

Additional data file 4

Comparison between metabolites produced in the strains overexpressing individual ORFs at day 2 and day 5 of fermentation

DAY2	2-VIN13		2-AAD10		2-AAD14		2-BAT1		2-ACS1	
	AVG	STDEV	AVG	STDEV	AVG	STDEV	AVG	STDEV	AVG	STDEV
Ethyl Acetate	2.67132	0.71809	1.39649	0.60241	1.7544	0.18616	1.76417	1.07244	1.7394	1.150799
Methanol	0	0	0	0	0	0	0.63064	1.26128	13.342	8.354718
Propanol	14.7066	4.44758	5.82111	1.98674	9.4074	4.74112	10.8028	4.19661	8.3353	3.799929
Isobutanol	1.56948	0.64767	12.7392	8.52819	8.4275	1.70086	14.3071	13.1303	3.9161	1.196288
Isoamyl Acetate	0.04664	0.09329	0.30194	0.10895	0.3583	0.07154	0.24133	0.00952	0.2074	0.006574
Butanol	0	0	0	0	0	0	0	0	0	0
Isoamyl alcohol	23.4471	3.27719	51.0936	10.7452	52.46	6.49995	45.9859	3.46044	24.406	3.762729
Ethyl Hexanoate	0	0	0.61773	0.03633	0.6213	0.05532	0.58557	0.01217	0.5784	0.014222
Ethyl Caprylate	0.07018	0.00989	0.11601	0.01513	0.1224	0.02783	0.09869	0.0142	0.0807	0.012
Acetic Acid	485.296	27.8685	457.411	43.2177	482.49	40.486	458.807	40.9478	399.35	30.69431
Propionic Acid	1.26778	0.15453	1.60352	0.22267	1.8627	0.2777	1.32456	0.1496	1.2824	0.083102
Iso-Butyric Acid	0.49209	0.09729	0.57476	0.23551	0.3443	0.05668	2.16286	1.7599	0.3316	0.055992
Butyric Acid	0.11801	0.02202	0.2295	0.0629	0.0513	0.01005	0.12135	0.02686	0.1723	0.026664
Ethyl Caprate	0.09833	0.0097	0.1191	0.02526	0.1143	0.0388	0.12314	0.01619	0.0859	0.009594
Iso-Valeric Acid	0	0	0	0	0	0	0	0	0	0
Valeric Acid	0	0	0.02898	0.03959	0	0	0	0	0	0
Hexanoic Acid	0.30756	0.03539	0.50942	0.02088	0.5469	0.0668	0.37278	0.03683	0.2381	0.029844
2-Phenyl Ethanol	5.52597	0.86301	12.2529	6.04184	6.4247	1.25547	8.82691	1.83741	5.8428	0.881559
Octanoic Acid	1.2404	0.06628	1.26199	0.15308	1.0343	0.24883	1.33173	0.10565	0.854	0.13799
Decanoic Acid	0.90223	0.15721	0.51101	0.27423	0.6946	0.12323	0.97289	0.06482	0.3704	0.191978

DAY5	5-VIN13		5-AAD10		5-AAD14		5-BAT1		5-ACS1	
	AVG	STDEV	AVG	STDEV	AVG	STDEV	AVG	STDEV	AVG	STDEV
Ethyl Acetate	13.3674	1.77749	25.2528	3.65343	19.614	3.23695	13.8588	4.68798	12.913	1.37075
Methanol	0	0	0	0	0	0	0	0	16.467	26.26792
Propanol	50.9914	10.9319	69.1456	21.8867	54.931	3.84015	52.6067	12.9033	36.385	10.92261
Isobutanol	13.5071	3.22921	38.9519	4.4709	20.386	3.72996	28.0572	5.94455	16.093	0.445393
Isoamyl Acetate	0.27655	0.06636	0.78233	0.50653	0.3564	0.04058	0.33212	0.06941	0.2805	0.023889
Butanol	0.17471	0.03857	0.50813	0.21803	0.6281	0.0631	0.13437	0.0196	0.2991	0.10362
Isoamyl alcohol	78.0651	11.7431	159.912	29.2963	119.44	11.9912	125.009	15.6299	90.028	6.709901
Ethyl Hexanoate	0	0	0.67611	0.04046	0.027	0.00739	0.61856	0.01309	0.5213	0.116107
Ethyl Caprylate	0.11653	0.00881	0.26021	0.07307	0.2868	0.02717	0.14232	0.02537	0.1652	0.015984
Acetic Acid	1004.78	72.7766	933.574	200.156	946.64	39.902	910.234	46.0822	919.26	44.70362
Propionic Acid	3.00421	0.28201	5.4656	0.17342	2.7622	0.31999	3.36724	0.53457	3.4984	0.119936
Iso-Butyric Acid	0.59074	0.08484	0.91031	0.08543	0.3837	0.05307	2.01188	0.37148	0.5061	0.081971
Butyric Acid	0.20469	0.02425	0.6182	0.38403	0.2174	0.02485	0.23488	0.03445	0.3025	0.058895
Ethyl Caprate	0.16174	0.00472	0.29469	0.05434	0.3127	0.04937	0.18424	0.02391	0.183	0.028895
Iso-Valeric Acid	0	0	0.0665	0.07309	0	0	0.08373	0.03108	0	0
Valeric Acid	0.09186	0.0368	0.17253	0.01164	0.0693	0.00946	0.18791	0.04041	0.0376	0.021208
Hexanoic Acid	0.50324	0.03304	0.57958	0.41405	0.6336	0.12742	0.55371	0.04342	0.5252	0.03136
2-Phenyl Ethanol	17.9857	3.29181	39.5911	10.995	15.948	3.43543	24.1895	3.88824	21.363	3.676614
Octanoic Acid	1.11356	0.02355	1.55171	0.22522	1.0713	0.20705	1.20851	0.06938	1.1216	0.125789
Decanoic Acid	1.24153	0.15376	1.6943	0.40723	0.8235	0.06941	1.25322	0.14896	1.2577	0.23832