Supplementary Material

Heat-induced changes in molecular biosignatures and the influence of Mars-relevant minerals

Bettina Haezeleer, Stefan Fox and Henry Strasdeit

Department of Bioinorganic Chemistry and Chemical Evolution, Institute of Chemistry, University of Hohenheim, 70599 Stuttgart, Germany

Author for correspondence:

Henry Strasdeit,

E-mail: henry.strasdeit@uni-hohenheim.de

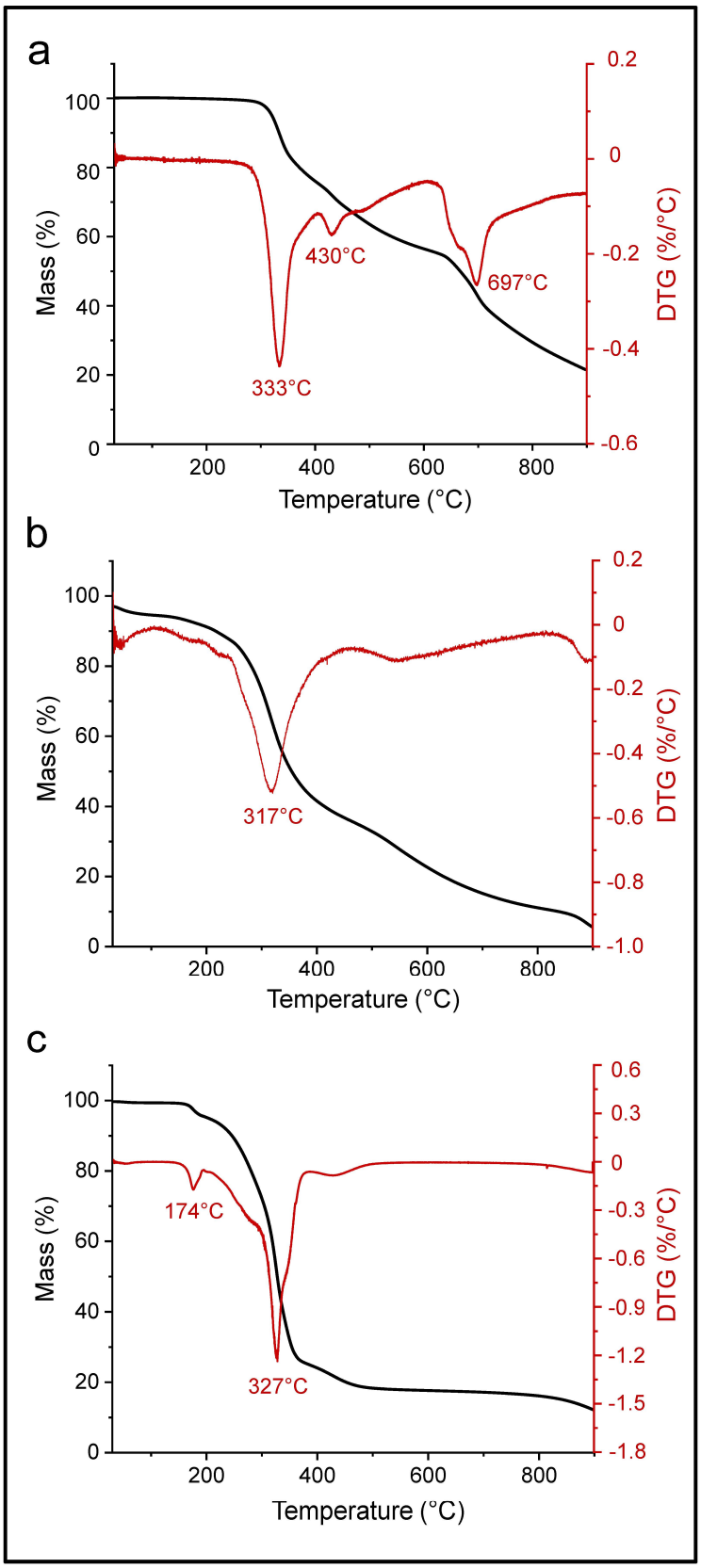

Fig. S1. Thermogravimetric analysis of (a) haemin, (b) cytochrome *c* and (c) lecithin under nitrogen gas at a heating rate of 5 K min^{-1}. The first derivative thermogravimetric (DTG) curves are shown in red. The temperatures of highest decomposition rate are given.

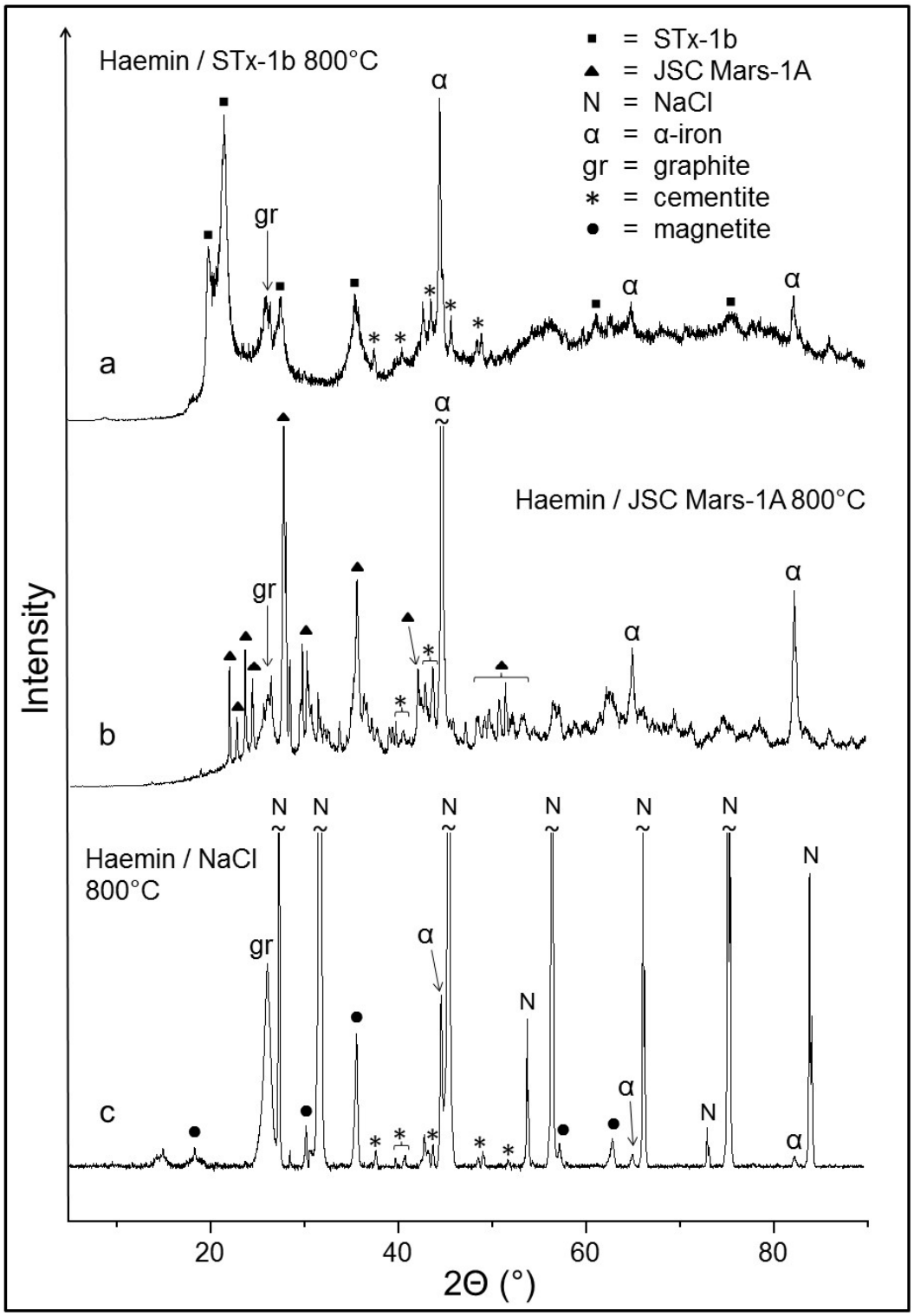

Fig. S2. X-ray diffractograms of (a) the haemin–STx-1b mixture, (b) the haemin–JSC Mars-1A mixture and (c) the haemin–NaCl mixture after treatment at 800°C. The residue of the haemin–NaCl mixture appeared to be particularly air sensitive. Therefore, it was handled in an inert atmosphere, and the sample holder was sealed with Kapton film. A baseline correction was applied to remove the Kapton background.

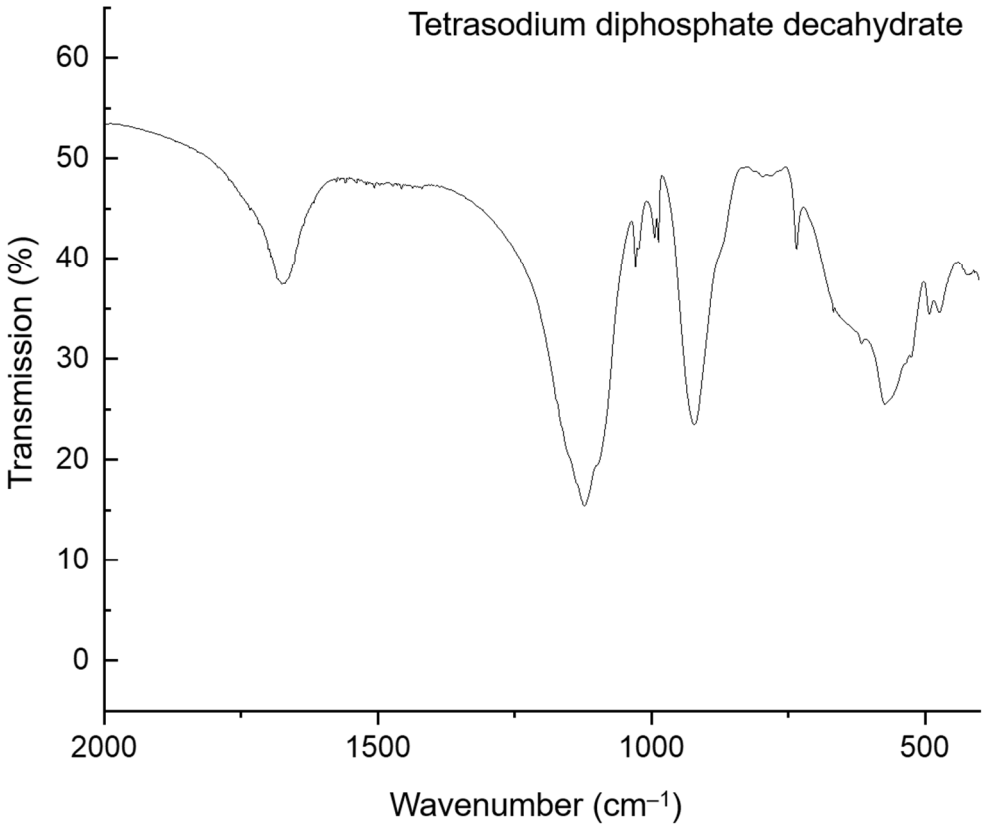

Fig. S3. Infrared spectrum of tetrasodium diphosphate decahydrate (Merck, p.a.) measured in transmission mode in a NaCl pellet.

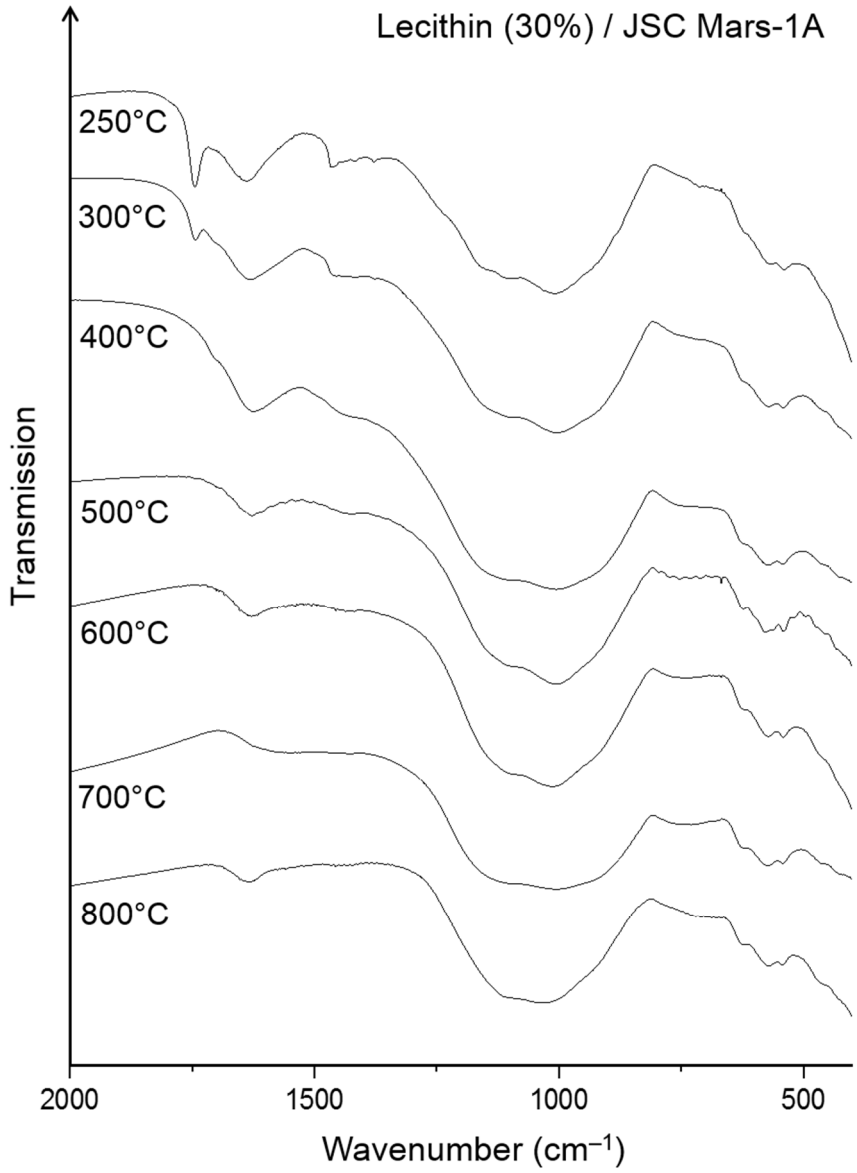

Fig. S4. Infrared spectra of the residues obtained from heating lecithin in the Martian regolith simulant JSC Mars-1A. The samples were measured in transmission mode in NaCl pellets.

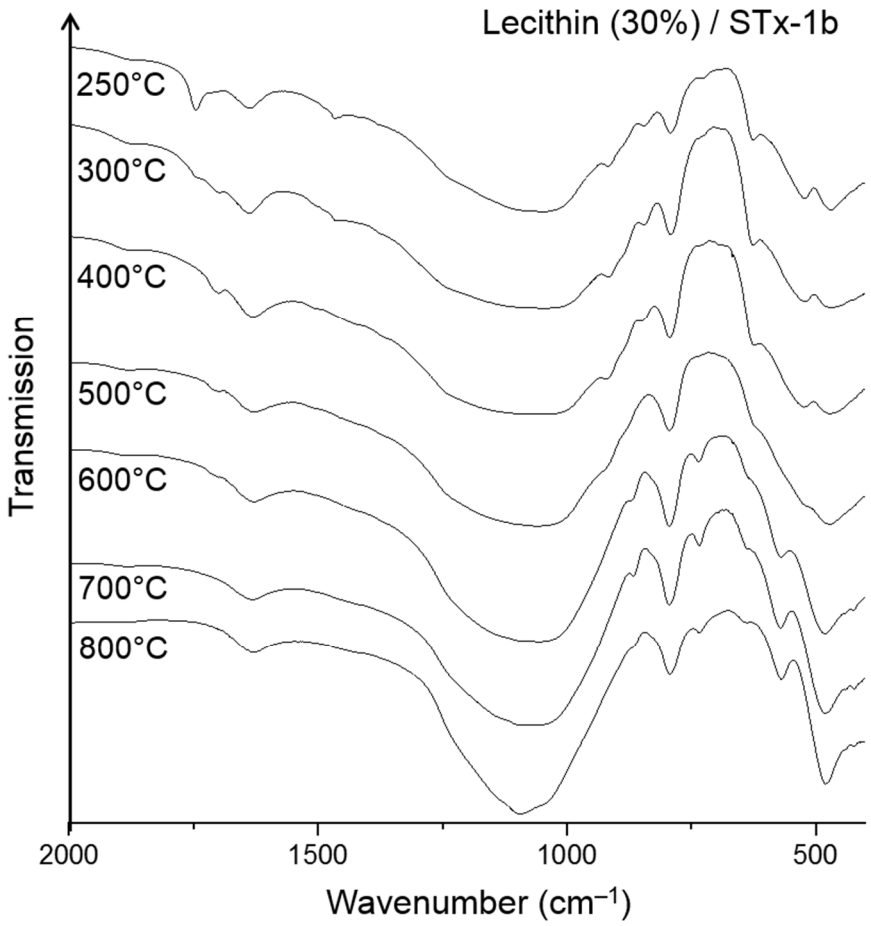

Fig. S5. Infrared spectra of the residues obtained from heating lecithin in the Ca-montmorillonite STx-1b. The samples were measured in transmission mode in NaCl pellets.

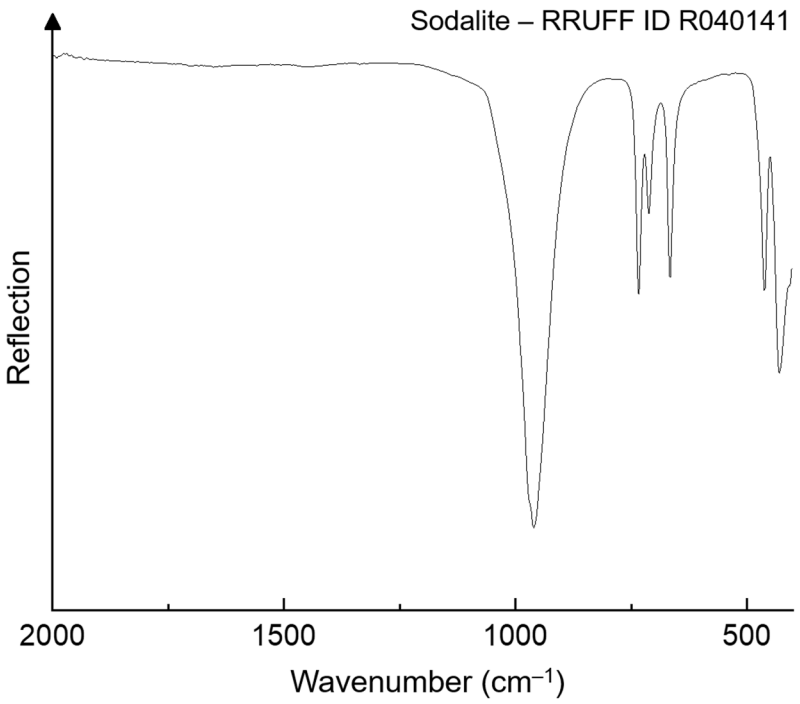

Fig. S6. Reference ATR spectrum of sodalite.