

**Supplement Table 1 (Primary Data Set).** The  $^{13}\text{CO}_2$  Enrichment Coefficient of Glucose Oxidation for  $^{13}\text{C}$ -Sucrose (CGO-S) values obtained at 60 minutes, 75 minutes and the mean 60-75 minute values are tabulated for all adult subjects diagnosed with functional bowel disorder (left) and asymptomatic controls (right), N=11 each. The CGO-S value is the ratio of enrichment (*delta over the baseline*) derived from digestion and oxidation of  $^{13}\text{C}$ -Sucrose (25 mg.) and from the oxidation of  $^{13}\text{C}$ -glucose (super dose 125mg) divided by 5. Diagnostic cut-off values for each time point were determined from the 95% confidence interval lower-limit.

Adults with Functional Bowel Disorder Subject #	Age	BMI	$^{13}\text{CO}_2$ Enrichment Coefficient of Glucose Oxidation for $^{13}\text{C}$ -Sucrose at 60'	$^{13}\text{CO}_2$ Enrichment Coefficient of Glucose Oxidation for $^{13}\text{C}$ -Sucrose at 75'	$^{13}\text{CO}_2$ Enrichment Coefficient of Glucose Oxidation for $^{13}\text{C}$ -Sucrose at 60'-75' Mean	Adult Control Subject #	Age	BMI	$^{13}\text{CO}_2$ Enrichment Coefficient of Glucose Oxidation for $^{13}\text{C}$ -Sucrose at 60'	$^{13}\text{CO}_2$ Enrichment Coefficient of Glucose Oxidation for $^{13}\text{C}$ -Sucrose at 75'	$^{13}\text{CO}_2$ Enrichment Coefficient of Glucose Oxidation for $^{13}\text{C}$ -Sucrose at 60'-75' Mean
FBD-1	46.3	18.88	0.77	0.83	0.80	ACS-1	60.8	29.83	1.00	0.92	0.96
FBD-2	29.4	25.06	0.57	0.57	0.57	ACS-2	53.2	21.45	1.10	0.94	1.02
FBD-3	29.6	28.17	0.87	0.84	0.86	ACS-3	22.9	19.15	0.90	0.82	0.86
FBD-4	51.6	41.81	1.32	1.35	1.33	ACS-4	57.4	27.13	0.74	0.82	0.78
FBD-5	24	31.32	0.79	0.72	0.76	ACS-5	22.8	21.56	1.47	1.24	1.36
FBD-6	47.1	35.43	0.58	0.78	0.68	ACS-6	22.8	18.56	0.89	0.75	0.82
FBD-7	66	25.79	0.55	0.58	0.57	ACS-7	24.6	18.74	0.91	0.96	0.94
FBD-8	60.3	32.54	1.13	1.39	1.26	ACS-8	32.2	21.18	1.07	0.77	0.92
FBD-9	33.9	24.45	0.92	0.77	0.84	ACS-9	25.6	22.27	0.92	0.93	0.93
FBD-10	28.7	24.56	0.83	0.75	0.79	ACS-10	53.3	25.05	0.94	0.89	0.91
FBD-11	49.8	20.34	0.47	0.46	0.46	ACS-11	50.6	23.79	1.03	0.90	0.97
Mean	42.43	28.03	0.80	0.82	0.81	Mean	38.75	22.61	1.00	0.90	0.95
STD Dev	14.09	6.76	0.26	0.29	0.27	STD Dev	16.03	3.58	0.19	0.13	0.15
STD_ERR			0.08	0.09	0.08	STD_ERR			0.06	0.04	0.05
95%CI			0.80±0.16+	0.82±0.18	0.81±0.16	95%CI			1.00±0.12	0.90±0.08	0.95±0.10
						Lower Limit Cutoff			0.87	0.82	0.85