Although everyone knows in California, it's regulated by the safety cosmetic program, and proposition 65, which lists retinol and retinyl esters when in daily dosage in excess of 10,000 international units, or in other words, 3,000 retinol equivalent, as maximum allowable dose. Which is not currently still adopted by the California Code of Regulations. If we move to the European Union, currently there are no maximum concentration limits in the use of retinol in cosmetic products. However, the scientific committee on consumer

safety, the 6th of October, so a month ago, adopted a final option on vitamin A.

Let me remark that vitamin A is considered to be retinol, retinyl palmitate, and retinyl acetate. As a conclusion of this opinion, the committee considers that the use of vitamin A in face creams, hand creams, leave-on products and rinse-off products, should be up to the concentration of 2.3% of retinol equivalent per set safe, considered to be safe. And also, that in body lotions, up to the maximum concentration of 0.05% of retinol equivalent is also considered per set safe. But it is of note that these estimates are based on a worst-case scenario, assuming that all the cosmetic products contain vitamin A at the maximum concentration.

Nevertheless, this opinion is currently subject to a commenting period, and does not necessarily reflect the view of the European community. As I said, it's just the opinion of the scientific community, although it's relatively very new. In Asia, and particularly in China, Japan, and South Korea, in our research, we have not been able to identify any cosmetic regulation authorities that are concluding a limit in the use of retinol in cosmetic products. So regulation is in itself one of the challenges. But there are also the challenges that many retinol solutions need to address. The main ones are obviously expectations and experiences of customers, and the requirements of formulators. Because it is logical that formulators of cosmetic products are aiming for greater competitive advantage in the market.

When the beneficial effect of a...let's call it a lower strength retinol product are seen slowly and over a long period of time, very often leads, this drives to discontinuation in the use of these products by consumers. And this is really one of the cases that many companies have to be aware of in the designing retinol-based products. In some countries, consumers simply prefer prescription-like or OTC products as very highly regarded for anti-aging programs. So the high retinol levels can also create very good expectations in the sense of efficacy, but can also raise concerns of adverse side-effects like irritation, arrhythmia, cancer scaling. From the perspective of formulators, high retinol levels should also provide a high degree of retinol stability and should enable the delivery of a high-load of retinol to the deeper layers, the lower layers of the skin, to encourage the appearance of a more youthful skin. In other words, to maximize anti-aging efficacy and minimizing its degradation.

So in order to overcome those challenges, one of the most effective approaches in the use of cosmetic practice is encapsulation of the active. In the case of retinol, encapsulation of retinol can deliver some key benefits, which we have listed here, and include the improvement of stability of retinol, the improvement of viability, and the reduction of irritation potential on the skin. Let's start looking into the improvement of the stability of retinol as provided by the final report of the European Scientific Committee. The vehicle used for retinol delivery would play a critical role in eliciting its efficacy, as retinol is extremely unstable and easily gets

degraded to biological inactive forms on exposure to light and air.

And it is well known by the industry that encapsulation technologies can enhance the stability of retinol, simply by safeguarding it from the environmental or intrinsic factors. Also in this final report, as mentioned, there are general comments related to the skin viability of unencapsulated retinol. As you can read, it's says that recent in vitro skin penetration data of short-term skin penetration, although most found that the vast majority of the test material was absorbed by the stratum corneum, and was thereby considered not bioavailable. In comparative clinical trials with cosmetic products based on retinol used in encapsulation of systems and products which contain unencapsulated retinol, have been observed results that provide attractive results showing the improved viability of retinol by delivering the ingredients into the lower layers of the epidermis.

However, the encapsulation of retinol can also help reduce the irritation potential of the skin. According to the Norwegian Scientific Committee for Food Safety, the comment on the skin irritation of unencapsulated retinol are that the retinoids used in cosmetics may also induce local irritation. The concentrations of these retinoids in cosmetic products are to a high degree determined and limited by these immediate adverse effects. And it has been demonstrated that some encapsulation technologies can reduce the skin irritation potential of retinol, such for instance by modulating the release of retinol into the skin.

And now, I would like to ask Michael Zucker to present [inaudible 00:19:08] and product, InuMax Advanced Retinol, which we all believe is a very interesting solution for formulators of high-load retinol products that can lead to results consumers want, without the possible drawbacks that high retinol use levels can generate. Thank you.

Michael: Thank you Joaquin for the nice introduction and for providing all the valuable information regarding the cosmetic raw material retinol, well proven and documented efficacy in skin, and in particular also having a...let's say, an introduction to the regulatory and marketing aspect of retinol. My name is Michael Zucker, and I would like to invite you to join me in presenting the technology part of the webinar, which is specifically dealing with our proprietary delivery system and product, InuMax Advanced Retinol Cosmetic Active.

The InuMax Advanced Retinol Cosmetic Active is a cosmetic ingredient that uses the innovative InuMax delivery technology to achieve a high-load of retinol encapsulation, and enabling the high use to have been claimed by formulators.

What is very interesting is that many encapsulation technologies have to compromise between high ingredient loading on one hand, and an ability to penetrate the skin on the other hand. InuMax technology is able to provide both

benefits. But what are we talking about? Our InuMax advanced retinoic cosmetic active contains 8% of retinol encapsulated with Air Product's patent pending [inaudible 00:20:47] InuMax technology. And the key benefits listed in this slide of our product are that, formulators can benefit from high-load retinol use-level claims, and our product has proven to significantly enhance the stability of retinol over 28 weeks, and provides lower skin irritation potential from retinol.

Moreover, InuMax Advanced Retinol Cosmetic Active uses an innovative delivery technology to enhance the epidermal bioavailability of retinol. And last but not least, our offering provides a cost-effective use of retinol in cosmetic formulation. So we have already discussed the claims, and now we'll see how we test this to provide the proof that these claims can be taken when using our InuMax Advanced Retinol Cosmetic Active.

As we have learned in previous slides, retinol is easily degraded, and stability is both a key formulation challenge and a principle driver for use of more advanced stabilization and delivery technology.

In general, unstabilized retinol will simply lose its efficacy by degradation, and will consequently lead to consumer disappointment and frustration. In some formulation, this can also trigger the yellowish color shift in the finished product. And this is what consumers will easily note. So the InuMax delivery technology provides an excellent protection to encapsulated retinol, as demonstrated and shown in [inaudible 00:22:26]. In this study, samples of InuMax Advanced Retinol Cosmetic Active were stored at room temperature, and 40° Celsius respectively, for a period of 28 weeks. The samples were opened and given, at given interval without any nitrogen or photo protection. And a small amount was taken for HPLC.

As the chart suggests in this study, a high degree of retinol could be recovered as active, even after 28 weeks of storage. By contrast, the previous study, using similar conditions, involving free retinol stored for 24 weeks, measured a retinol state level of less than 20% at room temperature, and less than 5% at elevated storage temperature of 40°. So the conclusion is that this study demonstrates that formulation using InuMax Advanced Retinol Cosmetic Active, can significantly benefit from an improved retinol stability.

In the second study, in vivo 5-dimensional intravital tomography was employed to follow and investigate the penetration profile of retinol in the skin. This seems to be a very, very new and innovative technology, and therefore I would like to have a few words regarding this method before explaining on this slide.

The multi-photo 5-dimensional intravital tomography represents a state-of-the-art test method that allows for non-invasive in vivo investigation and analysis of human skin. Conclusions on skin morphology are possible, as well as the

tracking of endogenous and exogenous fluorescence skin. The five dimensions comprise: facial, so this is the first dimension. And spectrally with both fluorescence lifetime endogenous which represents the fourth and the fifth dimensions. Advantages compared to the well-known confocal laser scanning microscopy are, the deeper penetration of low energy radiation, which is achieved with a multiphoton excitation, less scattering, and in particular, less damage to the surrounding tissue. Which actually qualifies the 5D-intravital tomography for in vivo measurement.

InuMax Advanced Retinol Cosmetic Active was used in a simple active solution to yield a 0.3% retinol level in the skin. The measurements were taken across several skin layers, as you can see on the slide. So starting from the left hand side, stratum corneum, stratum granulosum, stratum spinosum, and stratum basale. In the first row, you see the morphological features, and in the second row, in the below row, you see the [inaudible 00:25:38], which corresponds to a fluorescence lifetime. In this study, we could see that across the skin layer for five hours after application, the retinol had generally penetrated into deeper skin layer.

So in the study, the bluish emission color can be defined to retinol. So in particular, the picture down right, representing the stratum basale skin layer, shows very well bluish emission embedded in the green cell structure area, demonstrating that the use of InuMax Advanced Retinol Cosmetic Active yielded successful delivery of retinol to the deeper skin layers. That was a very, very new approach to the penetration profile. We are very proud on this study, and we will learn that we used later on once again.

In the next slide, we have also learned in previous slides that skin irritation can really become an unpleasantly sure side effect formulators increase the level of retinol to their product.

So a mature and very logical approach to investigate on the irritation profile of InuMax Advanced Retinol Cosmetic Active, we therefore run a epicutaneous human patch test with 50 panelists, according to Colipa compliance test protocol, which actually is given here on the slide. We were using an aqueous solution containing 4% of the raw material. Just consider our InuMax Advanced Retinol Cosmetic Active has a use-level of 8% retinol. So the outcome of the patch test suggested that InuMax Advanced Retinol Cosmetic Active is rated as harmless to the skin at 4% use-level, which corresponds, keeping in mind the 8% to a concentration of 0.3% of retinol. Which, for example, as Joaquin already explained, is still in the range of the regulatory discussion even in Europe. So that was good news.

And in a second approach, we decided to employ the in vivo 5D intravital tomography to profoundly investigate the skin irritation potential of retinol in the

skin. But what, we then have to select a very specific test protocol. Actually, we are working together with the dermatological institute of the university. Have plenty of studies applying the multi-photo 5D intravital tomography, suggested the link between the pro-inflammatory macrophage activation, and skin-intrinsic NADH fluorescence signal. And this was indicating an increased production of reactive oxygen species and in particular a modulation of cellular metabolism.

So to determine the cellular metabolism of epidermal cells in vivo, we utilized the 5D intravital tomography and recorded the NADH FLIM signal, which was representing the fluorescence lifetime of skin-intrinsic NADH. So for clarification, I need to explain what's in here at this stage. Free NADH in the skin is found to exhibit a fluorescence lifetime. How? Of between approximately 200 to 450 picoseconds. Whereas protein-bound NADH exhibits a prolonged lifetime, in the range of 2000 to 3000 picoseconds. And the resulting new fluorescence lifetime served at the intravital readout of the cellular metabolic state. The alteration of mean time therefore, is correlated with the level of irritation, and this is pointing towards increased stress and keratinocytes within the affected skin region. That is very, very new research. So how did it work in practice?

An aqueous solution containing 0.3% of free retinol, and one aqueous dilution containing InuMax Advanced Retinol Cosmetic Active at 4% use-level, which actually corresponds to 0.3% retinol elsewhere, were applied to panelists. 48 hours later, 5D IVT was used to monitor the level of cell inflammation activity as the proxy for possible onset of skin irritation. By simply measuring and quantification of the mean fluorescence lifetime in the NADH principle. The scale below the picture, it might be difficult to see, but there is the scale below the picture that actually shows the corresponding color coding, from short fluorescence lifetime count with orange color on the left, to the longer fluorescence lifetime on the right, representing a blue color.

But overall, across all panelists, the InuMax advanced retinol yielded mean NADH fluorescence lifetime values that were much lower than those measured for the area we treated with unencapsulated retinol. And this is reflected by the orange to brownish color of these...

Trey: [inaudible 00:31:40]

Michael: Yeah. By the orange to brownish color of the NADH FLIM signal of the InuMax advanced retinol treated area, that was very, very close to the color coding of the untreated region. And the chart on the right-hand side summarizes the results of the 5D intravital tomography irritation level. The NADH mean fluorescence lifetime observed in the untreated area of the forearm. Though this is the left, and as is indicated with [inaudible 00:32:15] was used as baseline control. And the results for the treated area were calculated and shown in [inaudible 00:32:22]. So the areas of the forearm that were treated with the

solution of our product, InuMax Advanced Retinol Cosmetic Active, showed only a slight increase in the NADH FLIM signal, whereas the solution of the unencapsulated retinol caused a significant increase in the NADH mean fluorescence lifetime without signal of approximately 33%.

And in addition, we took photos of the panelists' forearm showing an averaging scale also 48 hours after application, which was actually very, very well in compliance with the 5D intravital. All these results suggest that the use of InuMax Advanced Retinol Cosmetic Active is leading to a lower level of irritation-related response in the skin than experienced when using the comparable level of retinol. It is postulated that the InuMax ability to deliver retinol deep into the skin, as we have seen in one of the other protein studies, and to release this retinol at a modulated pace, could be helping to reduce the level of poor skin reaction seen with the free retinol.

To finally summarize. InuMax Advanced Retinol Cosmetic Active can help formulators for designing products focused on retinol, to achieve an outstanding level of retinol stability, combined with improved epidermal bioavailability retinol, and lower levels of irritation, despite using a high-load retinol efforts. This actually can in turn enable marketers to fully leverage the differentiating benefits of retinol level claims, while simultaneously reducing the risk of product issues side effects and the outcome for their customers and even consumers.

So in this connection, I would like to share with you very recent feedback we got from customers, currently evaluating or already using our product, InuMax Advanced Retinol Cosmetic Active in their formulation. They reported that they liked the protection sensory of the final formulation when using our product, for the fact that it is not negatively affected by the solid or any solid tangible particles. And they also liked that the product is very easy to formulate.

So I assume that many formulators are online and eager to know about the physical properties and incorporation strategies of InuMax Advanced Retinol in cosmetic formulation. Here is my comment, it's quite simple. InuMax Advanced Retinol Cosmetic Active is a pale yellow, slightly viscous liquid, that can easily process into the final formulation by simply storing at 30°. Maybe up to 40°. After the emulsification process and cooling down. And guide formulations are available upon request. Thank you very much for your attention. Thank you everyone.

Trey: What do we have?

Joaquin: I think we have time enough for questions. So thanks everyone for sending, and we have a lot of questions. I think we can review the ones we have received so far, and probably we can select the ones that might be of highest interest. Let me start, for those questions that are related to, for instance if we will

share the presentation slides after this webinar? For sure. Of course. The same like any technical information, any information related to the product, please visit the prospectors' website and you can request the commentation of the product that we have available for you. Okay? So that, I think is a little bit of a general question for many of you.

Let me start with one question which I think it's important. It says, what makes your product so unique versus other retinol products in the market? And we already covered, this is a proprietary technology that makes this product special. But a special why? Because it really is a combination of several key benefits. I would say it's not only offering an outstanding stability of retinol, which is an advantage in itself, but it's also providing a significant reduction of irritation potential, as already Michael has presented. And finally, increasing epidermal viability. I think we all understand that to reach the lower layers of the epidermis is also critical for the...as we explained the conversion of retinol into retinoic acid.

And customers are already using InuMax, as we said. They're reporting good feedback from the texture of the formulations, and as we said already, it's rapidly a product which is very [inaudible 00:37:43]. And I think this is really what it makes it altogether the product very unique and very different. Just to highlight that the delivery technology is obviously, we have five patent applications for this technology. And we will be, of course, able to share with you more information about this technology in the future. We believe there will be many other products based on this technology. Okay?

Trey: Any other question Michael that you've received?

Michael: No, that's fine. [inaudible 00:38:16].

Trey: Okay. We have another one, what is the inky composition of the product?

Joaquin: Yeah. I think this covers... the inky composition is obviously given in the technical info sheet of this product. As I mentioned before, you can get the information just by requesting through the Prospector website, or just getting in contact with our product right here. Okay?

Michael: Another fair one, why haven't you presented any performed studies of your product? In the development process, actually where we are from the very beginning focusing on the development of the delivery system itself. Because, as was mentioned in the presentation, that many delivery systems have to compromise between the one or the other benefit, and our target here was really to address all the issues you can have when using retinol in formulation in one go. So, the focus in testing was focused on testing on the performance of the delivery system. And Joaquin in the very beginning has already mentioned that it is well known that retinol in many different aspects influenced or had good

contribution to skin aging effect or performance on skin aging. So that is our answer, that we are already having been focusing on the development or test of the delivery system, rather than looking into the benefits of the retinol.

Joaquin: Right. I see that. I would like to cover another question, which is not the first time that it comes to us. And it says, would you recommend using your product in daily creams, or only in night creams? I think this is a concern for some customers, of course. We believe that both are possible. However, as retinol is per set unstable under UV light, we tend to recommend not using it in sunscreen products, combined with the common practice. But as I said, both daily creams and night creams should be both acceptable for the use of InuMax retinol, as we mentioned. Perhaps...?

Michael: Yeah, there's another one. How much InuMax retinol do you need to get 1% retinol in finished formulation for claim purposes? We actually we have 8% of retinol in our InuMax Advanced Retinol Cosmetic Active, so the calculation is that for getting a formulation that contains 1%, we would have to use 0.5% of InuMax per weight in the finished product. Similarly, for example, which might be more interesting for the European customers, a 4% of use-level would correspond to a 0.3% level of retinol in the finished good formulation.

Joaquin: All right. We have one which says, we have to go back to slide number 13, because it's a question, seems not to have been well understood. It says, how come the blue light is increasing after 18 weeks?

Michael: Yeah. I would take this question, actually because it's dealing with the technology problem. So what we have given here is real data from the HPLC. That is not a treat into the data points. So just connecting the points. And of course, there's a failure within the HPLC, that determination. And so this is no rationally we took behind this kind of sequence of the dots. So it could be that the dot at 18 weeks is lower than 28 weeks, which would, according to my reading, correspond to a...not to an increase in the content of retinol anymore. Because that would not be logical at all. So this is purely, it can be explained by giving the exact data of the measurement.

Joaquin: All right. Thanks, Michael. I think we should look into the next one as well, because there's a question related to, and it says, why is the retinol giving a blue fluorescence response?

Michael: Yeah. That's a good one. And I think I had only a very, very short time to talk about the intravital tomography and the FLIM. But Joaquin just opened the right slide. I talked a little bit about the scale which can be seen below the picture. And this is, I would call it the false color expression. Which means you are determining or measuring the fluorescence lifetime, and then you assign the kind of color code to the corresponding to values to the fluorescence lifetime. So

don't think that the fluorescence from retinol too. But this can be deducted to the FLIM signal. And is the kind of, let's say, scale as we present the fluorescence lifetime of [inaudible 00:43:54]. Nothing to deal with the energy, with the wavelength here.

Joaquin: All right. There's another question which I think is also of interest. It is, how is it different from the Rovisome Retinol Moist? Which I think this person knows our products. So it's another of our retinol-based products. I think obviously, the percentage of retinol contained is different. We're talking with InuMax advanced retinol, we're talking about, as mentioned before, 8% retinol contained, but also the delivery technology is different. Retinol Rovisome Moist is considered to be a technology which is more focused on...In the real sense penetration is equivalent, but in the sense of activity and how we can measure the activity, it performs differently. So we will recommend InuMax advanced for those, as we mentioned, for formulations which will require a high-load of retinol. And if it's not the case, and you opt for a formulation with lower content or percentage of retinol, then we recommend Rovisome Retinol Moist. Okay. That's...Right. So we have probably this one is also interesting. Could you provide the breakdown percentage of InuMax? No. We don't...

Michael: We just have the...the derivative is struggling with the [inaudible 00:45:46] the breakdown in percentage.

Joaquin: Perhaps refers to this percentage of degradation, probably. We don't know...

Michael: The degradation can be seen within the HPLC chart. So if we go to this chart, this is the real meaning of the question. We were able to recover approximately 73% of the initial used concentration of retinol after 28 weeks stored at 40° value, and as mentioned in the presentation, we did not present a sample from oxygen, due to the fact that we did not take any precaution with nitrogen or specific storage. With the room temperature storage, we actually were close to the 90% recovery with our product.

Joaquin: Two more questions. I think that the main one that might be of general interest is, how soon will you start seeing a benefit? We already mentioned that in our studies we have measured the positioning of retinol as we mentioned as viability in the lower layers of the epidermis happening in five hours' time. And I think that is a reference to say that if retinol reaches these lower levels of the epidermis, where most of the activity happens in the sense of conversion as we mentioned before, it is well understood that the activity starts to happen at this time, and when it's...obviously, the visual results will depend very much on the formulation.

But we can say that by using InuMax to get retinol, you can really ensure that the

activity happens in, as mentioned, in about five hours from the first application. One last question, Michael, perhaps also of general interest? I think we could go for, at 4% can we get results in the OTC products? I think we cannot really answer this question, because it depends very much on...[Crosstalk]

Michael: Yeah. That would require for sure a comparative test with the reference or the benchmark, you're right. Because you have to be aware of the situation that also the vehicle of itself for the formulation could influence the performance, with or without our InuMax advanced retinol system. We also have to take into consideration the influence of the vehicle itself. So that would need...it's very difficult to predict. That would need referential data.

Joaquin: All right. Okay. So I think we covered some of the most general questions. But in any case, we would really like to thank you for your attendance to this webinar. I hope you have enjoyed, and probably from this presentation, you would like to contact us for any further questions or requests. So please feel free to contact us, and thank you very much for your attention.

Trey: Great. Thank you to Michael and Joaquin for a really great informative presentation. We have had a couple of questions come in about, where can I get a copy of the slides, where can I get a copy of the presentation? We will be sending that to your emails, so we will have a link there. So do be checking your email for that in the coming days. We also encourage you to check out some of the other great webinars we do have on the Prospector Knowledge Center. Again, a big thank you to everybody for attending and have a great rest of the day.