

Transfer Data Analysis

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Dataset A

Table 1: ‘Head’ (i.e. first 20 rows) of A Transfer Data

Substrate	ObservationType	Count	Mass	TransferTime	Experiment	Replicate
Cott01	Ndata	20	0	0	1	1
Wool01	Ndata	46	0	0	1	1
Cott01	Uvpol	121	0	0	1	1
Cott01	Uvpol	70	1000	60	1	1
Wool01	Uvpol	48	1000	60	1	1
Cott01	Ndata	4	0	0	2	1
Nylo01	Ndata	1	0	0	2	1
Cott01	Uvpol	205	0	0	2	1
Cott01	Uvpol	142	1000	60	2	1
Nylo01	Uvpol	95	1000	60	2	1
Cott01	Ndata	31	0	0	1	2
Wool01	Ndata	1	0	0	1	2
Cott01	Uvpol	148	0	0	1	2
Cott01	Uvpol	66	1000	60	1	2
Wool01	Uvpol	8	1000	60	1	2
Cott01	Ndata	10	0	0	2	2
Nylo01	Ndata	1	0	0	2	2
Cott01	Uvpol	73	0	0	2	2
Cott01	Uvpol	69	1000	60	2	2
Nylo01	Uvpol	30	1000	60	2	2

Table 2: Summary Data for A 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

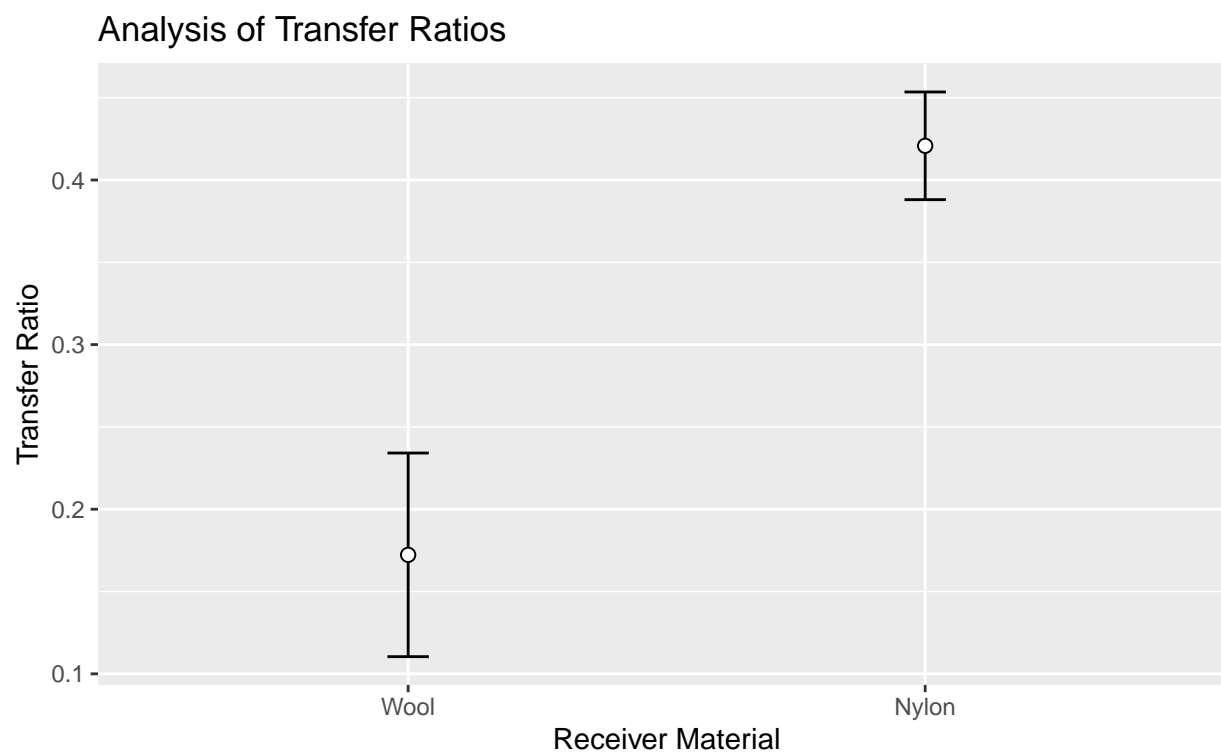


Figure S1: Transfer Ratios Dataset A

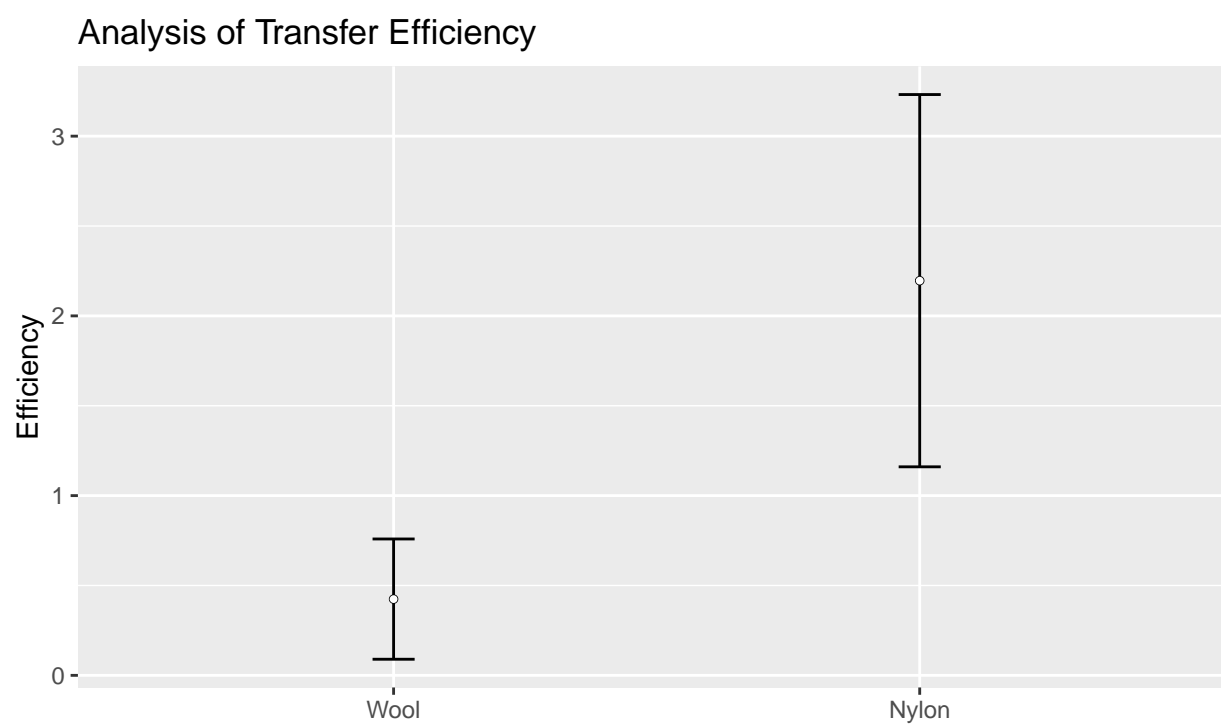


Figure S2: Transfer Efficiency dataset A.

Dataset B

Table 3: ‘Head’ of B Transfer Data

Substrate	ObservationType	Count	Mass	TransferTime	Experiment	Replicate
Cott01	Ndata	142	0	0	9	1
Nylo01	Ndata	25	0	0	9	1
Cott01	Uvp01	282	0	0	9	1
Cott01	Uvp01	214	1000	60	9	1
Nylo01	Uvp01	91	1000	60	9	1
Cott01	Ndata	166	0	0	9	2
Nylo01	Ndata	28	0	0	9	2
Cott01	Uvp01	282	0	0	9	2
Cott01	Uvp01	214	1000	60	9	2
Nylo01	Uvp01	51	1000	60	9	2
Cott01	Ndata	151	0	0	9	3
Nylo01	Ndata	37	0	0	9	3
Cott01	Uvp01	264	0	0	9	3
Cott01	Uvp01	188	1000	60	9	3
Nylo01	Uvp01	56	1000	60	9	3
Cott01	Ndata	151	0	0	9	4
Nylo01	Ndata	57	0	0	9	4
Cott01	Uvp01	166	0	0	9	4
Cott01	Uvp01	150	1000	60	9	4
Nylo01	Uvp01	62	1000	60	9	4

Table 4: Summary Data for B 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

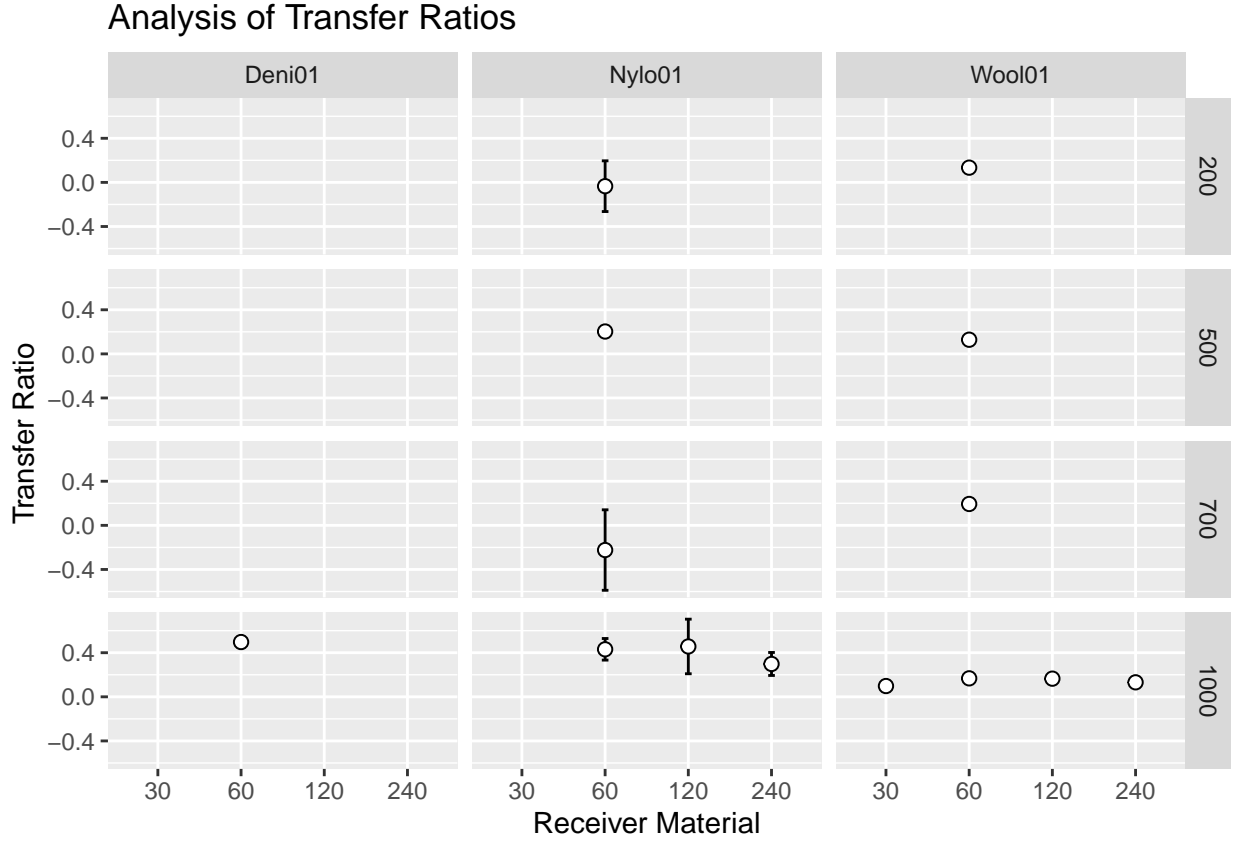


Figure S3: Transfer Ratios dataset B.

Table 5: Efficiency data for B

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
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

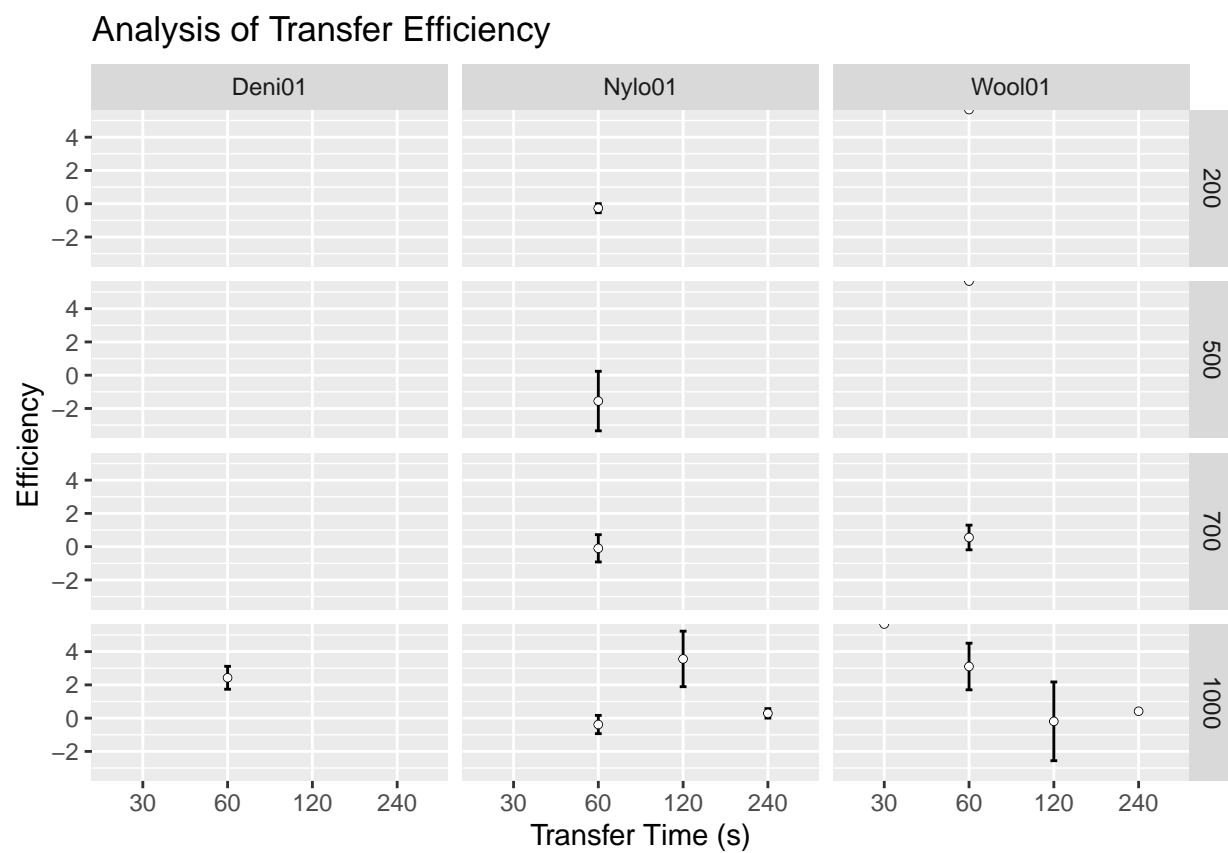


Figure S4: Transfer Efficiency dataset B.

Dataset C

Table 6: ‘Head’ of C Transfer Data

Substrate	ObservationType	Count	Mass	TransferTime	Experiment	Replicate
Cott01	Ndata	0	0	0	1	1
Wool01	Ndata	0	0	0	1	1
Cott01	Uvp01	107	0	0	1	1
Cott01	Uvp01	91	1000	30	1	1
Wool01	Uvp01	1	1000	30	1	1
Cott01	Ndata	0	0	0	1	2
Wool01	Ndata	0	0	0	1	2
Cott01	Uvp01	123	0	0	1	2
Cott01	Uvp01	108	1000	30	1	2
Wool01	Uvp01	6	1000	30	1	2
Cott01	Ndata	0	0	0	1	3
Wool01	Ndata	0	0	0	1	3
Cott01	Uvp01	58	0	0	1	3
Cott01	Uvp01	42	1000	30	1	3
Wool01	Uvp01	3	1000	30	1	3
Cott01	Ndata	0	0	0	1	4
Wool01	Ndata	0	0	0	1	4
Cott01	Uvp01	81	0	0	1	4
Cott01	Uvp01	51	1000	30	1	4
Wool01	Uvp01	0	1000	30	1	4

Table 7: Summary Data for C 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

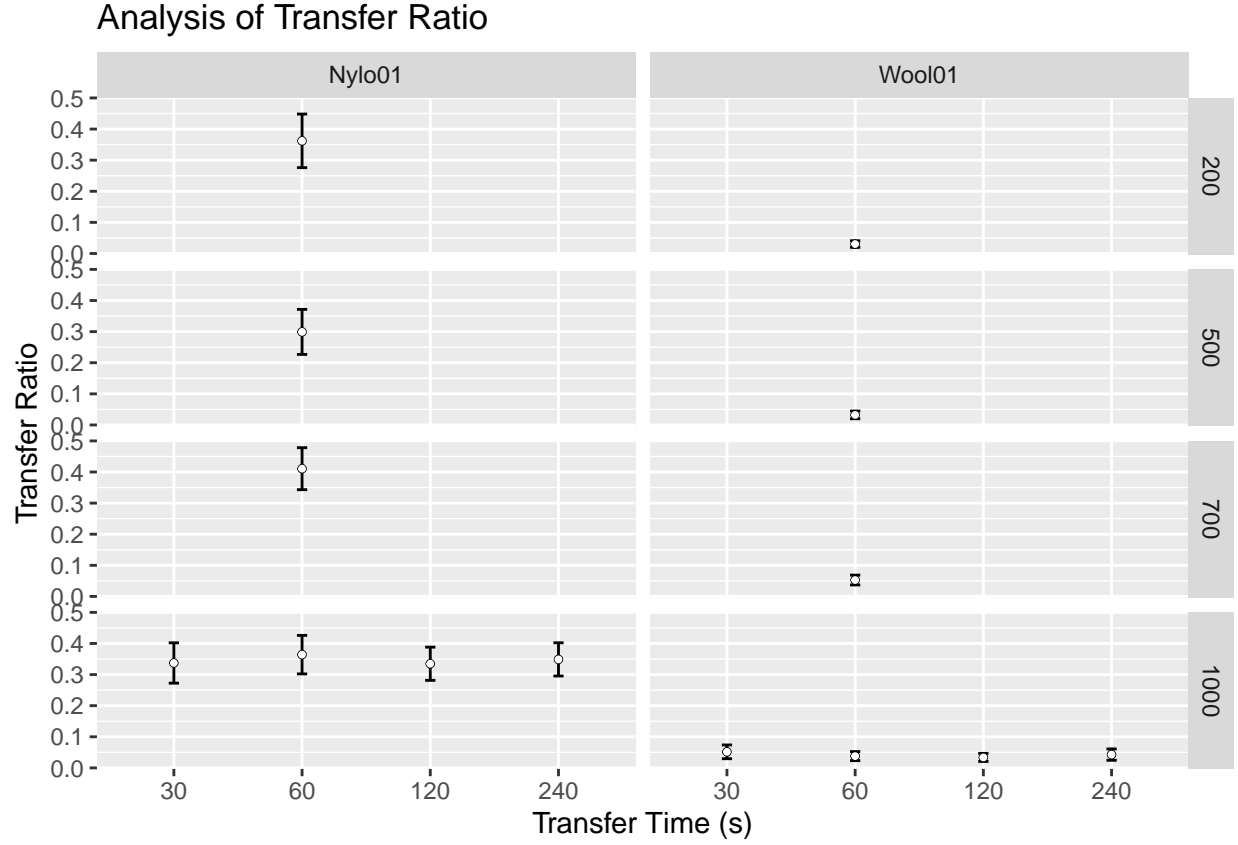


Figure S5: Transfer Ratio dataset C.

Table 8: Efficiency data for C

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
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

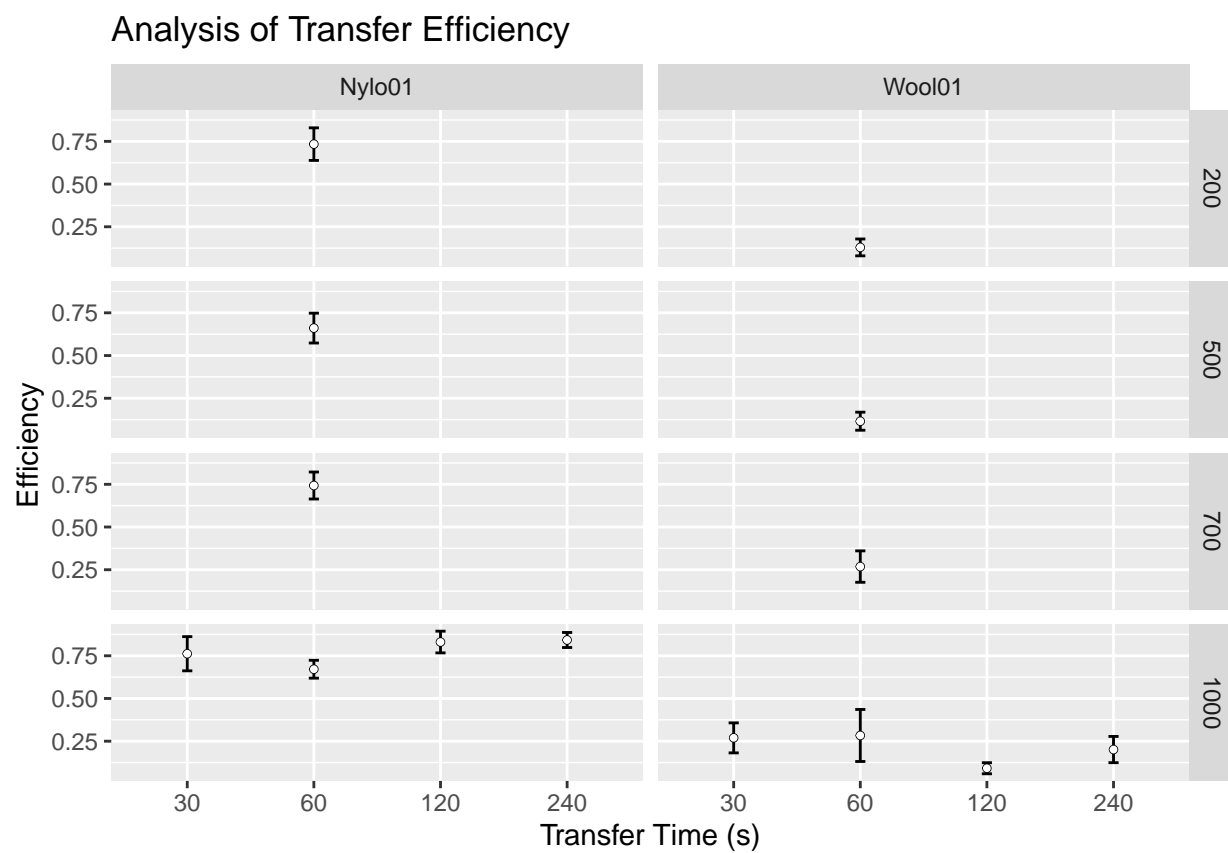


Figure S6: Transfer Efficiency dataset C.

Dataset D

Table 9: ‘Head’ of D Transfer Data

Substrate	ObservationType	Count	Mass	TransferTime	Experiment	Replicate
Cott01	Ndata	89	0	0	11	1
Wool01	Ndata	1	0	0	11	1
Cott01	Uvp01	182	0	0	11	1
Cott01	Uvp01	172	1000	30	11	1
Wool01	Uvp01	89	1000	30	11	1
Cott01	Ndata	81	0	0	1	1
Nylo01	Ndata	1	0	0	1	1
Cott01	Uvp01	159	0	0	1	1
Cott01	Uvp01	152	1000	30	1	1
Nylo01	Uvp01	100	1000	30	1	1
Cott01	Ndata	59	0	0	1	2
Nylo01	Ndata	2	0	0	1	2
Cott01	Uvp01	270	0	0	1	2
Cott01	Uvp01	155	1000	30	1	2
Nylo01	Uvp01	152	1000	30	1	2
Cott01	Ndata	49	0	0	1	3
Nylo01	Ndata	2	0	0	1	3
Cott01	Uvp01	320	0	0	1	3
Cott01	Uvp01	156	1000	30	1	3
Nylo01	Uvp01	143	1000	30	1	3

Table 10: Summary Data for D 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

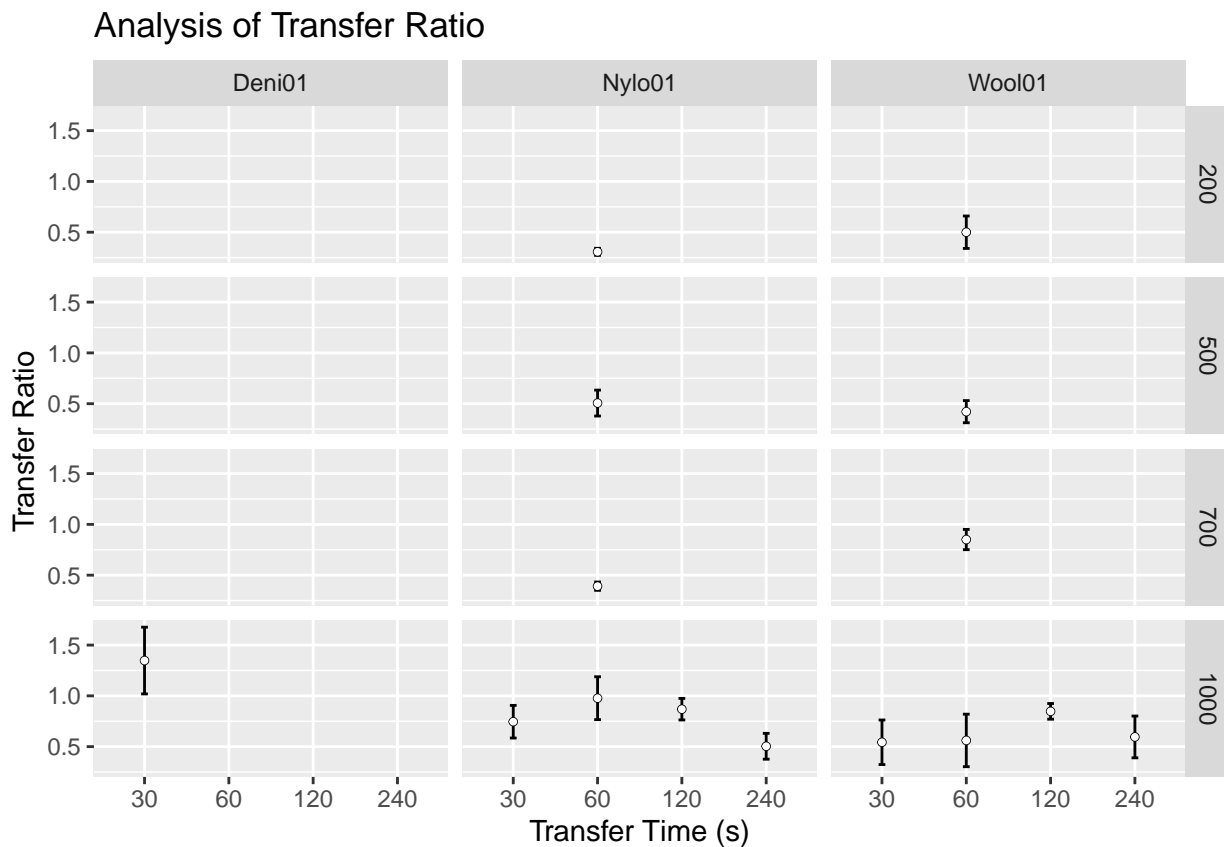


Figure S7: Transfer Ratio dataset D.

Table 11: Efficiency data for D

Set	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



Figure S8: Transfer Efficiency dataset D.

Dataset E

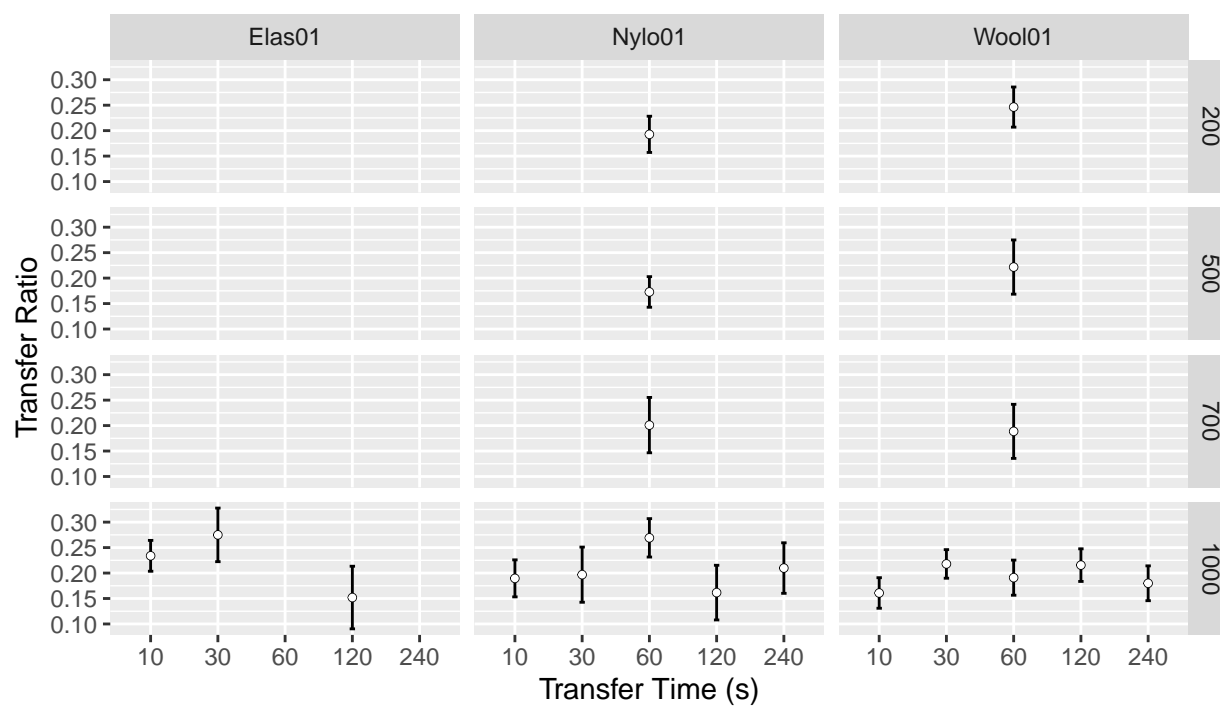
Table 12: ‘Head’ of E Transfer Data

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
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 E 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

A Analysis of Transfer Ratio – C1



B Analysis of Transfer Ratio – C2

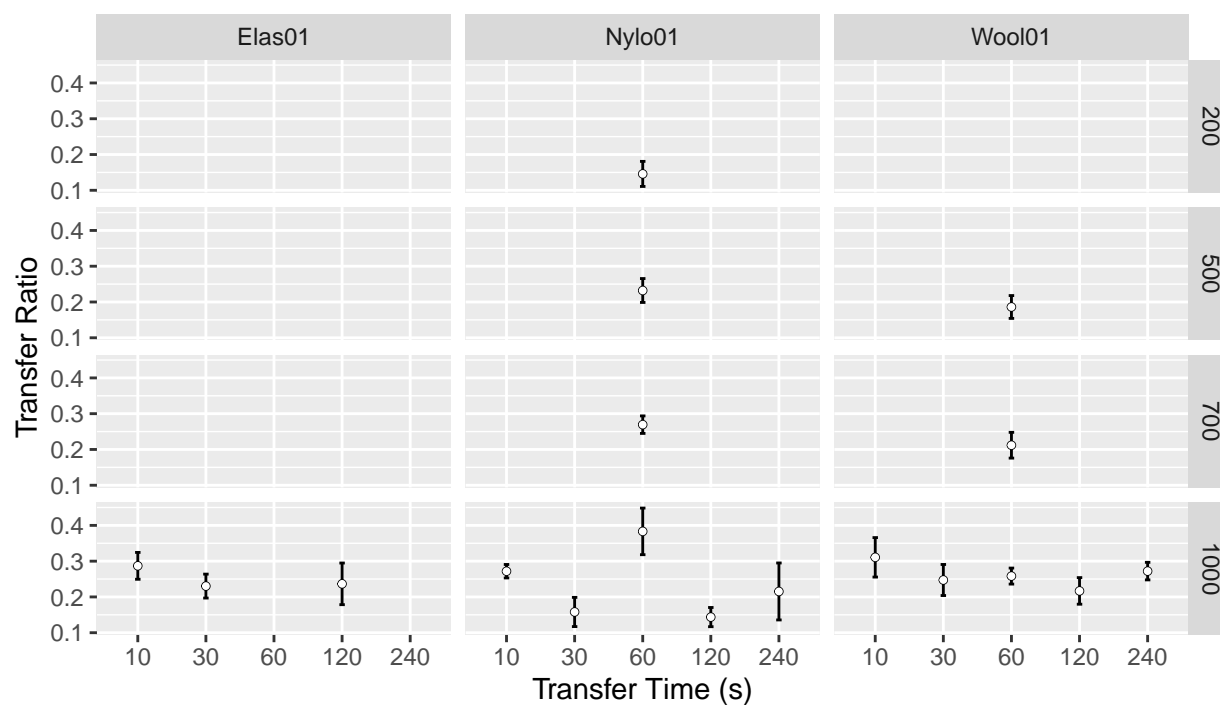


Figure S9: Transfer Ratio dataset E. (A) Camera setting C1, and (B) Camera setting C2.

Table 14: Efficiency data for E

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

Analysis of Transfer Efficiency

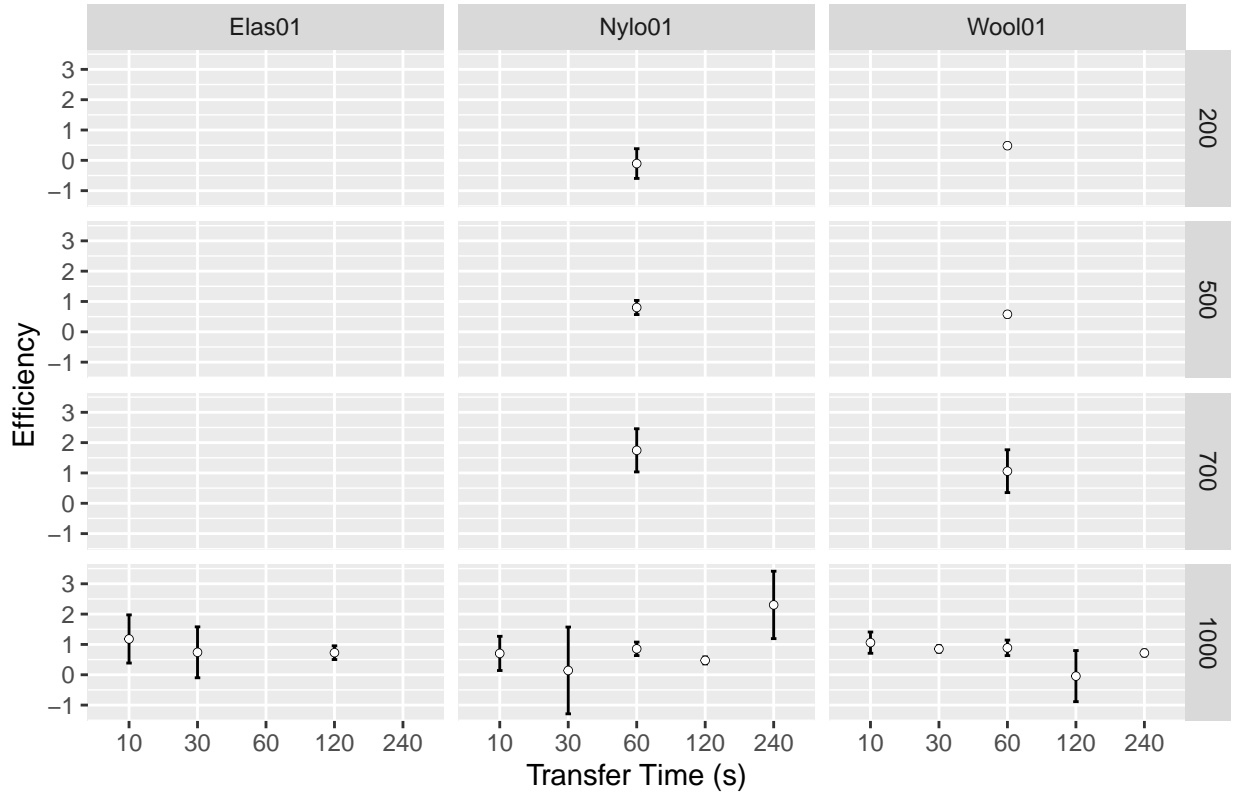


Figure S10: Transfer Efficiency dataset E.

Combined Analysis - counts

Table 15: Summary statistics of particle counts for each photo type by experiment

Set	Mass	TransferTime	Substrate	Experiment	Replicate	photo	count
A	1000	60	Wool01	1	1	P1	20
A	1000	60	Nylo01	2	1	P1	4
A	1000	60	Wool01	1	2	P1	31
A	1000	60	Nylo01	2	2	P1	10
A	1000	60	Wool01	1	3	P1	0
A	1000	60	Nylo01	2	3	P1	5
A	1000	60	Wool01	1	4	P1	0
A	1000	60	Nylo01	2	4	P1	1
A	1000	60	Wool01	1	5	P1	3
A	1000	60	Nylo01	2	5	P1	8

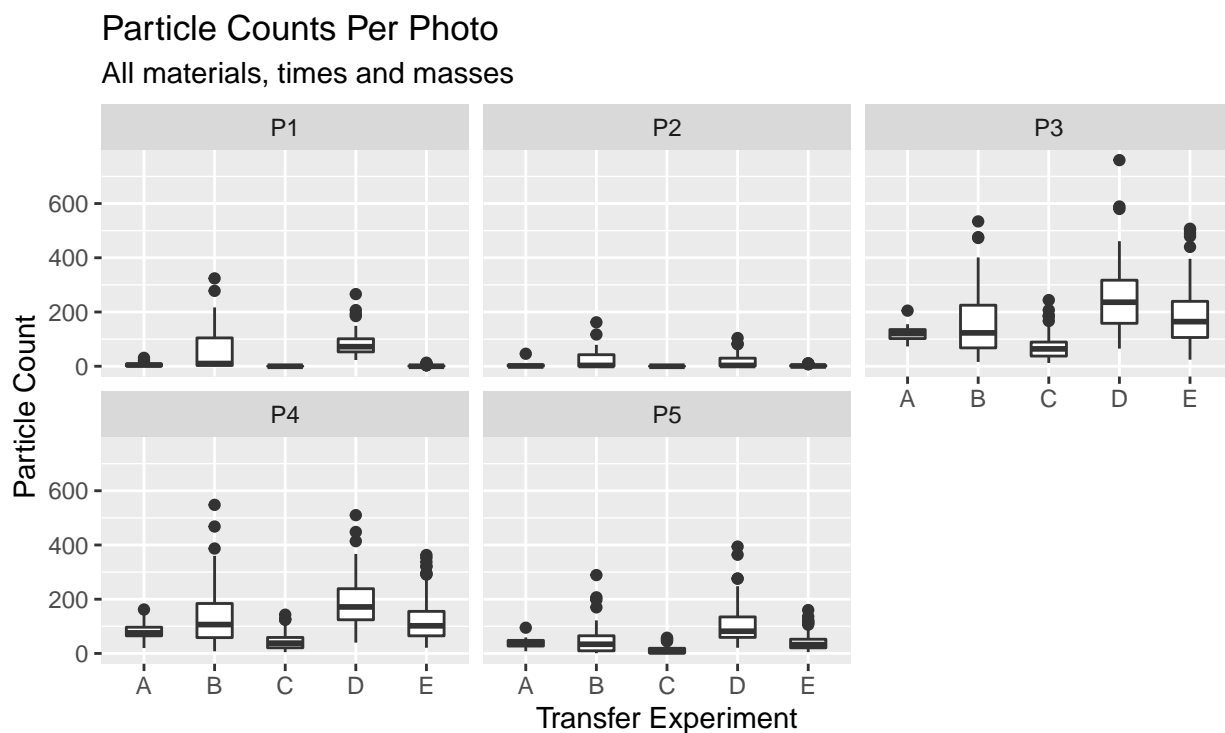


Figure S11: Particle Counts Per Photo, all datasets, materials, masses and times.

Particle Counts Per Photo
Wool and all times and masses

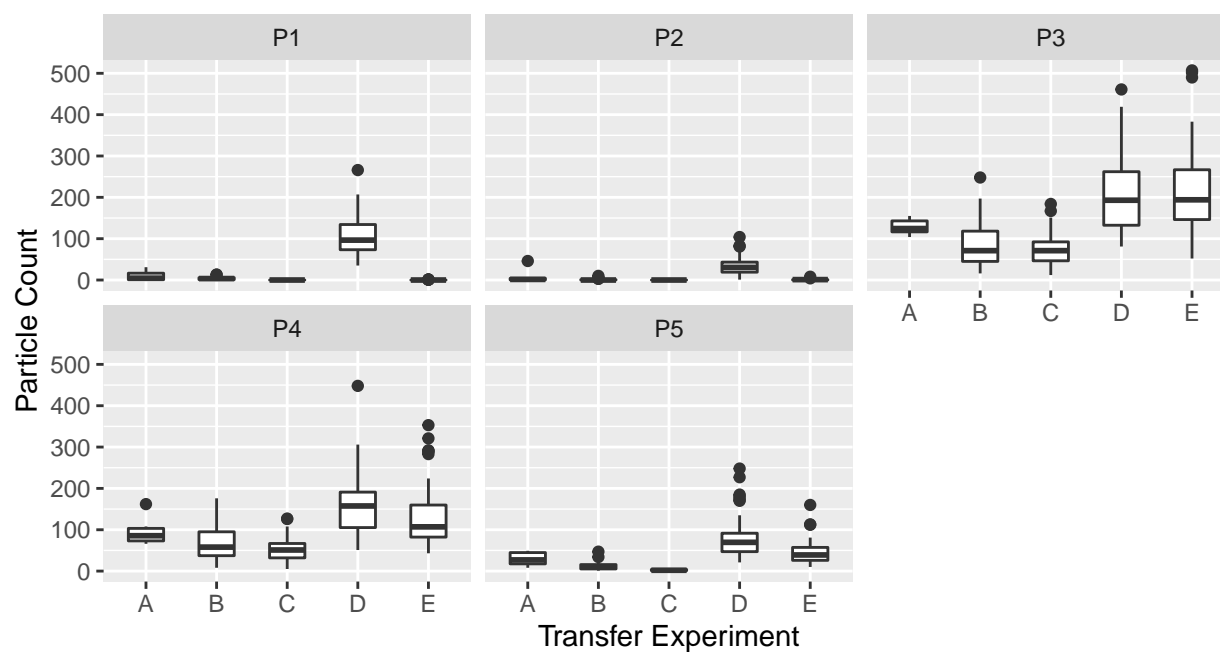


Figure S12: Particle counts per photo, Wool, all datasets, masses and times.

Particle Counts Per Photo
Nylon and all times and masses

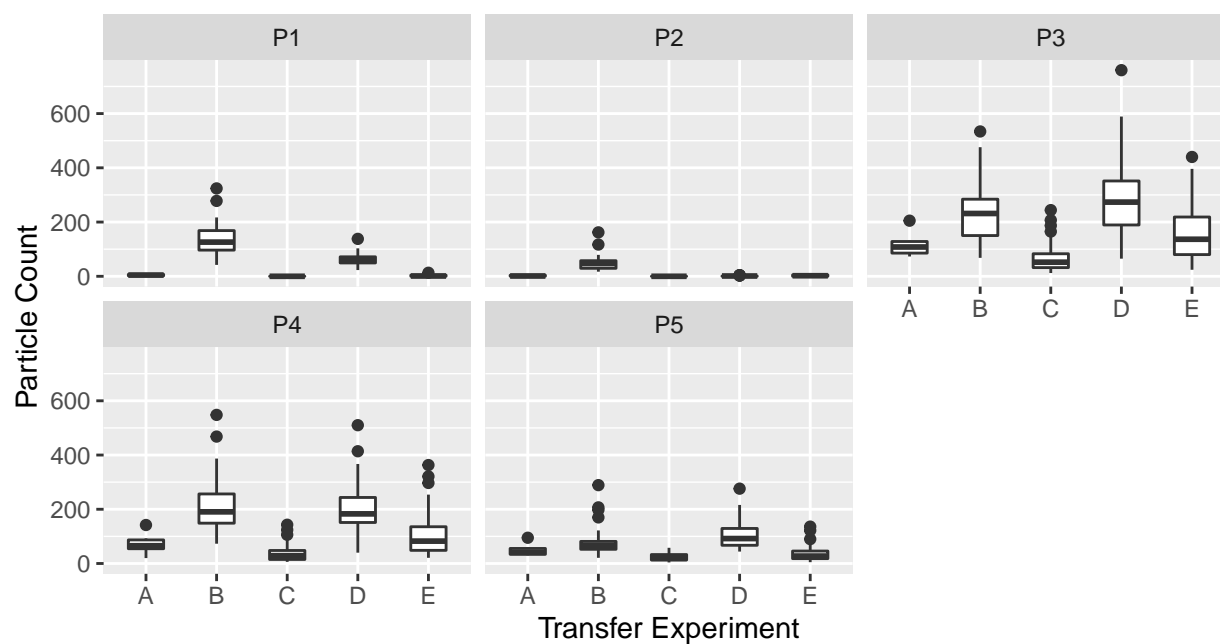


Figure S13: Particle counts per photo, Nylon, all datasets, masses and times.

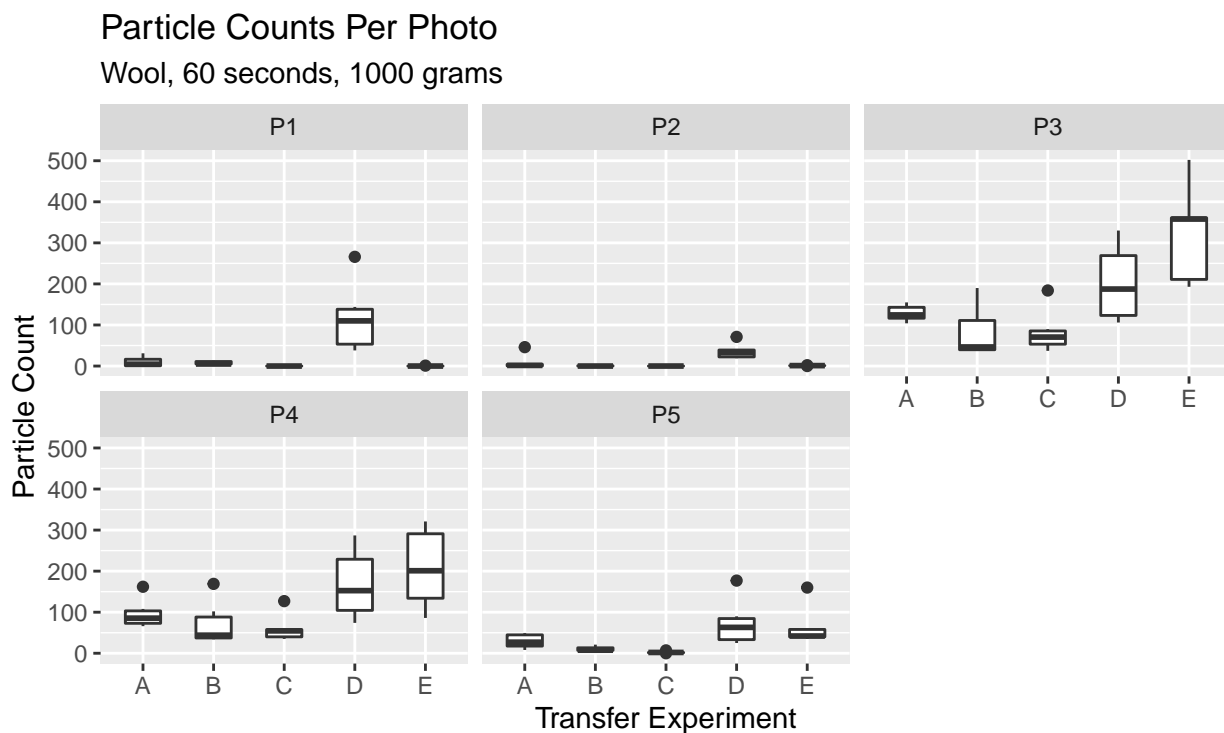


Figure S14: Particle counts per photo, Wool, all datasets, 60 s, 1000 g.

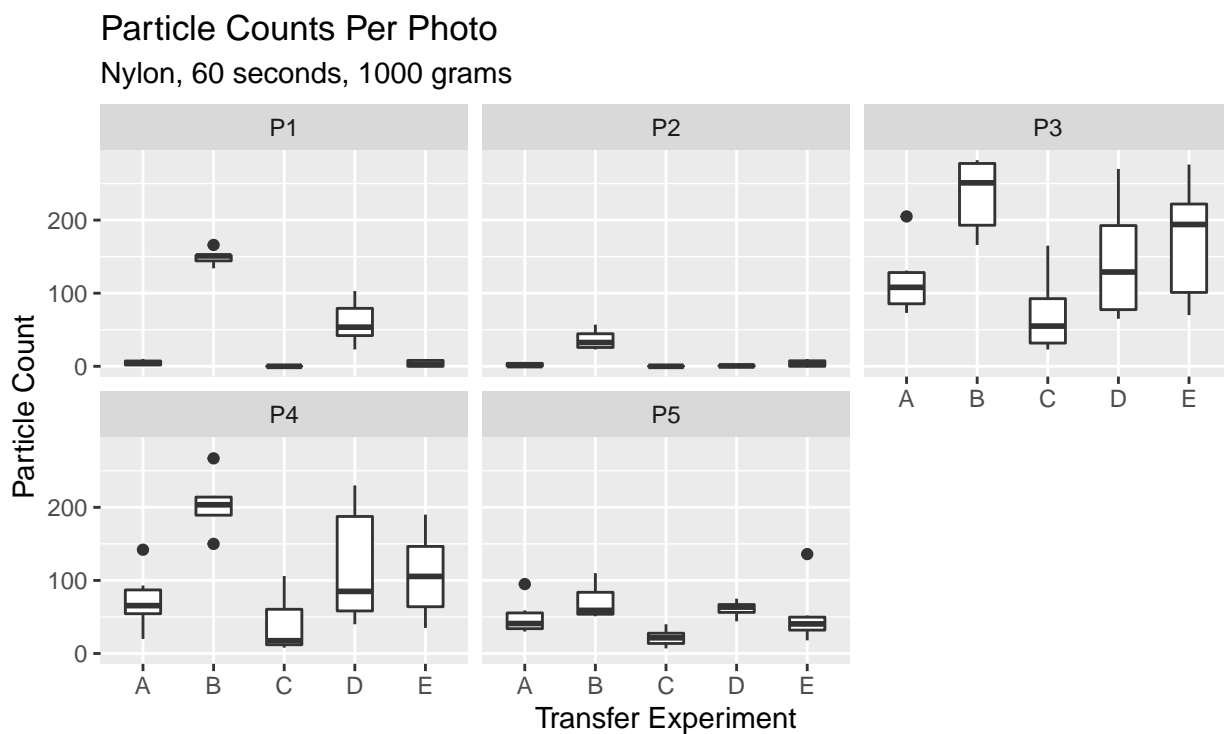


Figure S15: Particle counts per photo, Nylon, all datasets, 60 s, 1000 g.

Particle Counts Per Photo
All materials, times and masses

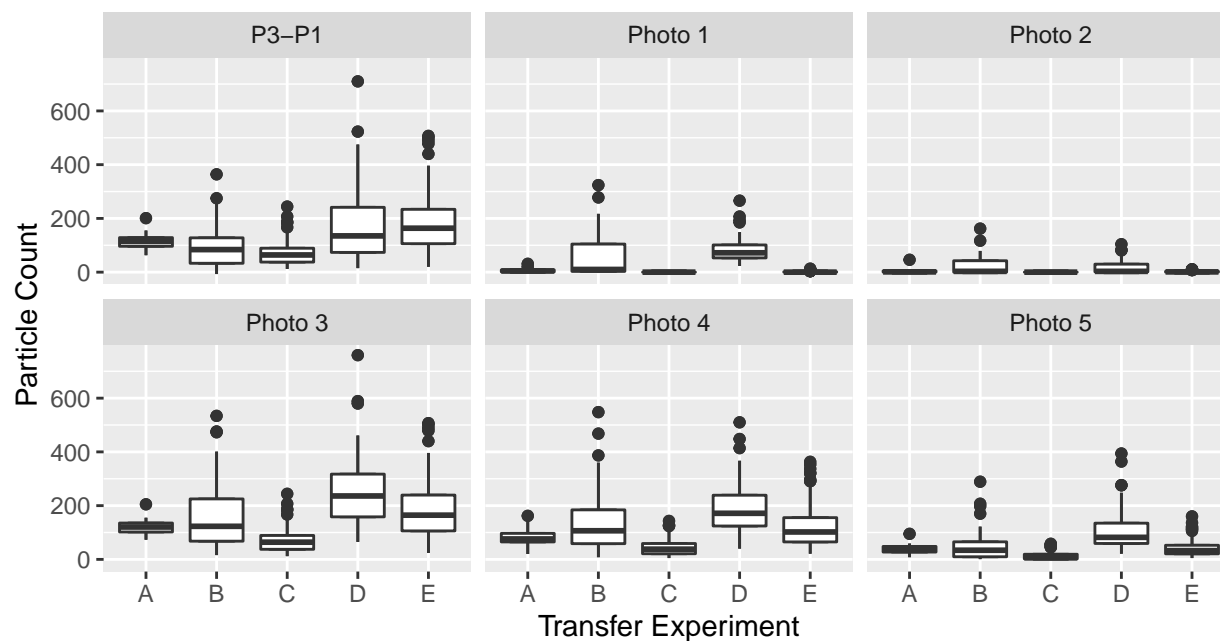


Figure S16: Particle counts per photo, all datasets, materials, masses and times. Included top left: Donor after UV deposition (Photo 3) - Donor Background (Photo 1).

Particle Counts Per Photo
Wool, all times and masses

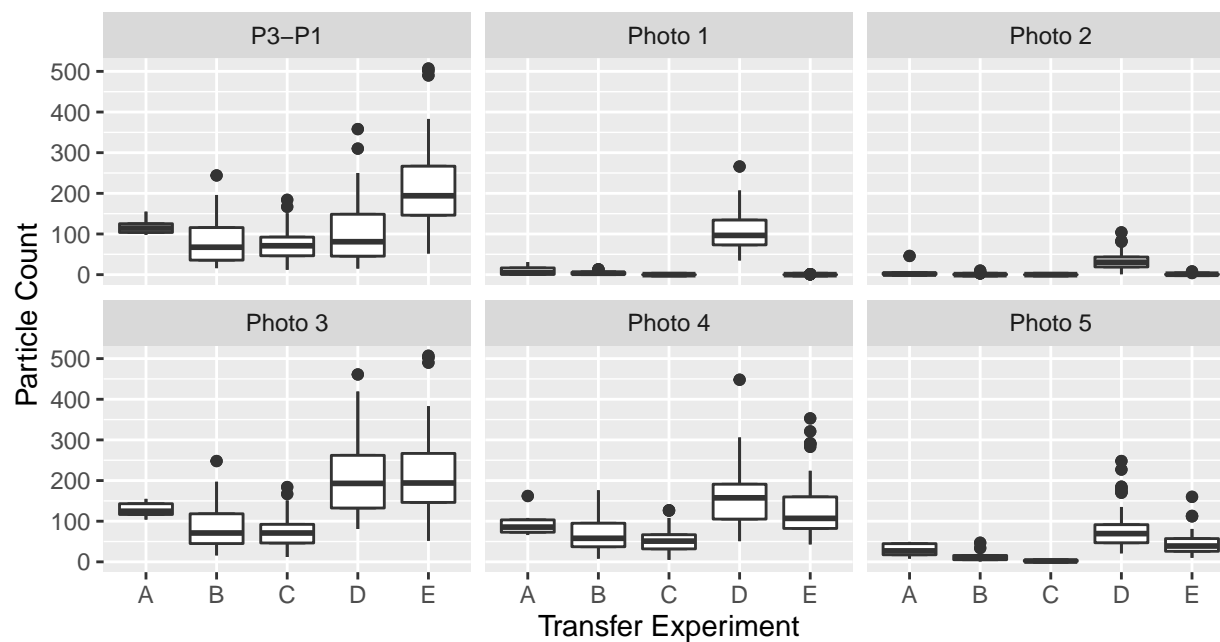


Figure S17: Particle counts per photo, Wool, all datasets, masses and time. Included top left: Donor after UV deposition (Photo 3) - Donor Background (Photo 1).

Combined Analysis - ratios

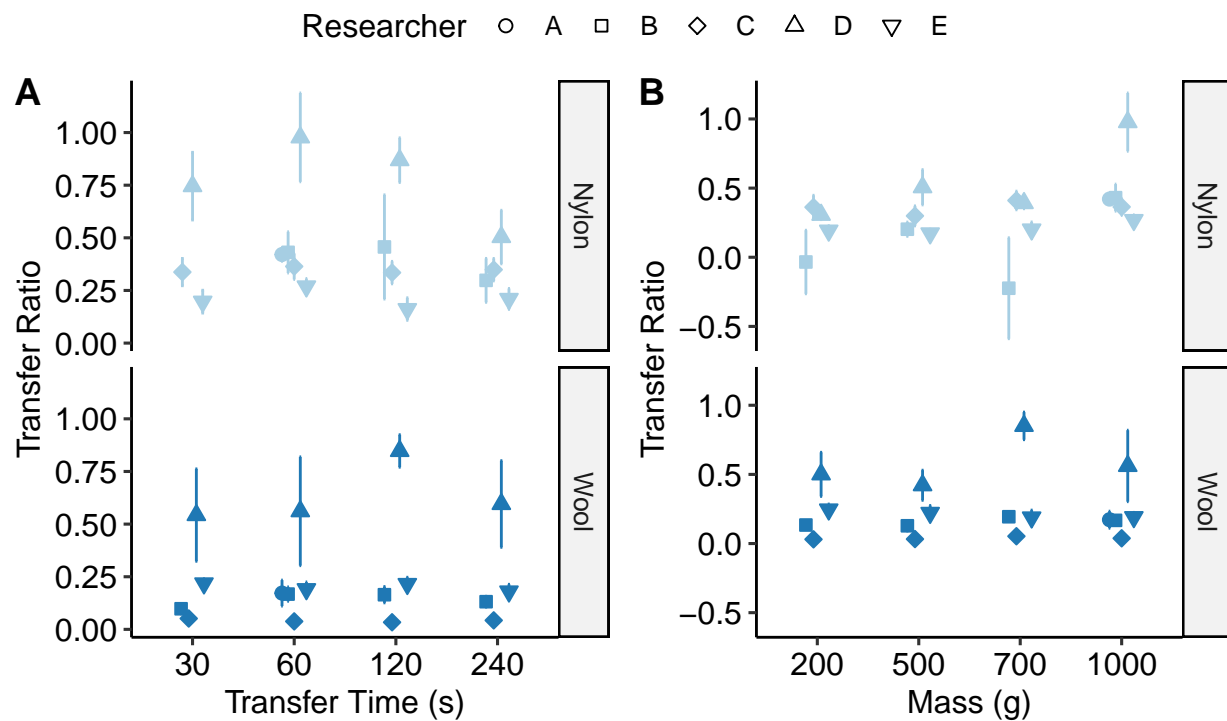


Figure S18: Transfer ratios for all datasets. (A) for mass = 1000 g and all times, (B) for time = 60 s and all masses.

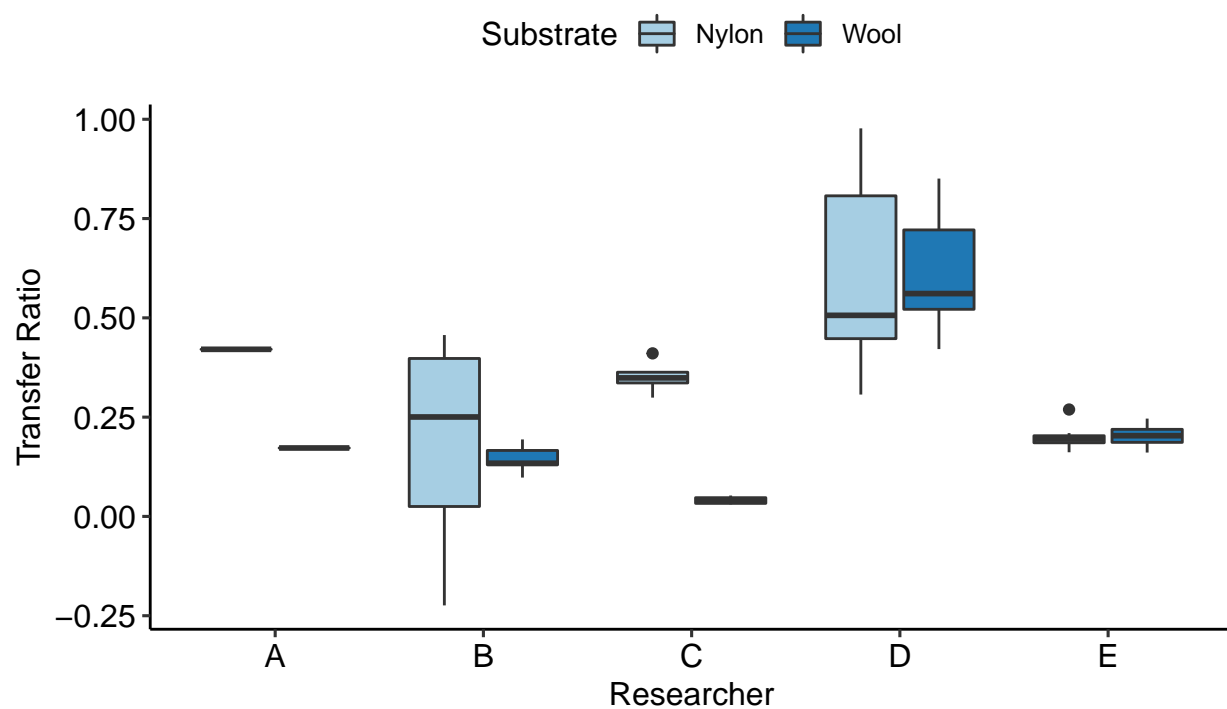


Figure S19: Transfer ratios for Wool and Nylon, variation between dataset (researcher).

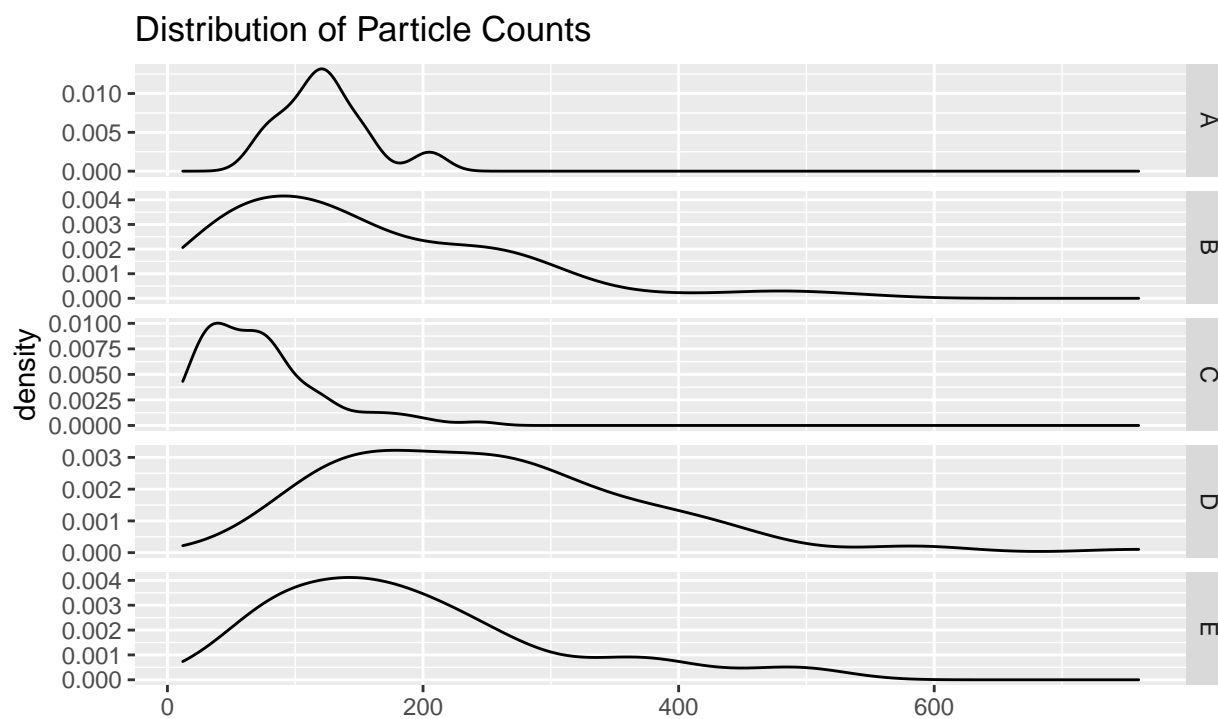


Figure S20: Particle count distribution for Photo 3 (donor after UV deposition) between datasets.

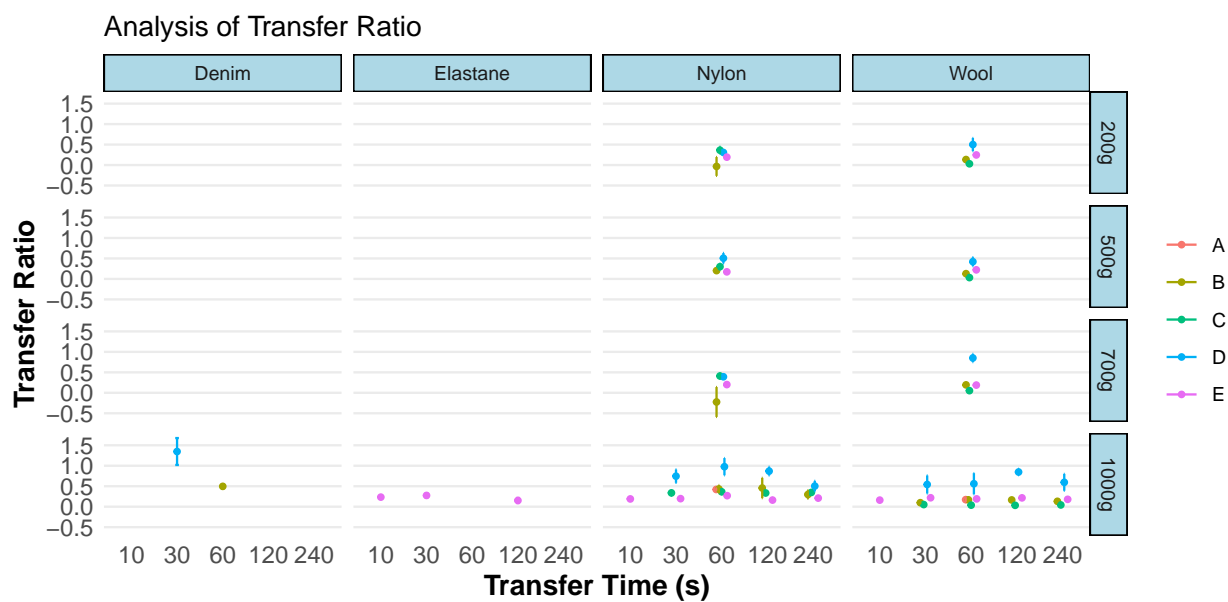


Figure S21: Summary of all transfer ratios.

Transfer Efficiencies

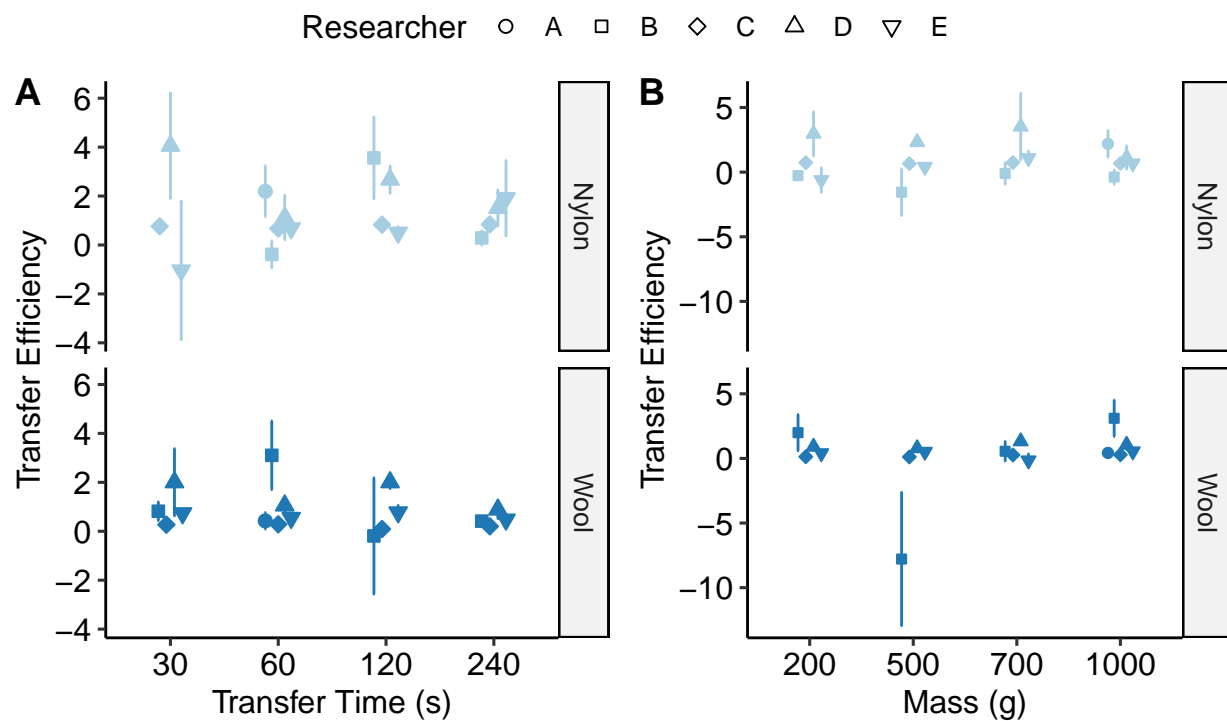


Figure S22: Transfer efficiencies for all datasets. (A) for mass = 1000 g and all times, (B) for time = 60 s and all masses.

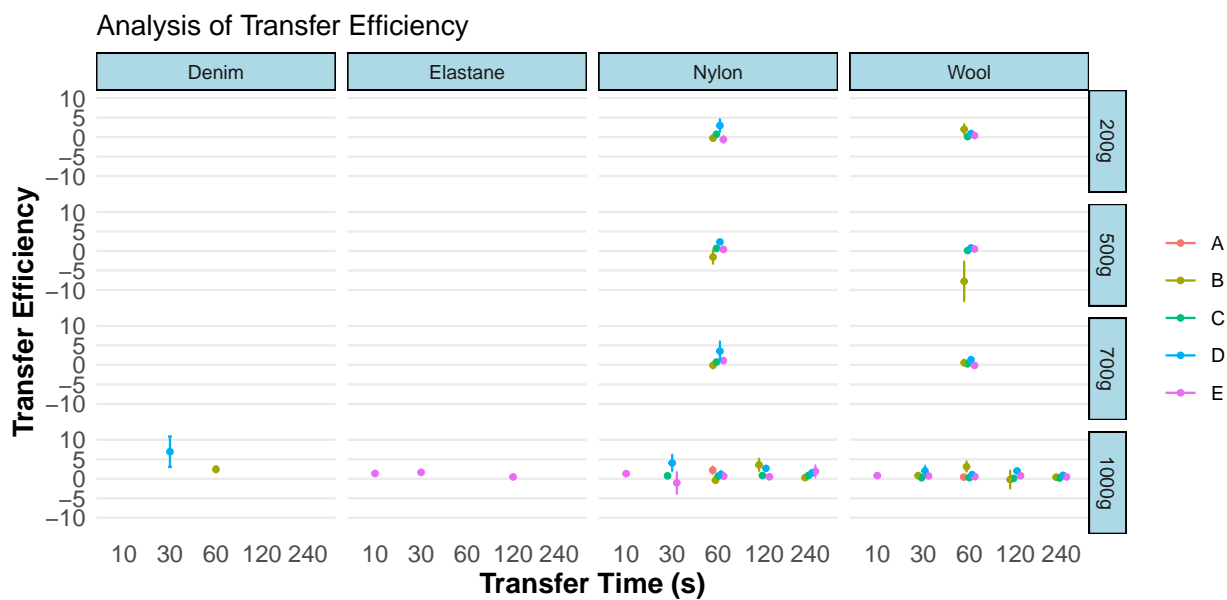


Figure S23: Summary of all transfer efficiencies.