ABSTRACT:

Natural flavonoid, namely 4’,5,7-trihydroxyflavanone and 3’,4’,5,7-tetrahydroxyflavanone were synthesised via its chalcone. The initial step was to synthesize derivatives of 2-hydroxyacetophenone and benzaldehyde by protecting the phenolic hydroxyl groups. The respective chalcone was synthesised by Claisen-Schmidt condensation. 4’,5,7-Trihydroxyflavanone and 3’,4’,5,7-tetrahydroxyflavanone were synthesised by acid hydrolysis and subsequent treatment with sodium acetate of the respective chalcones, 2’-hydroxy-4,4’-6’-tris(methoxymethyloxy)chalcone and 2’-hydroxy-3,4,4’,6’-tetrakis(methoxymethyloxy)chalcone. 3’,4’,5,7-Tetrahydroxyflavanone was found to be more potent as an antioxidant agent than 4’,5,7-trihydroxyflavanone with 83.11% inhibition and IC50 8.57 ?g/mL in the radical scavenging activity by ESR method.