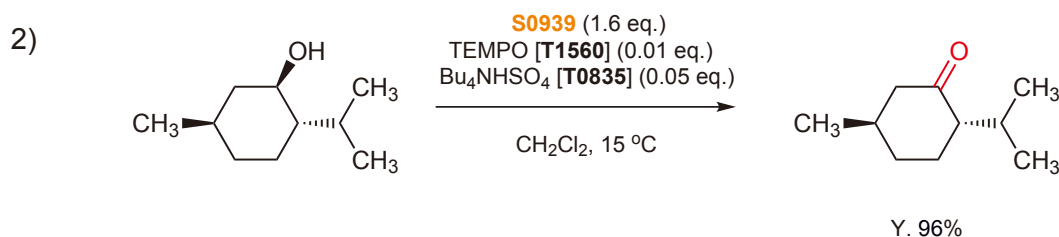
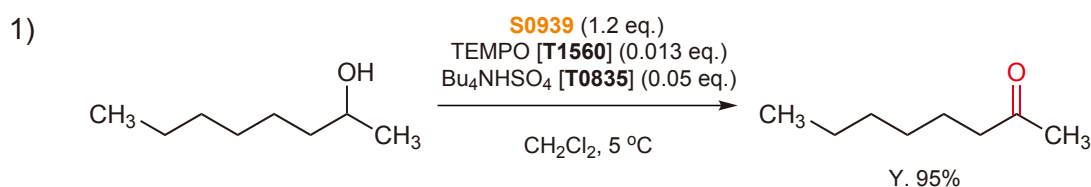


New

A Crystalline Hypochlorite with Ease of Handling

NaClO · 5H₂O**[S0939]****Advantages**

- A Crystalline Compound Capable of Being Weighed
- Stable for Long Term in a Refrigerator
- Effective for the Oxidations of Hydroxy Groups and Sulfur-containing Compounds

Oxidations of Secondary Alcohols**Application Example (reaction formula 1)**

NaOCl·5H₂O (2.0 g, 12.2 mmol) is added in one portion to a mixture of Bu₄NHSO₄ (0.17 g, 0.50 mmol), TEMPO free radical (21 mg, 0.13 mmol), and 2-octanol (1.30 g, 10.0 mmol) in CH₂Cl₂ (10 mL) at 5 °C. The reaction is stopped after 0.5 h by quenching with aq. sat. Na₂SO₃ solution (20 mL). The organic layer is separated, and the aqueous layer is extracted with CH₂Cl₂ (30 mL). The combined organic layers are washed with H₂O (30 mL), dried over Na₂SO₄, concentrated and distilled to give 2-octanone as a colorless oil (95% yield).

T. Okada, T. Asawa, Y. Sugiyama, M. Kirihara, T. Iwai, Y. Kimura, *Synlett* **2014**, 25, 596.

S0939 Sodium Hypochlorite Pentahydrate

25g / 500g

Related Products**T1560 TEMPO Free Radical**

5g / 25g

T0835 Tetrabutylammonium Hydrogen Sulfate

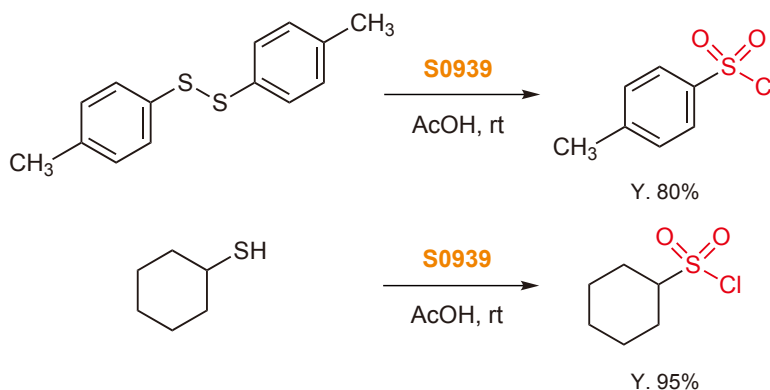
25g / 100g / 500g



A Crystalline Hypochlorite with Ease of Handling

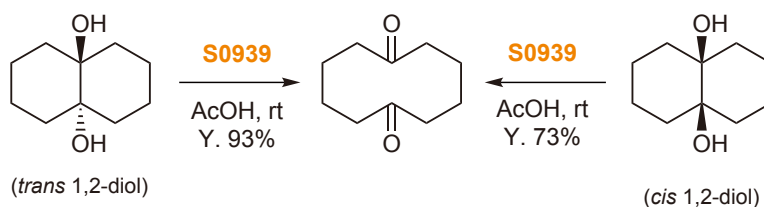
Other Applications

Syntheses of Sulfonyl Chlorides from Disulfides or Thiols



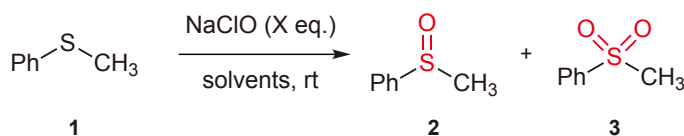
T. Okada, H. Matsumuro, T. Iwai, S. Kitagawa, K. Yamazaki, T. Akiyama, T. Asawa, Y. Sugiyama, Y. Kimura, M. Kirihara, *Chem. Lett.* **2015**, 44, 185.

An Oxidative Cleavage of 1,2-Diols



M. Kirihara, *et al.*, The 95th CSJ Annual Meeting, Chiba, Japan, March 26-29, **2015**, Abstr., No. 1E3-38.

Oxidation of Sulfides by an Equivalent Control



NaClO	X eq.	time (h)	solvents	NMR ratio (%), GC area (%)*		
				1	2	3
S0939	1.1	0.3	CH ₃ CN : H ₂ O	0	98	2
12% NaClO aq.	1.1	4	CH ₃ CN	5	79	16
S0939	2.4	2	Toluene : H ₂ O	0*	0*	>99*
13% NaClO aq.	2.4	24	Toluene	40*	1*	58*

T. Okada, H. Matsumuro, S. Kitagawa, T. Iwai, K. Yamazaki, Y. Kinoshita, Y. Kimura, M. Kirihara, *Synlett* **2015**, 26, 2547.
Y. Sugiyama, T. Okada, M. Kirihara, Y. Kimura, *Fain Kemikaru (Fine Chemical)* **2015**, 44, 53.

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