Photostability is now heavily promoted by several international sunscreen market leaders. Although more prevalent in Europe, the claim is appearing on Australian based websites. Recently, the FDA was petitioned with the proposal that only photostable products be permitted for marketing. At this time, photostability is not a requirement of any monograph around the world and has not been defined.

How do we define photostability?
There are a number of published in-vitro interpretations suggesting protocols for the evaluation of photostability. The principle of these is essentially the application of UV light to a sunscreen – generally in a thin film – and the comparison of pre and post irradiation effects on the quantity and quality of the sample. The ISO Standard 24443 Cosmetics – In vitro determination of UVA Protection is an example. Although not intended to define photostability, the method does discriminate the effects as they relate the relationship of the UVA protective contribution of the product once it has been light challenged. A modification of this method is used by Dermatest in order to quantify photostability.

Reporting of Results
This change is determined by variation in the comparative SPF value. This change is determined by variation in the comparative UVA Ratio. The change is reported as a percentage and a descriptive report is provided.

Photostability by Chemical Analysis
An analytical approach can also be used in order to investigate chemical degradates.

References