



Scheme 7.9

Many analogues of norepinephrine have been radiolabelled for investigation of presynaptic binding sites of the heart. In order to investigate the sympathetic nerve terminal and the noradrenaline metabolism it may be of advantage to use the endogenous transmitter norepinephrine itself and not an analogue. A synthetic approach has been developed for the preparation of racemic [¹¹C]norepinephrine (¹¹C)7.39 starting from [¹¹C]nitromethane (7.36) (Scheme 7.10). In the first step, piperonal is reacted with [¹¹C]nitromethane with the mild base tetrabutylammonium fluoride (TBAF) as catalyst to give 80-90% of the