Additional File B: Antioxidant DPPH radical scavenging activity (RSA) by manuka leaf extracts

Optimisation of ultrasound assisted extraction of antiacetylcholinesterase and antioxidant compounds from manuka (*Leptospermum scoparium*) for use as a phytomedicine against Alzheimer's disease

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Table B1. DPPH RSA ANOVA results.

Source	Sum of Squares	df	Mean Square	F-value	p-value	
Model	1033.88	7	147.70	22.97	< 0.0001	significant
T- Temperature	313.75	1	313.75	48.79	< 0.0001	
t - Time	231.13	1	231.13	35.94	0.0002	
E – Ethanol concentration	2.31	1	2.31	0.3594	0.5636	
tE	29.16	1	29.16	4.53	0.0621	
T^2	30.98	1	30.98	4.82	0.0558	
t^2	297.98	1	297.98	46.33	< 0.0001	
E^2	122.21	1	122.21	19.00	0.0018	
Residual	57.88	9	6.43			
Lack of Fit	50.42	5	10.08	5.41	0.0635	not significant
Pure Error	7.46	4	1.86			
Cor Total	1091.76	16				

Table B2. DPPH RSA model fit statistics.

Std. Dev.	2.54	**R^2**	0.9470
Mean	63.68	**Adjusted R^2**	0.9058
C.V. %	3.98	**Predicted R^2**	0.7625
		Adeq Precision	15.6784

Table B3. Final RSA equation in terms of actual factors

DPPH RSA =
+61.62735
　-2.08625 T
　+1.81274 t
　+1.22454 E
+0.014211 t * E
+0.027125 T^2
　-0.093213 t^2
　-0.013469 E^2

The equation in terms of actual factors can be used to make predictions about the response for given levels of each factor. Here, the levels should be specified in the original units for each factor. This equation should not be used to determine the relative impact of each factor because the coefficients are scaled to accommodate the units of each factor and the intercept is not at the centre of the design space.