Efficiency vs effectiveness. Are the fastest ways to fake a gorgeous bronze tan really worth it?

Do you know that 2 in 3 Australian's will be diagnosed with skin cancer by age 70? The dangers of sun exposure are well known, but luckily there is no need to put yourself at risk when you can fake a gorgeous bronze glow for a fraction of the time and effort.

Fake tanning is becoming a popular trend among girls and women, but most tans take hours of your precious time to develop. While a fake tan is much safer than a "baked" tan, there are a few things to keep in mind next time you're choosing a fake tanning product to ensure that you choose one of the quicker ones out there.

When you apply a fake tan, be it a lotion, mousse or spray, it causes a chemical reaction with the very top layer of your skin consisting of dead skin cells, the stratum corneum. The main ingredient called dihydroxyacetone or DHA, reacts with amino acids in this layer to form brown compounds called melanoids that give your skin a golden hue. In fact, 60% of this process is complete within the first hour but it slows down and can continue for over 24 hours.

With things to do, places to be and people to see, it is no surprise that many women can't spare the hours required to wait for a fake tan to develop. However, faster solutions are becoming available. One of the fastest fake tans in the market is the Bondi Sands 1 Hour Express Self Tanning Foam that gives you a light-medium glow in just 30 minutes. It seems like the perfect solution, but what makes this product work faster than others?

A tan that is applied as a foam reacts quicker with your skin than a cream, because the surface area of the reactant particles increases and in turn so does the frequency of collisions between DHA molecules and amino acids. This is called the state of subdivision. To put it simply, spreading out the DHA molecules gives them a higher chance of colliding with the amino acids in your skin. This could also be a reason to choose a spray tan because the same reasoning applies. Like a foam, spraying the product spreads out the DHA much more than if you applied a lotion or cream.

Another important thing to check before purchasing a fake tan is the concentration. The concentration of DHA in fake tanning products ranges from 5% to 18%. A higher concentration of DHA makes the rate of reaction faster because it means that the frequency of collisions between the DHA molecules and amino acids is increased.

Imagine that a bowl of red and green M&M's and pretend the red are amino acids and the green are DHA molecules. In the bowl there are two thirds red and one third green. If you shake it around the red and green ones will bump into each other a bit, but mostly the red ones would bump into each other. Now swap out some red ones for green ones so that there are now about the same number of each. The total number in the bowl is unchanged but now when you shake it the two colours will bump in to each other more often, therefore the rate of reaction between DHA and amino acids would happen faster.

Not only is a slower tan easier to get right, but most gradual tans last longer too. Both natural and fake tans only last as long as it takes for you to shed your top layer of skin, but since gradual tanners often contain moisturising ingredients they keep your skin hydrated for longer. A longer lasting tan won't just save you time later on, but also money because fake tans don't come cheap.

You can imagine that the magical stuff in a bottle of fake tan is liquid gold, and maybe it is judging by the success of businesses in this industry. The number of Australian self-tanning brand, Bondi Sands, is expected to turn over $80 million in the 2018-2019 financial year. Unsurprisingly, the fastest tans are the most popular. There's the one hour express foam that we sold around 550,000 of in the first week it was launched in January this year," says co-founder Blair James from Melbourne.

"The success of our one hour tan has been great and from the reaction we've had, the people who use it pretty much stand by it too" says his friend and co-founder of the brand Shawn Wilson.

Faking a tan in minutes trumps laying in the sun for hours any day of the week. Since the market for self-tanning products is booming, faster and more effective methods to achieve a perfect bronzed skin are constantly being developed. There are endless options made to maintain an enviable summer glow all year round, and choosing the perfect one will be easy. All you have to decide is whether you want to enter the very real world of fake tanning gradually or by taking the fast route.