reduction, hydrogenation

O 0220 37 - 086 A Facile Reduction Procedure for Nitroarenes with Al-NiCl2-THF System. — The system Al-NiCl2·6H2O-THF effectively reduces the aromatic nitro compounds (I) to form the corresponding amines in a very fast reaction and under mild conditions. With anhydrous NiCl2, no reaction occurs unless water is added. — (SARMAH, P.; BARUA, N. C.; Tetrahedron Lett. 31 (1990) 28, 4065-4066; Div. Nat. Prod. Chem., Reg. Res. Lab. (CSIR), Jorhat-785006, Assam, India; EN)

$$Ar - NO_2 \xrightarrow{AI/NiCl_2 \cdot 5 H_2 0} Ar - NH_2$$

$$I \qquad \qquad II$$

$$a Ar: -Ph \qquad 90\%$$

$$b Ar: -COOH \qquad 80\%$$

$$c Ar: -NH_2 \qquad 79\%$$

$$d Ar: -OH \qquad 85\%$$

$$e Ar: -OH \qquad 85\%$$

$$f Ar: -OH \qquad 80\%$$