

Table S1: Oxygen purity as a function of time for different flow rates, input pressure 2.5 bar and height of packing 9cm. For Fig. 4

time(sec)	2L min ⁻¹	4L min ⁻¹	6 Lmin ⁻¹	8 Lmin ⁻¹	10 Lmin ⁻¹
0	20.0847	19.92569	20.29017	20.31697083	20.15796
1	20.11329	19.96857	20.35271	20.42060089	20.31697
2	20.07756	19.93819	20.42596	20.40094757	20.42239
3	20.08828	19.9775	20.42596	20.47241592	20.69933
4	20.12401	20.09721	20.52066	20.60105896	22.02863
5	20.18476	20.24551	20.79223	20.89586258	23.96719
6	20.29732	20.31697	21.48011	21.30858994	26.79554
7	20.44561	20.37593	22.67005	21.69987488	29.93834
8	20.64037	20.48135	24.40493	22.06793594	32.82206
9	20.83154	20.87442	26.39174	22.38596725	35.3681
10	21.05845	21.51764	28.53042	22.6450386	37.61756
11	21.3604	22.3145	30.73341	22.88803101	39.5186
12	21.72846	23.18641	32.93998	23.10958099	41.05516
13	22.11082	24.11549	35.16085	23.38830566	42.3255
14	22.49496	25.04993	37.37099	23.73670959	43.34034
15	22.86123	25.99867	39.54361	24.10119629	44.32303
16	23.20427	26.97599	41.64477	24.46389771	45.3611
17	23.53124	27.98011	43.6691	24.87483597	46.44205
18	23.82069	28.97709	45.57907	25.33758926	47.55516
19	24.08869	29.94905	47.46047	25.88610458	48.55214
20	24.37992	30.95139	49.32756	26.69548035	49.33828
21	24.71046	31.90549	51.09818	28.13019562	49.84749
22	25.06244	32.85244	52.77232	30.0830574	50.17446
23	25.42693	33.76544	54.33746	32.32714844	50.41745
24	25.77712	34.66772	55.74359	34.62662506	50.87484
25	26.12195	35.50032	57.02823	36.82247543	51.95044
26	26.45428	36.29719	58.1735	38.8861084	53.4727
27	26.76695	37.06011	59.19013	40.78715515	54.89133
28	27.06354	37.78193	60.07633	42.51310349	56.01695
29	27.3637	38.4573	60.8464	44.04072952	56.87279
30	27.61742	39.09694	61.53606	45.35216522	57.52493
31	27.88542	39.76159	62.14711	46.44741058	58.01806
32	28.12305	40.37979	62.70099	47.41043854	58.39862
33	28.39106	40.96404	63.07441	48.19301224	58.82207
34	28.68764	41.52685	63.45676	48.9362793	59.31699
35	29.02712	42.0575	63.73191	49.70812988	59.73507
36	29.36838	42.58815	64.02135	50.45318222	60.01201
37	29.7007	43.13488	64.35725	51.15714264	60.14244
38	29.9973	43.6691	64.74854	51.79320526	60.24428
39	30.28138	44.16044	65.13268	52.33457565	60.32647
40	30.56904	44.62141	65.49538	52.78660965	60.0799
41	30.90672	45.03949	65.83664	53.16539001	59.68683

42	31.30516	45.43257	66.15646	53.44947052	58.26105
43	31.76612	45.78276	66.51022	53.67638397	57.52493
44	32.2664	46.12045	66.69783	53.86398315	56.77809
45	32.79169	46.44741	66.90151	53.99084473	56.38144
46	33.30268	46.75472	67.05338	54.07839203	56.4815
47	33.82083	47.03881	67.19096	54.13913727	56.89244
48	34.31574	47.29966	67.31245	54.16415405	57.30516
49	34.82674	47.49263	67.43037	54.17844391	57.63749
50	35.30021	47.67844	67.53757	54.17487335	57.9716
51	35.78619	47.79636	67.58224	54.16950989	58.33966
52	36.26681	47.96253	67.6019	54.15879059	58.62017
53	36.7528	47.81602	67.58582	54.15164185	58.92034
54	37.22091	47.60162	67.54294	54.14985657	59.23837
55	37.68545	47.43188	67.43216	54.14807129	59.57069
56	38.15178	47.37113	67.39459	54.14807129	59.79939
57	38.58952	47.4551	67.41374	54.14807129	59.92625
58	39.00403	47.66594	67.37924	54.14628601	60.00307
59	39.43999	47.94823	67.34592	54.14628601	60.0942
60	39.79018	48.28949	67.26463	54.14270782	59.72971
61	40.15824	48.65577	67.24991	54.13735199	59.41525
62	40.52451	49.03455	67.19847	54.12663269	59.46528
63	40.8747	49.38831	67.1834	54.10876465	59.68683
64	41.1981	49.72778	67.09394	54.08732605	59.91731
65	41.53936	50.05296	66.97452	54.06230927	60.11564
66	41.85381	50.3442	66.9108	54.05516052	60.26036
67	42.17006	50.58004	66.89836	54.05873871	60.35684
68	42.45057	50.81588	66.79166	54.06767273	60.39258
69	42.74359	51.03207	66.65524	54.08017731	60.39972
70	42.9973	51.24469	66.5984	54.08554077	60.43188
71	43.25994	51.42157	66.50929	54.07839203	60.4033
72	43.50651	51.60024	66.46594	54.05337524	60.25143
73	43.71912	51.79142	66.41306	54.03015137	60.03166
74	43.94246	51.92899	66.38572	53.99798584	59.62251
75	44.15865	52.10052	66.31466	53.96582794	59.04898
76	44.34983	52.20951	66.29518	53.92295074	58.44686
77	44.52671	52.15948	66.21715	53.8818512	57.88763
78	44.71074	51.97902	66.17471	53.85326386	57.39986
79	44.86797	51.72174	66.10265	53.81395721	56.97462
80	45.03234	51.44301	66.06975	53.7728653	56.63515
81	45.19136	51.09461	65.92165	53.73177338	56.32963
82	45.32536	50.73727	65.8894	53.67816925	56.02589
83	45.45937	50.35849	65.80779	53.64243317	55.73823
84	45.5755	49.96363	65.76688	53.57990265	55.41841
85	45.69342	49.56877	65.7631	53.53166199	55.10574
86	45.8042	49.15425	65.70044	53.47627258	54.83952
87	45.89354	48.74331	65.67855	53.42803192	54.54829
88	45.99359	48.34488	65.54715	53.38694	54.28029

89	46.06148	47.97504	65.49358	53.32797623	54.06588
90	46.1258	47.62484	65.39969	53.27259064	53.8765
91	46.19548	47.28358	65.34669	53.19576263	53.77644
92	46.22943	46.96555	65.29058	53.13144302	53.77823
93	46.27053	46.6636	65.2554	53.07247925	53.77644
94	46.29554	46.41167	65.16151	53.01173401	53.77287
95	46.29375	46.13474	65.07436	52.96349335	53.40838
96	46.28304	45.93105	64.97367	52.92061234	52.81877
97	46.26338	45.77561	64.89718	52.87237167	52.77768
98	46.23122	45.6559	64.79055	52.84556961	52.96706
99	46.20442	45.55942	64.62916	52.80090332	53.24579
100	46.15082	45.49689	64.51501	52.75266266	53.61921
101	46.10258	45.43971	64.44904	52.71156693	53.87471
102	46.05076	45.42006	64.38026	52.64188766	53.9962
103	45.99359	45.41113	64.27032	52.57756424	54.18916
104	45.93105	45.40398	64.16125	52.50252533	54.31781
105	45.86316	45.40577	64.06883	52.41497421	54.38927
106	45.76846	45.38075	63.97843	52.33814621	54.4268
107	45.68806	45.41113	63.8725	52.25417328	54.43037
108	45.60766	45.40577	63.8424	52.1737709	54.34282
109	45.53083	45.31643	63.73245	52.10409164	54.16772
110	45.4415	45.2128	63.65887	52.04155731	54.05695
111	45.38254	45.07166	63.5804	51.97366333	53.8086
112	45.28963	44.90907	63.43003	51.92363358	53.71569
113	45.20208	44.73933	63.37399	51.86645889	53.56561
114	45.13062	44.56602	63.2937	51.81464767	53.4048
115	45.05736	44.38199	63.18446	51.7556839	53.19398
116	44.97874	44.17652	62.96857	51.67528534	53.21006
117	44.90728	43.98891	62.70523	51.56451035	53.66745
118	44.82688	43.78881	62.61898	51.44837189	54.34818
119	44.65178	43.59048	62.54437	51.34653091	54.41965
120	43.89601	43.37786	62.46154	51.24468994	53.96583

Table S2: O₂ % as a function of time for different heights of packing; input pressure 2.5 bar and inlet flow rate 6 Lmin⁻¹. For Fig. 5

time(sec)	9 cm	12 cm	16 cm
0	19.99001	20.29017	22.35958
1	20.07398	20.35271	25.03193
2	20.07398	20.42596	27.6728
3	20.10971	20.42596	28.42858
4	20.15796	20.52066	30.12951
5	20.24551	20.79223	32.29499
6	20.35449	21.48011	34.53372

7	20.44383	22.67005	36.71885
8	20.6082	24.40493	39.16841
9	20.93695	26.39174	41.91099
10	21.57838	28.53042	44.65535
11	22.39133	30.73341	47.51585
12	22.99881	32.93998	50.15659
13	23.44191	35.16085	52.71157
14	23.84034	37.37099	54.98425
15	24.21019	39.54361	57.0586
16	24.71404	41.64477	58.80956
17	25.53592	43.6691	60.45154
18	26.49716	45.57907	61.98273
19	27.51558	47.46047	63.44247
20	28.50183	49.32756	64.73604
21	29.41126	51.09818	65.93134
22	30.26351	52.77232	67.09984
23	31.05859	54.33746	68.15935
24	31.76077	55.74359	69.15453
25	32.4272	57.02823	70.03538
26	33.03468	58.1735	70.81616
27	33.58855	59.19013	71.44687
28	34.09419	60.07633	71.97752
29	34.57481	60.8464	72.40811
30	35.00541	61.53606	72.78332
31	35.41813	62.14711	72.98521
32	35.79512	62.70099	73.14602
33	36.17926	63.07441	73.13887
34	36.60986	63.45676	73.11323
35	37.02437	63.73191	73.10531
36	37.41387	64.02135	73.06672
37	37.78014	64.35725	72.85201
38	38.15535	64.74854	72.81146
39	38.49125	65.13268	72.71695
40	38.8611	65.49538	72.67401
41	39.25595	65.83664	72.59668
42	39.62759	66.15646	72.48824
43	40.00458	66.51022	72.35226
44	40.35835	66.69783	72.24616
45	40.69961	66.90151	72.1466
46	41.02836	67.05338	72.09222
47	41.32853	67.19096	71.99228
48	41.61261	67.31245	71.8623
49	41.87347	67.43037	71.75697
50	42.11288	67.53757	71.645
51	42.36481	67.58224	71.53923
52	42.58993	67.6019	71.42679
53	42.79719	67.48154	71.31848

54	42.98301	67.2324	71.28904
55	43.17239	67.04238	71.1792
56	43.34392	66.86182	71.06537
57	43.49757	66.54207	70.57069
58	43.65659	66.41943	70.49299
59	43.80131	66.39236	70.3485
60	43.94603	66.28216	70.2485
61	44.14972	66.14609	70.14703
62	44.38199	65.85347	70.06525
63	44.72503	65.64225	69.98519
64	45.13062	65.40738	69.8633
65	45.52547	65.36926	69.74654
66	45.87745	65.20802	69.624
67	46.19548	65.09836	69.50469
68	46.45098	64.96489	69.49739
69	46.68325	64.71117	69.37025
70	46.89051	64.58402	69.25665
71	47.06025	64.36929	69.13443
72	47.20318	64.15939	69.08264
73	47.31753	63.83055	68.97875
74	47.41044	63.62086	68.82028
75	47.47655	63.47215	68.76512
76	47.54623	63.25108	68.65044
77	47.58732	63.06171	68.54905
78	47.60162	62.93747	68.41997
79	47.59268	62.72418	68.3678
80	47.55516	62.56975	68.31404
81	47.50335	62.36522	68.27366
82	47.42295	62.17129	68.22708
83	47.32289	61.85779	68.16116
84	47.2139	61.26688	68.09103
85	47.09241	61.09967	67.98706
86	46.97091	60.90044	67.91919
87	46.83155	60.78548	67.86547
88	46.70291	60.54715	67.84474
89	46.58856	60.35837	67.77023
90	46.4885	60.16883	67.67125
91	46.41882	60.08904	67.5684
92	46.34557	59.84091	67.43155
93	46.29375	59.64016	67.3998
94	46.24015	59.42316	67.27279
95	46.19548	59.27436	67.18803
96	46.12938	59.03674	67.04375
97	46.09364	58.97183	66.98822
98	46.0597	58.74718	66.8515
99	46.03468	58.58292	66.79029
100	46.01682	58.51501	66.65494

101	46.00252	58.37449	66.46671
102	45.98644	58.2938	66.38935
103	45.94892	58.17841	66.24754
104	45.87209	57.83612	66.13404
105	45.74524	57.68834	66.03825
106	45.54691	57.40843	65.97739
107	45.3343	57.25014	65.85505
108	45.08952	57.02403	65.78677
109	44.84296	56.93297	65.6845
110	44.61605	56.75887	65.50098
111	44.40343	56.5804	65.46285
112	44.2051	56.37451	65.37195
113	44.0318	56.09861	65.29796
114	43.84062	55.96213	65.12465
115	43.67446	55.7446	65.06139
116	43.48685	55.56857	64.84955
117	43.31712	55.30714	64.53168
118	43.15096	55.1019	64.47763
119	42.98479	54.79444	64.40991
120	42.83828	54.23162	64.40451