

PHOSPHORUS-CONTAINING URACIL ANALOGS

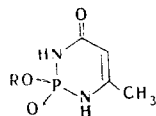
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We have synthesized phosphorus analogs of 6-methyluracil by cyclization of alkylphosphoric acid diamides of the $ROP(O)(NH_2)_2$ type by the method proposed for the cyclization of phenylphosphoric acid diamide [1].

Diketene (2 ml) was added slowly to a mixture of 6.5 mmole of alkylphosphoric acid diamide [2, 3] and 0.2 g of $HgSO_4$ in 10 ml of glacial acetic acid. The reaction mixture was stirred at room temperature for 3 h, after which it was vacuum evaporated to dryness. The residue was extracted with boiling acetonitrile, and the solvent was removed by distillation. Recrystallization gave 1-alkoxy-5-methyl-1,2,3,6-tetrahydro-1,2,6-phosphadiazine-1,3-diones (see Table 1).

TABLE 1



R	mp, °C	Empirical formula	Found, %				Calc., %				Yield, %	PMR spectra, δ , ppm (in CD_3OD)		
			C	H	N	P	C	H	N	P		$C-CH_3$	$C-H$	R-O-P
C_2H_5	217-218 from acetonitrile	$C_8H_{11}N_2PO_3$	37,9	5,9	14,8	16,4	37,9	5,8	14,7	16,3	67	2,08	5,06	1,35 t (CH_3) 4,05 m (CH_2)
$n-C_4H_9$	188-189 from acetonitrile	$C_8H_{15}N_2PO_3$	43,9	6,9	12,7	13,8	44,0	6,9	12,8	14,2	64	2,08	5,10	0,96 t (CH_3) 1,3-1,8 m (CH_2)n 4,00 m (OCH_2)
Cyclohexyl	221-222 from alcohol	$C_{10}H_{17}N_2PO_3$	49,2	6,9	11,4	12,4	49,2	7,0	11,5	12,7	56	2,04	5,04	1,0-2,3 m (CH_2)n 4,20 m ($O-CH$)

LITERATURE CITED

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