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A POSSIBLE USE OF A POLYMERIC AMPHIPHILE AS PETROLEUM POLLU- TION COLLECTOR

J. L. RODRÍGUEZ^{1,2}, A. E. CIOLINO², O. I. PIERON², B. M. VUANO² and P. C.
SCHULZ^{1,2,*}

¹Escuela de Oficiales de la Armada, Instituto Universitario Naval (INUN), Base Naval Puerto
Belgrano, Argentina.

²Departamento de Química, Universidad Nacional del Sur, Bahía Blanca, Argentina.

Abstract –A polymeric amphiphile was synthesised by addition of phosphonate groups to asymmetric terminal double bonds of polybutadiene giving α , β -unsaturated phosphonic acids. The polymer was characterized by NMR and FT-IR. The synthesis produces a complex cream-like O/W emulsion containing simultaneously water and toluene. The oil droplets are interconnected by polymer chains avoiding the dispersion of the emulsion in water. When this emulsion is spread on a crude petroleum overflow on water, the oil stain shrink and is absorbed by the cream-like emulsion. The resulting product can be manipulated more easily than the original oil to extract it from the water surface.

Keywords : Polymeric amphiphile, petroleum collector, phosphonic acids, phosphonated polybutadiene, emulsion.

*Author for correspondence. E-mail : pschulz@criba.edu.ar