

## SECTION E

### E - 05 1-ALKYL SUBSTITUTED TRICARBONYL ( $\eta^5$ CYCLOHEXADIENYL) IRON SALTS FROM CARBOXYL COMPLEXES

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The formations of variously substituted tricarbonyl ( $\eta^5$ -cyclohexadienyl) iron cations for synthetic use, require the availability of a range of different methods. Here we report the formation of the title salts from tricarbonyl ( $\eta^4$ -1-methoxycarbonylcyclohexa-1, 3-diene) iron complexes by the sequence: metal-alkyl reaction and acid-catalysed dehydroxylation. The mechanism of the rearrangement involved in the latter process leading to  $\eta^5$ -cations has been investigated, using deuterium-labelled alcohols derived from the metal-alkyl reaction on 1-methoxycarbonyl complexes.