

# Supplementary Materials: Assessment of toxigenic *Fusarium* species and their mycotoxins in brewing barley grains

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**Table S1.** *Fusarium* species references used in this study for phylogenetic analysis.

Accessionnumber	<i>Fusarium</i> species	NCBI accessionnumber	
		<i>EF-1<math>\alpha</math></i>	<i>RPB2</i>
NRRL26755	<i>F.acaciae-mearnsii</i>	AF212449	KM361658
NRRL29133	<i>F.armeniicum</i>	HM744659	HQ154448
NRRL31970	<i>F.armeniicum</i>	HM744664	HQ154453
NRRL6227	<i>F.armeniicum</i>	HM744692	HQ154480
NRRL13818	<i>F.asiaticum</i>	AF212451.1	JX171573.1
FRC R-09495	<i>F.avenaceum</i>	GQ915502	GQ915486
NRRL26916	<i>F.boothii</i>	GQ915503.1	GQ915487
FRC R-09624	<i>F.cerealis</i>	GQ915505	GQ915489
NRRL13721	<i>F.cerealis</i>	AF212464	KM361656
NRRL29297	<i>F.cortaderiae</i>	AY225885.1	KM361662.1
CBS139512	<i>F.culmorum</i>	KT855186	KT855212
FRC R-09618	<i>F.culmorum</i>	GQ915506	GQ915490.1
NRRL25475	<i>F.culmorum</i>	AF212463	JX171628
NRRL13402	<i>F.equiseti</i>	JX171566.1	GQ505592.1
NRRL20697	<i>F.equiseti</i>	JX171595.1	GQ505594.1
CBS128539	<i>F.graminearum</i>	KT855182	KT855208
CBS138561	<i>F.graminearum</i>	KT855183	KT855209
CBS138562	<i>F.graminearum</i>	KT855184	KT855210
CBS138563	<i>F.graminearum</i>	KT855185	KT855211
CBS139513	<i>F.graminearum</i>	KT855187	KT855213
CBS139514	<i>F.graminearum</i>	KT855188	KT855214
NRRL31084	<i>F.graminearum</i>	HM744693	HQ154481
NRRL26417	<i>F.incarnatum-equiseti</i>	GQ505598	JX171635
NRRL32175	<i>F.incarnatum-equiseti</i>	GQ505609	JX171645
NRRL53438	<i>F.langsethiae</i>	HM744690	HQ154478
NRRL53439	<i>F.langsethiae</i>	HM744691	HQ154479
NRRL28436	<i>F.meridionale</i>	AF212435	KM361660
NRRL25797	<i>F.mesoamericanum</i>	AF212441	KM361657
FRC T-0962	<i>F.poa</i>	GQ915511	GQ915495
NRRL28062	<i>F.pseudograminearum</i>	AF212468	JX171637
FRC R-07843	<i>F.sambucinum</i>	GQ915512	GQ915496
NRRL53421	<i>F.sibiricum</i>	HM744675	HQ154463
NRRL53422	<i>F.sibiricum</i>	HM744676	HQ154464
NRRL54149 <sup>a</sup>	<i>Fusarium</i> sp.	HM068337	HM068359
NRRL13440	<i>F.sporotrichioides</i>	HM744650	HQ154439
NRRL3299	<i>F.sporotrichioides</i>	HM744665	HQ154454
NRRL25481	<i>F.tricinatum</i>	HM068307	JX171629
FRC R-09186	<i>F.venenatum</i>	GQ915515	GQ915499

<sup>a</sup> *Fusarium* sp. NRRL54149: currently described as *Fusarium torreyae*(O Donnell et al., 2013).

**Table S2.** Characteristics of the method performance for extraction of deoxynivalenol and zearalenone in barley grains and culture media.

Analytes	Matrix	LOD ( $\mu\text{g}/\text{kg}$ )	LOQ ( $\mu\text{g}/\text{kg}$ )	Linear regression ( $R^2$ )	Spiking level ( $\mu\text{g}/\text{ml}$ )	Recovery (%)	RSD (%)
DON	Barley grains	5	25	0.997	0.0375	98	6.4
					0.375	99	5.2
	Fungi strains	5	25		0.500	99	3.3
					0.025	98	5.7
ZEA	Barley grains	10	25	0.999	0.125	99	2.9
					0.0375	97	3.0
	Fungi strains	10	25		0.375	98	2.3
					0.500	99	0.4
					0.025	102	2.1
				0.125	98	1.5	