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Supplementary information

Measuring key human carbohydrate digestive enzyme activities using high-performance anion-exchange chromatography with pulsed amperometric detection

In the format provided by the authors and unedited

Accurate measurement of key human carbohydrate digestive enzyme activities using high-performance anion-exchange chromatography with pulsed amperometric detection

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Supplementary data: Example of raw peak area data for α-glucosidase assay (sucrase activity with sucrose as the substrate, and acarbose and quercetagetin as inhibitors), quantified by HPAE-PAD in triplicate injections.

Replicate	Label	Information	Glucose	Sucrose	Fructose	Isomaltose	Maltose
Run #1	Water	Wash	0	0	0	0	0
	A50	Inhibitor 1 blank	0	0	0	0	0
	Enz250	Enzyme blank	0.0855	0	0	0	0
	Suc20	Substrate blank	0	3.2285	0	0	0
	Enz100, A200	Enzyme+Inhibitor 1 blank	0.086	0	0	0	0
	Suc20, Enz250, 10min	Reaction without inhibitor	0.7599	3.1333	0.3697	0	0
	Suc20, Enz250, A1	Acarbose 1 µM	0.5809	3.0359	0.2809	0	0
	Suc20, Enz250, A2.5	Acarbose 2.5 µM	0.45	3.0588	0.2147	0	0
	Suc20, Enz250, A5	Acarbose 5 µM	0.3511	3.3045	0.1703	0	0
	Suc20, Enz250, A10	Acarbose 10 µM	0.2243	3.1282	0.0973	0	0
	Suc20, Enz250, A50	Acarbose 50 µM	0.0941	3.3795	0.0267	0	0
	Suc20, A50	Substrate+Inhibitor 1 blank	0	3.2724	0	0	0
	QT20	Inhibitor 2 blank	0	0	0	0	0
	Enz250, DMSO	Enzyme+Solvent blank	0.0897	0	0	0	0
	Suc20, QT20	Substrate+Inhibitor 2 blank	0	2.995	0	0	0
	Enz250, QT20	Enzyme+Inhibitor 2 blank	0.0869	0	0	0	0
	Suc20, Enz250, QT2	Quercetagetin 2 µM	0.5788	2.7808	0.2794	0	0
	Suc20, Enz250, QT5	Quercetagetin 5 µM	0.5973	2.967	0.2639	0	0
	Suc20, Enz250, QT10	Quercetagetin 10 µM	0.5151	2.8939	0.2484	0	0
	Suc20, Enz250, QT20	Quercetagetin 20 µM	0.4676	3.0395	0.2255	0	0
	DMSO	Solvent blank	0	0	0	0	0
	Buffer alone	Buffer blank	0	0	0	0	0
Run #2	Water	Wash	0	0	0	0	0
	A50	Inhibitor 1 blank	0	0	0	0	0
	Enz250	Enzyme blank	0.0847	0	0	0	0
	Suc20	Substrate blank	0	3.3889	0	0	0
	Enz100, A200	Enzyme+Inhibitor 1 blank	0.08	0	0	0	0
	Suc20, Enz250, 10min	Reaction without inhibitor	0.7643	3.1143	0.3769	0	0
	Suc20, Enz250, A1	Acarbose 1 µM	0.5377	2.8294	0.2581	0	0
	Suc20, Enz250, A2.5	Acarbose 2.5 µM	0.4773	3.2455	0.2297	0	0
	Suc20, Enz250, A5	Acarbose 5 µM	0.3557	3.2397	0.1613	0	0
	Suc20, Enz250, A10	Acarbose 10 µM	0.2213	3.1211	0.1089	0	0
	Suc20, Enz250, A50	Acarbose 50 µM	0.0936	3.1744	0.0417	0	0
	Suc20, A50	Substrate+Inhibitor 1 blank	0	3.033	0	0	0
	QT50	Inhibitor 2 blank	0	0	0	0	0
	Enz100, DMSO	Enzyme+Solvent blank	0.844	0	0	0	0

	Suc20, QT20	Substrate+Inhibitor 2 blank	0	2.9204	0	0	0
	Enz250, QT20	Enzyme+Inhibitor 2 blank	0.0812	0	0	0	0
	Suc20, Enz250, QT2	Quercetagetin 2 µM	0.583	2.7672	0.2543	0	0
	Suc20, Enz250, QT5	Quercetagetin 5 µM	0.583	2.8225	0.2665	0	0
	Suc20, Enz250, QT10	Quercetagetin 10 µM	0.5021	2.7056	0.2282	0	0
	Suc20, Enz250, QT20	Quercetagetin 20 µM	0.4487	2.8496	0.2071	0	0
	DMSO	Solvent blank	0	0	0	0	0
	Buffer alone	Buffer blank	0	0	0	0	0
Run #3	Water	Wash	0	0	0	0	0
	A50	Inhibitor 1 blank	0	0	0	0	0
	Enz250	Enzyme blank	0.0871	0	0	0	0
	Suc20	Substrate blank	0	3.3279	0	0	0
	Enz100, A200	Enzyme+Inhibitor 1 blank	0.0895	0	0	0	0
	Suc20, Enz250, 10min	Reaction without inhibitor	0.8014	3.323	0.389	0	0
	Suc20, Enz250, A1	Acarbose 1 µM	0.5688	3.002	0.2726	0	0
	Suc20, Enz250, A2.5	Acarbose 2.5 µM	0.4539	3.0124	0.2047	0	0
	Suc20, Enz250, A5	Acarbose 5 µM	0.3545	3.2635	0.1616	0	0
	Suc20, Enz250, A10	Acarbose 10 µM	0.2262	3.0786	0.0853	0	0
	Suc20, Enz250, A50	Acarbose 50 µM	0.0937	3.2734	0.0188	0	0
	Suc20, A50	Substrate+Inhibitor 1 blank	0	3.4166	0	0	0
	QT50	Inhibitor 2 blank	0	0	0	0	0
	Enz100, DMSO	Enzyme+Solvent blank	0.0842	0	0	0	0
	Suc20, QT20	Substrate+Inhibitor 2 blank	0	2.9839	0	0	0
	Enz250, QT20	Enzyme+Inhibitor 2 blank	0.0817	0	0	0	0
	Suc20, Enz250, QT2	Quercetagetin 2 µM	0.5756	2.7469	0.2768	0	0
	Suc20, Enz250, QT5	Quercetagetin 5 µM	0.5847	2.8203	0.2675	0	0
	Suc20, Enz250, QT10	Quercetagetin 10 µM	0.5075	2.8103	0.236	0	0
	Suc20, Enz250, QT20	Quercetagetin 20 µM	0.467	2.9887	0.2187	0	0
	DMSO	Solvent blank	0	0	0	0	0
	Buffer alone	Buffer blank	0	0	0	0	0
Wash	Water	Wash	0	0	0	0	0
Wash	Water	Wash	0	0	0	0	0