Vol. 68, 2003

Laurent Lemoucheux, Jacques Rouden,* Méziane Ibazizene, Franck Sobrio, and Marie-Claire Lasne.* Debenzylation of Tertiary Amines Using Phosgene or Triphosgene: An Efficient and Rapid Procedure for the Preparation of Carbamoyl Chlorides and Unsymmetrical Ureas. Application of Carbon-11 Chemistry.

Page 7291. In Table 1, the structures of compounds **10** and **11** should be interchanged. The corrected table is shown below.

TABLE 1. Reaction of BTC with Secondary Amines: Influence of the Added Base

entry	$amine^a$	base	equiv	solvent	T (°C)	$time^b\left(h\right)$	products	relative ratio (%)°
1	1	NEt ₃	2.2	THF	-78 to 20	0.15 then 16	2/3/8/7	46/0/54/0
2	1	NEt_3	2.2	\mathbf{THF}	20	0.10 then 1.25	2/3/8/7	93/7/traces/0
3	1	NEt_3	2.2	CH_2Cl_2	20	0.25 then 1	2/3/8/7	9/46/38/7
4	1	${ m NEt_3}$	2.2	CH_2Cl_2	20	1 then 3	2/3/8/7	4/44/38/14
5	1	Na_2CO_3	1	$\mathrm{CH_2Cl_2}$	0	30 then 0.75	2/3	84/16
6	1	Na_2CO_3	1	CH_2Cl_2	-78	0.15 then 2	2/3	78/22
7	1	Na_2CO_3	1	THF	20	$0.3 ext{ then } 2$	2/3	84 (68)/16
8	1	C_5H_5N	2.2	CH_2Cl_2	20	$0.5 ext{ then } 3$	2/3	100/0
9	1	C_5H_5N	2.2	$\mathrm{CH_2Cl_2}$	-78 to 20	0.16 then 3	2/3	100 (88)/0
10^d	1	C_5H_5N	1.2	$\mathrm{CH_2Cl_2}$	20	2 then 2	2/3	82 (60)/18
11	4	C_5H_5N	1.2	$\mathrm{CH_2Cl_2}$	0	0.15 then 1	5	100 (48)/0
12	CO₂Me N _H	C_5H_5N	2.5	$\mathrm{CH_2Cl_2}$	20	0.15 then 1	CO ₂ Me N _{COCI}	(81) ^e
13	Ph II Me N H	$\mathrm{C_5H_5N}$	2.5	CH ₂ Cl ₂	-50	0.15 then 1	Ph I Me COCI 12	(60)

^a All of the reactions were carried out with BTC (0.37 equiv) except entry 1 (reaction with phosgene): To BTC in CH_2Cl_2 at a given temperature were added the base then the secondary amine over a given period of time. After reaction, the mixture was hydrolyzed with 1 N HCl and extracted with CH_2Cl_2 . ^b Time of addition followed by the reaction time. ^c Percentage of the reaction products determined by ¹H NMR. The isolated yields are given in parentheses. ^d BTC was added to the amine. ^e Crude yield, carbamoyl chloride 10 decomposed on silica gel.

JO0335847

10.1021/jo0335847 Published on Web 10/03/2003