Mechanism on Colloidal Stabilization of Emulsifierfree Water-in-Oil Emulsions

Toshio Sakai

Department of Chemistry and Material Engineering, Faculty of Engineering, Shinshu University

Colloidal stability of emulsifier-free water-in-oil (EF-W/O) emulsions prepared by ultrasonication was examined to evaluate the mechanism on the colloidal stabilization of water droplets dispersed in organic media. We found that the colloidal stability of paraffin-based EF-W/O emulsions became higher with longer hydrocarbon chain of paraffin. Furthermore, we revealed that the vegetable oil-based EF-W/O emulsions were much more stable than the paraffin-based EF-W/O emulsions.