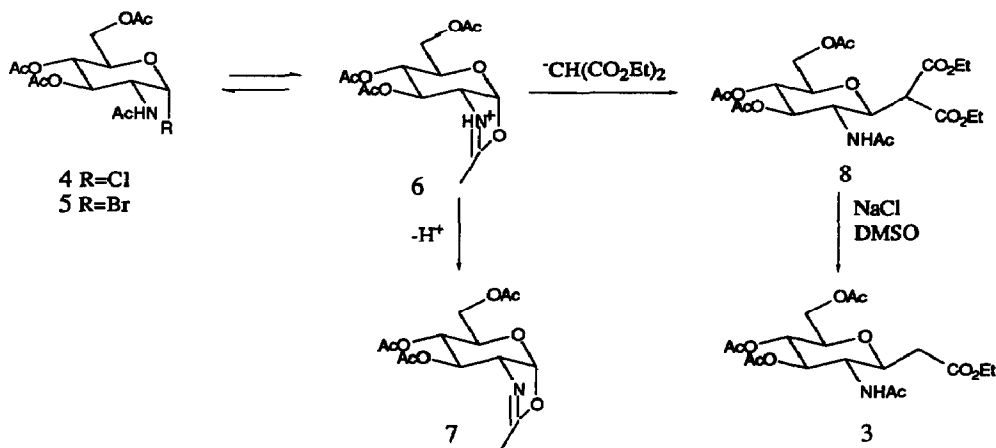


column chromatography (eluent: $\text{CH}_2\text{Cl}_2/\text{MeOH}=30/1$). 0.88gr(21%) pure oily product **3** was obtained.



Attempt of direct alkylation of acetobromogalactose and acetobromoglucuronic acid methylester by this method were both unsuccessful. It has been reported³ that treatment of the acetobromoglucosamine **5** with pyridine at room temperature for 20 min. gave the oxazoline **6** in high yield(90%). It was therefore necessary to maximize the effective concentration of the nucleophile(malonate) for the formation of **8** to dominate over that of **7**. Moisture in the reaction mixture also seemed to accelerate the formation of **7**. As a result, it was important to add the minimum amount of the solvent and keep the reaction mixture anhydrous.

REFERENCES AND NOTES

- 1) D. Monti; P. Gramatica; G. Speranza; P. Manitto, *Tetrahedron Lett.*, 1987, 28, 5047. and references cited therein.
- 2) A. Giannis; K. Sandhoff, *Carbohydrate Res.*, 1987, 171, 201. and references cited therein.
- 3) (a) M. Imoto; M. Yoshimura; M. Yamamoto; T. Shimamoto; S. Kusumoto; T. Shiba, *Bull. Chem. Soc. Jpn.*, 1987, 60, 2197.; (b) M. Imoto; H. Yoshimura; T. Shimamoto; N. Sakaguchi; S. Kusumoto; T. Shiba, *Bull. Chem. Soc. Jpn.*, 1987, 60, 2205.
- 4) Silica (Kieselgel 60 F₂₅₄ Merck) eluent: $\text{CH}_2\text{Cl}_2/\text{MeOH}=20/1$.
- 5) Diethyl 2-acetamino-2-deoxy-3,4,6-tri-O-acetyl- β -D-glucopyranosylmalonate: R_F^4 0.37; $^1\text{H-n.m.r.}$ (CDCl_3 , TMS, J in Hz) $\delta=1.26(3\text{H}, t, J=8.0, \text{CH}_3)$, $1.27(3\text{H}, t, J=8.0, \text{CH}_3)$, $1.87(3\text{H}, s, \text{CH}_3)$, $2.03(3\text{H}, s, \text{CH}_3)$, $2.04(3\text{H}, s, \text{CH}_3)$, $2.06(3\text{H}, s, \text{CH}_3)$, $3.69(1\text{H}, m, \text{H-5})$, $3.72(1\text{H}, d, J=8.0, \text{CH})$, $4.06-4.35(8\text{H}, m, \text{H-1}, \text{H-2}, \text{H-6}, \text{H-6}' \text{ and } \text{OCH}_2\text{CH}_3)$, $5.09(2\text{H}, m, \text{H-3 and H-4})$.
- 6) Ethyl 2-acetamino-2-deoxy-3,4,6-tri-O-acetyl- β -D-glucopyranosylacetate: R_F^4 0.35; $[\alpha]_D^{20}$ -1.94 (c 0.09, CHCl_3); $^1\text{H-n.m.r.}$ (CDCl_3 , TMS, J in Hz) $\delta=1.23(3\text{H}, t, J=7.0, \text{CH}_3)$, $1.90(3\text{H}, s, \text{CH}_3)$, $2.00(3\text{H}, s, \text{CH}_3)$, $2.01(3\text{H}, s, \text{CH}_3)$, $2.04(3\text{H}, s, \text{CH}_3)$, $2.58(2\text{H}, d, J=6.0, \text{CH}_2)$, $3.62(1\text{H}, m, \text{H-5})$, $3.79(1\text{H}, dt, J=10.0 \text{ \& } 6.0, \text{H-1})$, $4.01-4.22(4\text{H}, m, \text{H-2}, \text{H-6}, \text{H-6}' \text{ and } \text{OCH}_2\text{CH}_3)$, $4.98(1\text{H}, dd, J=10.0 \text{ \& } 10.0, \text{H-4})$, $5.06(1\text{H}, dd, J=10.0 \text{ \& } 10.0, \text{H-3})$; $^{13}\text{C-n.m.r.}$ (CDCl_3 , TMS) 37.70(C-2); M.S. (Neg. FAB, matrix: NBA) 416.2(M-1).

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