

Reactions of 1,2-ethanedithiol and 2-mercaptoethanol with unsaturated derivatives of four-coordinate phosphorus acids

Khusainova N., Mostovaya O., Berdnikov E., Efremov Y., Sharafutdinova D., Cherkasov R.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

The reaction of 1,2-ethanedithiol with diethyl vinylphosphonate in the presence of EtONa occurs as the addition of the sulfhydryl group to the β -carbon atom of the substrate to give 1:1 and 1:2 adducts. The nucleophilic addition of 2-mercaptoethanol at the β position of the multiple bond of diethyl vinyl-, diethyl allenyl-, and diethyl prop-1-ynylphosphonates involves only the sulfhydryl group. © 2004 Springer Science+Business Media, Inc.

<http://dx.doi.org/10.1007/s11172-005-0109-7>

Keywords

1,2-ethanedithiol, 2-mercaptoethanol, Diethyl allenylphosphonate, Diethyl prop--ynylphosphonate, Diethyl vinylphosphonate, Functionalization, Nucleophilic addition