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## Solvent, salt and high pressure effects on the rate and equilibrium constants for the formation of tri-n-butylphosphoniumdithiocarboxylate

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### Abstract

Solvent, salt and high pressure effects on the rate and equilibrium constants for the formation of tri-n-butylphosphoniumdithiocarboxylate at 298.2 K are reported. This equilibrium is shifted to the phosphobetaine in polar solvents, salt solutions and under high external pressure. The reaction volume changes dramatically on going from less polar diethyl ether (-69 cm<sup>3</sup> mol<sup>-1</sup>) and tetrahydrofuran (THF) (-66 cm<sup>3</sup> mol<sup>-1</sup>), to more polar acetonitrile (-39 cm<sup>3</sup> mol<sup>-1</sup>) and acetone (-38 cm<sup>3</sup> mol<sup>-1</sup>). Copyright © 2010 John Wiley & Sons, Ltd.

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### Keywords

activation volume, reaction volume, solvent effect, tri-n-butylphosphoniumdithiocarboxylate