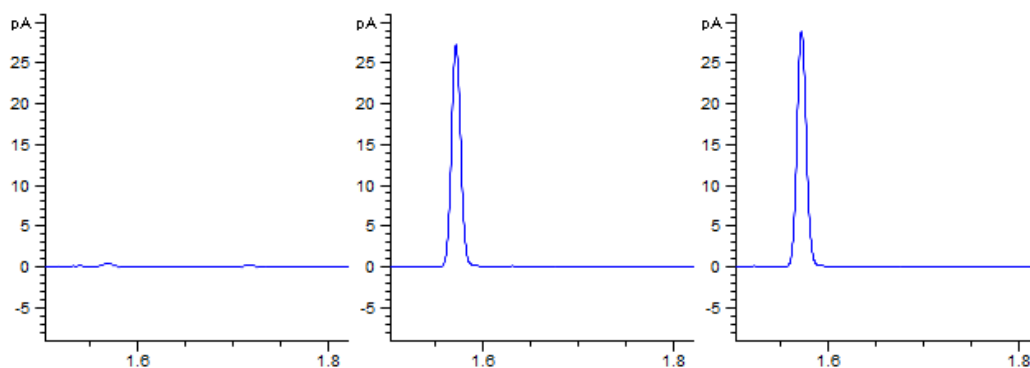


GC program

An Agilent 7820A gas chromatograph equipped with an Agilent HP-5 30m x 0.320mm x 0.25 μ m column was used for detection of ethylene and ethylene oxide in the headspace of sealed culture vials. For quantitation, 500 μ L of headspace was manually injected. An injector temperature of 105 $^{\circ}$ C and a split ratio of 50:1 were used, and oven temperature was held at 30 $^{\circ}$ C for 5 min, and flame ionization detector was held at 200 $^{\circ}$ C. Our lower limit of detection from a 0.5mL culture in a 2mL vial was 3.5 μ M.



Supplemental figure 1. Example set of GC-FID traces illustrating a negative control (cells only), a positive control (cells spiked with 100 μ M oxirane, Sigma part #48838, transfer done in cold room), and a product response. Retention times are in minutes.