

Supplementary material

Solution-state NMR investigation of the sorptive fractionation of dissolved organic matter by alkaline mineral soils

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Table S1. Specific compounds that were identified in the ^1H nuclear magnetic resonance (NMR) spectra of the dissolved organic matter (DOM) samples

+ indicates a positive detection whereas – indicates that a compound was not detected

Molecule	Akko unbound	Akko desorbed	Basra unbound	Basra desorbed	Nir-Oz unbound	Nir-Oz desorbed	Bulk
Acetic acid	+	+	+	+	+	+	+
Lactic acid	+	+	+	+	+	+	–
Succinic acid	+	+	+	+	+	+	+
Methanol	+	+	+	+	+	+	+
Glycolic acid	+	+	+	+	+	+	–
Fumaric acid	+	+	+	+	+	+	–
Benzoic acid	+	–	+	–	–	–	–
Formic acid	+	+	+	+	+	+	+

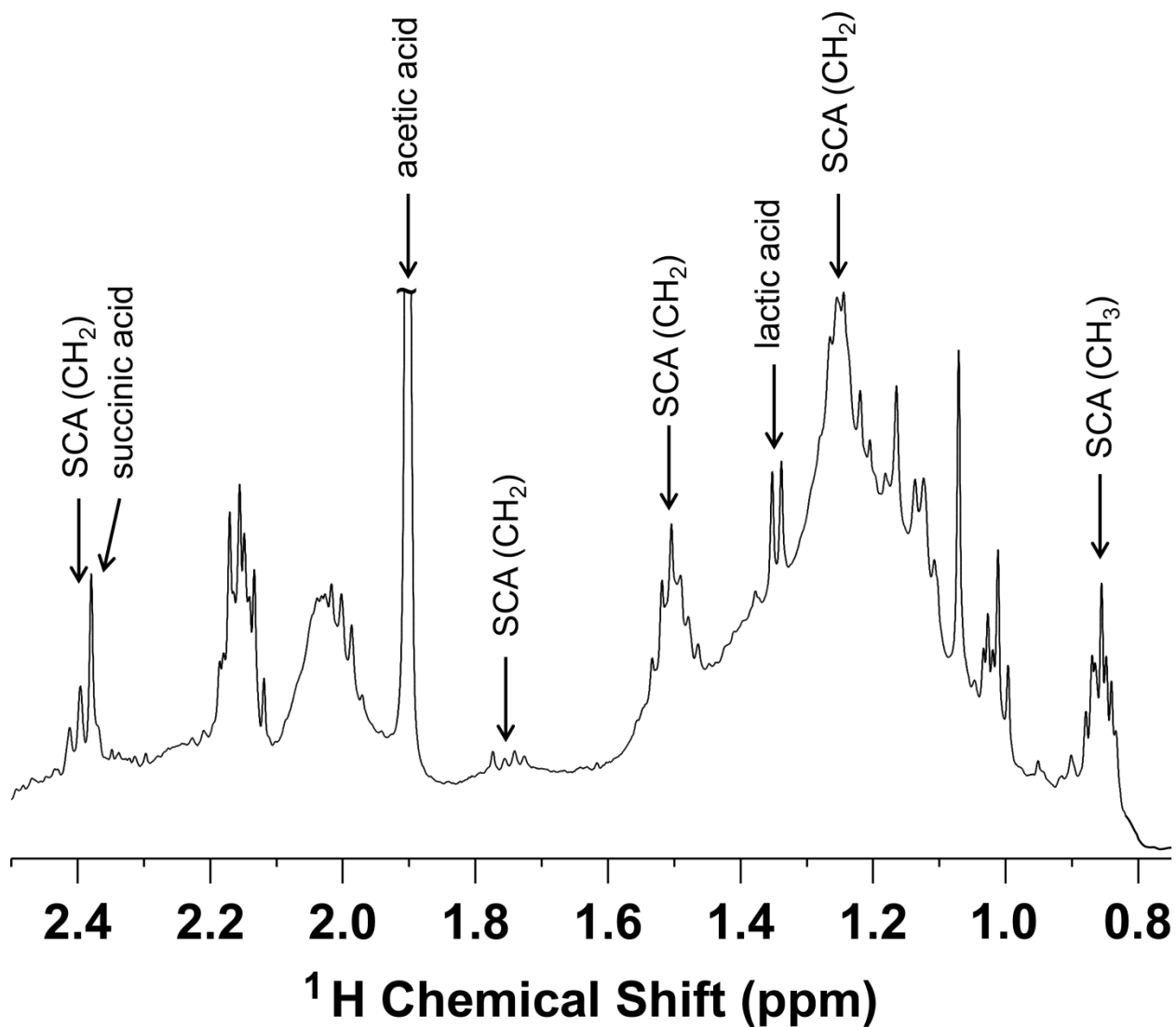


Fig. S1. Expanded view of the region between 0.8 and 2.5 ppm in the ^1H nuclear magnetic resonance (NMR) spectrum of unbound dissolved organic matter (DOM) after interaction with the Akko soil with peaks for identifiable compounds labelled. SCA denotes a mixture of short-chain carboxylic acids that resonate at similar chemical shift values.

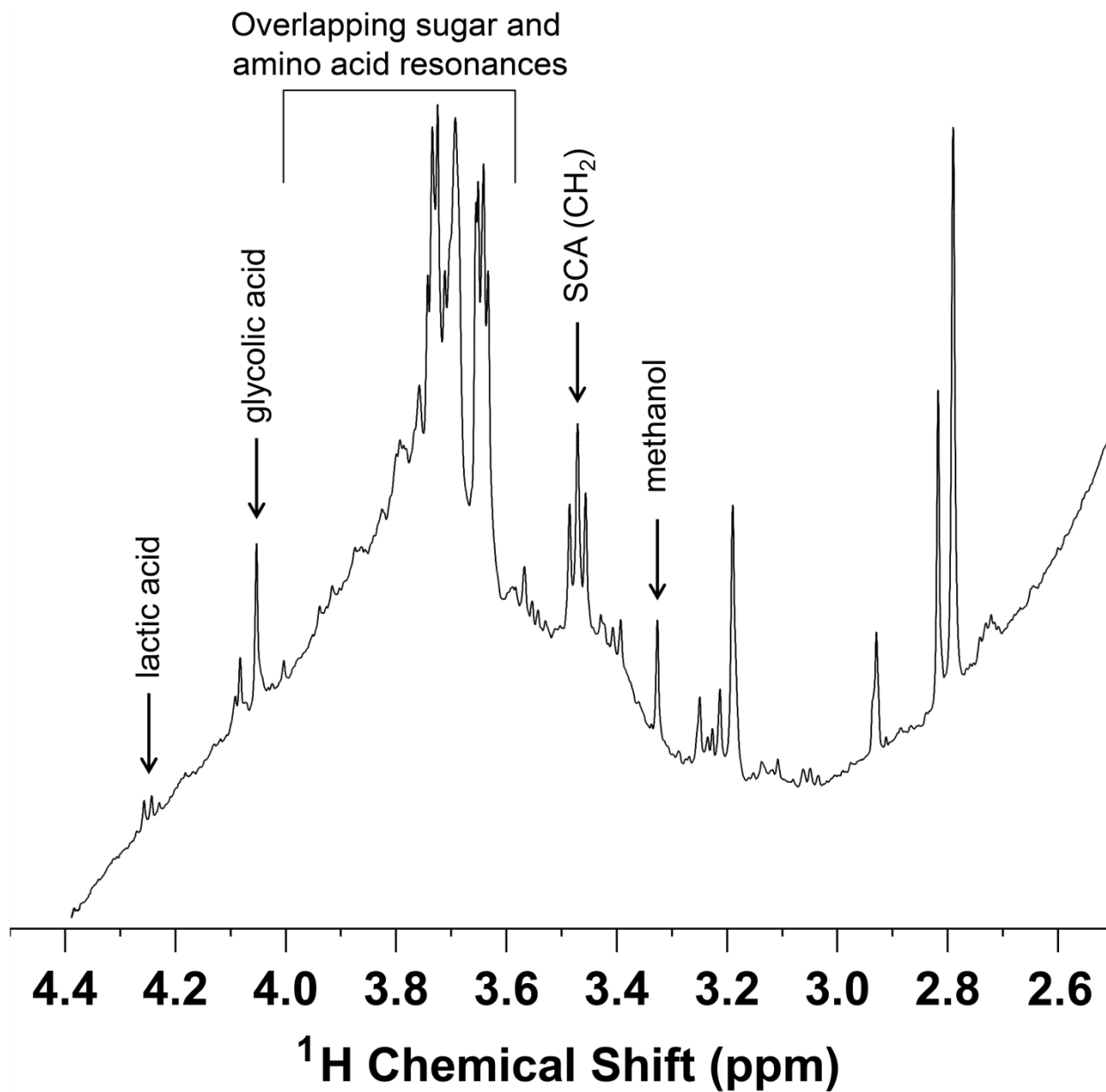


Fig. S2. Expanded view of the region between 2.5 and 4.5 ppm in the ^1H nuclear magnetic resonance (NMR) spectrum of unbound dissolved organic matter (DOM) after interaction with the Akko soil with peaks for identifiable compounds labelled. SCA denotes a mixture of short-chain carboxylic acids that resonate at similar chemical shift values.

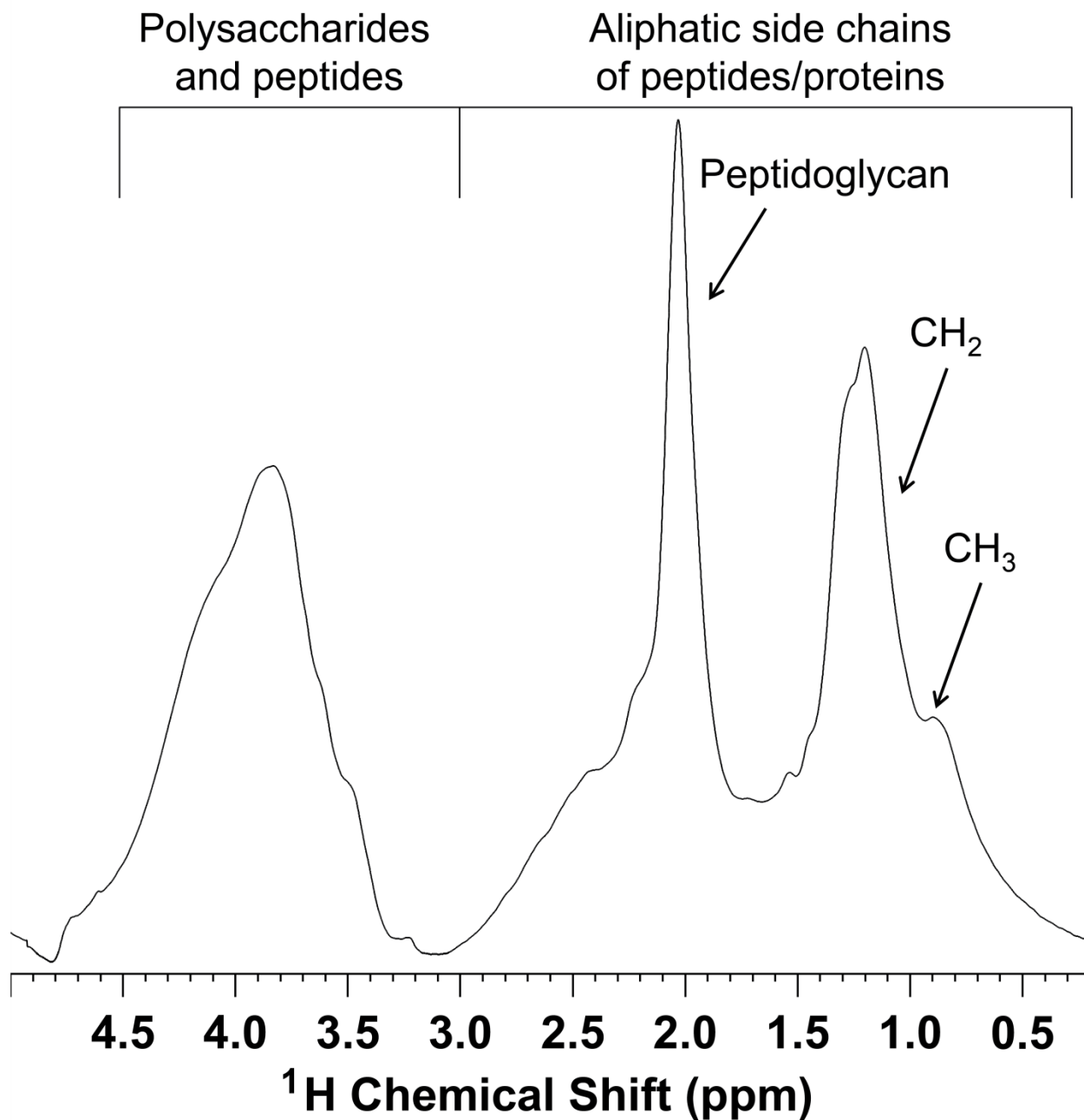


Fig. S3. Diffusion-edited ^1H nuclear magnetic resonance (NMR) spectrum of bulk dissolved organic matter (DOM) with identifiable peaks for polysaccharides and peptides, peptidoglycan and aliphatic components labelled.

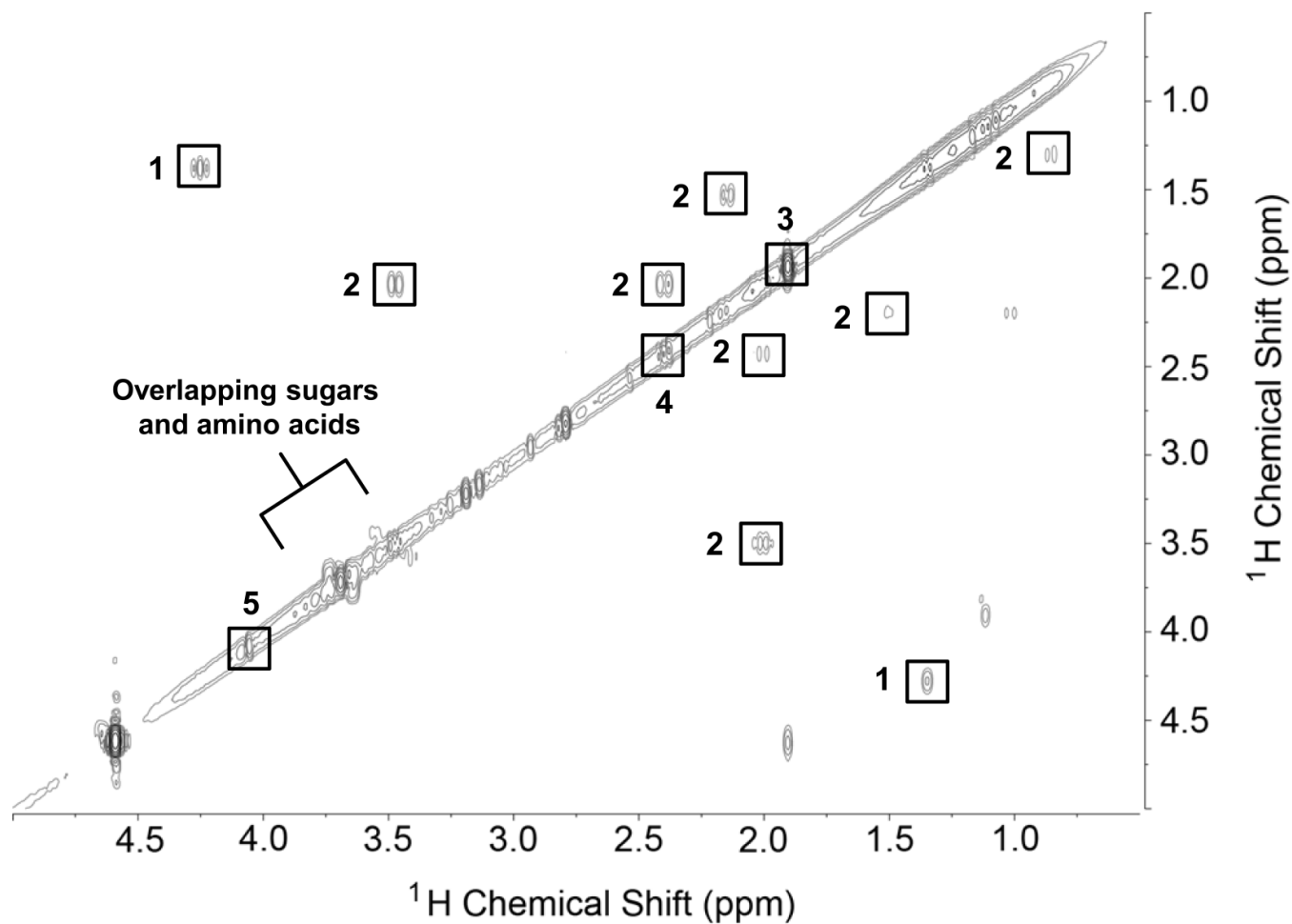


Fig. S4. Correlation spectroscopy (COSY) data for unbound dissolved organic matter (DOM) after interaction with the Basra soil. Identified compounds are labelled as follows: 1, lactic acid; 2, short-chain carboxylic acids; 3, acetic acid; 4, succinic acid; 5, glycolic acid.