Additional File A: AChE inhibition 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 A1. AChE inhibition ANOVA results.

Source	Sum of Squares	df	Mean Square	F-value	p-value	
Model	3071.69	9	341.30	65.03	<0.0001	significant
T – Temperature	3.13	1	3.13	0.5955	0.4656	
t – Time	723.90	1	723.90	137.94	<0.0001	
E – Ethanol concentration	739.20	1	739.20	140.86	<0.0001	
Tt	129.96	1	129.96	24.76	0.0016	
TE	38.44	1	38.44	7.32	0.0304	
tE	37.82	1	37.82	7.21	0.0313	
T^2	311.23	1	311.23	59.31	0.0001	
t^2	176.39	1	176.39	33.61	0.0007	
E^2	781.36	1	781.36	148.89	<0.0001	
Residual	36.74	7	5.25			
Lack of Fit	11.51	3	3.84	0.6082	0.6441	not significant
Pure Error	25.23	4	6.31			
Cor Total	3108.42	16				

Table A2. AChE inhibition model fit statistics.

Std. Dev.	2.29	**R^2**	0.9882
Mean	57.22	**Adjusted R^2**	0.9730
C.V. %	4.00	**Predicted R^2**	0.9281
		Adeq Precision	24.0724

Table A3. AChE inhibition final equation in terms of actual factors.

AChE inhibition =
-353.68175
+10.06500 T
+6.31659 t
+4.83118 E
-0.060000 T * t
-0.015500 T * E
-0.016184 t * E
-0.085975 T^2
-0.071717 t^2
-0.034056 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.