HOW DOES THE SCANNER MEASURE CAROTENOIDS?

Its technology is based on an optical method known as **Resonant Raman Spectroscopy**, a Nobel prize-winning technology that has been adapted for biological measurements and is an established discipline backed by years of research.

The Scanner shows carotenoid levels in human tissue at the skin's surface using optical signals.
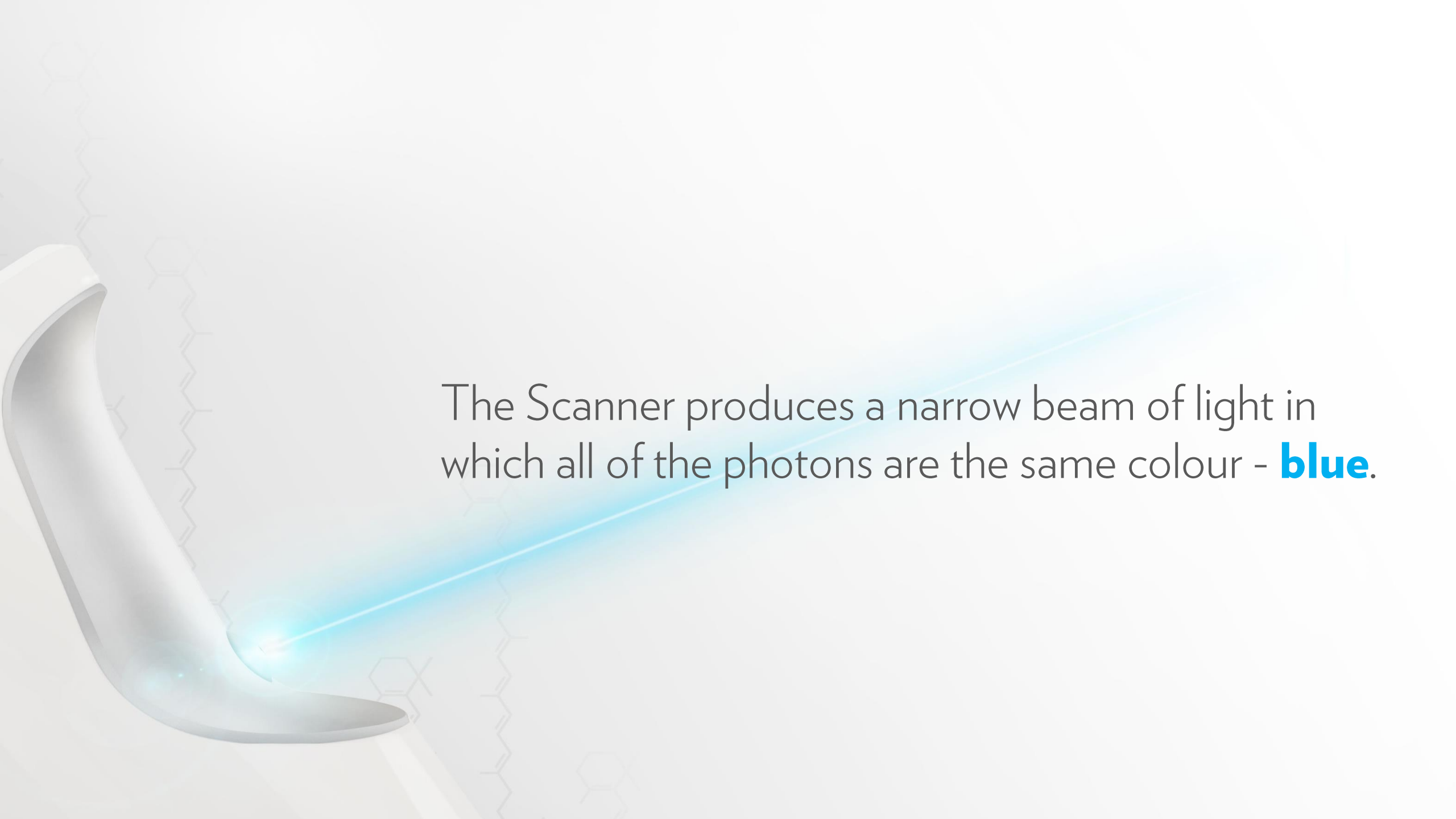
Carotenoids are primarily responsible for the red, orange and yellow colours found in fruit and vegetables. The more of these someone eats, the more carotenoids they give to their body.
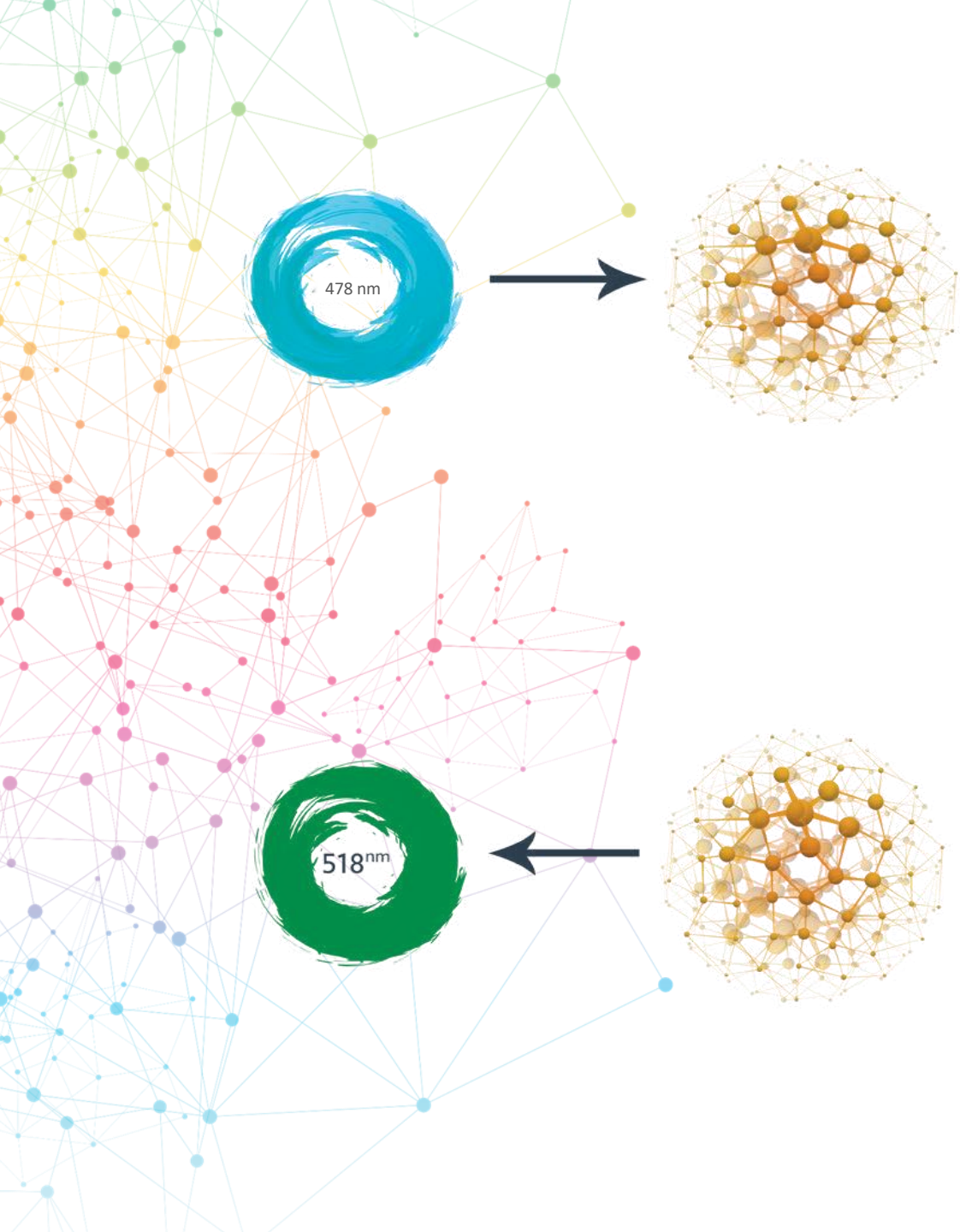
The technology behind the scanner works on the principle of light and its fundamental particle; **the photon.**

White light is built of photons of different wavelengths, which are seen as **different colours**.

The Scanner produces a narrow beam of light in which all of the photons are the same colour - **blue**.
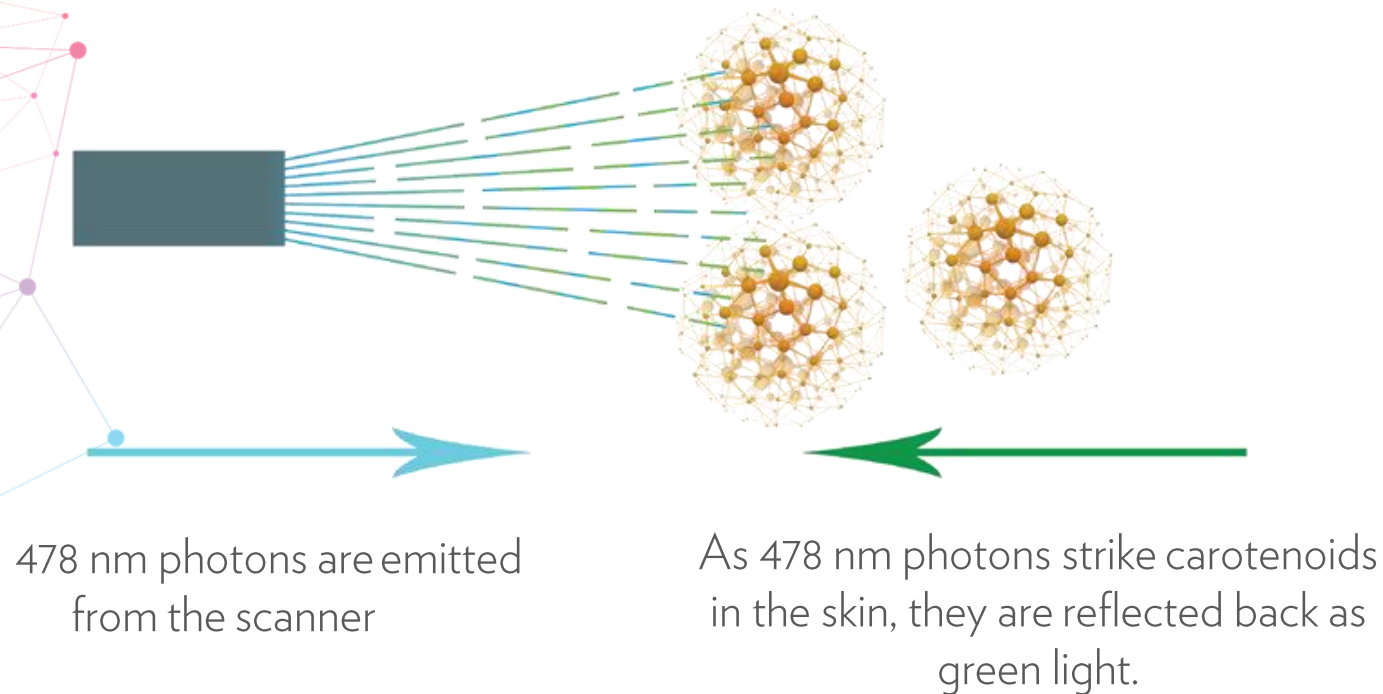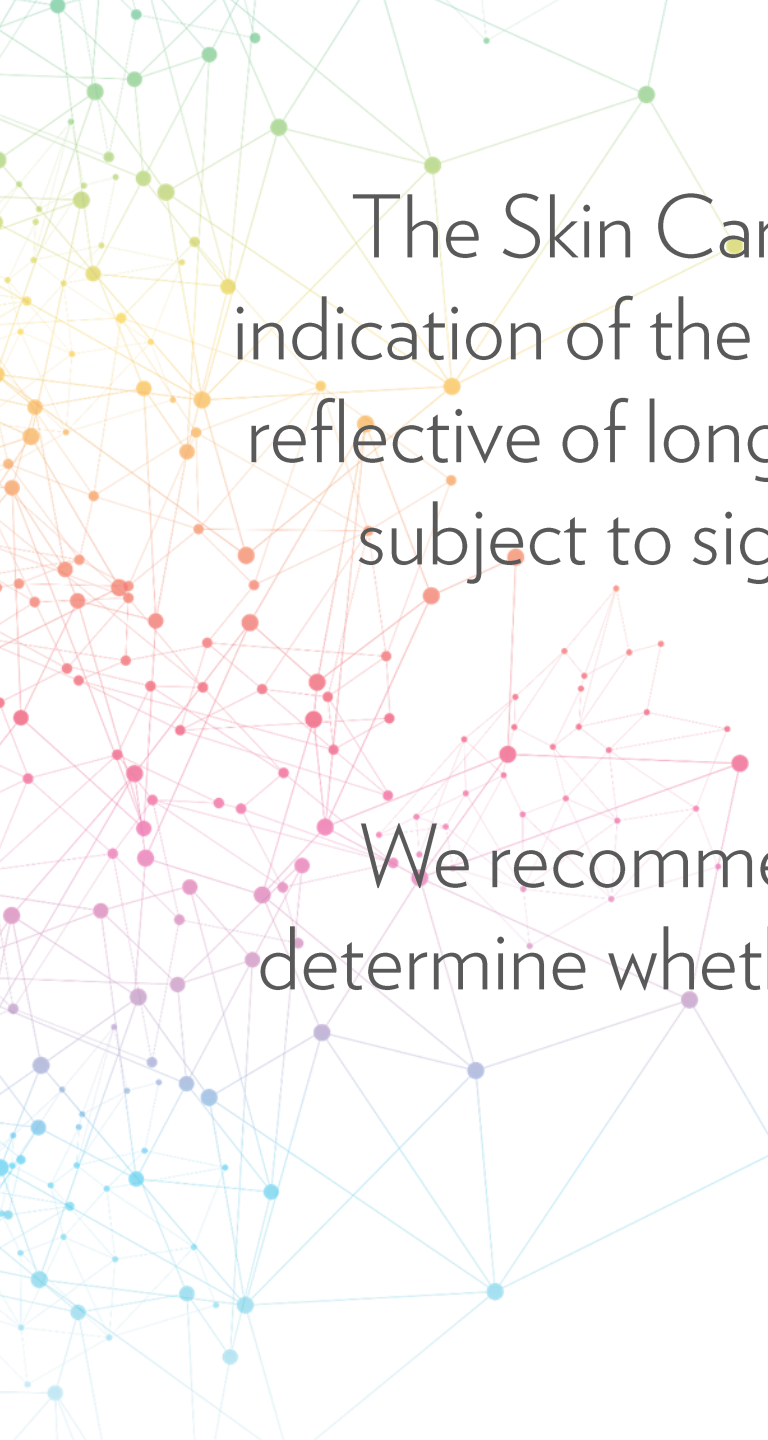
This blue light has a wavelength of 478 nanometres (nm).

When it comes into contact with a carotenoid's molecular structure, the photon becomes excited and its energy level increases from 478 nm to 518 nm, the wavelength associated with green light.

This change in colour is called **the Raman shift**, and only occurs when contact is made with the molecular structure of a carotenoid.

The green photons, proportional to the concentration of carotenoids in the skin, are then counted to calculate the individual SCS.

478 nm photons are emitted from the scanner

As 478 nm photons strike carotenoids in the skin, they are reflected back as green light.

The Skin Carotenoid Score (SCS) is a convenient and useful indication of the level of carotenoids present in the skin. This score is reflective of long-term fruits and vegetables intake habits and is not subject to significant changes over a matter of hours or days.

We recommend scanning again every 6-8 weeks to help you determine whether or not you are consuming an adequate amount of carotenoid-filled nutrients.*

*The BioPhotonic Scanner is not intended to diagnose, predict, treat, cure or mitigate any disease.