CHEMISTRY

Stable Diazotransfer Reagent against Heat and Impact/Friction

2-Azido-1,3-dimethylimidazolinium Hexafluorophosphate
5g
[A2457]

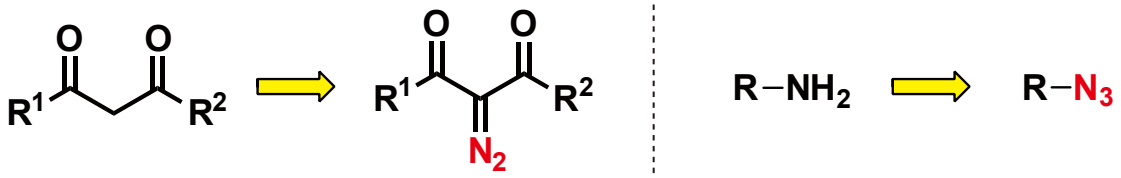
Advantages

- **Stable crystalline solid against heat, impact, and friction**
- **Reaction proceeds under mild conditions**
- **By-products can be easily removed by ordinary extraction procedures**

2-Azido-1,3-dimethylimidazolinium Hexafluorophosphate [A2457], which was developed by Kitamura *et al.*, is a crystalline diazotransfer reagent having high thermal stability and low explosibility. The differential scanning calorimetry (DSC) experiment of A2457 has revealed that the exothermic decomposition temperature was approximately 200˚C. Moreover, A2457 has tested negative for the impact and friction-sensitivity tests.[1)]

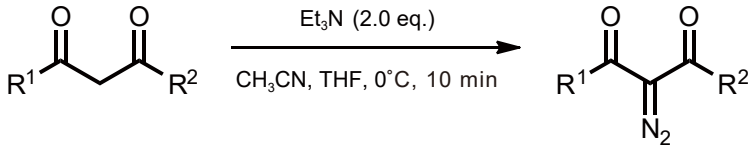
Application

Diazotransfer Reagent to 1,3-Diketones or Amines



Example 1.

Reaction of 1,3-Dicarbonyl Compounds with A2457[1)]



Entry	R^1	R^2	Yield (%)
1	Me	Me	83
2	Ph	Ph	90
3	OEt	OEt	quant.
4	—$CH_2C(Me)_2CH_2$—		86

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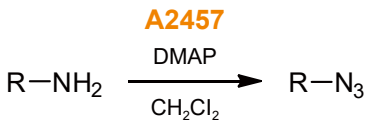
Example 2.

Reaction of Aromatic and Aliphatic Amines with A2457[2)]



Entry	R	A2457 (eq.)	DMAP (eq.)	Temp.	Time (h)	Yield (%)
1	Ph	1.15	1.1	rt	2.5	87
2	4-MeC_6H_4	1.15	1.1	rt	1.5	94
3	4-$O_2NC_6H_4$	2	3	50 ˚C	4	61
4	$PhCH_2CH_2$	1.15	5[a)]	rt	0.25	74
5	1-adamantyl	1.15	1.1	rt	0.33	71

[a)] Et_3N is used instead of DMAP.

References

1) M. Kitamura, N. Tashiro, S. Miyagawa, T. Okauchi, *Synthesis* **2011**, 1037.
DOI: https://doi.org/10.1055/s-0030-1258457
2) M. Kitamura, M. Yano, N. Tashiro, S. Miyagawa, M. Sando, T. Okauchi, *Eur. J. Org. Chem.* **2011**, 458.
DOI: https://doi.org/10.1002/ejoc.201001509

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