Supplementary

Table 1: Fermentation parameters for different yeast strains

Fermentation [h]	Strains	SeMet/ µg g^{-1}	Se_{total} µg g^{-1}	Met/ µg g^{-1}	Cys/ µg g^{-1}	S_{total}/ µg g^{-1}	SeMet/ %	Cell Viability/ %	S/Se	Met/SeMet
23	**Sey 38**	0	10	6600	6400	4000	0	99.20	985.0	-
	Bio 19	0	0	-	-	-	0		-	-
	696	0	10	6900	7600	3900	0	98.76	960.3	-
28	**Sey 38**	1400	1100	4100	4000	2100	51	98.69	4.7	3.8
	Bio 19	0	10	5700	5900	3300	0	98.87	812.6	-
	696	800	800	4800	4900	2100	40	99.51	6.5	7.9
31	**Sey 38**	1900	1100	3700	3800	1900	70	98.76	4.3	2.6
	Bio 19	1000	700	4100	4700	2600	58	99.55	9.1	5.4
	696	700	1000	3800	4200	1800	28	99.26	4.4	7.1
47	**Sey 38**	2700	1200	3300	2800	1800	91	80.92	3.7	1.6
	Bio 19	2600	1000	2800	3000	1600	105	97.98	3.9	1.4
	696	2800	1100	2700	2600	1600	102	96.57	3.6	1.3
53	**Sey 38**	2600	1200	3000	2700	1600	87	75.93	3.3	1.5
	Bio 19	2800	1100	2600	2800	1600	102	95.84	3.6	1.2
	696	2100	1400	2500	2600	2100	60	98.02	3.7	1.6
72	**Sey 38**	2500	1400	2500	2500	1600	73	62.44	2.8	1.3
	Bio 19	3100	1300	1900	2500	1100	98	86.55	2.2	0.8
	696	3000	1500	2300	2900	1400	77	92.48	2.3	1.0

Table 2: Methionine and cysteine distribution in the yeast cell

Methionine[µmol g^{-1}]	Proteome			Metabolome			Sum		
Fermentation [h]	**Sey 38**	**Bio 19**	**696**	**Sey 38**	**Bio 19**	**696**	**Sey 38**	**Bio 19**	**696**
23	37.2	0.0	35.9	6.8	0.0	10.2	44.0	0.0	46.1
28	20.2	31.7	22.5	7.1	6.4	9.7	27.3	38.0	32.3
31	20.1	26.0	23.9	4.8	1.8	1.4	24.9	27.8	25.4
47	17.0	16.6	15.8	4.8	1.8	1.9	21.8	18.4	17.8
53	17.7	15.0	15.5	2.1	2.1	1.3	19.8	17.2	16.8
71	13.8	9.6	14.0	2.7	3.3	1.6	16.5	12.9	15.6

Cysteine [µmol g^{-1}]	Proteome			Metabolome			Sum		
Fermentation [h]	**Sey 38**	**Bio 19**	**696**	**Sey 38**	**Bio 19**	**696**	**Sey 38**	**Bio 19**	**696**
23	41.8	0.0	37.0	11.3	0.0	25.4	53.2	0.0	62.4
28	29.2	35.8	34.4	4.1	12.5	5.7	33.3	48.3	40.1
31	27.0	35.7	31.8	4.4	3.4	3.0	31.4	39.0	34.8
47	21.7	24.7	23.3	1.6	0.0	0.0	23.3	24.7	21.6
53	24.5	24.9	24.9	0.0	0.0	0.0	22.1	23.1	21.2
71	23.2	20.9	23.7	0.0	0.0	0.0	20.5	20.3	0.0

Table 3: Methionine and seleno methionine concentrations during 71 h of fermentation

[µmol g^{-1}]	Met			SeMet			Sum Met pool		
Fermentation [h]	**Sey 38**	**Bio 19**	**696**	**Sey 38**	**Bio 19**	**696**	**Sey 38**	**Bio 19**	**696**
23	44.0	0.0	46.1	0.0		0.0	44.0		46.1
28	27.3	38.0	32.3	7.2	0.0	4.0	34.5	38.0	36.2
31	24.9	27.8	25.4	9.5	5.0	3.7	34.4	32.8	29.1
47	21.8	18.4	17.8	13.9	13.3	14.1	35.7	31.7	31.9
53	19.8	17.2	16.8	13.3	14.4	10.5	33.1	31.6	27.2
71	16.5	12.9	15.6	12.9	15.6	14.9	29.4	28.5	30.5