

Supporting Information For:

Acetone Enhances the Direct Analysis of Procyanidin- and Prodelphinidin-Based Condensed Tannins in Lotus Species by the Butanol-HCl-Iron Assay

John Grabber^{*,†}, Wayne E. Zeller[†] and Irene Mueller-Harvey[‡]

[†]U.S. Dairy Forage Research Center, Agricultural Research Service, U.S. Department of Agriculture, 1925 Linden Drive West, Madison, Wisconsin 53706, United States

[‡]Chemistry and Biochemistry Laboratory, Food Production and Quality Division, School of Agriculture, Policy and Development, University of Reading, P.O. Box 236,1 Earley Gate, Reading RG6 6AT, UK

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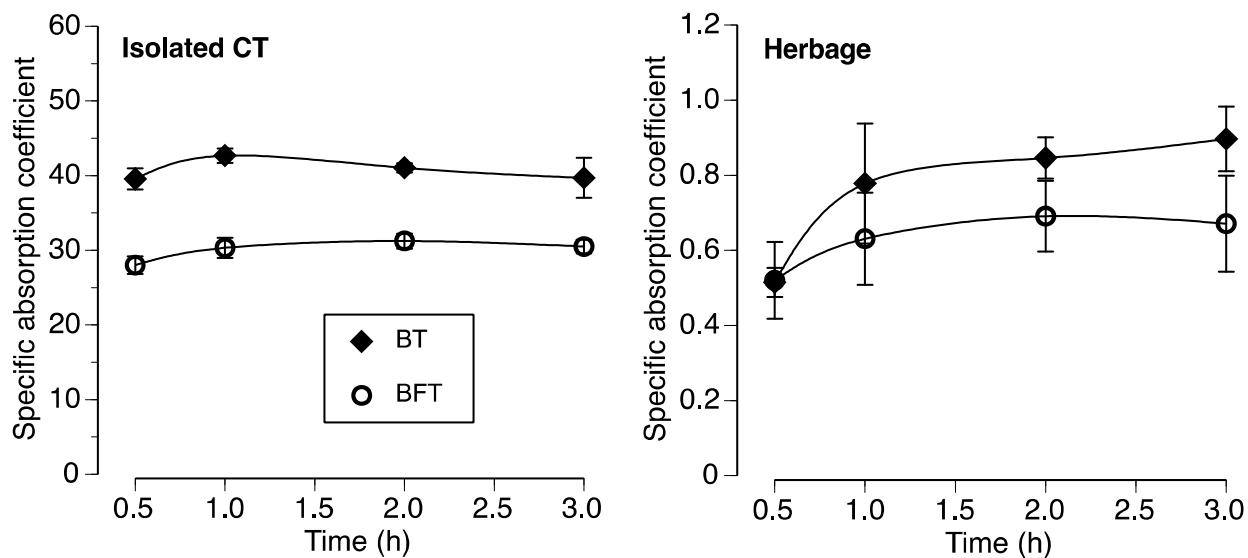


Figure 1S. Anthocyanidin color yields from isolated condensed tannins and herbage of birdsfoot trefoil and big trefoil as influenced by heating time at 95 °C in conventional butanol-HCl-iron reagent (N = 3).

Table 1S. Response Surface Analysis of Anthocyanidin Production from Isolated Condensed Tannins and Tissue of Birdsfoot Trefoil (BFT) and Big Trefoil (BT) Herbage When Heated at 70°C for 0.5 to 3 h in Butanol-HCl-Iron Reagent Amended with 0 to 60% (v/v) Acetone (N = 2).

	BFT Isolated CT	BFT Herbage	BT Isolated CT	BT Herbage
Estimate				
Intercept	6.227	-0.0675	12.010	-0.2212
Time	10.543	0.4008	12.129	0.5439
Acetone	0.356	0.0363	1.0500	0.1033
Time X Time	-2.0360	-0.0711	-2.5918	-0.1066
Time X Acetone	0.00268	-0.00056	-0.01852	0.000533
Acetone X Acetone	-0.00549	-0.00034	-0.01111	-0.00093
Probability				
Intercept	0.001	0.334	0.001	0.164
Time	0.001	0.001	0.001	0.007
Acetone	0.001	0.001	0.001	0.001
Time X Time	0.001	0.003	0.001	0.042
Time X Acetone	0.809	0.414	0.407	0.726
Acetone X Acetone	0.001	0.001	0.001	0.001
Lack of fit	0.408	0.180	0.080	0.001
Root mean square error	1.33	0.081	2.67	0.183
R ²	0.926	0.965	0.940	0.980
Predicted maximum				
Specific absorption coefficient	25.87	1.39	49.05	3.41
Time (h)	2.61	2.62	2.18	2.69
Acetone (mL L ⁻¹)	33.05	51.16	45.40	56.07

Table 2S. Response Surface Analysis of Anthocyanidin Production from Isolated Condensed Tannins and Tissue of Birdsfoot Trefoil (BFT) and Big Trefoil (BT) Leaves When Heated at 70°C for 1 to 4 h in Butanol-HCl-Iron Reagent Amended with 0 to 60% (v/v) Acetone (N = 3).

	BFT Isolated CT	BFT Leaves	BT Isolated CT	BT Leaves
Estimate				
Intercept	20.398	0.3349	21.894	0.4985
Time	5.971	0.4602	3.613	0.5644
Acetone	0.289	0.0548	1.016	0.2134
Time X Time	-0.9165	-0.06271	-0.4821	-0.05521
Time X Acetone	0.0187	-0.00217	-0.0088	-0.00379
Acetone X Acetone	-0.0059	-0.00043	-0.0104	-0.00185
Probability				
Intercept	0.001	0.032	0.001	0.116
Time	0.001	0.001	0.075	0.028
Acetone	0.001	0.001	0.001	0.001
Time X Time	0.001	0.010	0.211	0.251
Time X Acetone	0.088	0.024	0.565	0.052
Acetone X Acetone	0.001	0.001	0.001	0.001
Lack of fit	0.001	0.804	0.629	0.001
Root mean square error	1.854	0.160	2.63	0.329
R ²	0.794	0.936	0.935	0.981
Predicted maximum				
Specific absorption coefficient	35.38	2.53	51.98	7.22
Time (h)	3.56	2.67	3.31	3.25
Acetone (mL L ⁻¹)	30.05	57.63	47.44	54.37