Supplementary material to

Linalool dehydratase-isomerase, a bifunctional enzyme in the anaerobic degradation of monoterpenes

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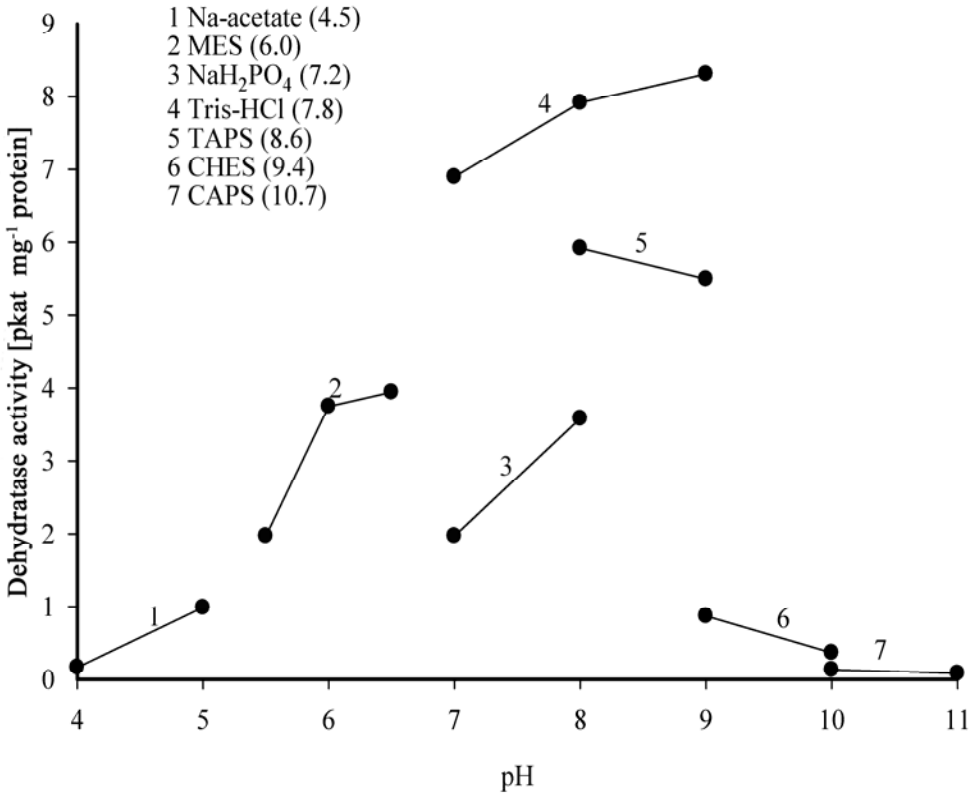

Fig. S1: pH activity profile of purified linalool dehydratase from *C. defragrans*. Activity was measured using 2 mM linalool in the two-phase-system. The buffers are listed with the pKa values at 35 °C.

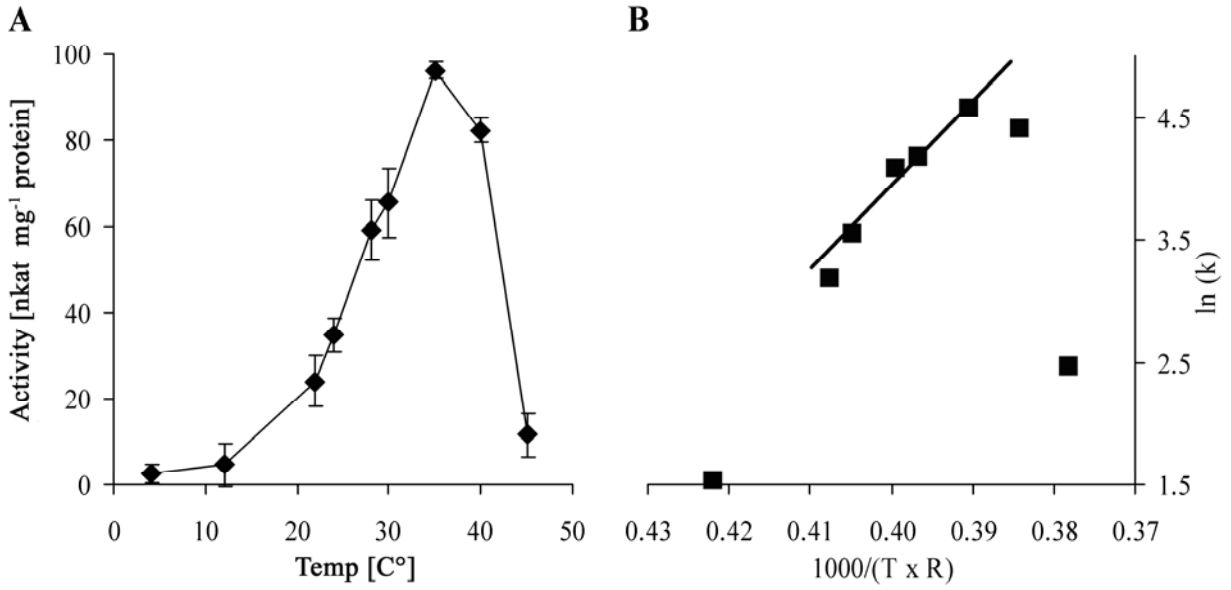

Fig. S2: Temperature profile (A) and Arrhenius plot (B). The activation energy is given by the negative slope of the regression curve in the range from 24 to 35 degree Celsius with E_A= 68.6 kJ/mol

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1     ATG CGG TTC ACA TTG AAG ACG ACG GCG ATT GTG TCG GCC GCC GCC   45
1      M   R   F   T   L   K   T   T   A   I   V   S   A   A   A    15

46    CTG CTG GCC GGT TTC GGG CCG CCG CCC CGC GCG GCG GAA CTG CCG   90
16     L   L   A   G   F   G   P   P   P   R   A   A   E   L   P    30

91    CCG GGG CGG CTC GCC ACC ACC GAG GAC TAT TTC GCG CAG CAG GCG   135
31     P   G   R   L   A   T   T   E   D   Y   F   A   Q   Q   A    45

136   AAG CAG GCC GTC ACC CCC GAC GTG ATG GCC CAG CTG GCC TAC ATG   180
46     K   Q   A   V   T   P   D   V   M   A   Q   L   A   Y   M    60

181   AAC TAC ATC GAT TTC ATC TCG CCC TTC TAC AGC CGG GGC TGC TCC   225
61     N   Y   I   D   F   I   S   P   F   Y   S   R   G   C   S    75

226   TTC GAG GCC TGG GAG CTC AAG CAC ACG CCG CAG CGG GTC ATC AAG   270
76     F   E   A   W   E   L   K   H   T   P   Q   R   V   I   K    90

271   TAT TCG ATC GCC TTC TAT GCG TAT GGC CTG GCC AGC GTG GCG CTC   315
91     Y   S   I   A   F   Y   A   Y   G   L   A   S   V   A   L   105

316   ATC GAC CCG AAG CTG CGT GCG CTC GCC GGC CAT GAC CTG GAC ATC   360
106    I   D   P   K   L   R   A   L   A   G   H   D   L   D   I   120

361   GCG GTC TCC AAG ATG AAG TGC AAG CGG GTC TGG GGC GAC TGG GAG   405
121    A   V   S   K   M   K   C   K   R   V   W   G   D   W   E   135

406   GAA GAC GGG TTC GGC ACC GAC CCG ATC GAG AAA GAG AAC ATC ATG   450
136    E   D   G   F   G   T   D   P   I   E   K   E   N   I   M   150

451   TAC AAG GGC CAC CTG AAC CTG ATG TAC GGC CTC TAT CAG CTG GTG   495
151    Y   K   G   H   L   N   L   M   Y   G   L   Y   Q   L   V   165

496   ACC GGC AGC CGC CGG TAC GAA GCC GAG CAT GCC CAC CTC ACC CGC   540
166    T   G   S   R   R   Y   E   A   E   H   A   H   L   T   R   180

541   ATC ATC CAT GAC GAG ATC GCG GCC AAC CCC TTT GCC GGC ATC GTC   585
181    I   I   H   D   E   I   A   A   N   P   F   A   G   I   V   195

586   TGC GAG CCG GAC AAT TAT TTT GTC CAG TGC AAT TCG GTC GCC TAC   630
196    C   E   P   D   N   Y   F   V   Q   C   N   S   V   A   Y   210

631   CTG AGC CTG TGG GTC TAT GAC CGG CTG CAT GGC ACC GAC TAC CGG   675
211    L   S   L   W   V   Y   D   R   L   H   G   T   D   Y   R   225

676   GCG GCC ACC AGG GCC TGG CTG GAT TTC ATC CAG AAG GAC CTG ATC   720
226    A   A   T   R   A   W   L   D   F   I   Q   K   D   L   I   240

721   GAT CCC GAG CGG GGC GCC TTC TAC CTG TCC TAT CAC CCC GAG TCC   765
241    D   P   E   R   G   A   F   Y   L   S   Y   H   P   E   S   255

766   GGC GCG GTG AAG CCG TGG ATC TCG GCG TAT ACG ACA GCC TGG ACG   810
256    G   A   V   K   P   W   I   S   A   Y   T   T   A   W   T   270

811   CTC GCC ATG GTG CAC GGC ATG GAC CCC GCC TTT TCC GAG CGC TAC   855
271    L   A   M   V   H   G   M   D   P   A   F   S   E   R   Y   285
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856   TAC CCC CGG TTC AAG CAG ACC TTC GTC GAG GTC TAC GAC GAG GGC   900
286    Y   P   R   F   K   Q   T   F   V   E   V   Y   D   E   G    300

901   CGC AAG GCC CGG GTG CGC GAG ACG GCC GGC ACG GAC GAC GCG GAT   945
301    R   K   A   R   V   R   E   T   A   G   T   D   D   A   D    315

946   GGC GGG GTG GGC CTG GCT TCG GCG TTC ACC CTG CTG CTG GCC CGC   990
316    G   G   V   G   L   A   S   A   F   T   L   L   L   A   R    330

991   GAG ATG GGC GAC CAG CAG CTC TTC GAC CAA TTG CTG AAT CAC CTG   1035
331    E   M   G   D   Q   Q   L   F   D   Q   L   L   N   H   L    345

1036  GAG CCG CCG GCC AAG CCG AGC ATC GTC TCG GCC TCG CTG CGG TAC   1080
346    E   P   P   A   K   P   S   I   V   S   A   S   L   R   Y    360

1081  GAG CAT CCC GGC AGC CTG CTG TTC GAC GAG CTG CTG TTC CTC GCC   1125
361    E   H   P   G   S   L   L   F   D   E   L   L   F   L   A    375

1126  AAG GTG CAT GCC GGC TTT GGC GCC CTG CTT CGG ATG CCG CCT CCG   1170
376    K   V   H   A   G   F   G   A   L   L   R   M   P   P   P    390

1171  GCG GCC AAG CTC GCA GGG   1188
391    A   A   K   L   A   G    396
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Fig. S3: Nucleotide and protein sequence of the linalool dehydratase-isomerase preprotein.