

**Table S7.** Subgroup analyses for effects of anthocyanins and main anthocyanin in the test foods on HOMA-IR

Subgroup	Anthocyanin groups	n	MD [95% CI]	I <sup>2</sup>	p		
					Heterogeneity <sup>a</sup>	Within-group <sup>b</sup>	Intra-group <sup>c</sup>
1. Main anthocyanin to total anthocyanin content							
≥ 50%	Delphinidin-based	3	-0.18 [-0.50, 0.13]	69	0.04	0.25	
	<b>Subtotal</b>	<b>4</b>	<b>-0.17</b> <b>[-0.46, 0.12]</b>	<b>55</b>	<b>0.08</b>	<b>0.25</b>	<b>0.53</b>
2. Anthocyanin dosage							
≥ 160 mg	Delphinidin-based	3	-0.18 [-0.50, 0.13]	69	0.04	0.25	
	<b>Subtotal</b>	<b>4</b>	<b>-0.17</b> <b>[-0.46, 0.12]</b>	<b>55</b>	<b>0.08</b>	<b>0.25</b>	<b>0.53</b>
3. Types of anthocyanin source							
Purified anthocyanins	Delphinidin-based	3	-0.18 [-0.50, 0.13]	69	0.04	0.25	
	<b>Subtotal</b>	<b>3</b>	<b>-0.18</b> <b>[-0.50, 0.13]</b>	<b>69</b>	<b>0.04</b>	<b>0.25</b>	-
Extract	Cyanidin-based	2	0.43 [-0.37, 1.22]	0	0.83	0.29	
	<b>Subtotal</b>	<b>2</b>	<b>0.43</b> <b>[-0.37, 1.22]</b>	<b>0</b>	<b>0.83</b>	<b>0.29</b>	-
4. Target population							
Prediabetes and/or type 2 diabetes	Delphinidin-based	2	-0.38 [-0.67, -0.09]	0	0.32	0.01	
	<b>Subtotal</b>	<b>2</b>	<b>-0.38</b> <b>[-0.67, -0.09]</b>	<b>0</b>	<b>0.32</b>	<b>0.01</b>	-
Metabolic syndrome	Cyanidin-based	2	0.43 [-0.37, 1.22]	0	0.83	0.29	
	<b>Subtotal</b>	<b>2</b>	<b>0.43</b> <b>[-0.37, 1.22]</b>	<b>0</b>	<b>0.83</b>	<b>0.29</b>	-
5. Baseline HOMA-IR							
> 2.5	Delphinidin-based	2	-0.38 [-0.67, -0.09]	0	0.32	0.01	
	<b>Subtotal</b>	<b>3</b>	<b>-0.37</b> <b>[-0.65, -0.08]</b>	<b>0</b>	<b>0.45</b>	<b>0.01</b>	<b>0.44</b>
≤ 2.5	<b>Subtotal</b>	<b>2</b>	<b>-0.02</b> <b>[-0.13, 0.08]</b>	<b>2</b>	<b>0.31</b>	<b>0.66</b>	<b>0.31</b>
6. Baseline BMI							
≥ 25.0 kg/m <sup>2</sup>	Cyanidin-based	2	0.43 [-0.37, 1.22]	0	0.83	0.29	
	<b>Subtotal</b>	<b>3</b>	<b>-0.03</b> <b>[-0.09, 0.04]</b>	<b>0</b>	<b>0.52</b>	<b>0.42</b>	<b>0.260</b>
< 25.0 kg/m <sup>2</sup>	Delphinidin-based	2	-0.38 [-0.67, -0.09]	0	0.32	0.01	
	<b>Subtotal</b>	<b>2</b>	<b>-0.38</b> <b>[-0.67, -0.09]</b>	<b>0</b>	<b>0.32</b>	<b>0.01</b>	-

The probabilities are based on the Cochran's Q-test (a), test for overall effect of each anthocyanin group (b), and test for subgroup differences (c). If there was the data about subgroup numbers being one or less, analysis limited to that subgroup was omitted. BMI, body mass index; CI, confidence interval; MD, mean difference; n, sample size; HOMA-IR, homeostasis model assessment-insulin resistance.