

Concurrent formation of furan-2,5- and furan-2,4-dicarboxylic acid: Unexpected aspects of the Henkel reaction

Shanmugam Thiyagarajan,^a Aliaksei Pukin,^a Jacco van Haveren,^a Martin Lutz,^b Daan van Es^a*

^a Food & Bio-based Research, Wageningen University and Research Centre,
P.O. Box 17, 6700 AA Wageningen, The Netherlands

^b Bijvoet Center for Biomolecular Research, Crystal and Structural Chemistry,
Utrecht University, Padualaan 8, 3584, Utrecht, The Netherlands

Supporting information

Contents:

Figure 1. ¹H-NMR spectrum of the potassium 2-furoate in D₂O.

Figure 2. ¹H-NMR spectrum of the purified 2,5-furandicarboxylic acid in D₂O.

Figure 3. ¹H-NMR spectrum of the purified 2,4-furandicarboxylic acid (purity 86 %)

Figure 4. Relative ratio of 2,5-FDCA and 2,4-FDCA formation over time according to ¹H-NMR.

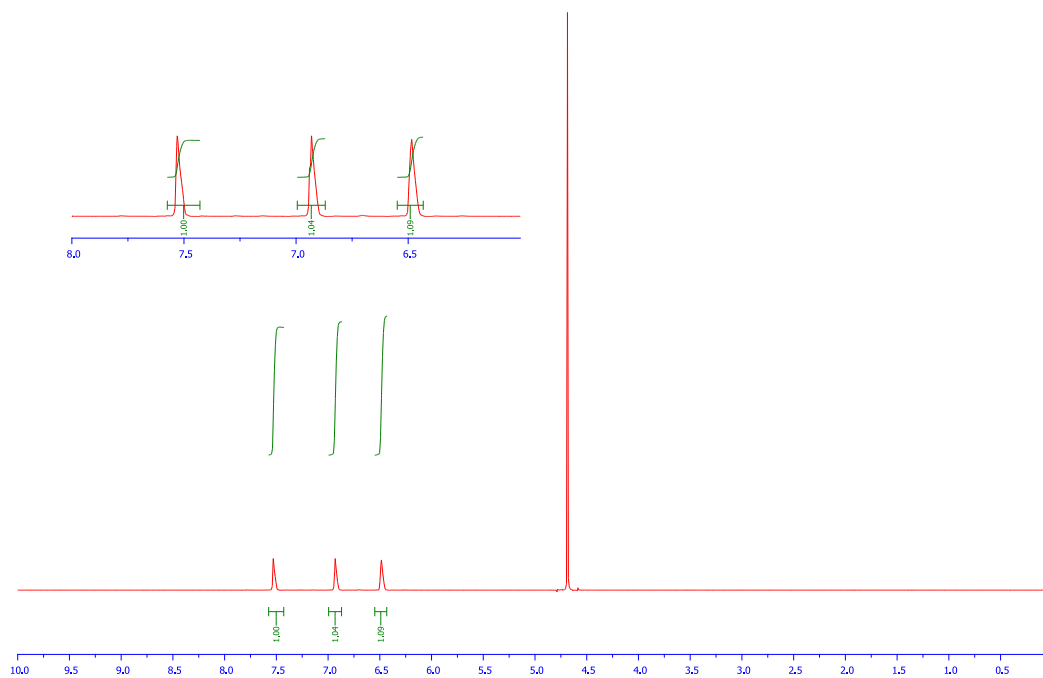


Figure 1. ¹H-NMR spectrum of the potassium 2-furoate in D₂O.

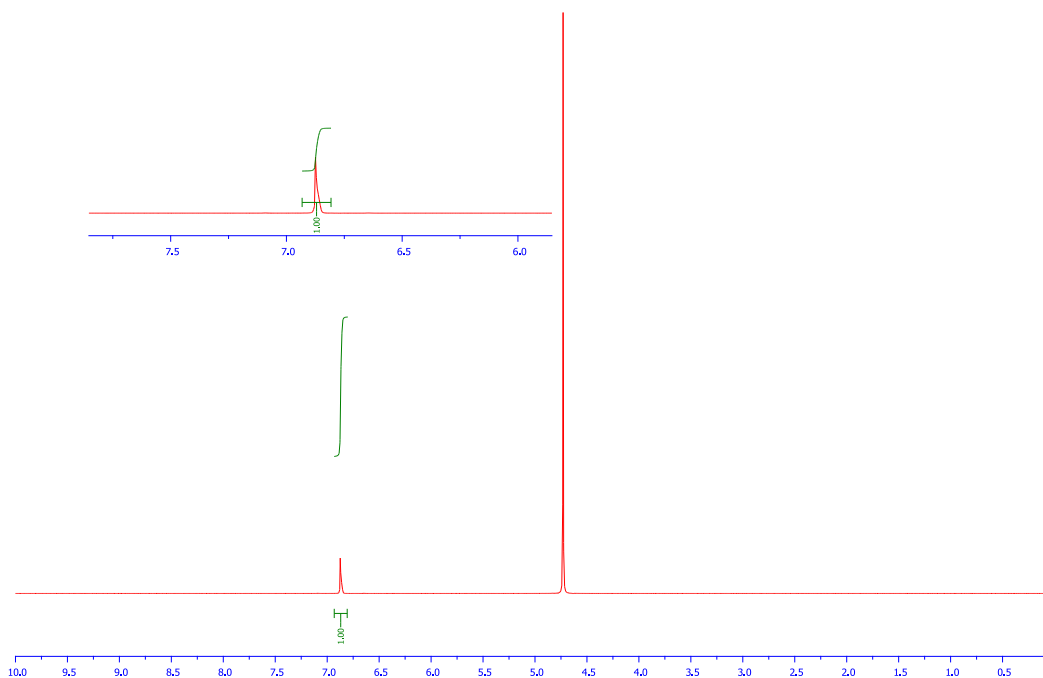


Figure 2. ¹H-NMR spectrum of the purified 2,5-furandicarboxylic acid in D₂O.

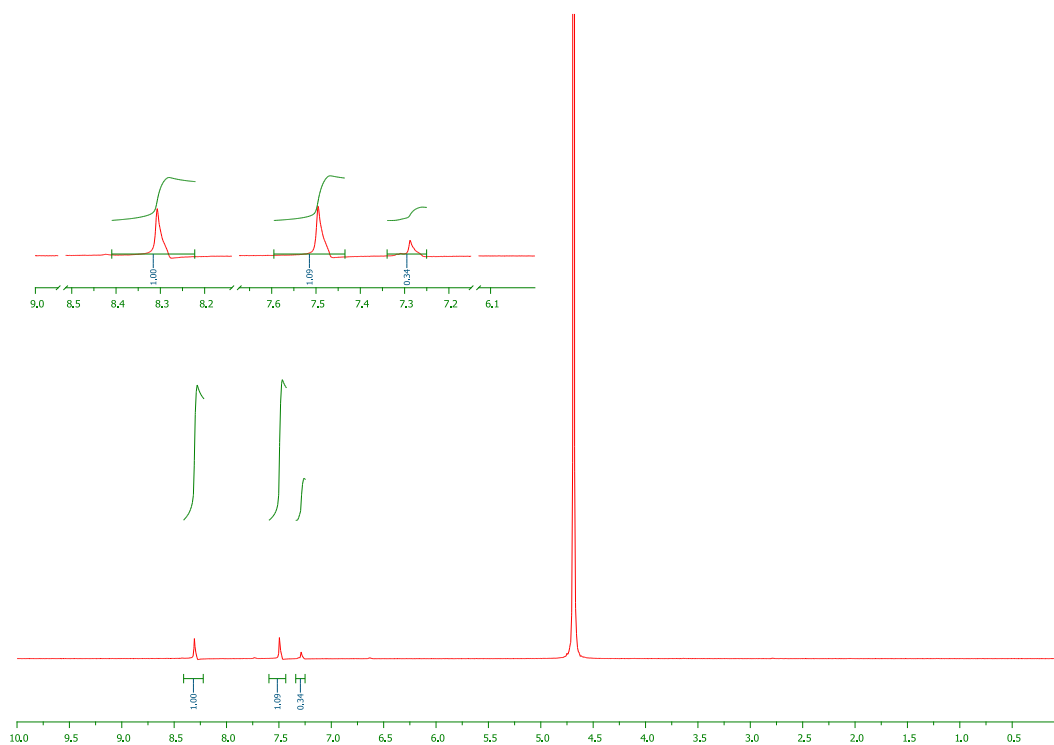


Figure 3. ¹H-NMR spectrum of the purified 2,4-furandicarboxylic acid (purity 86 %)

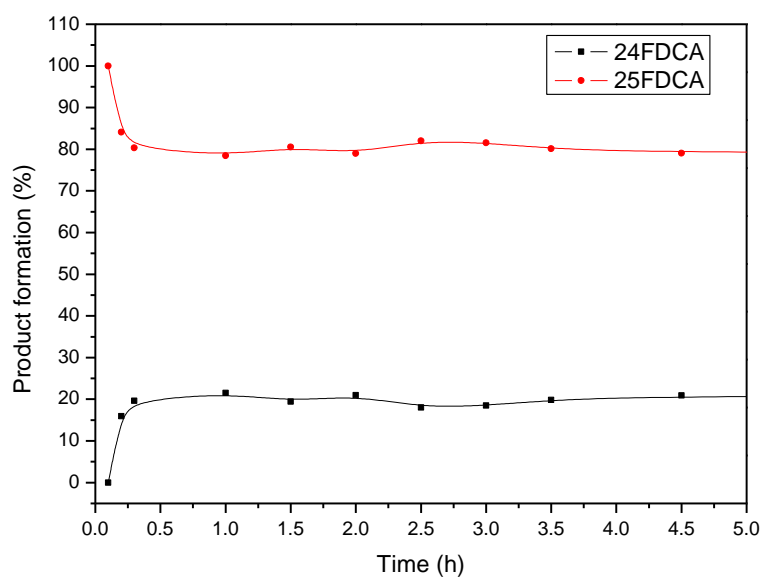


Figure 4. Relative ratio of 2,5-FDCA and 2,4-FDCA formation over time according to ¹H-NMR.