

Supplementary Materials: Exploration on the Enhancement of Detoxification Ability of Zearalenone and its Degradation Products of *Aspergillus niger* FS10 under Directional Stress of Zearalenone

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Table S1. The sequencing results were compared and analyzed on the NCBI website (<https://blast.ncbi.nlm.nih.gov/Blast.cgi>) to identify the species of the samples submitted for inspection. Generally, the species with the homology of more than 97% and the highest homology obtained by the comparison on the NCBI is judged as the species of the submitted sample.

Detection method	Homology	Reference Species
CSQ	696/703(99%)	<i>Aspergillus niger</i>
TGCCCCCGGAATACCAGGGGGCGCAATGTGCGTTCAAAGACTCGATGATTCATGAATTCTGCAATTCACA TTAGTTATCGCATTTTCGCTGCGTTCTTCATCGATGCCGGAACCAAGAGATCCATTGTTGAAAGTTTTAACTGAT TGCATTCAATCAACTCAGACTGCACGCTTTCAGACAGTGTTTCGTGTTGGGGTCTCCGGCGGGGCACGGGCCCCGG GGGGCAGAGGCGCCCCCGGCGGCCGACAAGCGGCGGGCCCCGCCGAAGCAACAGGGTACAATAGACACG GATGGGAGGTTGGGCCCAAAGGACCCGCACTCGGTAATGATCCTTCCGTTAGGGGAACCTGCGGAAGGATCA TTACCGAGTGCGGGTCTTTGGGCCCAACCTCCCATCCGTGTCTATTGTACCTGTTGCTTCGGCGGGCCCCGC CGCTTGTCGGCCGCCGGGGGGGCGCCTCTGCCCCCGGGCCCGTGCCCGCCGGAGACCCCAACACGAACACT G		

Table S2. Specific values of degradation rate of each generation.

Generation	Degradation Rate(%) (Mean \pm SD)
Raw (FS-10)	83.51 \pm 1.78
G1	80.25 \pm 1.68
G2	70.36 \pm 5.06
G3	80.56 \pm 5.56
G4	92.22 \pm 0.88
G5 (ZEN-S-FS10)	95.58 \pm 0.39

Table S3. Fitting results of first order degradation kinetics.

Concentration (ng/mL)	k_1 (h ⁻¹)
493.54	0.0033
481.49	0.0047
445.34	0.0096
361.01	0.0204
264.62	0.0318
107.99	0.0639

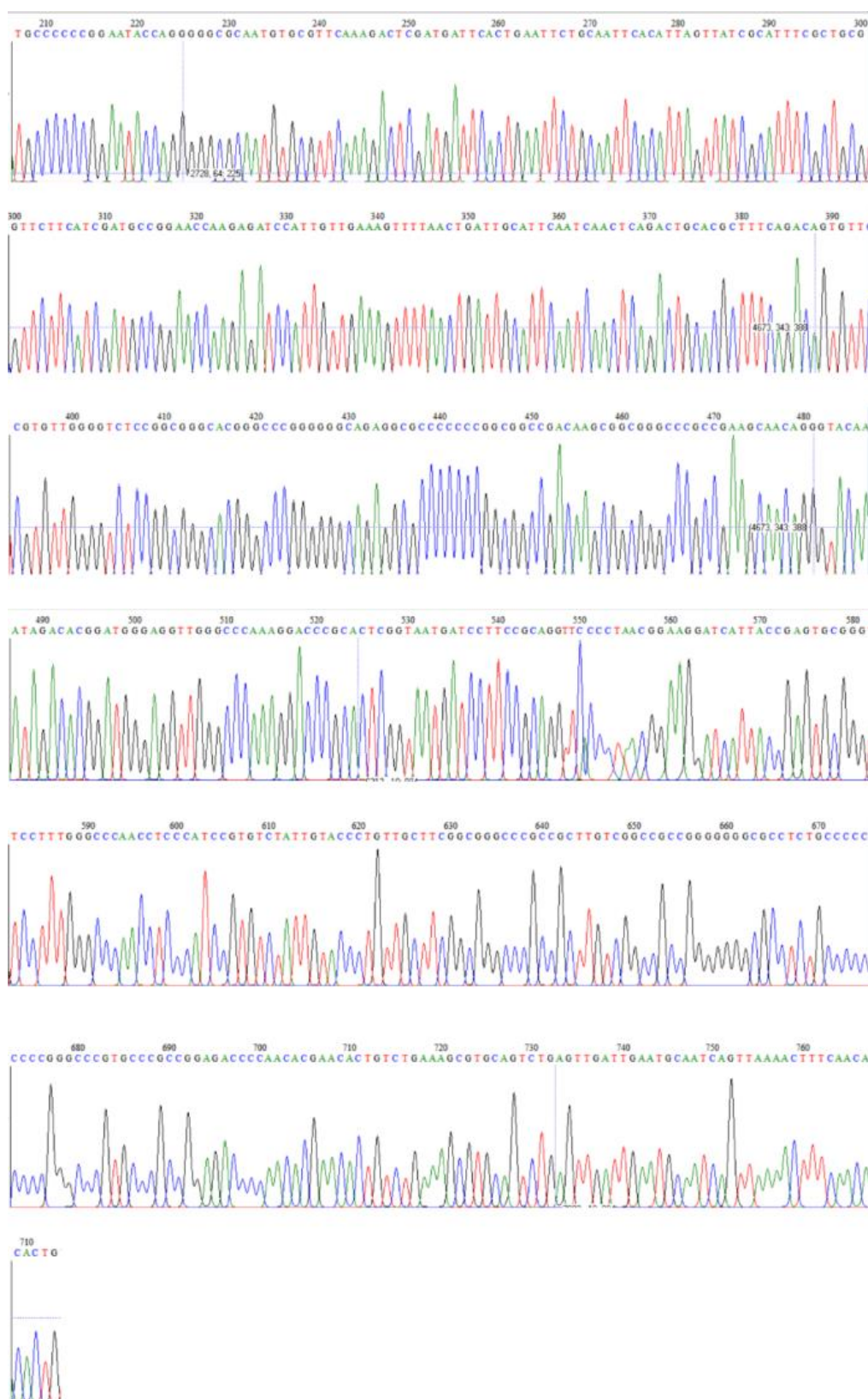


Figure S1. The content intensity of all base sequences of ZEN-S-FS10.

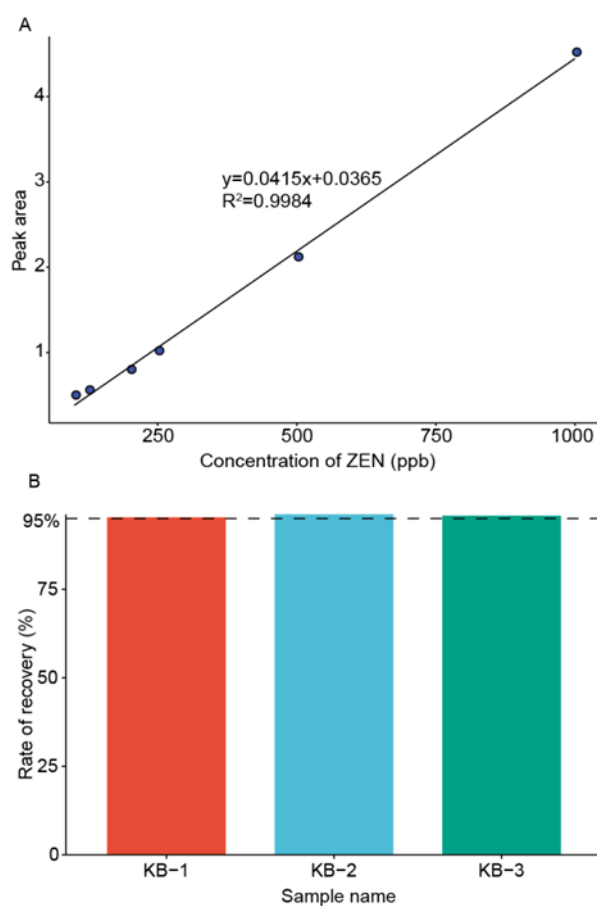


Figure S2. Recovery of ZEN in the blank control group of ZEN-S-FS10; (A) ZEN concentration and ration standard curve; (B) validation of recovery rate of blank control group.

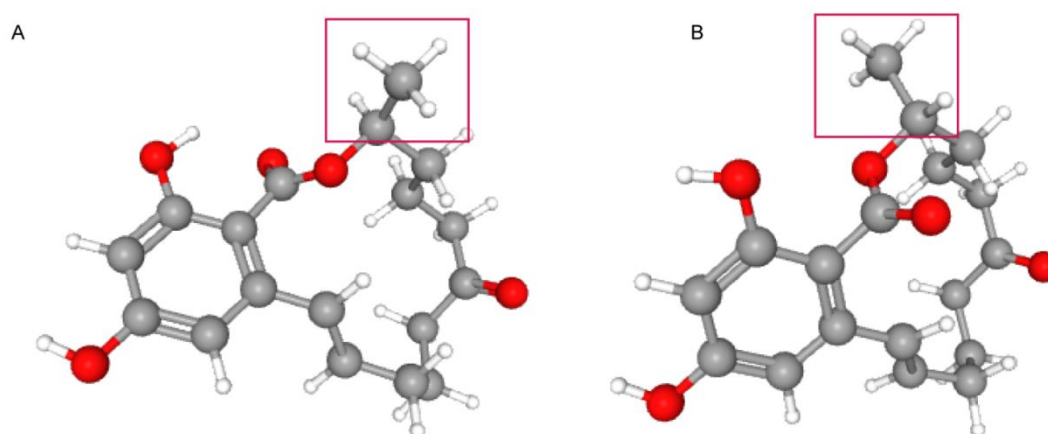


Figure S3. Comparison of the space structure of ZEN molecule and product B; (A) ZEN molecular space structure; (B) product B molecular space structure.