

Characterisation of *Clostridioides difficile* spore response to sodium hypochlorite using EM-imaging and Raman Spectroscopy

Supporting information

Dmitry Malyshev^{†,*}, Imogen Anne Jones[‡], Matthew McCracken[‡], Glenn Harper[‡], Lovleen Tina Joshi[‡] and Magnus Andersson^{†,§,*}

[†]Department of Physics, Umeå University, Umeå, Sweden

[‡]Faculty of Health, University of Plymouth, Plymouth

[§]Umeå Centre for Microbial Research (UCMR), Umeå University, Umeå, Sweden

*Corresponding authors Dmitry Malyshev and Magnus Andersson

Email: dmitry.malyshev@umu.se and magnus.andersson@umu.se

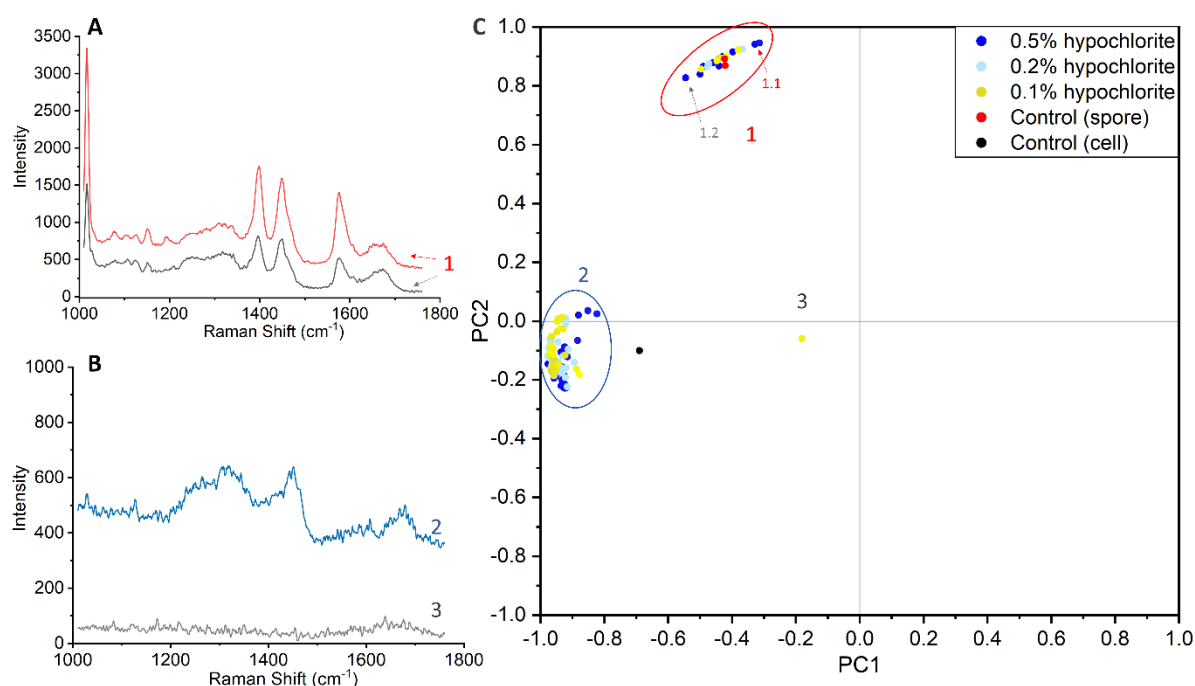


Figure S1. Principal component analysis (PCA) of sodium hypochlorite treated spores in the 1000 - 1700 cm⁻¹ spectral range (n=92, including 2 averaged control spectra). The representative observed spectra of spores with CaDPA (A) and without CaDPA (B) are shown. The labelling of the spectra corresponds to the groups in the loadings plot (C).

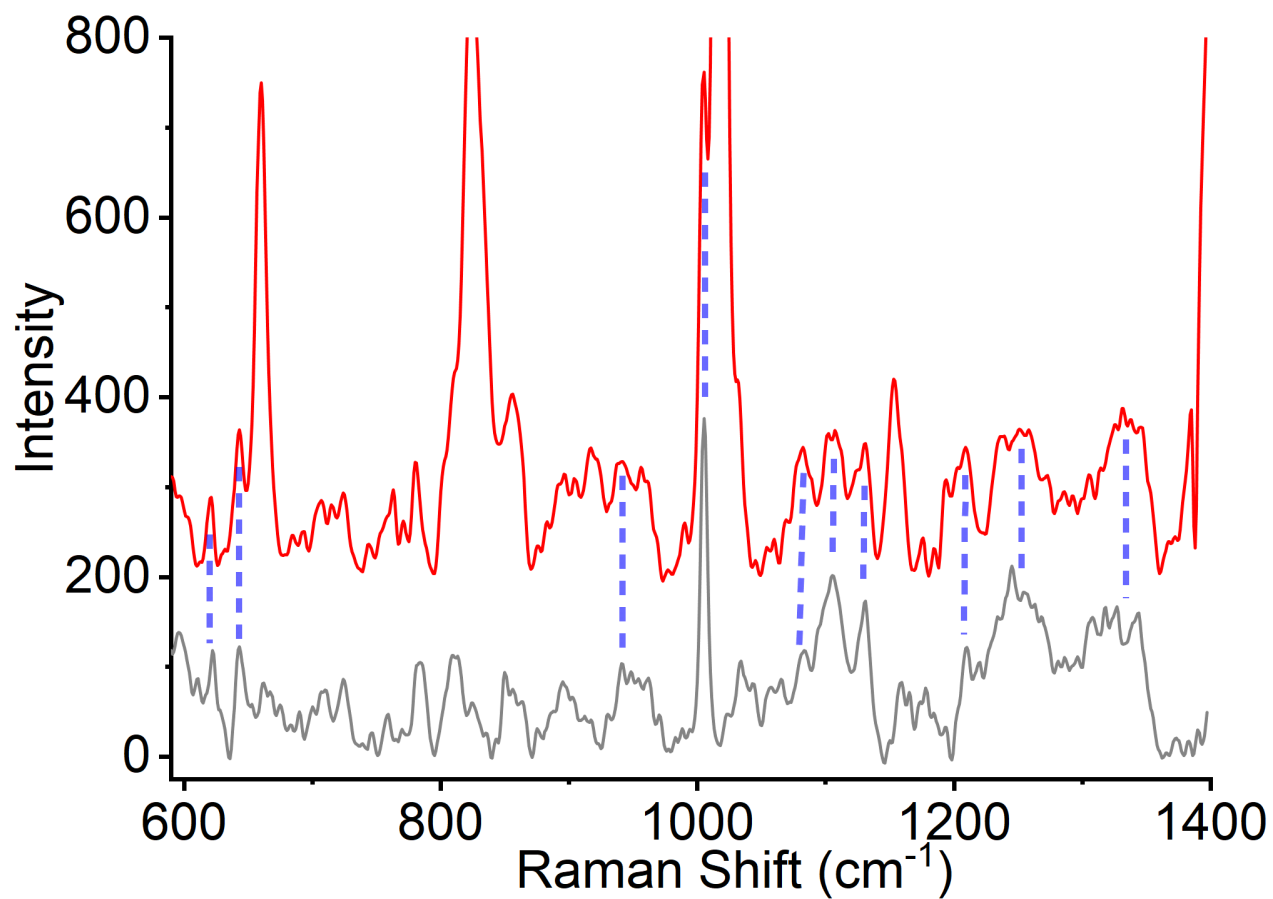


Figure S2. Rescaled plots from Figure 2A-B, highlighting the similarities in the spectra between Group 1 and Group 3 (dashed blue lines), with the exception of the large CaDPA associate peaks.

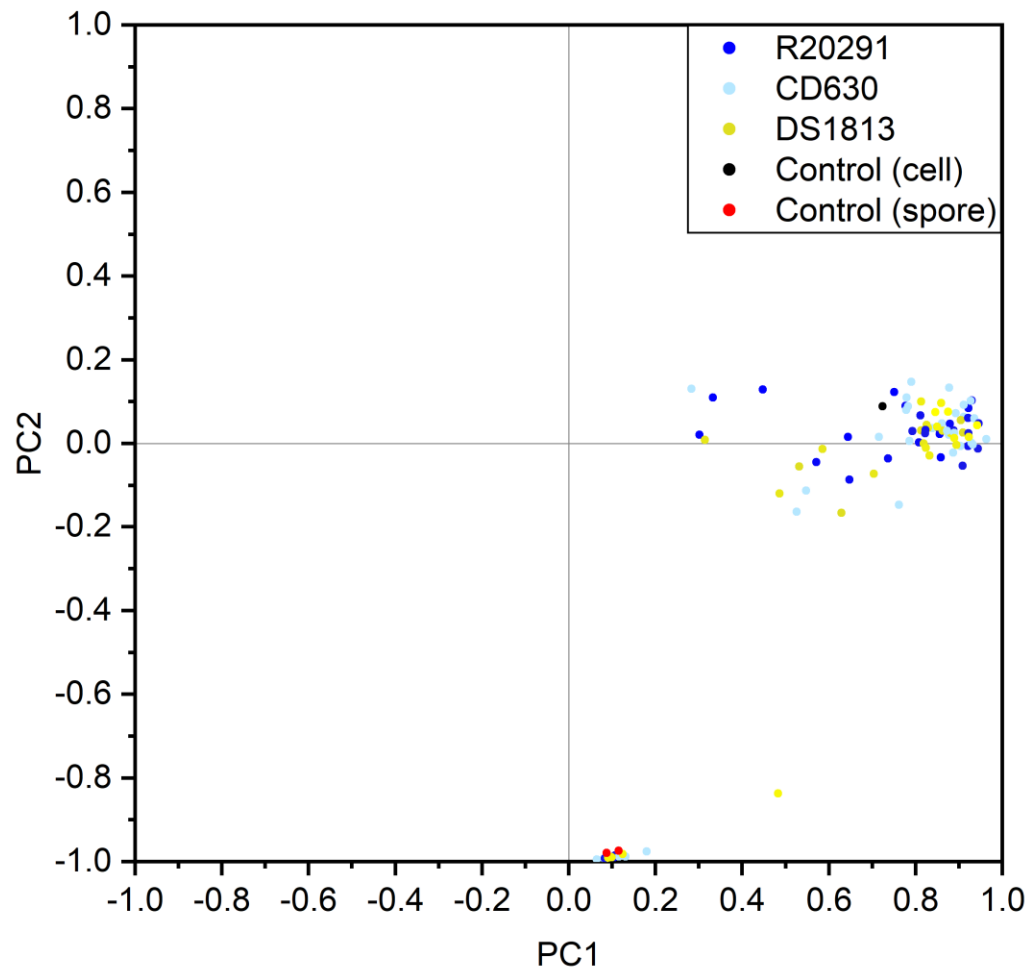


Figure S3. Principal component analysis of sodium hypochlorite treated spores (Figure 2C in main manuscript). Data points recolored based on clinical isolate.

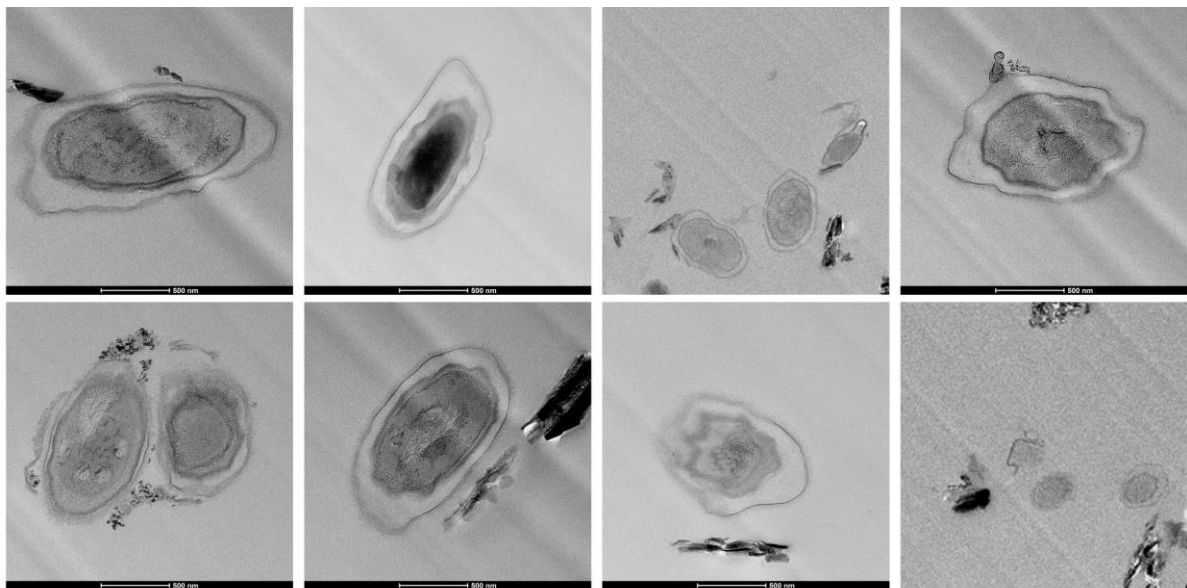


Figure S4. Additional representative TEM images of *B. thuringiensis* spores treated with 0.5% sodium hypochlorite for 10 min.

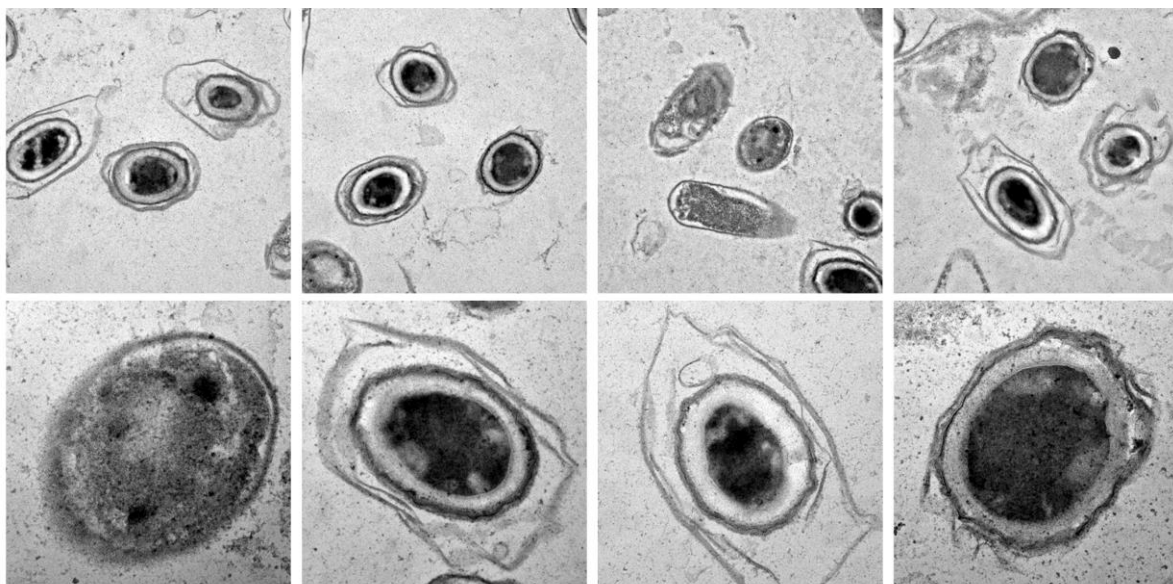


Figure S5. Additional representative TEM images of *C. difficile* R29291 spores treated with 0.5% sodium hypochlorite for 10 min.

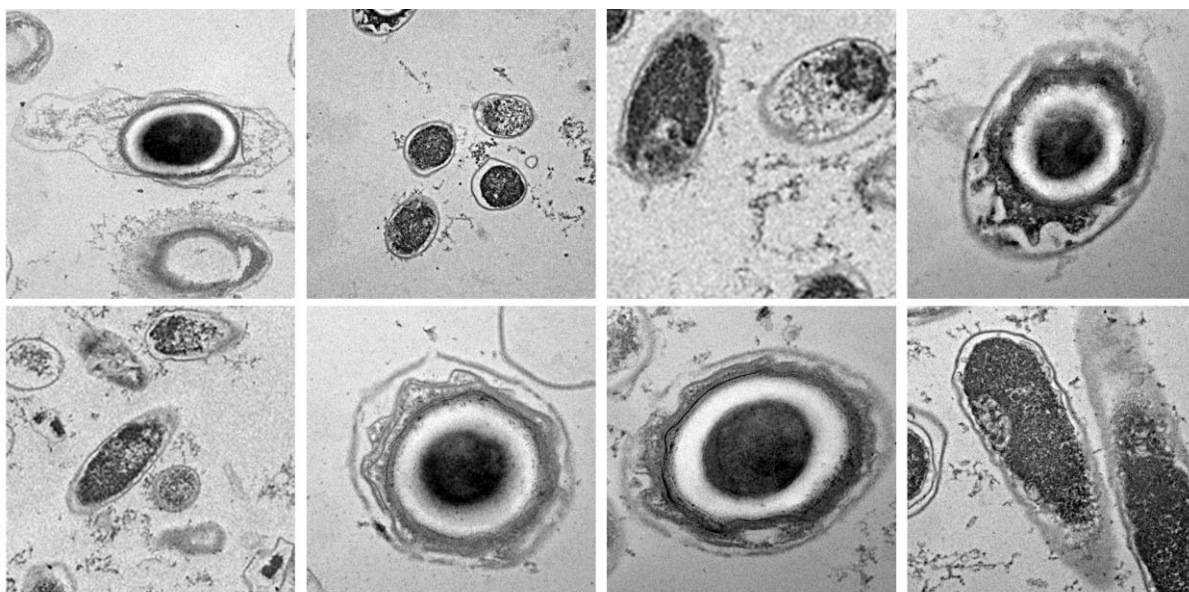


Figure S6. Additional representative TEM images of *C. difficile* CD630 spores treated with 0.5% sodium hypochlorite for 10 min.