



Sustainability in Surfactants

Brian P. Grady

School of Chemical, Biological and Materials Engineering, University of Oklahoma

US sales of surfactants is about \$35 billion dollars, with worldwide sales approximately 3 times larger. About half of the surfactant sold is in laundry detergent, with hard-surface cleaners and dishwashing soap making up most of the remainder. Almost all surfactants eventually end up in municipal waste treatment facilities and unfortunately will sometimes find their way into rivers and lakes. I will review the history of government regulation in surfactants, which started in the 1970s and continues to this day. Further, although surfactants have been known to mankind for over 4500 years and only for the last 80 years have surfactants been made from petroleum feedstocks. So sustainability in surfactants have two considerations: the first is using non-petroleum based feedstocks for surfactants and the second is the design of more biodegradable surfactants. I will briefly discuss the second, but I will discuss the first in more detail and will describe ours and other groups research areas into this subject.

Corresponding author e-mail bpgrady@ou.edu