

SUPPLEMENTARY TABLES

Table S1. LDA confusion matrix for lung samples in lipid (3020-2800 cm^{-1}) spectral region. Control (CNT) and intermittent fasting (IF), SCD Probiotics (PREB) and the group in which the IF and SCD Probiotics combined (IFPRB).

Confusion matrix	Actual	CNT	IF	IFPRB	PRB
Predicted		1	2	3	4
CNT	1	12	0	0	0
IF	2	0	9	1	1
IFPRB	3	0	1	9	2
PRB	4	0	0	0	9

Table S2. LDA prediction matrix for lung samples in lipid (3020-2800 cm^{-1}) spectral region.

Prediction Matrix	CNT	IF	IFPRB	PRB	Predicted
	1	2	3	4	5
1	35,2131958	-9,50739288	31,4401875	22,8519707	CNT_train
2	33,7456131	-548,903015	-19,0693531	-1,42506361	CNT_train
3	32,8156471	-189,600449	-9,79818535	24,069006	CNT_train
4	33,1391869	9,28858948	14,9037066	30,8848305	CNT_train
5	33,7510338	-36,0331573	-6,14894867	23,3888111	CNT_train
6	34,4911079	-59,9262238	3,78893614	20,7682991	CNT_train
7	34,7547569	-72,5835419	25,6167011	11,4608383	CNT_train
8	32,7392502	13,5824633	-0,609386027	-46,3346481	CNT_train
9	33,6547394	-70,8219604	12,8193417	4,77403164	CNT_train
10	35,8385201	7,34717417	30,3419876	28,7193356	CNT_train
11	33,126358	-441,356079	-145,326004	-17,2337074	CNT_train
12	32,9735222	-2830,29199	-249,75032	-23,4681683	CNT_train
13	16,9778347	36,9182014	21,6830196	4,03197622	IF_train
14	34,2695236	37,4427185	33,3030052	30,6301403	IF_train
15	33,9264565	39,5756912	38,9088287	29,1824055	IF_train
16	28,3269558	36,7594528	34,1725922	21,0108795	IF_train
17	28,9705334	36,7288094	19,4173393	18,9884109	IF_train
18	13,009985	36,6826477	7,71069479	23,685976	IF_train
19	-12,4641504	36,6475449	-30,3063984	-45,8842392	IF_train
20	34,847683	39,269722	38,5012627	34,9846725	IF_train
21	32,2140274	37,4431839	37,7964783	22,8224487	IFPRB_train
22	32,0928459	36,8547211	36,5206528	33,5974731	IF_train
23	25,5746841	-109,709747	35,8746414	12,1509066	IFPRB_train

24	31,3461056	-41,3819809	36,0286713	21,4649391	IFPRB_train
25	30,5199089	27,8359623	36,613945	-9,01812649	IFPRB_train
26	30,0571232	4,82985878	36,7924347	10,202096	IFPRB_train
27	26,1606922	23,9196587	37,1887779	-11,6346474	IFPRB_train
28	27,582222	26,7191563	36,8106499	10,9466953	IFPRB_train
29	24,2786274	29,7965679	36,8362694	23,3173866	IFPRB_train
30	30,4908905	-40,2936211	37,3551788	25,3868179	IFPRB_train
31	35,7016945	15,4378157	36,8245735	31,254343	IFPRB_train
32	33,0210724	39,0843849	37,2113228	35,8682327	IF_train
33	-38,7840691	-163,985229	-102,395607	32,2036209	PRB_train
34	15,700388	19,9598331	-7,67566681	33,6234245	PRB_train
35	29,7021542	35,9619293	23,5068016	34,9963799	IF_train
36	27,8203983	-24,3998795	34,1699333	35,9472847	PRB_train
37	-204,229034	-405,499359	-650,704712	31,9957581	PRB_train
38	1,42080104	-2105,39893	-157,988312	32,0185165	PRB_train
39	31,6425037	10,4504547	37,6163902	36,1167526	IFPRB_train
40	33,6805382	21,3687038	33,2398262	33,7167397	PRB_train
41	35,3814278	31,7728367	37,3761444	34,6580276	IFPRB_train
42	24,8936882	23,006073	29,2768879	32,7948151	PRB_train
43	13,7019291	-4721,95605	-603,894043	31,8346977	PRB_train
44	30,4479008	-146,168915	32,6606026	33,7945137	PRB_train

Table S3. LDA confusion matrix for lung samples in protein (1700-1500 cm⁻¹) spectral region.

Confusion matrix	Actual	CNT	IF	IFPRB	PRB
Predicted		1	2	3	4
CNT	1	12	1	1	1
IF	2	0	7	0	0
IFPRB	3	0	1	9	1
PRB	4	0	1	0	10

Table S4. LDA prediction matrix for lung samples in protein (1700-1500 cm⁻¹) spectral region.

Prediction Matrix	CNT	IF	IFPRB	PRB	Predicted
	1	2	3	4	5
1	21,654562	15,860013	14,88311	-10,3833027	CNT_train
2	23,2808495	19,5368538	14,7275791	21,498045	CNT_train
3	19,6316833	16,957777	8,43470669	17,0181332	CNT_train
4	21,1324863	15,9736824	6,16502237	13,4821701	CNT_train
5	19,9083691	10,1809273	2,46902442	15,4719009	CNT_train

6	20,5581837	9,09646702	-21,6245098	3,17665005	CNT_train
7	21,0197868	9,52769947	9,37169456	12,7517719	CNT_train
8	20,8387012	18,3438072	10,0196218	3,42355347	CNT_train
9	19,9264755	9,39620686	-53,4888725	9,20685673	CNT_train
10	19,414854	13,6151161	-58,1579895	13,6192808	CNT_train
11	20,2841663	5,30386686	-49,9944534	-63,0273552	CNT_train
12	21,5311623	13,9263449	15,2402124	-38,2769051	CNT_train
13	10,5053368	20,7840614	-10,6465015	-46,1656914	IF_train
14	12,8615074	20,3405628	22,3358078	18,7135735	IFPRB_train
15	17,4734497	19,148159	-12,9528313	12,9811134	IF_train
16	5,69445658	19,9956474	-9,48660088	-73,2326508	IF_train
17	-7,63013077	19,7560425	-179,67215	-31,6932144	IF_train
18	8,13081646	20,0966816	-12,8671036	-66,8314972	IF_train
19	-7,97515392	19,2223301	-79,7286758	-6,00881767	IF_train
20	19,9265881	19,3843098	-13,1185484	21,8406277	PRB_train
21	6,3366394	21,1778202	-18,1676483	-9,61397266	IF_train
22	19,53228	19,4529762	6,09357357	-0,922922432	CNT_train
23	22,7250214	17,4046516	22,4206982	-5,76997185	CNT_train
24	20,8968544	8,89124107	23,6806622	15,7122784	IFPRB_train
25	16,5450058	20,6185513	24,3156662	19,5562096	IFPRB_train
26	16,6761494	18,595787	22,5835648	8,5274353	IFPRB_train
27	12,9008512	14,0935125	22,9583759	4,10045576	IFPRB_train
28	19,0870972	18,2760239	25,098629	21,0585785	IFPRB_train
29	20,5343781	15,2238207	23,2531128	-2,03382921	IFPRB_train
30	14,376339	-2,64562249	22,3632412	12,7814693	IFPRB_train
31	21,5083542	10,5361004	23,0109253	-2,06882334	IFPRB_train
32	20,7768402	16,6144447	22,3165188	12,9866705	IFPRB_train
33	-1,30410814	7,18060637	-30,8638439	20,5772457	PRB_train
34	19,1504288	12,0951023	-32,2083664	21,0657787	PRB_train
35	14,7347975	19,8980598	21,3619633	20,0869865	IFPRB_train
36	20,6362801	15,1111727	19,7296658	20,5664768	CNT_train
37	-31,66432	-20,7560921	-65,8794861	21,3964386	PRB_train
38	10,3564329	13,5868626	-86,3825912	21,9922371	PRB_train
39	18,3672924	16,8566647	-1,306391	22,3870392	PRB_train
40	1,14967847	12,7458735	-51,5662117	21,795927	PRB_train
41	17,7864437	13,0940542	10,4737902	22,5359058	PRB_train
42	17,6485519	18,6112671	-103,077423	21,8394775	PRB_train
43	0,996968925	14,1054487	-169,390594	20,4321232	PRB_train
44	18,0584068	19,513422	-36,365612	23,2656517	PRB_train

Table S5. LDA confusion matrix for lung samples in nucleic acid (1300-800 cm⁻¹) spectral region.

Confusion matrix	Actual	CNT	IF	IFPRB	PRB
Predicted		1	2	3	4
CNT	1	12	0	0	1
IF	2	0	10	1	1
IFPRB	3	0	0	9	0
PRB	4	0	0	0	10

Table S6. LDA prediction matrix for lung samples in nucleic acid (1300-800 cm⁻¹) spectral region.

Prediction Matrix	CNT	IF	IFPRB	PRB	Predicted
	1	2	3	4	5
1	29,0760765	-2,96521258	26,7125111	3,24372745	CNT_train
2	27,8226376	21,4350948	-3,9310441	21,5507927	CNT_train
3	26,913681	-250,041504	4,58884859	20,7848797	CNT_train
4	28,8093681	20,5784264	19,9973431	26,597065	CNT_train
5	26,6698055	-5,34922504	-3,56353045	13,6055479	CNT_train
6	28,7022285	25,6246471	11,3925247	23,083828	CNT_train
7	28,1751709	19,9855576	14,9976139	20,8189487	CNT_train
8	27,2244434	-6,25829887	17,6530209	0,818116486	CNT_train
9	28,8143349	-772,899353	-106,822945	-1,42480063	CNT_train
10	28,4368095	-734,532227	-129,444412	-6,31832933	CNT_train
11	26,6367874	-135,642166	-0,630350471	-11,6342125	CNT_train
12	27,1486607	-15,5895939	-100,477112	13,0545063	CNT_train
13	7,96377659	29,9664993	-11,2018309	10,6445503	IF_train
14	27,7985344	30,835453	24,2822094	27,4366398	IF_train
15	1,34715188	28,8290749	-27,3716125	15,5897617	IF_train
16	3,44064856	29,0094719	-24,5053253	19,0530434	IF_train
17	17,5215015	29,4266701	17,0515594	21,9615803	IF_train
18	-1,31995773	29,4443493	-8,7687273	16,0156574	IF_train
19	28,1751366	28,8890057	9,28276825	24,7764378	IF_train
20	14,7646132	28,9514198	-17,6699944	-14,8808689	IF_train
21	-3,45468378	30,5744381	30,1941605	-17,5493965	IF_train
22	24,2985649	30,8029041	25,58144	12,4796629	IF_train
23	20,8360271	26,2881069	29,621397	-5,84602785	IFPRB_train
24	18,756813	-4,6655488	30,5942497	-41,3388824	IFPRB_train
25	3,94347525	-46,7973976	29,6282177	-12,761878	IFPRB_train
26	22,5643196	-85,5822754	31,5667973	1,29980206	IFPRB_train

27	-19,0043049	-80,5620728	30,1390114	-55,5843086	IFPRB_train
28	16,4147778	31,4767132	30,5574589	6,35698318	IF_train
29	7,97650957	-9,08755398	29,6531906	4,04998827	IFPRB_train
30	-7,73728657	-313,017059	29,6979122	-42,657608	IFPRB_train
31	14,5258532	17,8083668	33,0691681	0,532906055	IFPRB_train
32	-1,35964239	-26,6530838	30,3966026	2,21545219	IFPRB_train
33	-48,5895805	-1250,69641	-738,973206	25,5903606	PRB_train
34	13,2174606	2,61246252	-0,414891064	28,4579277	PRB_train
35	21,3355541	13,1867781	11,1609497	27,9308376	PRB_train
36	22,2901173	-16,6472721	22,8546848	26,4484978	PRB_train
37	6,80002785	-68,4023743	7,83733654	25,6105957	PRB_train
38	16,3055019	-172,024582	-261,154083	28,1090279	PRB_train
39	27,5912113	26,9380131	7,64559603	29,752018	PRB_train
40	25,7355995	30,1697178	16,2752953	27,6259861	IF_train
41	26,2252102	21,5909271	4,27030659	28,5595722	PRB_train
42	21,8007717	19,0975323	6,84729004	27,1820641	PRB_train
43	-27,6456261	-556,07074	-621,810181	26,8638992	PRB_train
44	29,1228313	5,73947716	1,73456132	26,133522	CNT_train