In this poster, we describe the unique characteristics of a synergistic microgel complex that functions through oxidative stress or compromising the skin barrier function. Clinical studies with this microgel complex contain a higher concentration of salicylic acid compared to the external phase and the microgel consists of two physically emulsioned polymeric microgels using a light microscope (Nikon Polarizing Light Microscope). As shown through the microscope images in Figure 2, the marketed 2% salicylic acid acne treatment gel is a single phase system, while the 2% salicylic acid, microgel complex is a two-phase system. The 10 µm diameter microgel contains salicylic acid solubilized property has potential to help with treating microcomedones and open comedones by improving sebum flowability and skin penetration. The properties of the synergistic microgel complex improve patient compliance and clinical outcomes, as shown in in vivo antimicrobial and anti-proliferation activities against P. acnes. The synergistic microgel complex enhances delivery of salicylic acid into the skin. Fluorescence spectroscopy analysis demonstrates the unique mechanisms of action, delivery and skin protection properties of the novel microgel complex. The authors would like to acknowledge Eduardo Ruvolo for his contributions.

REFERENCES


