

Supplementary Information

Purity assessment of dinotefuran using mass balance and quantitative nuclear magnetic resonance

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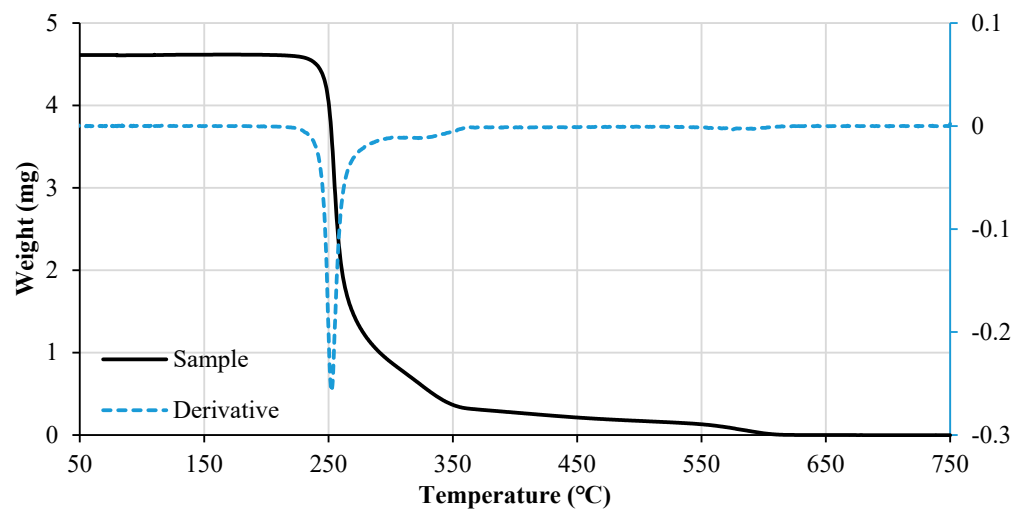


Figure S1. TGA curve of DNT

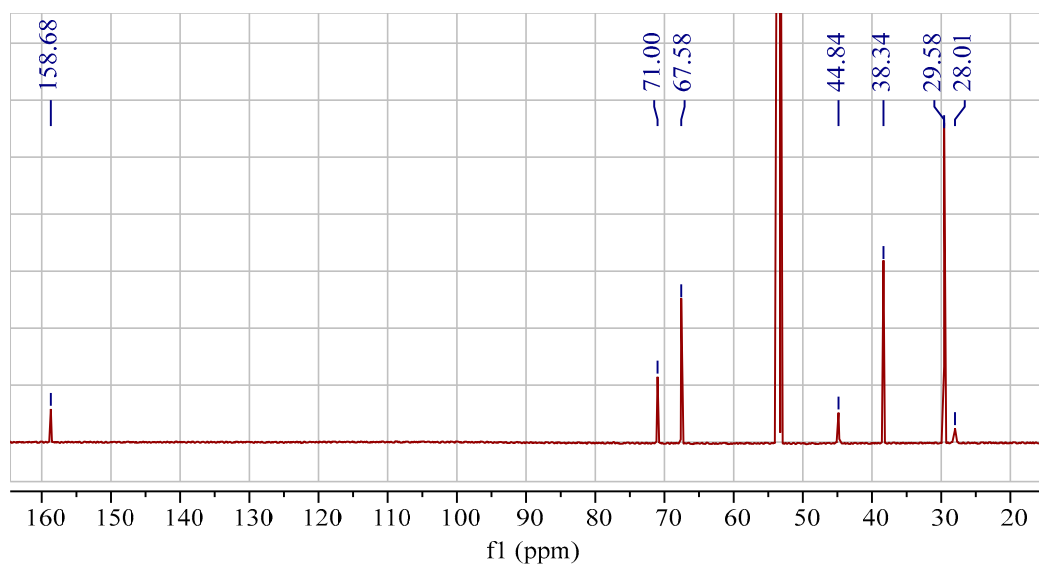


Figure S2. ¹³C spectrum of DNT

Table S1. Uncertainty from the difference in UV response factor.

Wavelength (nm)	DNT ($\mu\text{V}\cdot\text{s}$)	Impurity 1 ($\mu\text{V}\cdot\text{s}$)	Impurity 2 ($\mu\text{V}\cdot\text{s}$)	Impurity 3($\mu\text{V}\cdot\text{s}$)
254	7040094	2495	6254	3598
268	9881402	3482	9339	5140
269	9856533	3250	9406	5219
275	9072675	2756	8325	4983
254	7040094	2495	6254	3598
u_{2-i}	/	0.0023%	0.0000%	0.0000%
u_2	0.0014%			

Table S2 Concentrations of inorganic impurity

Elements	Molecular weight (g/mol)	Concentration (ng/L)	Elements	Molecular weight (g/mol)	Concentration (ng/L)
Li	7	/	In	115	/
Be	9	/	Sn	118	/
B	11	/	Sb	121	/
Na	23	/	Te	125	/
Mg	24	/	I	127	/
Al	27	/	Cs	133	0.01
Si	28	/	Ba	137	37.48
K	39	/	La	139	/
Ca	44	/	Ce	140	/
Sc	45	/	Pr	141	/
Ti	47	/	Nd	146	/
V	51	0.02	Sm	147	/
Cr	53	/	Eu	153	/
Mn	55	0.05	Gd	157	/
Fe	57	/	Tb	159	/
Co	59	/	Dy	163	/
Ni	60	/	Ho	165	/
Cu	63	0.04	Er	166	/
Zn	66	/	Tm	169	/
Ga	69	1.99	Yb	172	/
Ge	72	/	Lu	175	/
As	75	/	Hf	178	/
Se	82	/	Ta	181	/
Br	79	/	W	182	/
Rb	85	/	Re	185	/
Sr	88	/	Os	189	/
Y	89	/	Ir	193	/
Zr	90	/	Pt	195	/
Nb	93	0.01	Au	197	/
Mo	95	/	Hg	202	/
Ru	101	/	Tl	205	/
Rh	103	0.19	Pb	208	/
Pd	105	/	Bi	209	/
Ag	107	/	Th	232	/
Cd	111	/	U	238	/
Total concentration (ng/L)			39.8		
DNT concentration (ng/L)			4228000		
Inorganic impurity (mg/g)			0.01		