

Table S1. Enzymes tested and associated soil substrates, experimental substrates, and positive controls [16].

Enzyme	Organic Substrate (Target Nutrient)	Substrate Used	Positive Control
β -1,4-glucosidase (BG)	Cellulose (Carbon)	4-MUB- β -D-glucoside (Sigma #M2133)	4-methylumbilliferyl (Sigma #M1381)
Phosphatase (AP)	Phosphomonoesters (Phosphorous)	4-MUB-phosphate (Sigma #M8883)	4-methylumbilliferyl (Sigma #M1381)
β -1,4-N-acetylglucosaminidase (NAG)	Chitin (Carbon and Nitrogen)	4-MUB-N-acetyl- β -glucosaminide (Sigma #2133)	4-methylumbilliferyl (Sigma #M1381)
Leucine (LUC)	L-leucine aminopeptidase (Nitrogen)	L-leucine-7-amido-4-methylcoumarin (Sigma #L2145)	7-amido-4-methylcoumarin (Sigma #A9891)