Transfer and Persistence Data Analysis

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Plotting of Transfer Experiment Results - for ML

Starting with the simplest dataset e.g. with few samples and combinations. Using the combined spreadsheet "20191030DatasetPaper.xlsx" as all the data should be in there and is the source of the paper's figures.

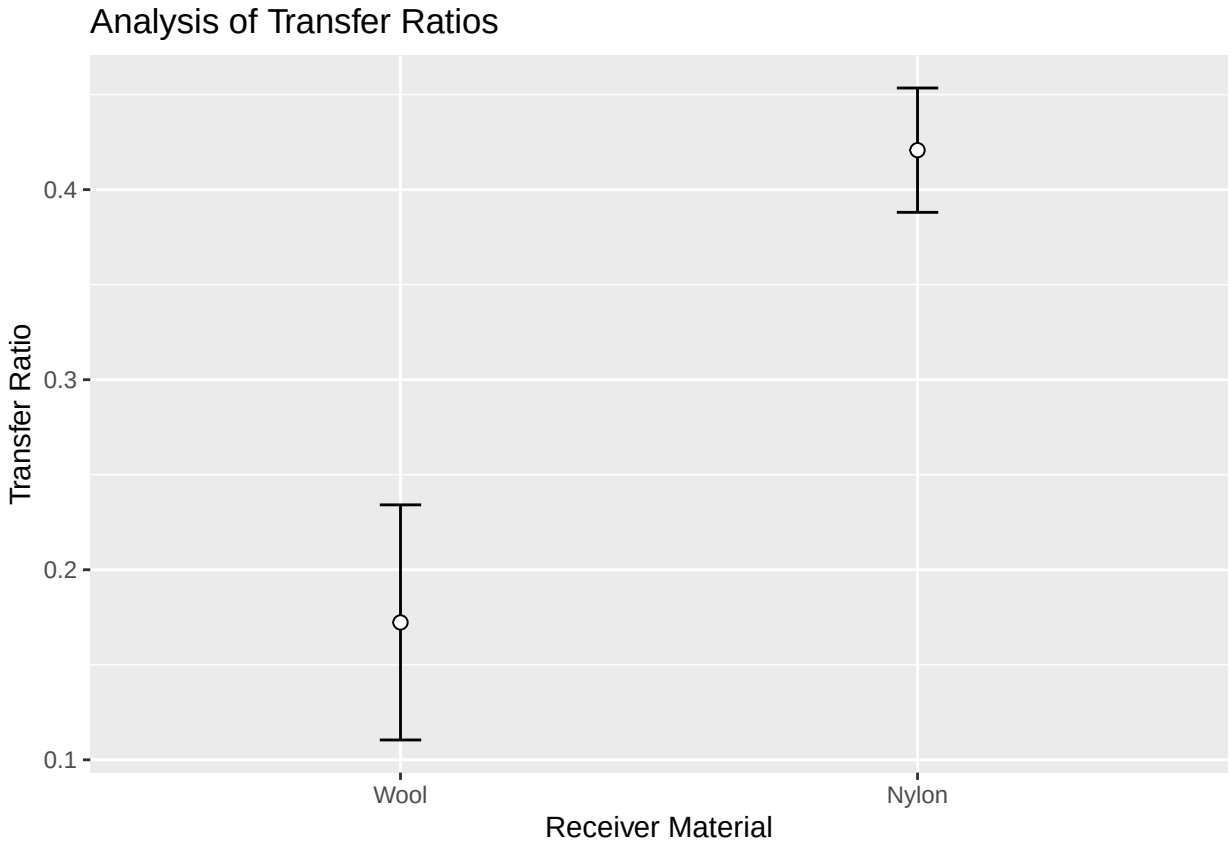
The Transfer experiments are defined by the "Time" column is "0" meaning there has been no Persistence performed yet. By selecting only those that value we can ignore the Persistence experiments (for the time being).

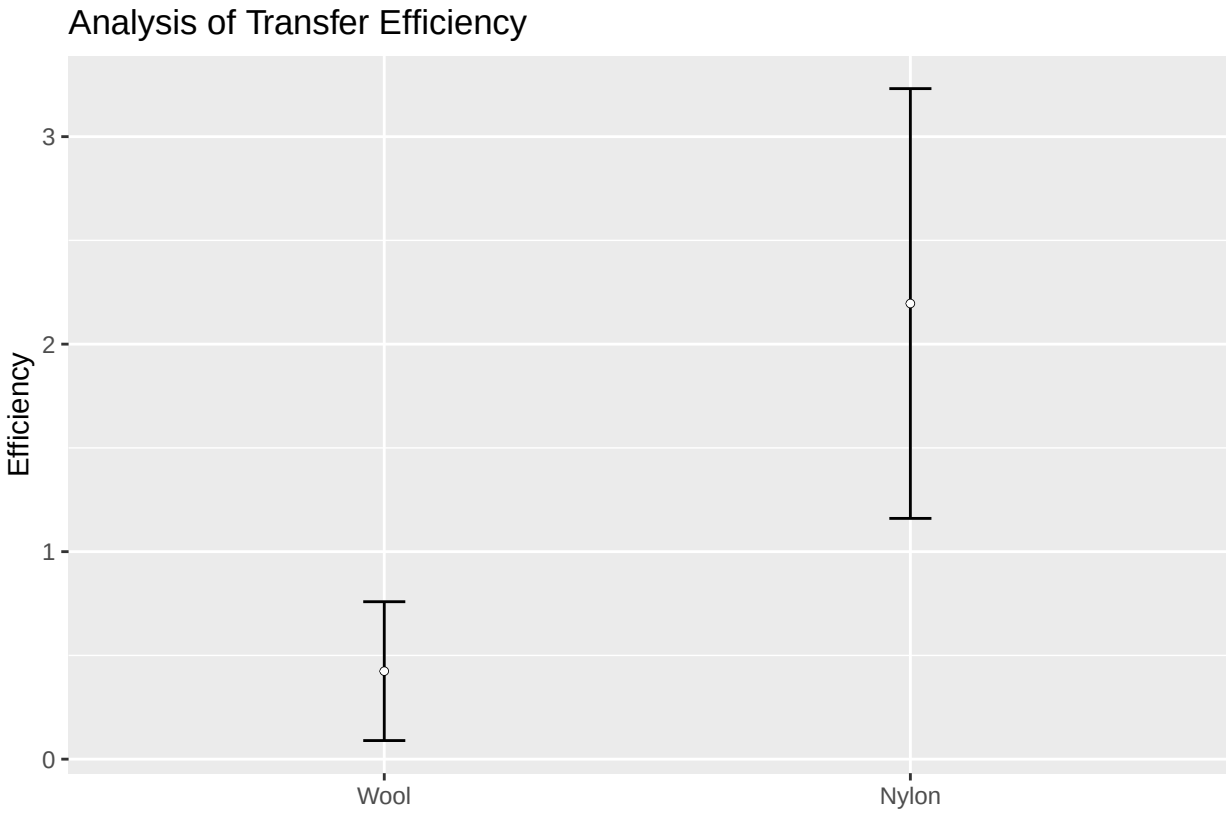
Table 1: 'Head' of ML's Transfer Data

Substrate	ObservationType	Count	Mass	TransferTime	Experiment	Replicate
Cott01	Ndata	20	0000	000	1	1
Wool01	Ndata	46	0000	000	1	1
Cott01	Uvpo1	121	1000	060	1	1
Cott01	Uvpo1	70	1000	060	1	1
Wool01	Uvpo1	48	1000	060	1	1
Cott01	Ndata	4	0000	000	2	1
Nylo01	Ndata	1	0000	000	2	1
Cott01	Uvpo1	205	1000	060	2	1
Cott01	Uvpo1	142	1000	060	2	1
Nylo01	Uvpo1	95	1000	060	2	1
Cott01	Ndata	31	0000	000	1	2
Wool01	Ndata	1	0000	000	1	2
Cott01	Uvpo1	148	1000	060	1	2
Cott01	Uvpo1	66	1000	060	1	2
Wool01	Uvpo1	8	1000	060	1	2
Cott01	Ndata	10	0000	000	2	2
Nylo01	Ndata	1	0000	000	2	2
Cott01	Uvpo1	73	1000	060	2	2
Cott01	Uvpo1	69	1000	060	2	2
Nylo01	Uvpo1	30	1000	060	2	2

Table 2: Summary Data for ML Transfer Ratios

Mass	TransferTime	Substrate	N	Ratio	sd	se	ci
1000	60	Wool01	6	0.1722808	0.1515063	0.0618522	0.1589961
1000	60	Nylo01	6	0.4207696	0.0801125	0.0327058	0.0840730


Analysis of Transfer Ratios
Transfer Ratio
0.4
0.3
0.2
0.1
Wool
Nylon
Receiver Material


Analysis of Transfer Efficiency
Efficiency
3
2
1
0
Wool
Nylon

Read SD Data

Table 3: 'Head' of SD's Transfer Data

Substrate	ObservationType	Count	Mass	TransferTime	Experiment	Replicate
Cott01	Ndata	142	0000	000	9	1
Nylo01	Ndata	25	0000	000	9	1
Cott01	Uvpo1	282	1000	060	9	1
Cott01	Uvpo1	214	1000	060	9	1
Nylo01	Uvpo1	91	1000	060	9	1
Cott01	Ndata	166	0000	000	9	2
Nylo01	Ndata	28	0000	000	9	2
Cott01	Uvpo1	282	1000	060	9	2
Cott01	Uvpo1	214	1000	060	9	2
Nylo01	Uvpo1	51	1000	060	9	2
Cott01	Ndata	151	0000	000	9	3
Nylo01	Ndata	37	0000	000	9	3
Cott01	Uvpo1	264	1000	060	9	3
Cott01	Uvpo1	188	1000	060	9	3
Nylo01	Uvpo1	56	1000	060	9	3
Cott01	Ndata	151	0000	000	9	4
Nylo01	Ndata	57	0000	000	9	4
Cott01	Uvpo1	166	1000	060	9	4
Cott01	Uvpo1	150	1000	060	9	4
Nylo01	Uvpo1	62	1000	060	9	4

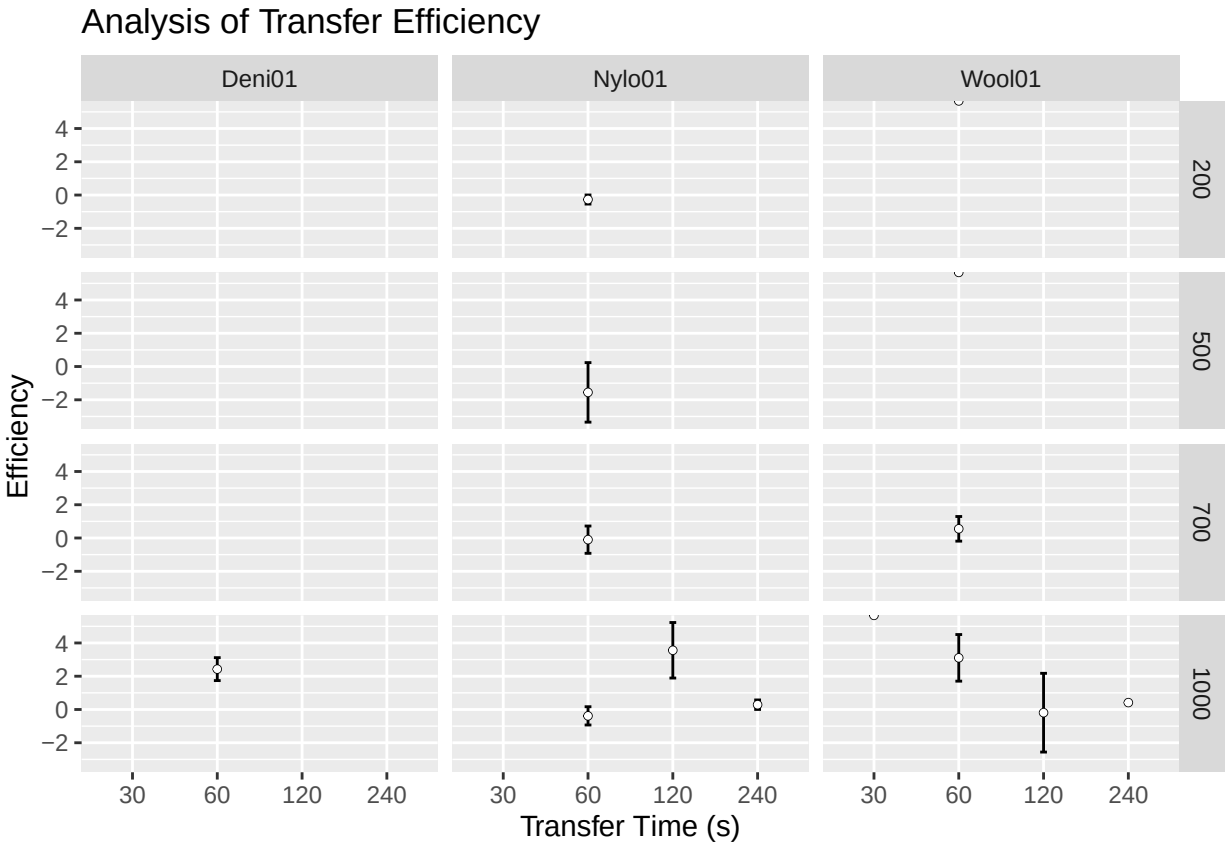
Table 4: Summary Data for ML Transfer Ratios

Mass	TransferTime	Substrate	N	Ratio	sd	se	ci
200	60	Nylo01	6	-0.0342778	0.5632213	0.2299341	0.5910645
200	60	Wool01	6	0.1338963	0.0588358	0.0240196	0.0617444
500	60	Nylo01	6	0.2028366	0.1266029	0.0516854	0.1328616
500	60	Wool01	6	0.1284607	0.0917462	0.0374552	0.0962818
700	60	Nylo01	6	-0.2240270	0.8942029	0.3650568	0.9384084
700	60	Wool01	6	0.1938328	0.0464003	0.0189428	0.0486941
1000	30	Wool01	6	0.0978378	0.0598697	0.0244417	0.0628294
1000	60	Deni01	6	0.4967478	0.1266902	0.0517211	0.1329533
1000	60	Nylo01	6	0.4309259	0.2401147	0.0980264	0.2519849
1000	60	Wool01	6	0.1675380	0.0840088	0.0342964	0.0881618
1000	120	Nylo01	6	0.4566484	0.6064524	0.2475832	0.6364328
1000	120	Wool01	6	0.1646794	0.0949062	0.0387453	0.0995979
1000	240	Nylo01	6	0.2979985	0.2554603	0.1042912	0.2680892
1000	240	Wool01	6	0.1314790	0.0630389	0.0257355	0.0661552
[](plo	ts_files/figure	-latex/plott	SD-1.	pdf)			

Table 5: Efficiency data for SD

Mass	TransferTime	Substrate	N	Efficiency	sd	se	ci
200	60	Nylo01	6	-0.2685916	0.6681670	0.2727781	0.7011983
200	60	Wool01	6	Inf	NaN	NaN	NaN
500	60	Nylo01	6	-1.5537063	4.3858910	1.7905325	4.6027103

Mass	TransferTime	Substrate	N	Efficiency	sd	se	ci
500	60	Wool01	6	Inf	NaN	NaN	NaN
700	60	Nylo01	6	-0.0992262	2.0074485	0.8195374	2.1066880
700	60	Wool01	6	0.5521886	1.8144115	0.7407304	1.9041081
1000	30	Wool01	6	Inf	NaN	NaN	NaN
1000	60	Deni01	6	2.4266632	1.6897007	0.6898174	1.7732321
1000	60	Nylo01	6	-0.3835150	1.3456210	0.5493475	1.4121427
1000	60	Wool01	6	3.1051587	3.4326399	1.4013694	3.6023347
1000	120	Nylo01	6	3.5599361	4.0885331	1.6691367	4.2906524
1000	120	Wool01	6	-0.1922619	5.7981526	2.3670859	6.0847880
1000	240	Nylo01	6	0.2884312	0.6992647	0.2854736	0.7338333
1000	240	Wool01	6	0.4143278	0.1695091	0.0692018	0.1778889



Hmm. Getting infinity values for some of the datapoints. To investigate.

Read BH Data

In trying to replicate the above for BH's data, I found that the "Time" column didn't make sense (an incrementing value per row) so from now on will use the cleaned data which was used for the file-renamer.

Table 6: 'Head' of BH's Transfer Data

Substrate	ObservationType	Count	Mass	TransferTime	Experiment	Replicate
Cott01	Ndata	0	0	0	1	1
Wool01	Ndata	0	0	0	1	1
Cott01	Uvpo1	107	0	0	1	1

Substrate	ObservationType	Count	Mass	TransferTime	Experiment	Replicate
Cott01	Uvpo1	91	1000	30	1	1
Wool01	Uvpo1	1	1000	30	1	1
Cott01	Ndata	0	0	0	1	2
Wool01	Ndata	0	0	0	1	2
Cott01	Uvpo1	123	0	0	1	2
Cott01	Uvpo1	108	1000	30	1	2
Wool01	Uvpo1	6	1000	30	1	2
Cott01	Ndata	0	0	0	1	3
Wool01	Ndata	0	0	0	1	3
Cott01	Uvpo1	58	0	0	1	3
Cott01	Uvpo1	42	1000	30	1	3
Wool01	Uvpo1	3	1000	30	1	3
Cott01	Ndata	0	0	0	1	4
Wool01	Ndata	0	0	0	1	4
Cott01	Uvpo1	81	0	0	1	4
Cott01	Uvpo1	51	1000	30	1	4
Wool01	Uvpo1	0	1000	30	1	4

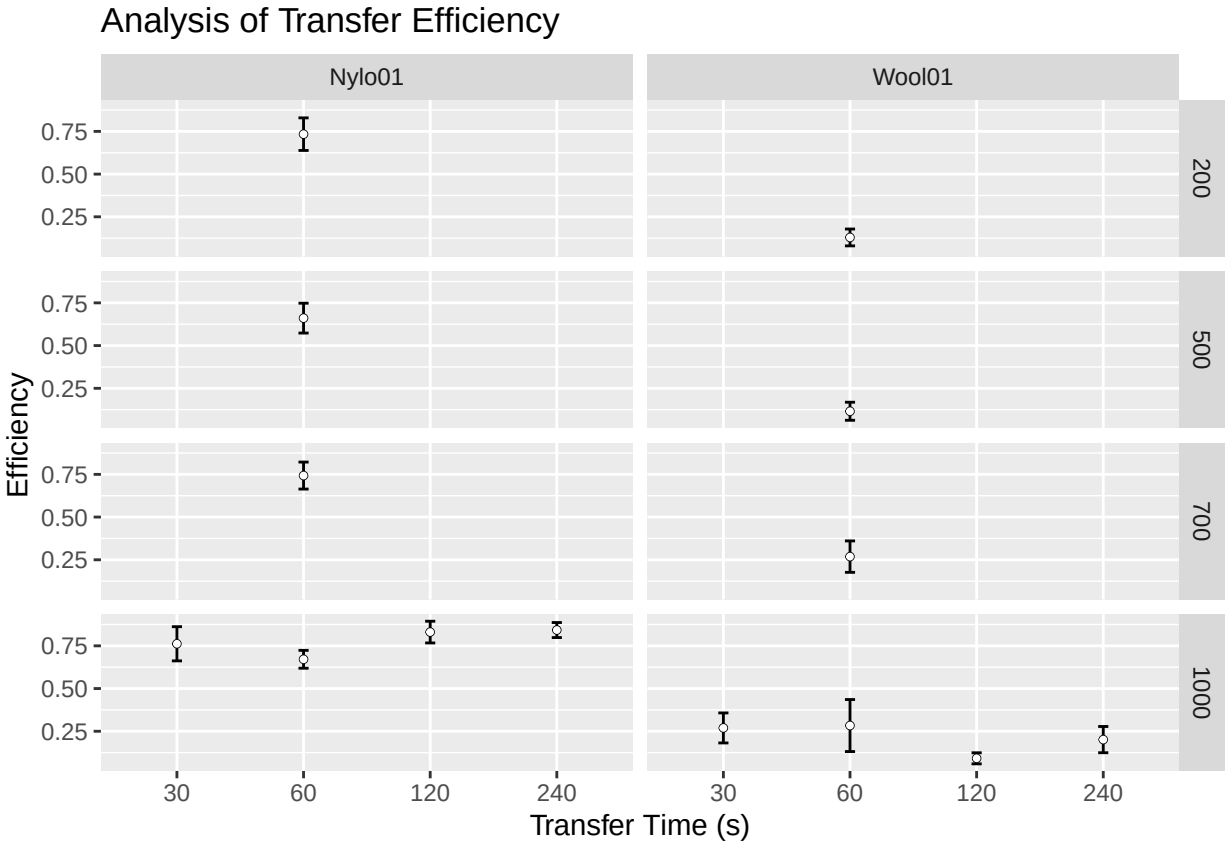
Table 7: Summary Data for BH Transfer Ratios

Mass	TransferTime	Substrate	N	Ratio	sd	se	ci
1000	120	Nylo01	6	0.3348185	0.1307888	0.0533943	0.1372545
1000	120	Wool01	6	0.0337128	0.0317159	0.0129480	0.0332838
1000	240	Nylo01	6	0.3488004	0.1307502	0.0533785	0.1372139
1000	240	Wool01	6	0.0427312	0.0446728	0.0182376	0.0468812
1000	30	Nylo01	5	0.3372719	0.1449379	0.0648182	0.1799641
1000	30	Wool01	6	0.0516072	0.0540128	0.0220506	0.0566829
1000	60	Nylo01	6	0.3640935	0.1516866	0.0619258	0.1591853
1000	60	Wool01	6	0.0378939	0.0356767	0.0145650	0.0374404
200	60	Nylo01	6	0.3620949	0.2110073	0.0861434	0.2214386
200	60	Wool01	6	0.0302975	0.0259474	0.0105930	0.0272301
500	60	Nylo01	6	0.2991406	0.1772545	0.0723639	0.1860172
500	60	Wool01	6	0.0323172	0.0305062	0.0124541	0.0320143
700	60	Nylo01	6	0.4105965	0.1653907	0.0675205	0.1735669
700	60	Wool01	6	0.0526802	0.0387257	0.0158097	0.0406401
[](plo	ts_files/figure	-latex/plott	BH-1.	pdf)			

Table 8: Efficiency data for SD

Mass	TransferTime	Substrate	N	Efficiency	sd	se	ci
1000	120	Nylo01	6	0.8305225	0.1555389	0.0634985	0.1632280
1000	120	Wool01	6	0.0916896	0.0793069	0.0323769	0.0832274
1000	240	Nylo01	6	0.8424325	0.1078329	0.0440226	0.1131637
1000	240	Wool01	6	0.2011204	0.1880151	0.0767568	0.1973097
1000	30	Nylo01	5	0.7620170	0.2237431	0.1000609	0.2778137
1000	30	Wool01	6	0.2694444	0.2150527	0.0877949	0.2256840
1000	60	Nylo01	6	0.6712203	0.1281090	0.0523003	0.1344421
1000	60	Wool01	6	0.2834795	0.3731486	0.1523373	0.3915955
200	60	Nylo01	6	0.7338422	0.2335260	0.0953366	0.2450705

Mass	TransferTime	Substrate	N	Efficiency	sd	se	ci
200	60	Wool01	6	0.1292639	0.1206931	0.0492728	0.1266596
500	60	Nylo01	6	0.6607276	0.2138730	0.0873133	0.2244459
500	60	Wool01	6	0.1156102	0.1294067	0.0528301	0.1358040
700	60	Nylo01	6	0.7429037	0.1934802	0.0789880	0.2030450
700	60	Wool01	6	0.2684238	0.2251887	0.0919329	0.2363210



SG Data

Table 9: 'Head' of SG's Transfer Data

Substrate	ObservationType	Count	Mass	TransferTime	Experiment	Replicate
Cott01	Ndata	89	0	0	11	1
Wool01	Ndata	1	0	0	11	1
Cott01	Uvpo1	182	0	0	11	1
Cott01	Uvpo1	172	1000	30	11	1
Wool01	Uvpo1	89	1000	30	11	1
Cott01	Ndata	81	0	0	1	1
Nylo01	Ndata	1	0	0	1	1
Cott01	Uvpo1	159	0	0	1	1
Cott01	Uvpo1	152	1000	30	1	1
Nylo01	Uvpo1	100	1000	30	1	1
Cott01	Ndata	59	0	0	1	2
Nylo01	Ndata	2	0	0	1	2
Cott01	Uvpo1	270	0	0	1	2

Substrate	ObservationType	Count	Mass	TransferTime	Experiment	Replicate
Cott01	Uvpo1	155	1000	30	1	2
Nylo01	Uvpo1	152	1000	30	1	2
Cott01	Ndata	49	0	0	1	3
Nylo01	Ndata	2	0	0	1	3
Cott01	Uvpo1	320	0	0	1	3
Cott01	Uvpo1	156	1000	30	1	3
Nylo01	Uvpo1	143	1000	30	1	3

Table 10: Summary Data for SG Transfer Ratios

Mass	TransferTime	Substrate	N	Ratio	sd	se	ci
1000	120	Nylo01	6	0.8689225	0.2600158	0.1061510	0.2728699
1000	120	Wool01	6	0.8473962	0.1889595	0.0771424	0.1983008
1000	240	Nylo01	6	0.5036197	0.3117237	0.1272607	0.3271340
1000	240	Wool01	6	0.5954625	0.5040950	0.2057959	0.5290152
1000	30	Deni01	6	1.3476846	0.8049645	0.3286254	0.8447585
1000	30	Nylo01	6	0.7454885	0.3934754	0.1606357	0.4129271
1000	30	Wool01	6	0.5428876	0.5375483	0.2194532	0.5641223
1000	60	Nylo01	6	0.9770824	0.5168077	0.2109859	0.5423565
1000	60	Wool01	6	0.5610459	0.6332315	0.2585157	0.6645357
200	60	Nylo01	6	0.3068359	0.0848446	0.0346377	0.0890390
200	60	Wool01	6	0.5001868	0.3909773	0.1596158	0.4103055
500	60	Nylo01	6	0.5062667	0.3127171	0.1276662	0.3281765
500	60	Wool01	6	0.4213237	0.2670105	0.1090066	0.2802103
700	60	Nylo01	6	0.3916311	0.1003462	0.0409662	0.1053069
700	60	Wool01	6	0.8506554	0.2444893	0.0998124	0.2565758

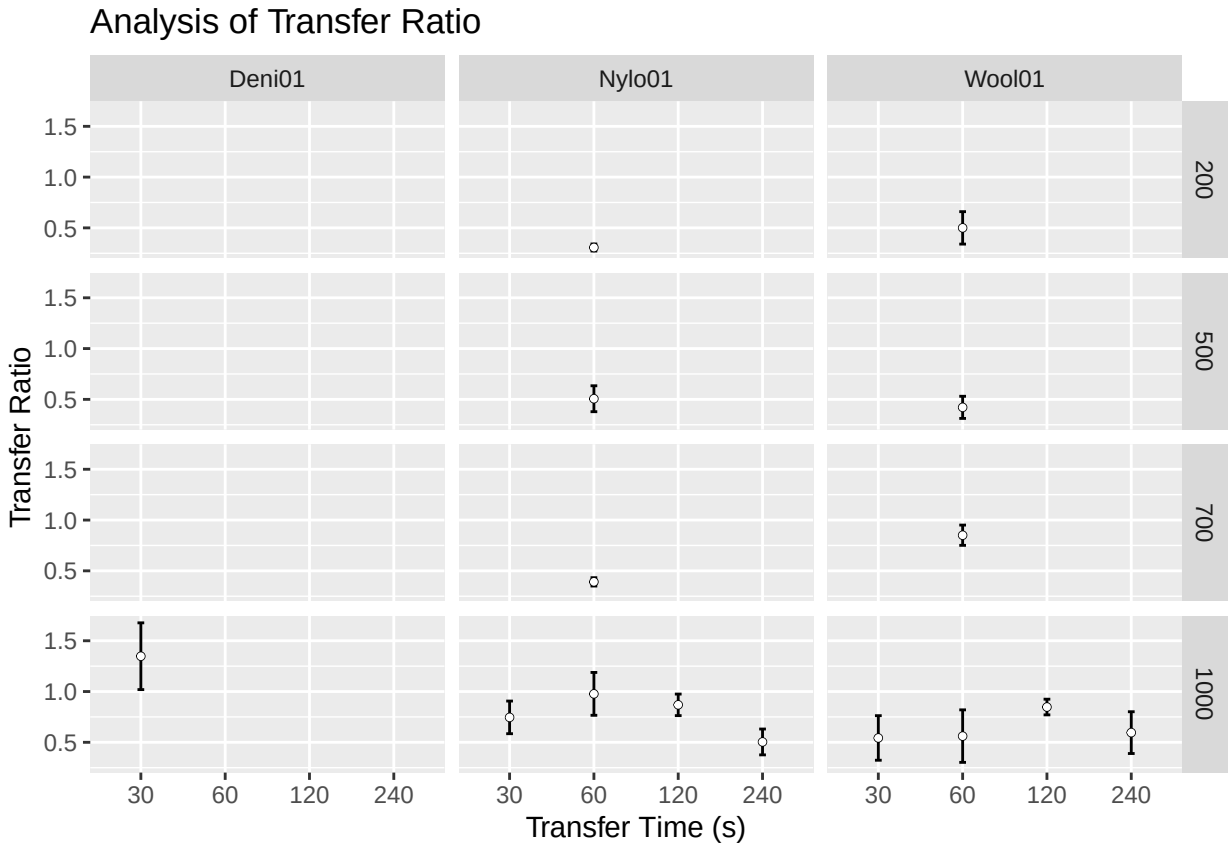
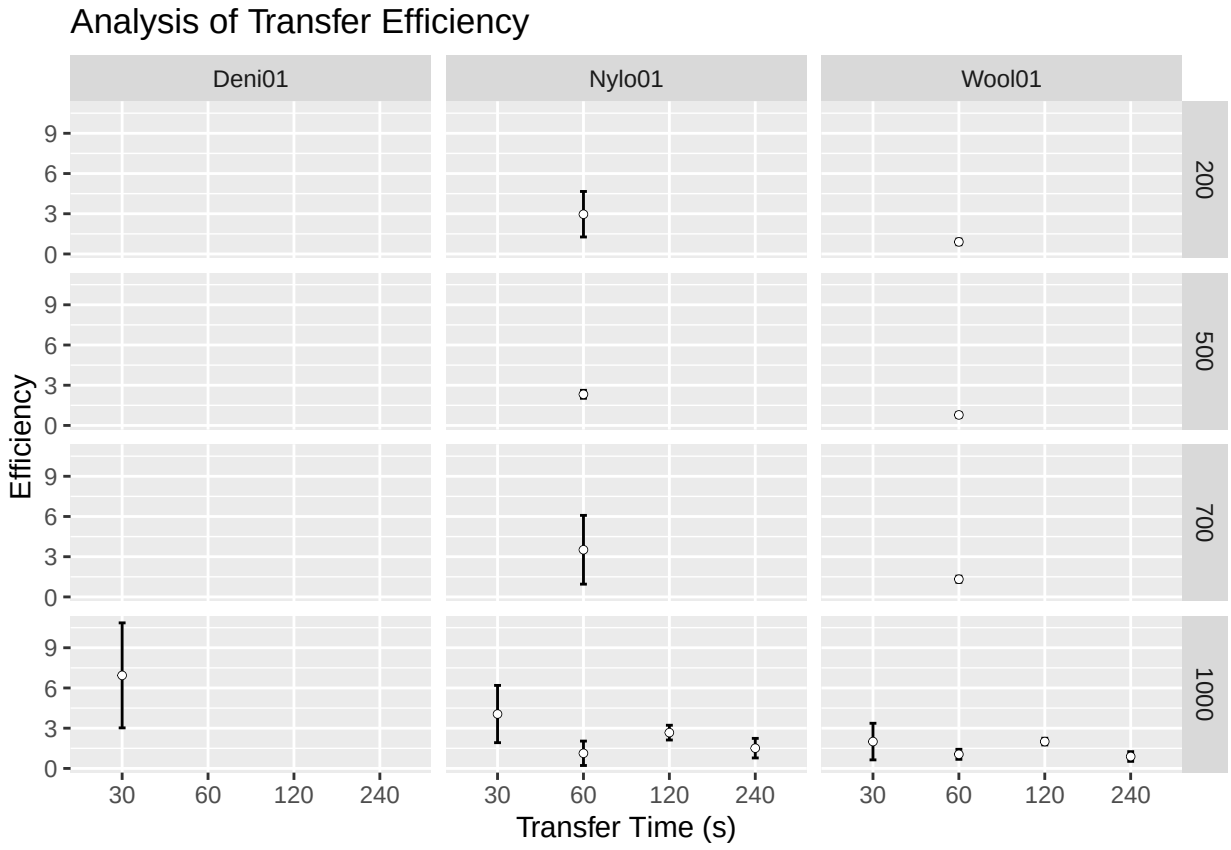


Table 11: Efficiency data for SG

Name	Mass	TransferTime	Substrate	N	Efficiency	sd	se	ci
D	1000	120	Nylo01	6	2.6699679	1.3478312	0.5502498	1.4144621
D	1000	120	Wool01	6	2.0022817	0.6068378	0.2477405	0.6368372
D	1000	240	Nylo01	6	1.5109170	1.7883054	0.7300726	1.8767114
D	1000	240	Wool01	6	0.8876003	0.8865460	0.3619309	0.9303730
D	1000	30	Deni01	6	6.9400517	9.5904499	3.9152848	10.0645599
D	1000	30	Nylo01	6	4.0561775	5.2318611	2.1358983	5.4905015
D	1000	30	Wool01	6	2.0025139	3.3406817	1.3638276	3.5058305
D	1000	60	Nylo01	6	1.1287837	2.2285891	0.9098177	2.3387608
D	1000	60	Wool01	6	1.0527281	0.9137557	0.3730392	0.9589278
D	200	60	Nylo01	6	2.9647290	4.1587253	1.6977925	4.3643146
D	200	60	Wool01	6	0.9006566	0.5167049	0.2109439	0.5422485
D	500	60	Nylo01	6	2.3242987	0.7267779	0.2967059	0.7627067
D	500	60	Wool01	6	0.7853393	0.4341273	0.1772317	0.4555886
D	700	60	Nylo01	6	3.5178882	6.2828775	2.5649740	6.5934755
D	700	60	Wool01	6	1.3226351	0.5579647	0.2277881	0.5855480



EM Data

This data is a little different from the others as this study includes an analysis of camera settings - specified in the "Note" column as C1 or C2. That information is included in the analysis and the two camera settings reported separately.

In the comparison to the other datasets only the C1 camera data is used, for pragmatic reasons.

Table 12: 'Head' of EM's Transfer Data

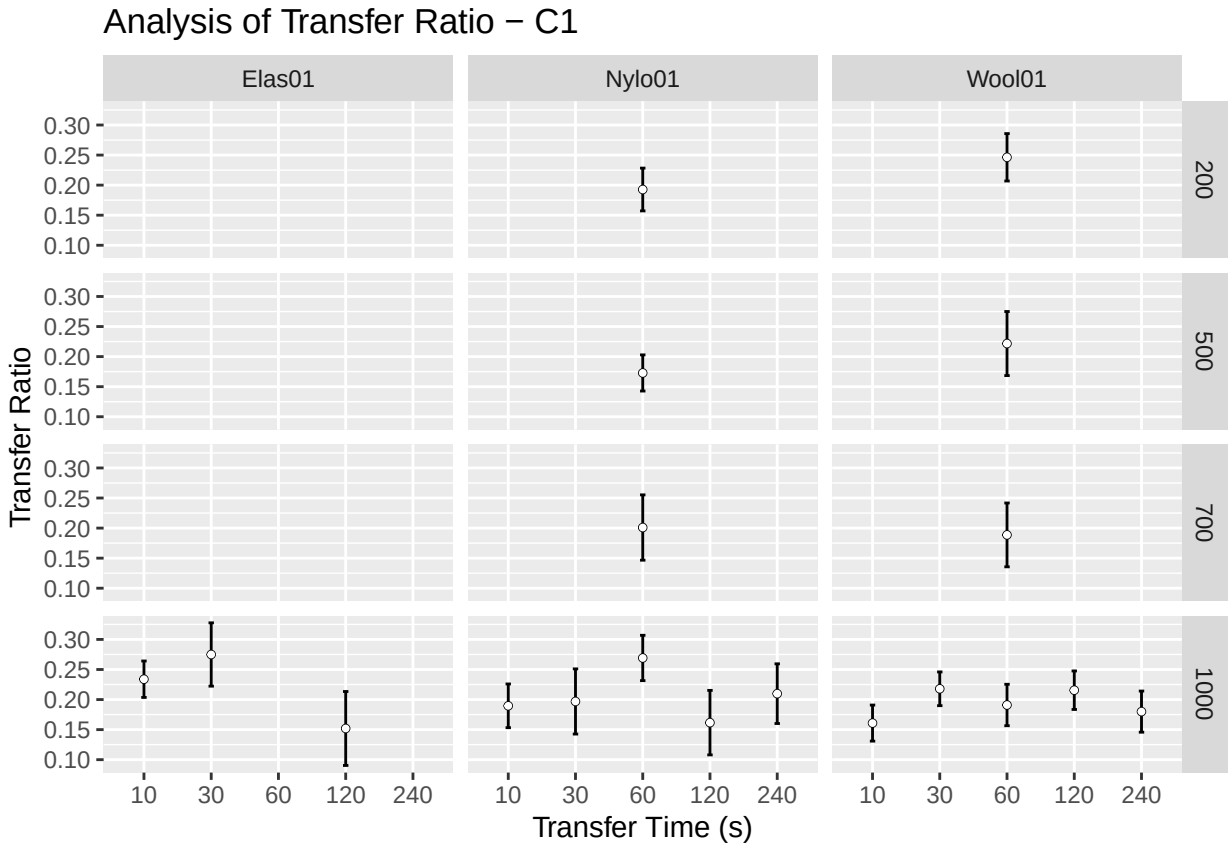
Substrate	ObservationType	Count	Mass	TransferTime	Experiment	Replicate	Note
Cott01	Ndata	4	0	0	1	1	C1
Nylo01	Ndata	4	0	0	1	1	C1
Cott01	Uvpo1	100	0	0	1	1	C1
Cott01	Uvpo1	81	1000	30	1	1	C1
Nylo01	Uvpo1	21	1000	30	1	1	C1
Cott01	Ndata	0	0	0	1	2	C1
Nylo01	Ndata	2	0	0	1	2	C1
Cott01	Uvpo1	151	0	0	1	2	C1
Cott01	Uvpo1	135	1000	30	1	2	C1
Nylo01	Uvpo1	35	1000	30	1	2	C1
Cott01	Ndata	4	0	0	1	3	C1
Nylo01	Ndata	4	0	0	1	3	C1
Cott01	Uvpo1	46	0	0	1	3	C1
Cott01	Uvpo1	47	1000	30	1	3	C1
Nylo01	Uvpo1	16	1000	30	1	3	C1
Cott01	Ndata	4	0	0	1	4	C1

Substrate	ObservationType	Count	Mass	TransferTime	Experiment	Replicate	Note
Nylo01	Ndata	5	0	0	1	4	C1
Cott01	Uvpo1	24	0	0	1	4	C1
Cott01	Uvpo1	21	1000	30	1	4	C1
Nylo01	Uvpo1	5	1000	30	1	4	C1

Table 13: Summary Data for EM Transfer Ratios

	Mass	TransferTime	Substrate	Experiment	Note	N	Ratio	sd	se	ci
1	1000	10	Elas01	41	C1	6	0.2338381	0.0741839	0.0302854	0.0778512
2	1000	10	Elas01	42	C2	6	0.2868970	0.0918738	0.0375073	0.0964156
3	1000	10	Nylo01	29	C1	3	0.1895775	0.0629581	0.0363489	0.1563967
4	1000	10	Nylo01	30	C2	3	0.2718908	0.0325974	0.0188201	0.0809764
5	1000	10	Wool01	31	C1	6	0.1608553	0.0734861	0.0300006	0.0771189
6	1000	10	Wool01	32	C2	6	0.3107039	0.1350947	0.0551522	0.1417732
7	1000	120	Elas01	37	C1	2	0.1518923	0.0869696	0.0614968	0.7813912
8	1000	120	Elas01	38	C2	2	0.2365703	0.0822599	0.0581665	0.7390760
9	1000	120	Nylo01	3	C1	5	0.1615913	0.1200060	0.0536683	0.1490071
10	1000	120	Nylo01	4	C2	5	0.1436581	0.0599683	0.0268187	0.0744605
11	1000	120	Wool01	19	C1	5	0.2155738	0.0716007	0.0320208	0.0889041
12	1000	120	Wool01	20	C2	5	0.2167934	0.0830756	0.0371525	0.1031520
13	1000	240	Nylo01	5	C1	4	0.2097961	0.0992487	0.0496243	0.1579268
14	1000	240	Nylo01	6	C2	3	0.2153112	0.1378391	0.0795815	0.3424114
15	1000	240	Wool01	25	C1	6	0.1799438	0.0837790	0.0342026	0.0879206
16	1000	240	Wool01	26	C2	6	0.2721513	0.0601230	0.0245451	0.0630952
17	1000	30	Elas01	33	C1	6	0.2749656	0.1289479	0.0526428	0.1353225
18	1000	30	Elas01	34	C2	6	0.2303146	0.0818126	0.0333999	0.0858571
19	1000	30	Nylo01	1	C1	5	0.1968279	0.1211747	0.0541910	0.1504583
20	1000	30	Nylo01	2	C2	5	0.1579633	0.0912528	0.0408095	0.1133053
21	1000	30	Wool01	15	C1	4	0.2178964	0.0561319	0.0280659	0.0893184
22	1000	30	Wool01	16	C2	4	0.2473069	0.0868115	0.0434057	0.1381365
25	1000	60	Nylo01	7	C1	8	0.2691769	0.1066598	0.0377099	0.0891698
26	1000	60	Nylo01	8	C2	7	0.3832045	0.1723505	0.0651424	0.1593977
27	1000	60	Wool01	17	C1	5	0.1909401	0.0770871	0.0344744	0.0957163
28	1000	60	Wool01	18	C2	6	0.2583069	0.0548124	0.0223771	0.0575221
29	200	60	Nylo01	13	C1	6	0.1927424	0.0871142	0.0355642	0.0914208
30	200	60	Nylo01	14	C2	6	0.1458026	0.0858242	0.0350376	0.0900670
31	200	60	Wool01	27	C1	2	0.2463054	0.0557326	0.0394089	0.5007371
33	500	60	Nylo01	11	C1	3	0.1728064	0.0520260	0.0300372	0.1292398
34	500	60	Nylo01	12	C2	4	0.2321003	0.0667902	0.0333951	0.1062780
35	500	60	Wool01	23	C1	5	0.2217096	0.1191345	0.0532786	0.1479250
36	500	60	Wool01	24	C2	5	0.1860587	0.0713513	0.0319093	0.0885943
37	700	60	Nylo01	10	C2	6	0.2693152	0.0598580	0.0244369	0.0628171
38	700	60	Nylo01	9	C1	6	0.2009331	0.1330634	0.0543229	0.1396415
39	700	60	Wool01	21	C1	4	0.1886549	0.1061766	0.0530883	0.1689507
40	700	60	Wool01	22	C2	5	0.2118627	0.0805434	0.0360201	0.1000079

Added an extra column for “Experiment” in addition to “Substrate” here as there seems to be too many replicates?? Need to investigate further.


Analysis of Transfer Ratio − C1
Elas01
Nylo01
Wool01
200
500
700
1000
Transfer Ratio
0.30
0.25
0.20
0.15
0.10
10
30
60
120
240
Transfer Time (s)

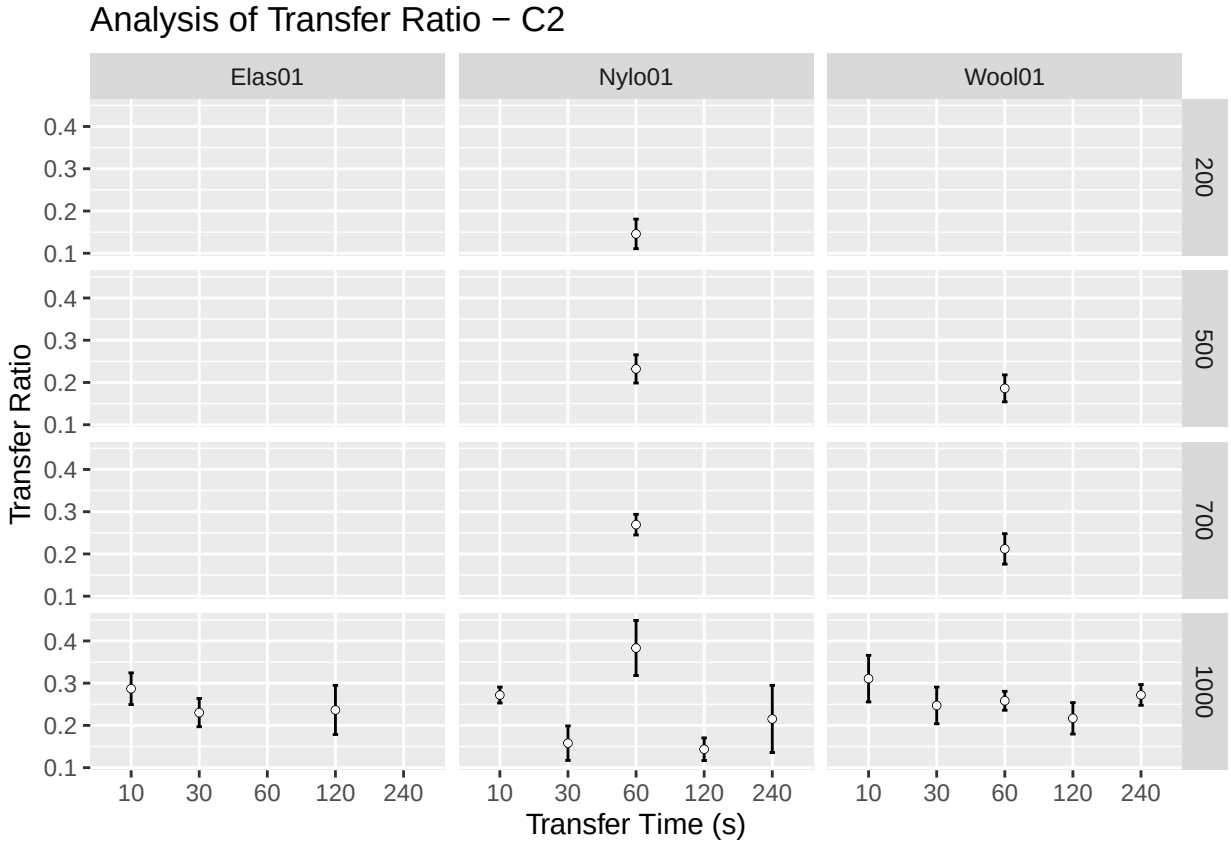
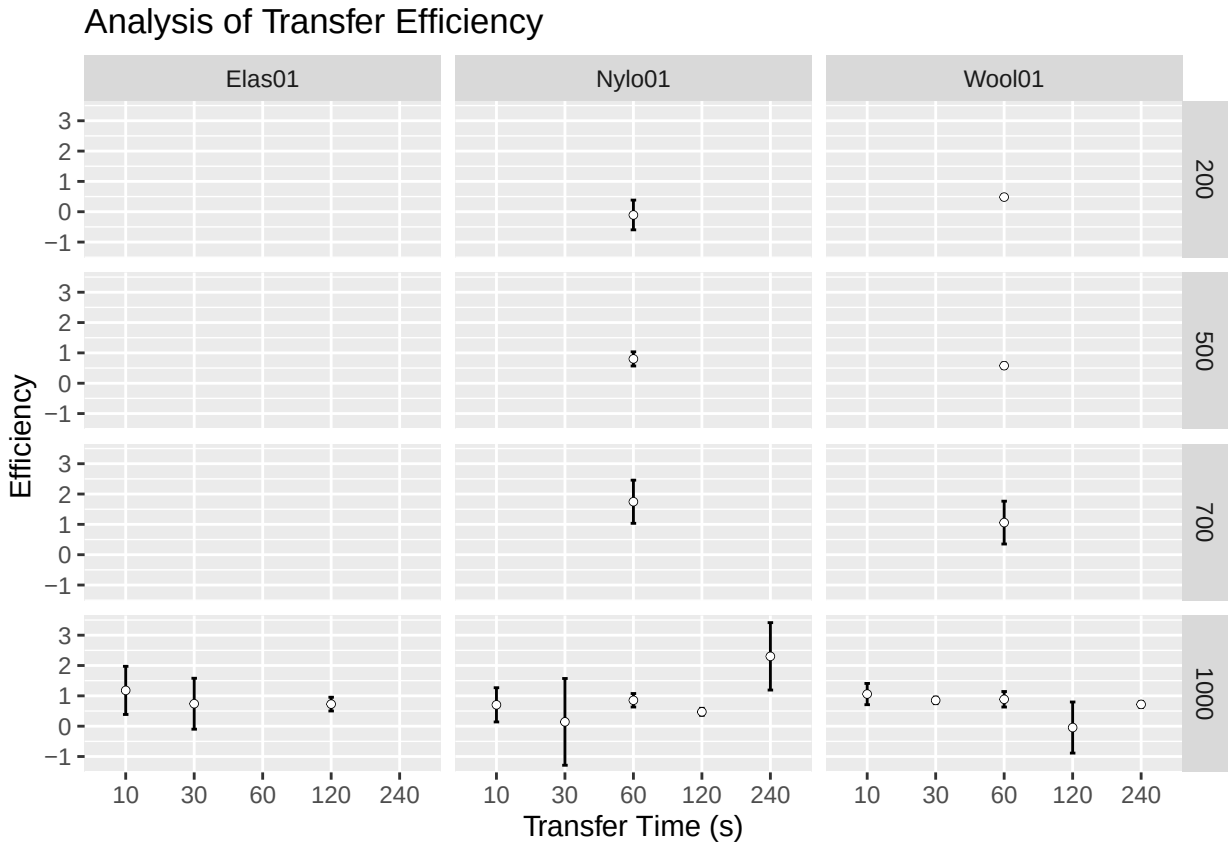

Analysis of Transfer Ratio − C2
Elas01
Nylo01
Wool01
200
500
700
1000
Transfer Ratio
0.4
0.3
0.2
0.1
10
30
60
120
240
Transfer Time (s)

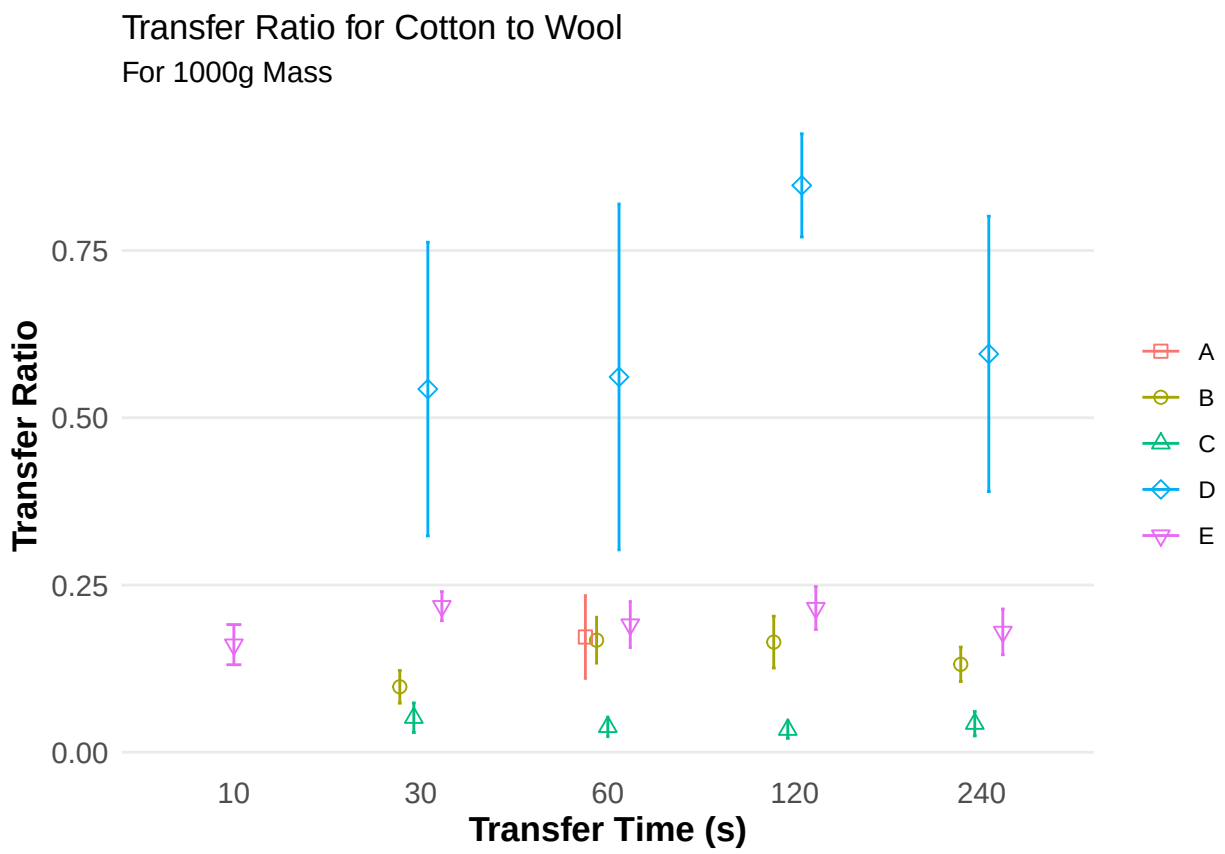
Table 14: Efficiency data for EM

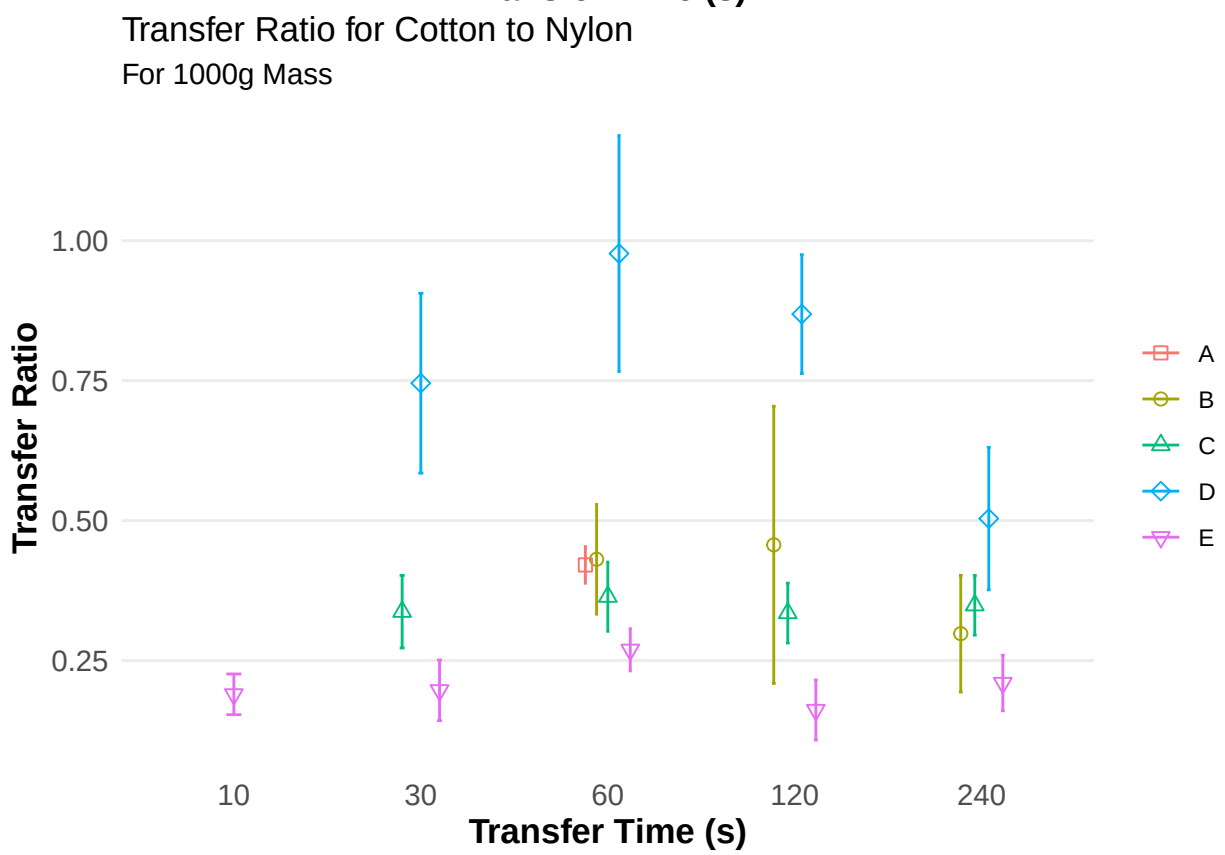
Mass	TransferTime	Substrate	N	Efficiency	sd	se	ci
1000	10	Elas01	12	1.1799508	2.7513425	0.7942442	1.7481197
1000	10	Nylo01	6	0.7037990	1.3819488	0.5641783	1.4502664
1000	10	Wool01	12	1.0591520	1.2141170	0.3504854	0.7714131
1000	120	Elas01	4	0.7276411	0.4522614	0.2261307	0.7196488
1000	120	Nylo01	10	0.4736985	0.3656422	0.1156262	0.2615646
1000	120	Wool01	10	-0.0448259	2.6642377	0.8425059	1.9058808
1000	240	Nylo01	7	2.3025230	2.9409544	1.1115763	2.7199292
1000	240	Wool01	12	0.7179882	0.3448847	0.0995596	0.2191293
1000	30	Elas01	12	0.7402536	2.9102871	0.8401275	1.8491082
1000	30	Nylo01	10	0.1426738	4.5237559	1.4305372	3.2361000
1000	30	Wool01	10	0.8515502	0.3437273	0.1086961	0.2458877
1000	60	Nylo01	15	0.8544468	0.8609351	0.2222925	0.4767700
1000	60	Wool01	11	0.8870747	0.8488601	0.2559410	0.5702720
200	60	Nylo01	12	-0.1064671	1.6992670	0.4905361	1.0796628
200	60	Wool01	3	0.4831126	0.1439292	0.0830976	0.3575401
500	60	Nylo01	7	0.8017865	0.6161360	0.2328775	0.5698308
500	60	Wool01	10	0.5780311	0.2817329	0.0890918	0.2015396
700	60	Nylo01	12	1.7459928	2.4644839	0.7114352	1.5658583
700	60	Wool01	9	1.0582959	2.1189461	0.7063154	1.6287661

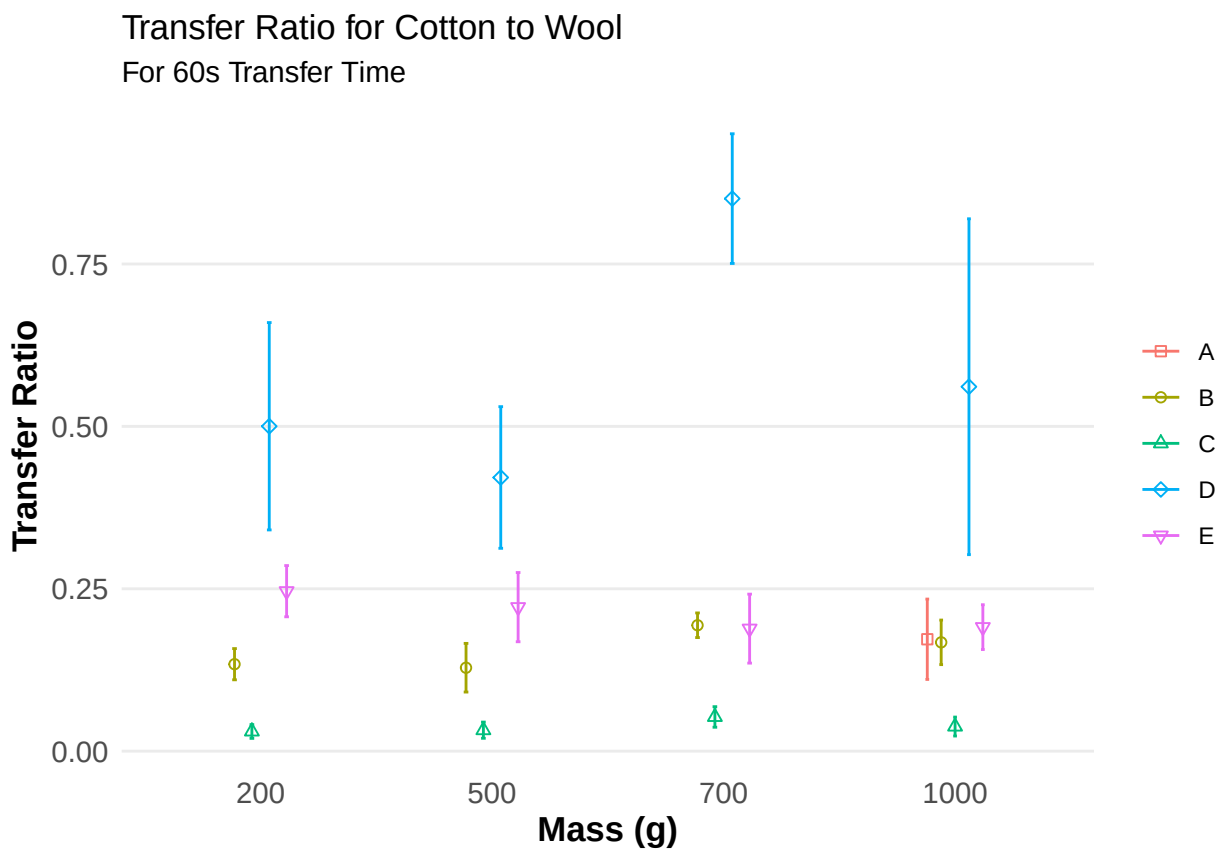


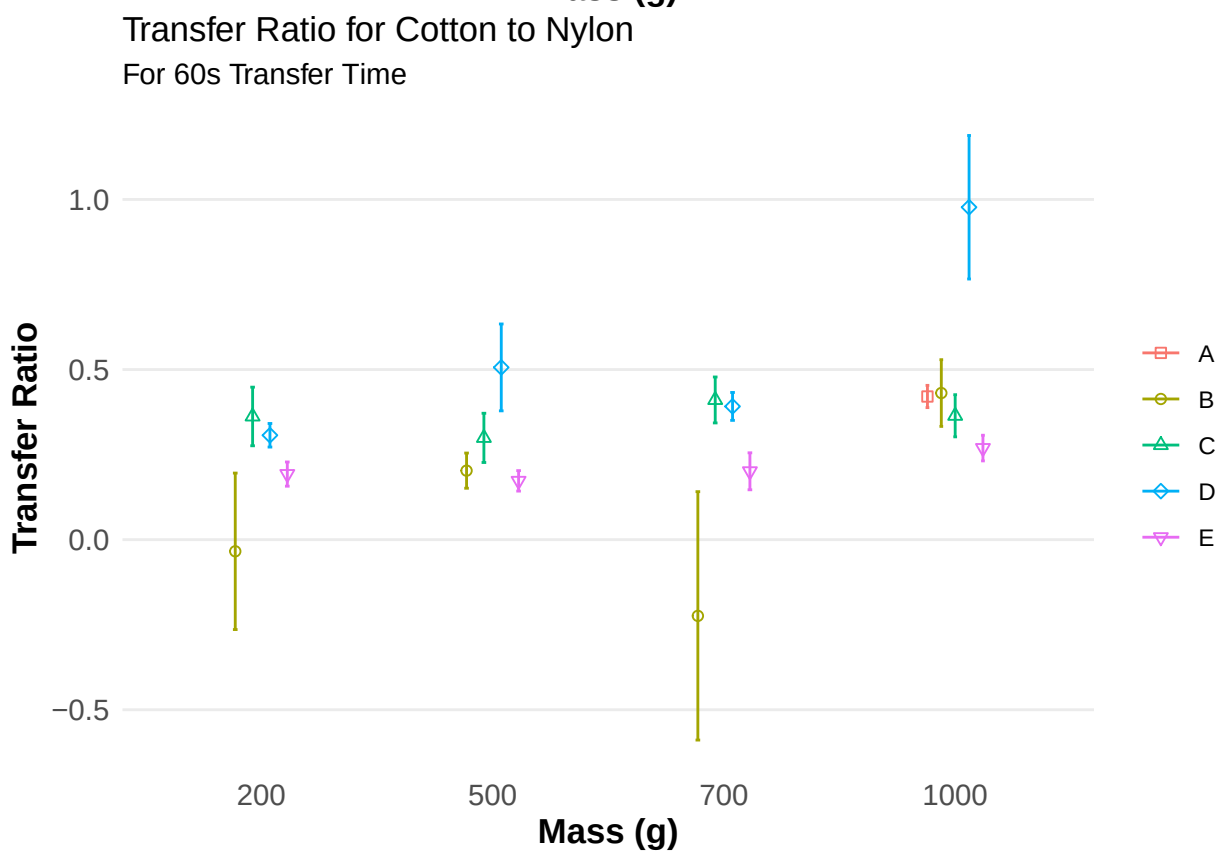
Combined Analysis

For the purposes of the paper let's look at the 1000g set for wool and nylon separately.

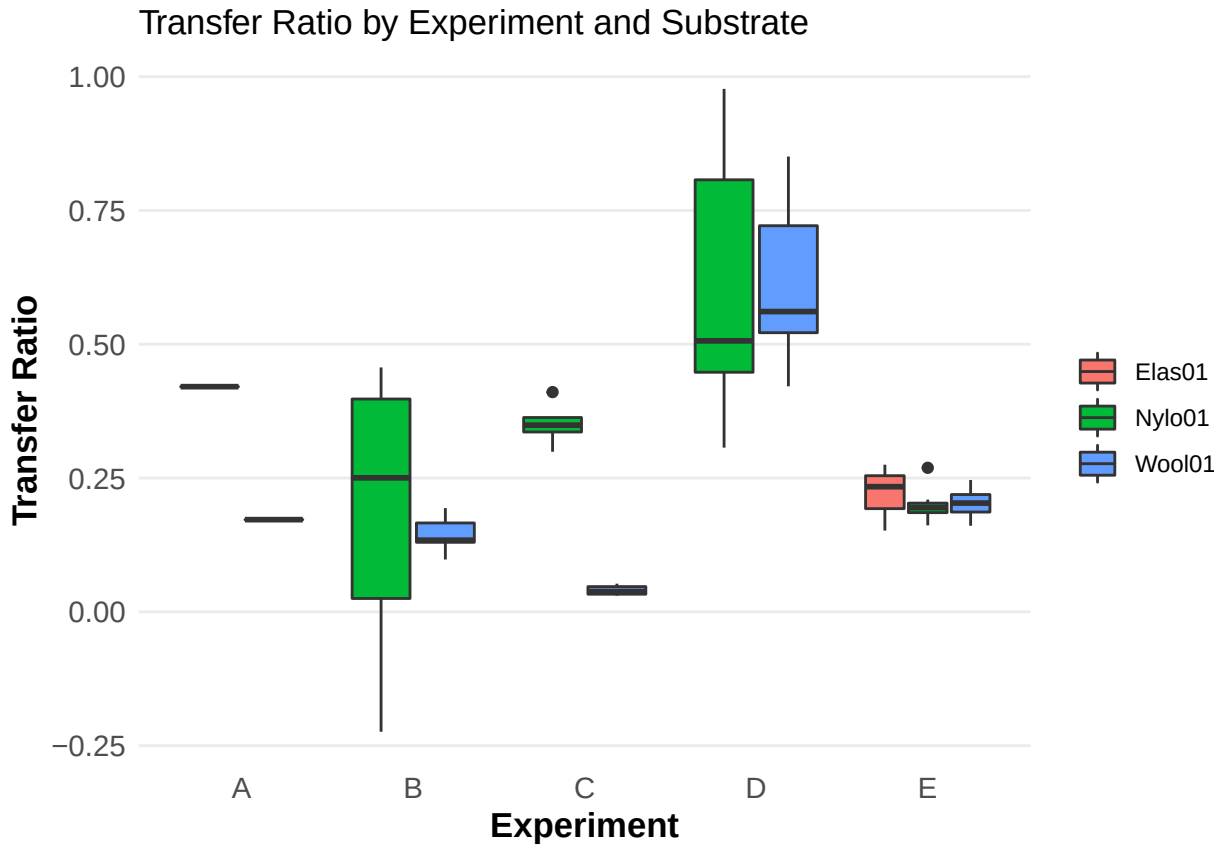

Transfer Ratio for Cotton to Wool
For 1000g Mass
Transfer Ratio
0.75
0.50
0.25
0.00
10
30
60
120
240
Transfer Time (s)
A
B
C
D
E


Transfer Ratio for Cotton to Nylon
For 1000g Mass
Transfer Ratio
1.00
0.75
0.50
0.25
10
30
60
120
240
Transfer Time (s)
A
B
C
D
E

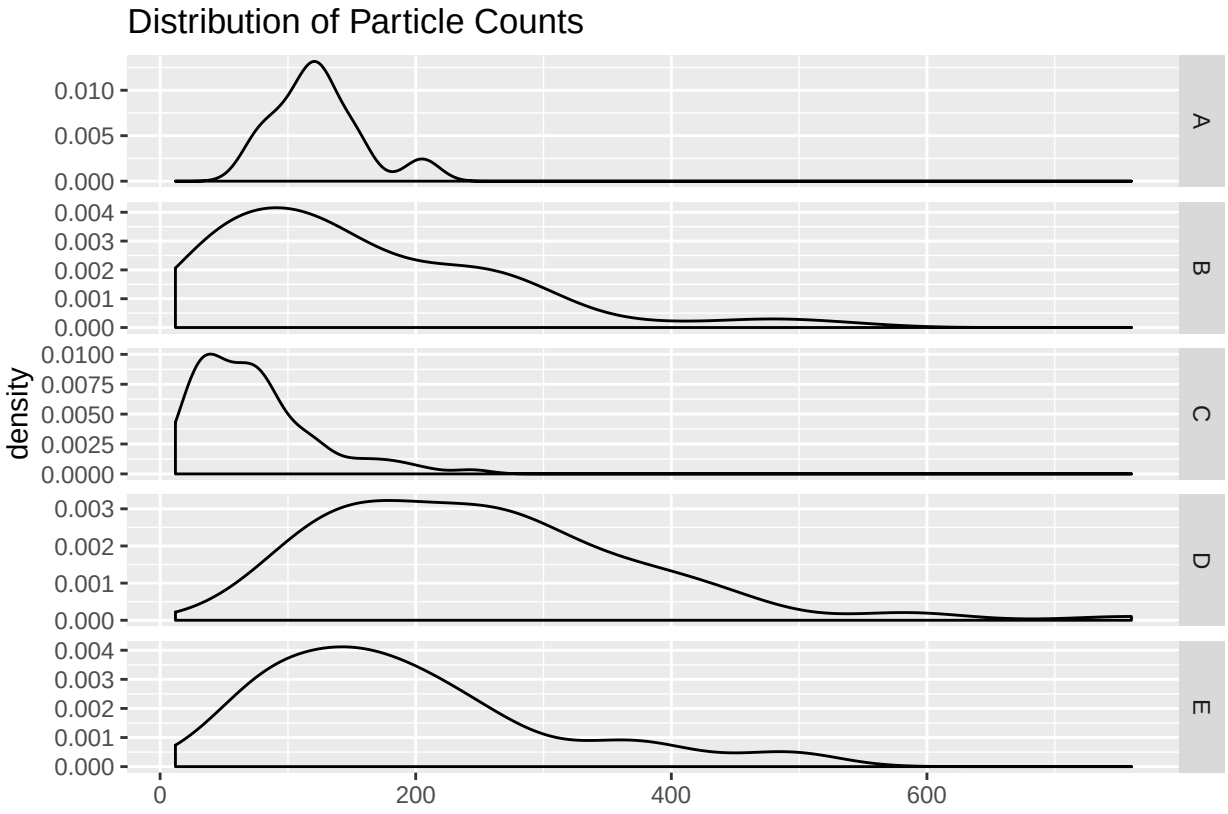

Transfer Ratio for Cotton to Wool
For 60s Transfer Time
Transfer Ratio
0.75
0.50
0.25
0.00
200
500
700
1000
Mass (g)
A
B
C
D
E

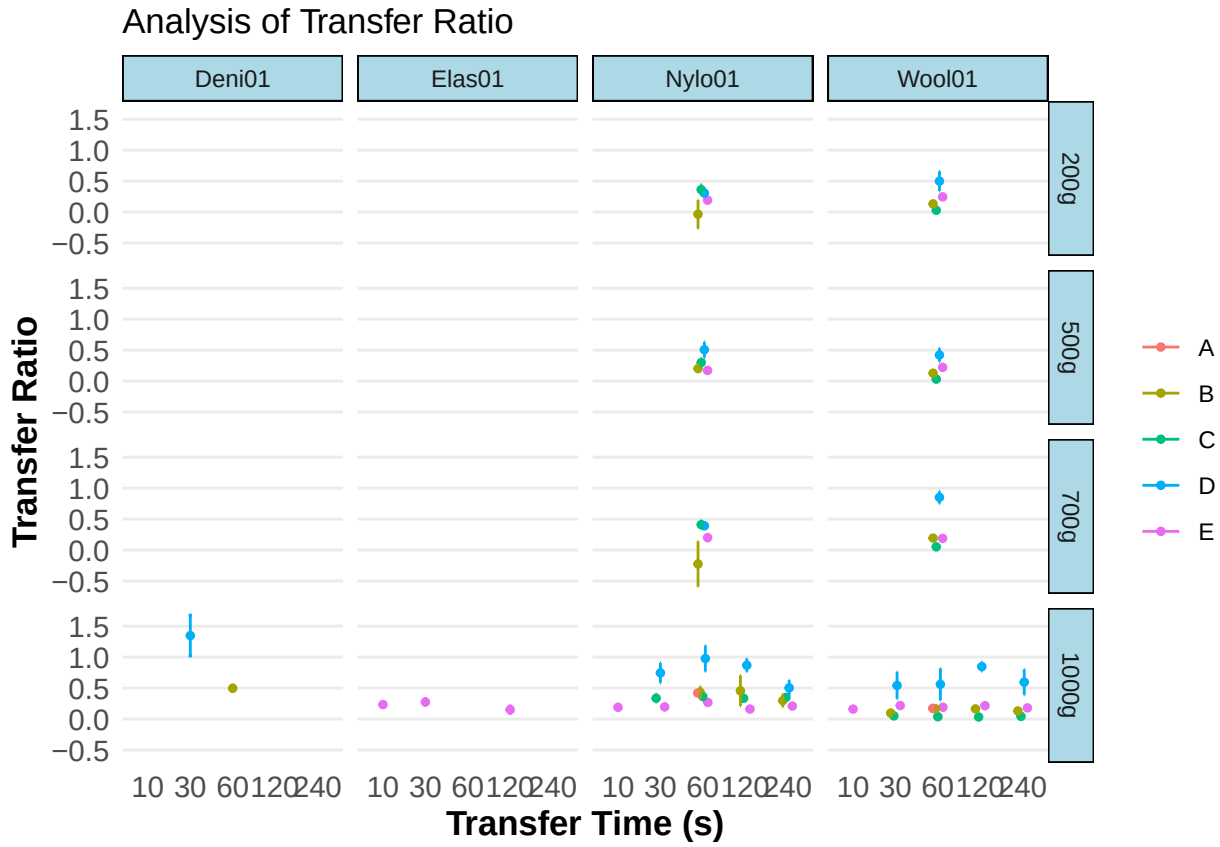

Transfer Ratio for Cotton to Nylon
For 60s Transfer Time
Transfer Ratio
1.0
0.5
0.0
−0.5
200
500
700
1000
Mass (g)
A
B
C
D
E

Seeing as there's very little effect from mass or time let's combine and see if receiver material has an effect.



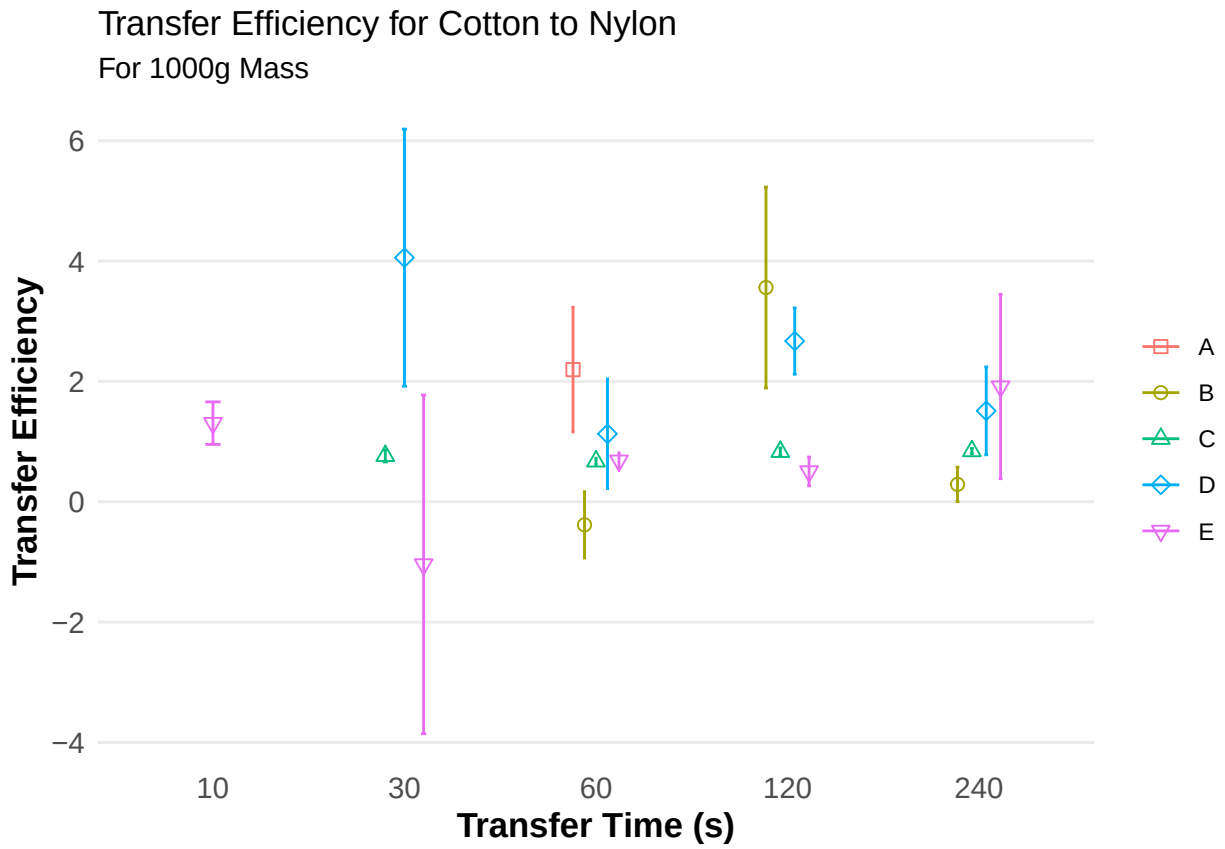
What does the count data look like for a given photo?


Distribution of Particle Counts
density
A
B
C
D
E
0.010
0.005
0.000
0.004
0.003
0.002
0.001
0.0100
0.0075
0.0050
0.0025
0.0000
0
200
400
600


Analysis of Transfer Ratio
Deni01
Elas01
Nylo01
Wool01
200g
500g
700g
1000g
Transfer Ratio
Transfer Time (s)
10 30 60 120 240
A
B
C
D
E

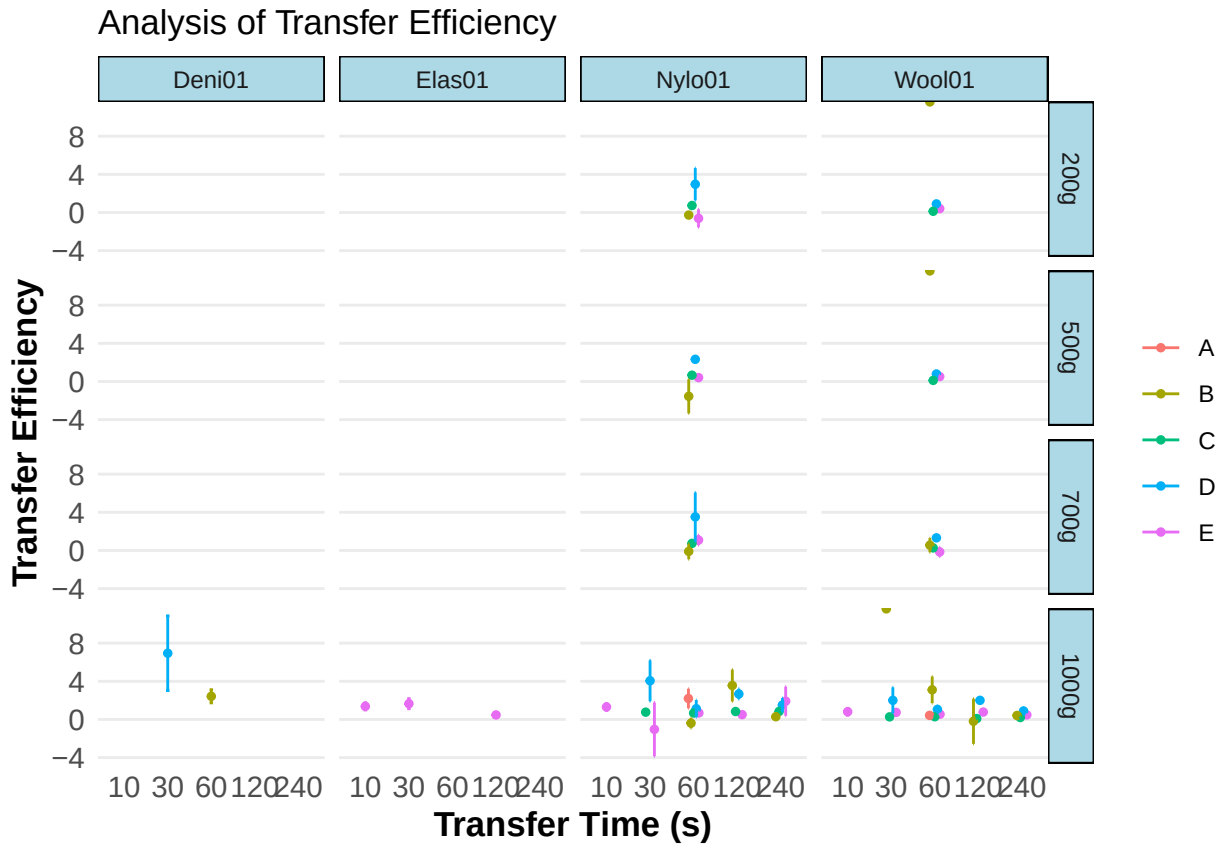
Transfer Efficiencies

A quick look at comparative transfer efficiency data.



Not sure what the transfer efficiency is showing here? What do values >1 mean, greater than 100% efficiency or what?


Transfer Efficiency for Cotton to Wool
For 1000g Mass
Transfer Efficiency
2.5
0.0
−2.5
10
30
60
120
240
Transfer Time (s)
A
B
C
D
E


Analysis of Transfer Efficiency
Deni01
Elas01
Nylo01
Wool01
200g
500g
700g
1000g
Transfer Efficiency
8
4
0
−4
10 30 60 120 240
Transfer Time (s)
A
B
C
D
E