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Soil carbon dioxide emissions controlled by an extracellular oxidative metabolism identifiable by its isotope signature

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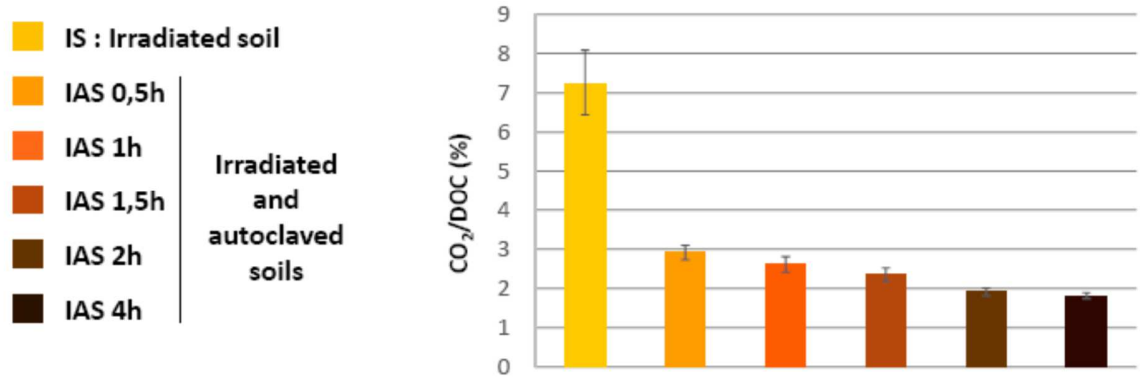
Supporting Online Material for

Figure S1: Percentage of initial DOC oxidized to CO2 during the incubation.



The percentage of initial DOC oxidized to CO_2 is low for all sterilized soils. This result indicates that the EXOMET was quantified with an excess of available substrate. This excess of substrate is favorable to measure the isotope fractionation induced by the EXOMET.

The percentage of initial DOC oxidized to CO_2 decreased with the intensity of sterilization treatments. The large difference between IS and IAS 0.5h (effect of autoclaving) is caused both by a decrease in CO_2 emissions and an increase in DOC content. The decrease percentage of initial DOC oxidized to CO_2 with the duration of autoclaving (from 0.5 to 4h) is only caused by an increase in DOC content. Overall, these results suggest that the efficiency of soil matrix to mineralize DOC decrease with the intensity of sterilization treatments.