

Supplementary Materials to:

Characterizing the Urban Mine – Simulation-based Optimization of Sampling Approaches for Built-in Batteries in WEEE

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1. Sampling data

Table S1. Number and mass of WEEE and BATT sampled

Sampling unit	WEEE		BATT	
	n [-]	mass [kg]	n [-]	mass [kg]
A	819	3,951	139	10
B	429	3,200	34	1
C	832	4,010	100	6
D	802	2,652	115	5
E	962	3,403	133	5
F	489	2,402	not investigated ^a	
G	2,124	3,689	293	34
Grand Total	6,457	23,306	814	61

^a Data were used for WEEE mass calculation only.

2. R packages and commands

Table S2. R packages.

Statistical parameter or operation	Command	R package
arithmetic mean (\bar{x})	<i>mean()</i>	base [40]
standard deviation (SD)	<i>sd()</i>	base [40]
variation coefficient (VC)	<i>sd()/mean()</i>	base [40]
95% confidence interval (2.5%-97.5% quantile)	<i>quantile(x, 0.025), quantile(x, 0.975)</i>	base [40]
median (\tilde{x})	<i>median()</i>	base [40]
median absolute deviation (MAD)	<i>mad()</i>	base [40]
Log-transformation	<i>log10()</i>	base [40]
Shapiro-Wilk test	<i>shapiro.test()</i>	stats [40]
Kurtosis	<i>kurtosis()</i>	e1071 [39]
Skewness	<i>skewness()</i>	e1071 [39]
bootstrapping	<i>sample(x, n, replace = TRUE)</i>	base [40]

Table S3. Number of electronic devices (UNUkey level) with or without battery compartment and share of batteries remained in a product.

Sum of count		Battery compartment				total n [-]
EU-10	UNUkey	without	with			
		total [%]	total [%]	battery remained [%]	battery removed [%]	
-	unknown	100	0	0	0	6
00	0001	100	0	0	0	1
	0002	100	0	0	0	1
01	0101	100	0	0	0	3
	0103	100	0	0	0	2
	0105	100	0	0	0	1
	0106	100	0	0	0	46
	0108	83	17	100	0	6
	0111	100	0	0	0	3
	0112	100	0	0	0	6
	0114	100	0	0	0	16

02	0201	88	13	55	45	336
	0202	93	7	59	41	324
	0203	99	1	0	100	247
	0204	87	13	94	6	237
	0205	62	38	84	16	150
03	0301	89	11	70	30	623
	0302	22	78	68	32	222
	0303	17	83	84	16	46
	0304	99	1	100	0	320
	0305	58	42	57	43	220
	0306	4	96	84	16	117
	0307	94	6	33	67	47
	0308	93	7	60	40	74
	0309	93	7	25	75	58
04	0401	48	52	61	39	392
	0402	54	46	39	61	195
	0403	90	10	43	57	221
	0404	98	2	40	60	292
	0405	99	1	0	100	327
	0406	27	73	74	26	37
	0407	99	1	67	33	265
	0408	83	17	50	50	23
05	0501	70	30	68	32	82
	0503	100	0	0	0	8
	0505	100	0	0	0	4
	0506	95	5	65	35	467
	0507	89	11	0	100	9
06	0601	83	17	80	20	244
	0602	94	6	100	0	18
07	0701	53	47	78	22	115
	0702	88	12	71	29	57
08	0801	38	62	38	63	13
	0802	100	0	0	0	4
09	0901	49	51	89	11	68
	0902	100	0	0	0	13
10	1001	100	0	0	0	1
	1002	100	0	0	0	1
Mean (%)		82	18	40	34	-
Median (%)		93	7	41	35	-
Grand Total (n)		4,762	1,206	808	398	5,968

3. Proportion of WEEE with and without Battery Compartment

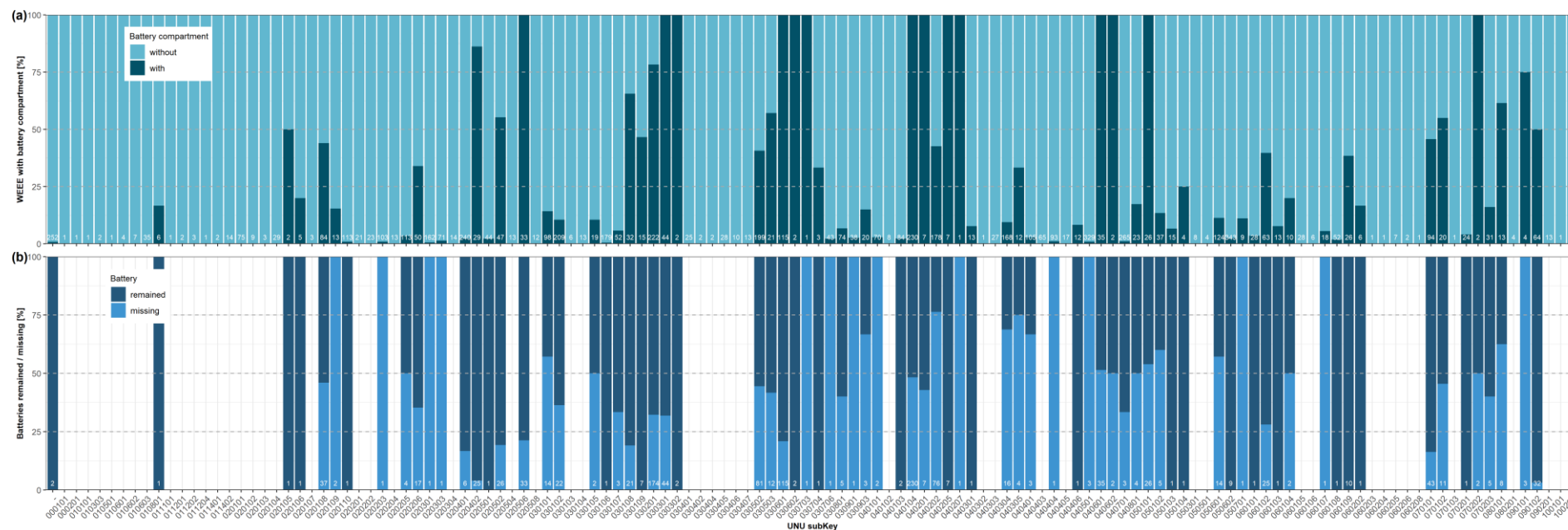


Figure S1. Proportion of WEEE devices (UNU subKey) with and without battery compartment (a) and proportion of WEEE in which batteries remained or were missing (b). The total number of appliances is shown in white at the bottom.

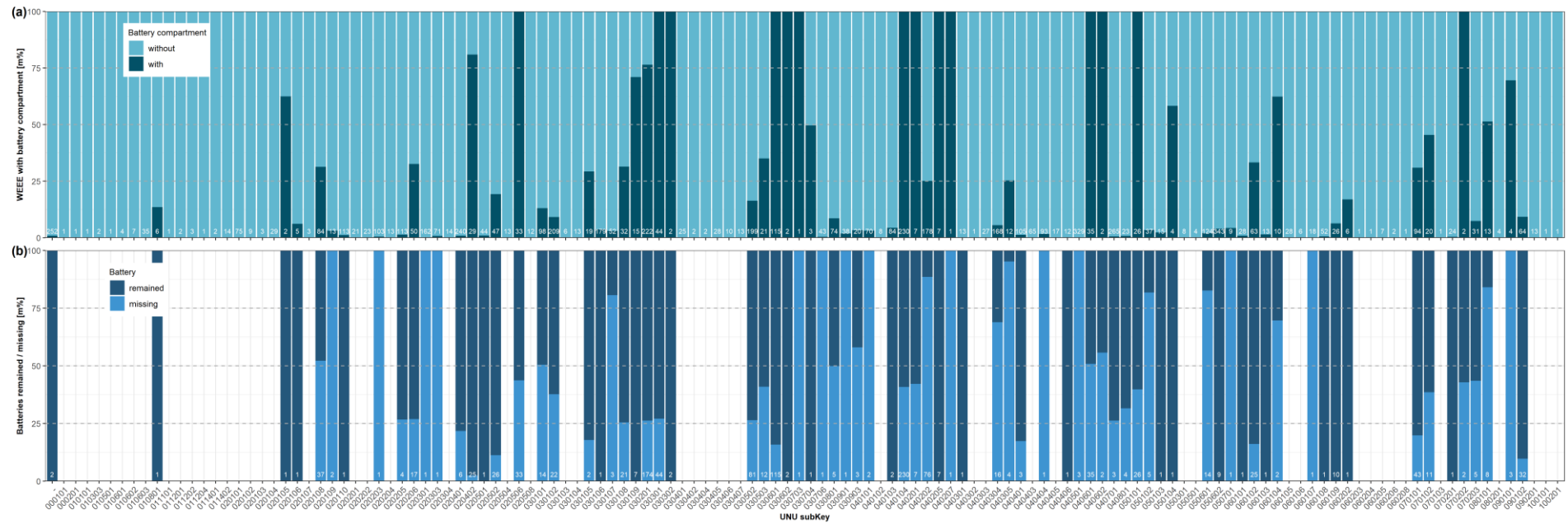
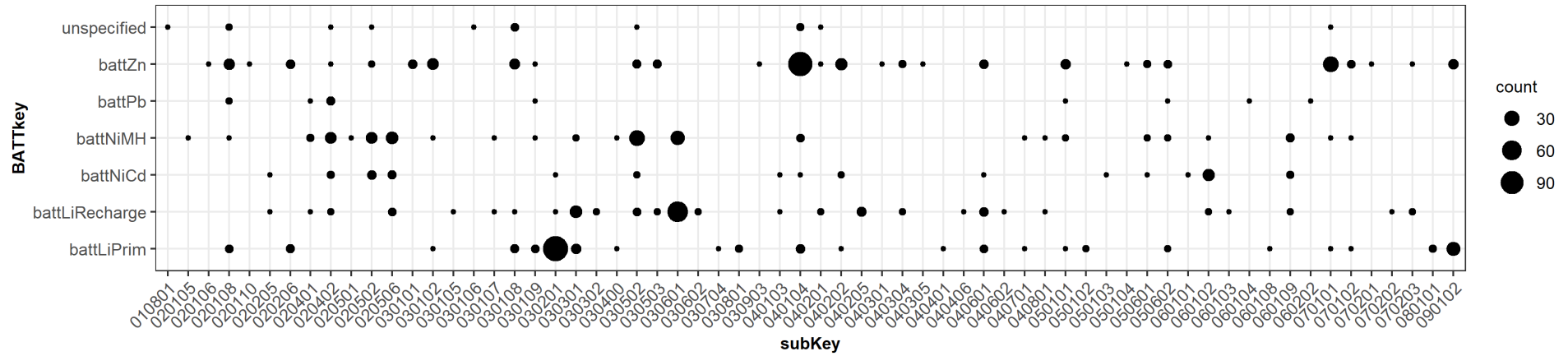


Figure S2. Mass share of WEEE devices (UNU subKey) with and without battery compartment (a) and mass share of WEEE in which batteries remained or were missing (b). The total number of appliances in white at the bottom.

9 **4. Occurrence of Batteries, Battery Mass, and Mass Share on subKey level**



10
11 **Figure S3.** Occurrence and count of battery types (BATTkeys) in subKeys. The total number of devices considered: 790.

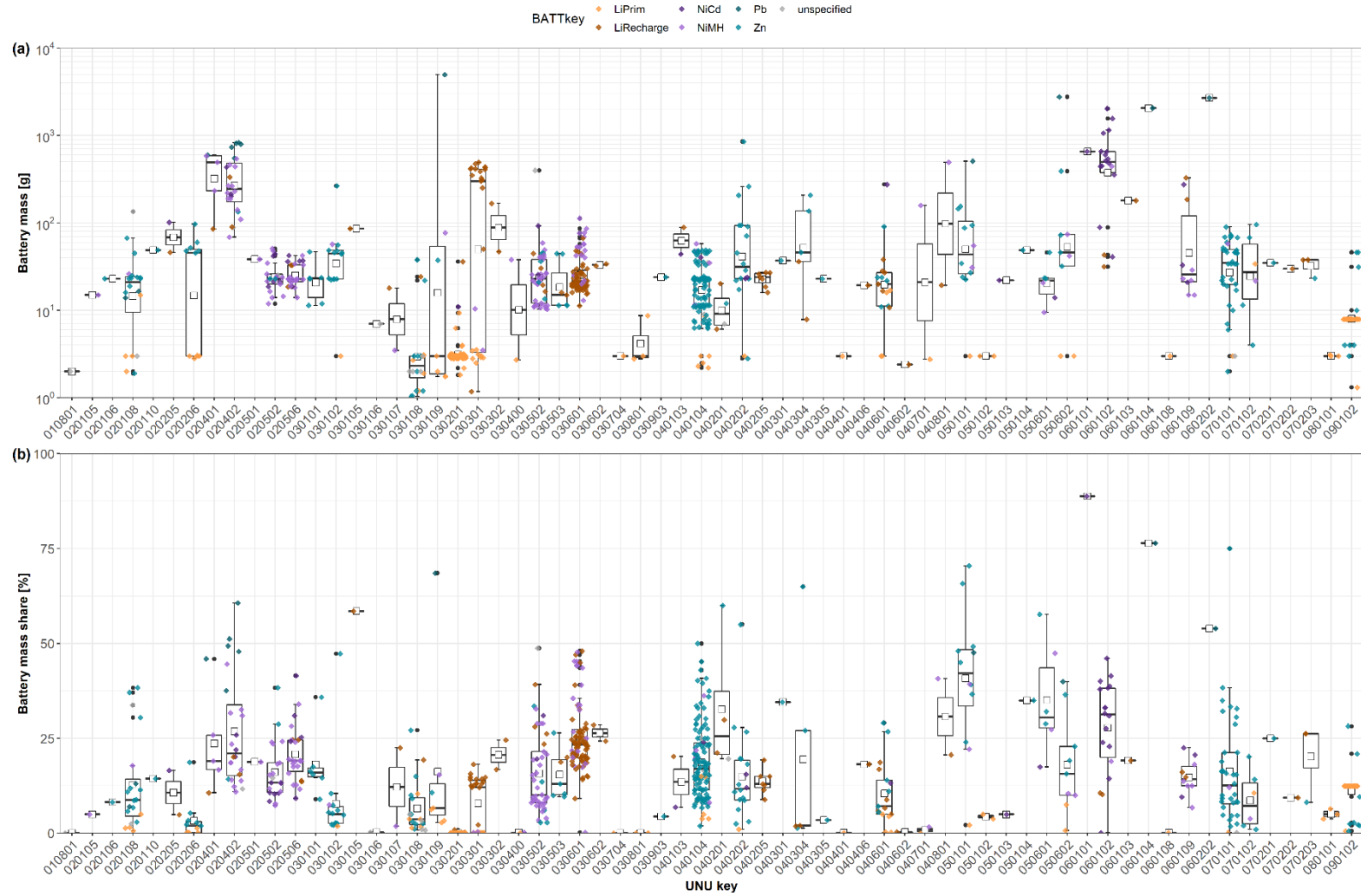


Figure S4. Mass (a) and mass share (b) of batteries remained in WEEE classified as subKeys and distinguished by their chemical system (BATTkey). The number of observations (n) is displayed on top of the graph (a). The lower and upper hinges of the boxplots correspond to the first and third quartiles (the 25th and 75th percentiles). The median is drawn as a bold horizontal line; the mean is shown as a square. Upper/lower whisker is the largest/smallest observation less/greater than or equal to upper/lower hinge $\pm 1.5 \cdot \text{IQR}$.

13 5. WEEE Mass

14 5.1. Data on UNUkey level

15 **Table S4** shows the descriptive statistics for the mass of all UNUkeys with more than 15 measured values. In total, the data include over 6000 devices of the
 16 WEEE Category 1-7, 9, and 10 (Annex I) or respectively the new categories 2-6 (Annex III) of the WEEE Directive [24]. The high SD values compared to the mean
 17 value, as well as the high values for RSD, skewness, and kurtosis indicate non-normally distributed data. The Shapiro-Wilk test confirms no normal distribution for
 18 the original and log-transformed data for almost all UNUkeys. Only Microwaves (0114) show low RSD with 40% and normal distribution according to the SW test.
 19 Lognormality was determined for the mass of food equipment (0202), flat display panel TV's (0408), professional tools (0602), toys (0701), and game consoles (0702).

20 **Table S4.** Descriptive statistics for the mass of all WEEE investigated differentiated in UNUkeys. The table comprises descriptive statistics, the results of the Shapiro-Wilk
 21 test on the normal distribution (ND) for original and log-transformed (log) data sets, and the results of for minimum samples sizes according to the parametric approach
 22 $n_{min}(PA)$.

UNUkey	n	\bar{m}	SD	VC	\tilde{m}	MAD	2.5 th	97.5 th	p	ND	S	K	p _{log}	ND _{log}	S _{log}	K _{log}	n _{min} (PA)
0106	99	4,470	4,310	1.00	3,660	2,430	200	16,360	0	No	2.3	6.71	0	No	-1.04	1.83	413
0114	60	11,670	5,050	0.40	11,960	5,350	3,750	20,880	0.384	Yes	0.2	-0.44	0.005	No	-0.77	-0.11	2,054
0201	351	1,510	2,990	2.00	480	590	40	8,120	0	No	5.53	44.72	0.011	No	0.15	-0.58	97
0202	354	2,020	1,780	0.90	1,500	990	350	6,750	0	No	2.23	5.84	0.272	Yes	0.08	-0.02	491
0203	274	1,760	2,180	1.20	1,190	750	380	6,160	0	No	6.02	49.94	0	No	0.32	2.16	250
0204	286	4,700	2,240	0.50	5,000	1,690	760	8,250	0	No	0.43	1.77	0	No	-1.28	1.02	1,687
0205	153	580	1,210	2.10	210	150	60	2,530	0	No	6.81	58.64	0	No	0.81	0.75	87
0301	635	540	700	1.30	420	440	20	1,900	0	No	6.4	67.43	0	No	-0.48	-0.06	232
0302	250	8,900	4,450	0.50	9,500	2,970	1,330	17,390	0	No	1.24	7.28	0	No	-1.62	2.41	1,538
0303	43	2,460	860	0.40	2,560	740	550	3,670	0.013	No	-0.8	-0.09	0	No	-2.01	4.03	3,116
0304	354	7,170	6,320	0.90	5,530	2,920	1,500	24,250	0	No	3.86	25.33	0	No	-1.97	18.78	495
0305	227	470	750	1.60	280	260	60	1,480	0	No	6.99	61.29	0	No	0.38	-0.25	150
0306	119	110	60	0.50	100	30	50	170	0	No	5.89	48.42	0	No	1.04	4.69	1,403
0307	47	4,360	7,490	1.70	2,460	2,040	640	12,780	0	No	4.87	26.5	0.037	No	0.38	0.71	130
0308	77	11,710	6,790	0.60	12,500	8,900	3,380	23,180	0	No	0.47	0.02	0	No	-1.7	6.01	1,143
0309	58	4,810	5,410	1.10	4,000	2,420	370	12,660	0	No	4.82	28.21	0.002	No	-0.6	1.37	303
0401	393	150	250	1.70	100	60	20	590	0	No	8.38	90.87	0	No	0.47	2.05	140

UNUkey	n	\bar{m}	SD	VC	\tilde{m}	MAD	2.5 th	97.5 th	p	ND	S	K	p _{log}	ND _{log}	S _{log}	K _{log}	n _{min} (PA)
0402	206	2,190	2,410	1.10	1,600	1,820	40	8,440	0	No	2.42	8.11	0	No	-0.7	-0.07	318
0403	234	4,070	3,250	0.80	3,170	2,700	180	11,000	0	No	2	8.29	0	No	-1.33	3.27	602
0404	333	2,640	2,080	0.80	2,300	1,860	90	8,220	0	No	1.72	5.17	0	No	-1.99	7.23	621
0405	354	3,020	3,780	1.30	1,570	1,670	120	13,320	0	No	2.52	8.05	0.034	No	-0.11	-0.48	245
0406	39	980	2,250	2.30	220	170	80	8,240	0	No	3.8	14.38	0.009	No	0.93	0.43	73
0407	266	24,560	13,600	0.60	21,000	15,570	8,000	52,410	0	No	0.92	1.34	0	No	-1.08	3.54	1,254
0408	24	9,600	14,830	1.50	6,070	6,390	170	43,310	0	No	3.3	11.43	0.21	Yes	-0.68	-0.06	161
0501	82	560	770	1.40	200	210	40	2,850	0	No	1.96	3.25	0.017	No	0.31	-0.9	203
0506	467	850	1,230	1.40	480	500	40	5,030	0	No	3.6	15.65	0.02	No	-0.1	-0.25	184
0601	265	3,150	3,590	1.10	2,120	1,720	160	14,020	0	No	2.43	6.6	0	No	-0.49	0.11	296
0602	18	7,380	6,050	0.80	4,930	4,680	550	18,210	0.021	No	0.68	-0.98	0.159	Yes	-0.62	-0.45	572
0701	169	650	740	1.10	460	420	50	2,720	0	No	3.08	12.2	0.304	Yes	-0.25	0.27	294
0702	57	780	1,030	1.30	350	310	60	4,110	0	No	2.34	4.94	0.117	Yes	0.31	-0.57	219
0901	70	740	1,830	2.50	160	140	60	5,460	0	No	4.22	18.9	0	No	1.11	0.49	62

n: number of observations, \bar{m} : mean, SD: standard deviation, VC: coefficient of variation, \tilde{m} : median, MAD: median absolute deviation, 95% CI: confidence interval [2.5th quantile, 97.5th quantile], p: p-value of Shapiro-Wilk test (normally distributed if p>0.05), ND: normally distributed data Yes/No, S: skewness, K: kurtosis; log(subscripted): respective values after log-transformation.

5.2. Data on UNU subKey level

Table S5. Descriptive statistics for the mass of all WEEE investigated differentiated in UNU subKeys. The table comprises descriptive statistics, the results of the Shapiro-Wilk test on the normal distribution (ND) for original and log-transformed (log) data sets, and the results of for minimum samples sizes according to the parametric approach n_{min}(PA).

subKey	n	\bar{m}	SD	VC	\tilde{m}	MAD	2.5 th	97.5 th	p	ND	S	K	p _{log}	ND _{log}	S _{log}	K _{log}	n _{min} (PA)
010601	12	6,895	3,957	0.57	4,990	2,165	3,180	13,966	0.008	No	0.87	-1.02	0.115	Yes	0.53	-1.27	125
010602	15	1,781	1,793	1.01	940	1,271	62	5,122	0.02	No	0.72	-1.04	0.264	Yes	-0.45	-1.15	392
010603	72	4,626	4,474	0.97	3,652	2,306	609	17,096	0	No	2.49	7.4	0.474	Yes	-0.11	-0.19	361
010801	6	8,703	7,007	0.81	6,280	4,374	2,378	20,250	0.208	Yes	0.83	-0.98	0.99	Yes	0.01	-1.44	252
011202	5	5,408	2,260	0.42	5,320	1,749	2,240	7,886	0.639	Yes	-0.41	-1.46	0.127	Yes	-0.81	-1.19	68

subKey	n	\bar{m}	SD	VC	\tilde{m}	MAD	2.5 th	97.5 th	p	ND	S	K	p _{log}	ND _{log}	S _{log}	K _{log}	n _{min} (PA)
011401	21	8,787	5,712	0.65	6,040	3,380	3,054	20,760	0.004	No	0.97	-0.43	0.318	Yes	0.27	-1.03	162
011402	39	13,230	3,914	0.3	13,300	3,914	6,511	19,933	0.503	Yes	0.46	1	0.106	Yes	-0.8	1.45	35
020101	85	2,764	3,838	1.39	1,460	697	741	6,240	0	No	6.26	47.54	0	No	0.88	0.52	742
020102	14	8,735	5,540	0.63	7,190	3,736	1,012	18,850	0.243	Yes	0.56	-0.8	0.001	No	-1.97	3.72	152
020104	29	2,106	1,295	0.61	2,220	1,067	284	4,550	0.001	No	1.6	4.59	0.002	No	-1.24	2	143
020106	5	900	1,536	1.71	280	208	86	3,312	0.001	No	1.06	-0.94	0.385	Yes	0.65	-1.36	1,123
020108	84	435	592	1.36	279	265	40	1,555	0	No	4.79	30.27	0.564	Yes	-0.04	-0.31	711
020109	13	498	732	1.47	231	167	61	2,276	0	No	2.05	3.06	0.408	Yes	0.6	-0.26	830
020110	113	256	237	0.93	180	178	29	856	0	No	2.18	7.08	0.033	No	-0.25	-0.63	332
020201	38	3,662	3,197	0.87	2,750	2,535	425	10,522	0	No	1.01	-0.33	0.118	Yes	-0.35	-0.74	291
020202	23	3,273	966	0.3	3,460	1,127	1,800	4,736	0.136	Yes	-0.09	-1.38	0.053	Yes	-0.4	-1.26	35
020203	107	2,055	1,600	0.78	1,520	504	472	6,500	0	No	1.99	3.03	0	No	0.54	0.66	234
020204	13	3,061	1,663	0.54	2,600	1,666	1,216	6,286	0.19	Yes	0.74	-0.65	0.893	Yes	0.1	-1.33	112
020205	117	1,366	1,101	0.81	980	474	435	4,794	0	No	2.2	4.95	0.001	No	0.58	0.3	252
020206	55	1,387	994	0.72	1,342	976	190	3,285	0	No	1.55	4.38	0.031	No	-0.47	-0.56	199
020301	175	2,126	2,393	1.13	1,570	764	607	7,929	0	No	5.89	46.1	0	No	-0.02	5.03	491
020302	9	2,487	1,541	0.62	2,320	1,898	496	4,768	0.679	Yes	0.21	-1.54	0.33	Yes	-0.73	-0.69	148
020303	76	976	1,579	1.62	720	267	363	1,690	0	No	7.46	58.08	0	No	1.94	10.56	1,008
020304	14	901	740	0.82	620	231	326	2,697	0	No	1.93	2.85	0.218	Yes	0.86	0.09	258
020401	231	5,127	2,069	0.4	5,210	1,794	880	9,250	0	No	0.68	3.14	0	No	-1.72	3.94	61
020402	55	2,895	2,051	0.71	1,720	1,450	633	6,299	0	No	0.56	-1.06	0.001	No	-0.01	-1.49	194
020501	45	462	347	0.75	385	200	142	1,682	0	No	3.08	10.49	0.018	No	0.5	1.3	216
020502	47	477	1,799	3.77	159	60	42	1,741	0	No	6.2	38.07	0	No	1.83	6.95	5,460
020504	13	1,740	1,165	0.67	1,400	1,097	550	4,091	0.049	No	1.06	0.51	0.623	Yes	0.05	-1.33	172
020506	33	182	217	1.19	120	25	83	895	0	No	3.57	12.02	0	No	2.53	6.41	544
020508	13	755	686	0.91	560	563	145	1,930	0.011	No	0.64	-1.36	0.072	Yes	0.15	-1.78	318
030101	98	120	124	1.03	108	25	48	186	0	No	8.72	79.88	0	No	2.09	14.85	408
030102	209	903	566	0.63	820	267	335	2,288	0	No	3.91	19.15	0	No	-0.68	7.98	152

subKey	n	\bar{m}	SD	VC	\tilde{m}	MAD	2.5 th	97.5 th	p	ND	S	K	p _{log}	ND _{log}	S _{log}	K _{log}	n _{min} (PA)
030103	6	716	132	0.18	740	38	507	869	0.23	Yes	-0.58	-0.85	0.093	Yes	-0.85	-0.67	12
030104	13	492	254	0.52	480	178	158	992	0.575	Yes	0.68	-0.14	0.89	Yes	-0.41	-0.75	104
030105	19	32	32	0.99	20	13	9	110	0	No	2.46	6.05	0.099	Yes	0.72	0.08	377
030106	188	384	276	0.72	342	200	50	979	0	No	2.98	17.28	0	No	-1.07	2.63	199
030107	52	856	1,498	1.75	310	326	60	2,879	0	No	4.44	23.89	0.015	No	0.37	-0.94	1,176
030108	35	171	283	1.66	85	67	20	1,064	0	No	3.3	10.88	0.093	Yes	0.64	0.12	1,059
030109	15	779	1,822	2.34	106	118	27	5,063	0	No	2.94	7.56	0.231	Yes	0.55	-0.78	2,104
030201	250	8,897	4,446	0.5	9,500	2,965	1,333	17,388	0	No	1.24	7.28	0	No	-1.62	2.41	96
030301	41	2,552	757	0.3	2,614	673	920	3,680	0.065	Yes	-0.71	-0.01	0	No	-1.8	3.5	35
030400	240	8,068	6,800	0.84	6,460	2,906	1,920	24,500	0	No	3.93	25.02	0	No	-3.07	30.04	271
030401	49	5,679	3,073	0.54	5,096	1,548	1,420	11,440	0	No	2.2	7.74	0.01	No	-0.65	2.04	112
030404	11	7,817	7,376	0.94	4,480	4,982	1,146	22,410	0.047	No	0.95	-0.37	0.674	Yes	-0.03	-1.54	339
030405	28	3,475	4,340	1.25	2,560	697	1,149	11,851	0	No	4.33	18.62	0	No	0.72	5.31	600
030406	11	4,860	2,092	0.43	4,500	2,224	1,585	8,165	0.711	Yes	-0.01	-1	0.09	Yes	-0.81	-0.58	71
030407	13	3,416	1,406	0.41	2,890	756	2,120	6,568	0.007	No	1.38	0.8	0.178	Yes	0.87	-0.28	65
030502	206	489	778	1.59	300	286	69	1,560	0	No	6.78	56.94	0	No	0.35	-0.22	971
030503	21	254	273	1.08	154	110	60	875	0	No	2.3	5.61	0.125	Yes	0.57	-0.75	448
030601	117	106	56	0.53	100	30	52	172	0	No	5.88	48	0	No	1.08	4.74	108
030706	43	3,061	2,689	0.88	2,189	1,773	771	11,350	0	No	1.96	4.16	0.012	No	0.36	-0.91	297
030801	77	11,711	6,790	0.58	12,500	8,896	3,382	23,182	0	No	0.47	0.02	0	No	-1.7	6.01	129
030901	38	6,321	6,141	0.97	4,750	1,483	2,188	16,875	0	No	4.36	20.96	0	No	-0.93	6.89	361
030903	20	1,928	1,006	0.52	2,120	915	372	3,835	0.412	Yes	0.23	-0.5	0.018	No	-0.9	-0.26	104
040101	70	121	110	0.91	82	93	13	406	0	No	1.24	1.25	0.003	No	-0.18	-1.2	318
040102	8	193	131	0.68	184	187	24	366	0.583	Yes	0.02	-1.72	0.136	Yes	-0.72	-1.19	178
040103	84	293	481	1.64	130	103	21	1,073	0	No	4.3	21.6	0.036	No	0.48	-0.1	1,033
040104	231	104	79	0.76	95	37	40	195	0	No	7.83	79.42	0	No	0.3	4.89	222
040201	7	38	16	0.43	36	15	21	65	0.509	Yes	0.7	-0.9	0.991	Yes	0.2	-1.39	71
040202	178	2,351	2,480	1.05	1,842	1,868	146	9,075	0	No	2.41	7.77	0	No	-0.51	-0.43	424

subKey	n	\bar{m}	SD	VC	\tilde{m}	MAD	2.5 th	97.5 th	p	ND	S	K	p _{log}	ND _{log}	S _{log}	K _{log}	n _{min} (PA)
040205	7	172	19	0.11	180	26	143	197	0.705	Yes	-0.21	-1.28	0.61	Yes	-0.37	-1.2	5
040207	14	2,264	1,694	0.75	1,890	1,957	338	5,123	0.197	Yes	0.45	-1.31	0.472	Yes	-0.42	-1.13	216
040301	16	4,406	3,331	0.76	4,370	3,758	135	10,188	0.415	Yes	0.3	-0.94	0.007	No	-0.97	-0.59	222
040303	28	1,359	1,007	0.74	1,206	273	151	3,416	0	No	3.11	11.7	0	No	-1.27	3.34	210
040304	176	4,417	2,892	0.65	3,560	2,392	373	11,000	0	No	1.02	1	0	No	-1.83	7.22	162
040305	13	4,919	6,876	1.4	3,000	3,173	268	21,062	0	No	2.15	3.87	0.887	Yes	-0.48	-0.05	753
040401	140	2,974	1,830	0.62	2,643	1,125	532	7,308	0	No	2.66	11.85	0	No	-0.91	2.56	148
040403	65	4,440	1,797	0.4	4,000	979	2,060	8,780	0	No	1.43	2.25	0.032	No	0.03	1.2	61
040404	99	1,188	856	0.72	1,007	707	213	3,207	0	No	1.74	5.33	0	No	-3.15	15.06	199
040405	17	335	267	0.8	358	403	40	734	0.02	No	0.19	-1.65	0.007	No	-0.33	-1.73	246
040406	12	4,249	3,446	0.81	4,230	2,261	73	10,987	0.171	Yes	0.79	0.25	0.006	No	-1.07	-0.45	252
040501	354	3,017	3,779	1.25	1,574	1,670	118	13,324	0	No	2.52	8.05	0.034	No	-0.11	-0.48	600
040601	37	983	2,308	2.35	200	149	76	8,436	0	No	3.69	13.41	0.003	No	1.04	0.58	2,122
040701	266	24,563	13,598	0.55	21,000	15,567	8,000	52,412	0	No	0.92	1.34	0	No	-1.08	3.54	116
040801	23	9,831	15,119	1.54	6,500	7,532	166	44,625	0	No	3.2	10.74	0.217	Yes	-0.67	-0.19	911
050101	26	172	233	1.36	87	65	34	882	0	No	2.78	7.15	0.098	Yes	0.83	0.51	711
050102	37	594	649	1.09	268	230	78	1,962	0	No	1.47	1.55	0.045	No	0.33	-1.24	456
050103	15	1,274	1,153	0.9	960	1,186	68	3,280	0.047	No	0.58	-1.28	0.295	Yes	-0.6	-0.75	311
050104	4	60	54	0.9	40	15	22	132	0.062	Yes	0.68	-1.73	0.467	Yes	0.37	-1.83	311
050301	8	1,680	281	0.17	1,520	139	1,402	2,037	0.015	No	0.37	-1.99	0.021	No	0.34	-1.98	11
050501	4	455	391	0.86	430	460	103	850	0.177	Yes	0.04	-2.39	0.188	Yes	-0.02	-2.39	284
050601	124	887	1,104	1.25	664	715	42	3,151	0	No	3.66	19.1	0.005	No	-0.5	-0.21	600
050602	343	841	1,275	1.52	420	445	40	5,275	0	No	3.56	14.61	0.038	No	0.07	-0.23	888
050701	9	2,140	2,430	1.14	1,403	858	710	7,210	0	No	1.93	2.25	0.08	Yes	1.14	0.44	499
060101	28	2,872	1,788	0.62	2,370	1,197	740	6,368	0.003	No	0.84	-0.64	0.323	Yes	-0.04	-0.89	148
060102	70	2,145	1,450	0.68	1,680	860	294	5,711	0	No	1.45	1.58	0.003	No	-0.52	0.82	178
060103	13	4,877	4,442	0.91	2,440	1,275	1,132	12,700	0.003	No	0.84	-1.1	0.088	Yes	0.37	-1.5	318
060104	11	1,825	2,238	1.23	460	563	110	6,095	0.002	No	1.03	-0.63	0.541	Yes	0.05	-1.43	581

subKey	n	\bar{m}	SD	VC	\tilde{m}	MAD	2.5 th	97.5 th	p	ND	S	K	p _{log}	ND _{log}	S _{log}	K _{log}	n _{min} (PA)
060105	34	6,255	6,201	0.99	3,930	3,558	262	20,728	0	No	1.09	-0.1	0.111	Yes	-0.49	-0.56	377
060106	6	1,253	1,543	1.23	855	838	76	3,875	0.038	No	1.06	-0.56	0.902	Yes	-0.25	-1.57	581
060107	22	3,070	1,457	0.47	3,000	1,483	683	5,437	0.542	Yes	0.09	-0.86	0	No	-2.16	5.58	85
060108	53	2,294	2,825	1.23	1,700	1,828	190	11,000	0	No	2.06	3.72	0.032	No	-0.02	-1.03	581
060109	28	4,002	4,744	1.19	2,110	2,713	114	14,203	0	No	1.12	-0.29	0.019	No	-0.3	-1.29	544
060202	6	4,898	3,936	0.8	4,930	5,434	486	10,100	0.535	Yes	0.09	-1.81	0.117	Yes	-0.44	-1.91	246
060205	7	8,536	6,083	0.71	5,060	3,106	3,006	15,065	0.008	No	0.2	-2.19	0.024	No	0.13	-2.15	194
070101	148	673	780	1.16	460	415	60	2,903	0	No	2.95	10.88	0.709	Yes	-0.14	0.09	517
070102	20	503	355	0.71	471	290	36	1,227	0.114	Yes	0.81	-0.15	0.021	No	-1.18	1.01	194
070201	24	1,261	1,406	1.11	895	956	60	4,350	0	No	1.21	0.07	0.064	Yes	-0.28	-1.22	473
070203	31	438	383	0.87	280	175	99	1,398	0	No	1.8	2.99	0.226	Yes	0.47	-0.57	291
080101	13	176	124	0.71	140	106	52	396	0.03	No	0.69	-1.18	0.43	Yes	0.14	-1.48	194
080201	4	4,575	2,783	0.61	5,640	1,112	855	6,483	0.11	Yes	-0.63	-1.78	0.014	No	-0.73	-1.7	143
090101	4	99	26	0.26	103	25	70	120	0.233	Yes	-0.15	-2.27	0.268	Yes	-0.21	-2.2	26
090102	66	775	1,881	2.43	163	148	63	6,025	0	No	4.08	17.59	0	No	1.02	0.28	2,268
090201	13	10,598	17,018	1.61	2,926	3,742	185	48,900	0	No	1.53	1.08	0.539	Yes	0.14	-1.48	996

n: number of observations, \bar{m} : mean, SD: standard deviation, VC: coefficient of variation, \tilde{m} : median, MAD: median absolute deviation, 95% CI: confidence interval [2.5th quantile, 97.5th quantile], p: p-value of Shapiro-Wilk test (normally distributed if p>0.05), ND: normally distributed data Yes/No, S: skewness, K: kurtosis; log(subscripted): respective values after log-transformation.

6. Battery mass (BM)

6.1. Data on Battery Mass (BM) for all Batteries (BATT)

Table S6. Descriptive statistics for the mass of batteries in WEEE differentiated in UNUkeys. The table comprises descriptive statistics, the results of the Shapiro-Wilk test on the normal distribution (ND) for original and log-transformed (log) data sets, and the results of for minimum samples sizes according to the parametric approach $n_{\min}(\text{PA})$.

UNUkey	BATTkey	n	\bar{m}	SD	VC	\tilde{m}	MAD	2.5 th	97.5 th	p	ND	S	K	p _{log}	ND _{log}	S _{log}	K _{log}	$n_{\min}(\text{PA})$
all	BATT	790	77	280	3.62	21	25	2	546	0	No	10.37	143.46	0	No	0.6	0.46	5,034
0201	BATT	23	26	28	1.1	23	12	2	98	0	No	2.48	6.66	0.015	No	-0.49	-0.51	465
0202	BATT	13	39	35	0.89	46	64	3	100	0.027	No	0.36	-1.19	0.002	No	-0.34	-1.91	304
0204	BATT	29	357	241	0.67	264	258	80	821	0.008	No	0.6	-0.98	0.144	Yes	-0.19	-1.22	172
0205	BATT	48	26	10	0.36	23	6	14	47	0	No	0.83	-0.32	0.043	No	0.24	-0.66	50
0301	BATT	51	121	693	5.71	12	16	1	220	0	No	6.69	43.8	0	No	0.82	1.12	12,525
0302	BATT	118	3	3	0.94	3	0	3	6	0	No	9.24	90.11	0	No	6.06	42.75	339
0303	BATT	29	209	193	0.92	252	299	2	481	0	No	0.06	-1.82	0	No	-0.39	-1.75	325
0305	BATT	52	33	54	1.66	22	15	11	84	0	No	5.93	37.08	0	No	1.37	3.38	1,059
0306	BATT	93	29	18	0.61	21	5	15	77	0	No	2.24	5.46	0	No	1.19	0.71	143
0401	BATT	121	22	14	0.66	22	16	3	48	0	No	1.36	2.71	0	No	-0.55	0.39	167
0402	BATT	29	73	161	2.2	24	12	3	440	0	No	3.96	16.07	0.057	Yes	0.53	0.63	1,859
0403	BATT	7	71	73	1.04	37	21	10	197	0.038	No	0.87	-1.05	0.781	Yes	-0.02	-1.35	416
0406	BATT	18	36	63	1.77	18	11	3	197	0	No	3.06	8.68	0.156	Yes	0.26	0.21	1,204
0501	BATT	16	79	124	1.57	33	39	3	376	0	No	2.56	6.09	0.224	Yes	-0.26	-0.72	947
0506	BATT	15	238	708	2.97	32	27	3	1,940	0	No	3.04	7.98	0.14	Yes	0.81	0.57	3,389
0601	BATT	32	469	560	1.19	342	458	12	2,043	0	No	1.55	1.7	0.021	No	-0.46	-0.99	544
0701	BATT	42	38	25	0.66	34	24	3	90	0.085	Yes	0.38	-0.77	0.001	No	-1.02	0.13	167
0702	BATT	5	33	6	0.19	35	4	24	38	0.257	Yes	-0.52	-1.71	0.186	Yes	-0.61	-1.58	14
0901	BATT	31	10	11	1.02	8	0	3	46	0	No	2.62	5.72	0	No	0.57	2.34	400

n: number of observations, \bar{m} : mean, SD: standard deviation, VC: coefficient of variation, \tilde{m} : median, MAD: median absolute deviation, 95% CI: confidence interval [2.5th quantile, 97.5th quantile], p: p-value of Shapiro-Wilk test (normally distributed if $p > 0.05$), ND: normally distributed data Yes/No, S: skewness, K: kurtosis; log(subscripted): respective values after log-transformation.

6.2. Data on Battery Mass (BM) for Batteries differentiated by BATTkey

Table S7. Descriptive statistics for the mass of batteries in WEEE differentiated in UNUkeys and BATTkeys. The table comprises descriptive statistics, the results of the Shapiro-Wilk test on the normal distribution (ND) for original and log-transformed (log) data sets, and the results of for minimum samples sizes according to the parametric approach $n_{\min}(\text{PA})$.

UNUkey	BATTkey	n	\bar{m}	SD	VC	\tilde{m}	MAD	2.5 th	97.5 th	p	ND	S	K	p _{log}	ND _{log}	S _{log}	K _{log}	n _{min} (PA)
all	LiPrim	195	4	3	0.8	3	0	2	9	0	No	5.44	41.79	0	No	1.95	4.74	246
all	LiRecharge	135	74	121	1.64	23	8	9	429	0	No	2.22	3.48	0	No	0.99	1.18	1,033
all	NiCd	44	307	441	1.44	67	71	14	1,536	0	No	2.09	4.51	0.001	No	0.28	-1.46	797
all	NiMH	130	69	115	1.66	26	21	10	487	0	No	3	8.44	0	No	0.93	0.76	1,059
all	Pb	13	1,336	1,417	1.06	799	429	15	4,305	0.006	No	1.27	0.59	0.007	No	-1.1	0.05	432
all	Zn	257	38	66	1.73	23	17	2	151	0	No	8.38	91.51	0	No	-0.27	1.62	1,150
all	unspecified	16	47	101	2.17	7	7	2	301	0	No	2.65	6.31	0.034	No	0.7	-0.87	1,809
0201	Zn	13	28	17	0.59	23	2	6	62	0.021	No	0.9	0.16	0.001	No	-1.64	2.91	134
0201	LiPrim	4	6	6	1.08	3	1	2	14	0.01	No	0.74	-1.7	0.105	Yes	0.64	-1.74	448
0202	Zn	6	58	20	0.34	50	5	46	92	0.008	No	1.17	-0.43	0.032	No	1.05	-0.65	44
0202	LiPrim	5	3	0	0.03	3	0	3	3	0.03	No	-0.89	-1.09	0.026	No	-0.9	-1.08	0
0204	Pb	6	721	119	0.17	767	83	557	828	0.154	Yes	-0.42	-1.91	0.126	Yes	-0.47	-1.86	11
0204	NiMH	15	296	165	0.56	233	136	83	570	0.117	Yes	0.43	-1.37	0.454	Yes	-0.34	-0.85	120
0205	NiCd	11	31	10	0.33	36	12	19	44	0.035	No	-0.05	-1.95	0.027	No	-0.15	-1.95	42
0205	NiMH	30	25	10	0.39	23	4	13	49	0.001	No	1.14	0.57	0.095	Yes	0.37	-0.3	58
0205	LiRecharge	4	26	8	0.32	26	11	19	33	0.025	No	0	-2.44	0.026	No	0	-2.44	39
0301	Zn	29	32	48	1.52	23	29	1	119	0	No	3.85	16	0.002	No	-0.52	-0.78	888
0301	LiPrim	10	2	1	0.3	2	1	1	3	0.086	Yes	-0.2	-1.74	0.087	Yes	-0.47	-1.25	35
0301	unspecified	5	3	2	0.68	2	0	2	7	0.005	No	0.98	-1.06	0.02	No	0.84	-1.27	178
0302	LiPrim	116	3	1	0.23	3	0	3	4	0	No	7.29	60.08	0	No	4.85	36.36	20

UNUkey	BATTkey	n	\bar{m}	SD	VC	\tilde{m}	MAD	2.5 th	97.5 th	p	ND	S	K	p _{log}	ND _{log}	S _{log}	K _{log}	n _{min} (PA)
0303	LiPrim	8	3	0	0.11	3	0	3	4	0.765	Yes	0.16	-1.37	0.825	Yes	0.01	-1.3	5
0303	LiRecharge	19	317	149	0.47	351	110	22	486	0.013	No	-0.88	-0.55	0	No	-2.59	6.38	85
0305	Zn	10	28	16	0.56	29	24	11	45	0.006	No	-0.01	-2.07	0.007	No	-0.13	-2.04	120
0305	NiMH	33	23	13	0.56	21	15	10	51	0	No	0.98	0.08	0.004	No	0.27	-1.24	120
0305	LiRecharge	6	24	12	0.5	18	4	15	43	0.051	Yes	0.83	-1.16	0.145	Yes	0.63	-1.53	96
0306	NiMH	24	46	25	0.55	43	29	16	97	0.057	Yes	0.74	-0.09	0.258	Yes	-0.12	-1.2	116
0306	LiRecharge	69	23	9	0.37	20	3	16	47	0	No	2.65	8.66	0	No	1.38	2.65	53
0401	Zn	105	21	12	0.57	22	15	6	48	0	No	0.96	0.05	0	No	-0.04	-0.81	125
0401	LiPrim	6	4	2	0.68	3	1	2	8	0.001	No	1.3	-0.18	0.011	No	1.16	-0.41	178
0401	NiMH	4	38	20	0.53	41	17	13	57	0.803	Yes	-0.3	-1.97	0.279	Yes	-0.57	-1.81	108
0402	Zn	16	118	209	1.78	40	44	6	632	0	No	2.7	6.64	0.92	Yes	0.12	-0.23	1,217
0402	LiRecharge	9	21	7	0.32	23	6	8	27	0.102	Yes	-0.99	-0.2	0.003	No	-1.55	1.19	39
0403	Zn	5	90	80	0.88	46	34	24	201	0.204	Yes	0.47	-1.86	0.561	Yes	0.18	-2.06	297
0406	Zn	6	30	30	0.99	23	9	11	83	0.003	No	1.24	-0.27	0.134	Yes	0.7	-0.99	377
0406	LiPrim	4	10	8	0.8	10	10	3	17	0.048	No	0.01	-2.43	0.034	No	0	-2.44	246
0406	LiRecharge	7	20	12	0.58	20	12	4	37	0.994	Yes	-0.04	-1.44	0.103	Yes	-1.03	-0.39	129
0501	Zn	9	71	52	0.73	49	39	23	153	0.07	Yes	0.52	-1.54	0.197	Yes	0.13	-1.87	205
0506	Zn	7	91	134	1.47	46	33	23	344	0	No	1.57	0.68	0.053	Yes	1.08	-0.29	830
0506	NiMH	4	37	28	0.78	31	24	10	72	0.709	Yes	0.32	-2.01	0.938	Yes	-0.11	-2.08	234
0601	NiCd	19	613	527	0.86	516	237	26	1826	0.013	No	1.15	0.76	0.011	No	-0.93	-0.3	284
0601	NiMH	6	91	173	1.89	22	10	15	392	0	No	1.36	-0.09	0.003	No	1.24	-0.28	1,372
0601	LiRecharge	5	154	122	0.79	180	203	33	314	0.43	Yes	0.24	-1.82	0.301	Yes	-0.19	-2.13	240
0701	Zn	37	39	25	0.63	36	24	4	91	0.152	Yes	0.36	-0.8	0.003	No	-1.08	0.6	152
0901	Zn	8	19	19	1.04	7	5	3	46	0.009	No	0.52	-1.78	0.038	No	0.27	-1.99	416
0901	LiPrim	23	8	1	0.18	8	0	5	8	0	No	-4.19	16.26	0	No	-4.19	16.26	12

46 n: number of observations, \bar{m} : mean, SD: standard deviation, VC: coefficient of variation, \tilde{m} : median, MAD: median absolute deviation, 95% CI: confidence interval [2.5th quantile,
47 97.5th quantile], p: p-value of Shapiro-Wilk test (normally distributed if p>0.05), ND: normally distributed data Yes/No, S: skewness, K: kurtosis; log(subscripted): respective values
48 after log-transformation.

7. Battery Mass Share (BMS)

The following information on BMS refers to WEEE with a battery compartment and remaining batteries. A distinction is made between all batteries (BATT) and the various battery systems (BATTkeys).

7.1. Data on Battery Mass Share (BMS) for all Batteries (BATT)

Table S8. Descriptive statistics for battery mass share of WEEE differentiated in UNUkeys. The table comprises descriptive statistics, the results of the Shapiro-Wilk test on the normal distribution (ND) for original and log-transformed (log) data sets, and the results of for minimum samples sizes according to the parametric approach $n_{\min}(\text{PA})$.

UNUkey	BATTkey	n	\bar{x}	SD	VC	\tilde{x}	MAD	2.5 th	97.5 th	S	K	SW	ND	SW _{log}	ND _{log}	S _{log}	K _{log}	$n_{\min}(\text{PA})$
all	BATT	790	15.22	13.88	0.91	12.92	14.31	0.02	47.92	1.25	2.3	0	No	0	No	-1.3	0.16	318
0201	BATT	23	12.32	11.53	0.94	8.65	6.51	1.03	37.65	1.17	0.02	0.001	No	0.427	Yes	-0.46	-0.4	339
0202	BATT	13	4.45	6.11	1.37	2.29	3.1	0.15	18.05	1.45	0.54	0.001	No	0.157	Yes	-0.18	-1.46	721
0204	BATT	29	26.32	14.21	0.54	20.19	9.44	10.86	54.05	0.84	-0.57	0.003	No	0.158	Yes	0.28	-1.21	112
0205	BATT	48	18.71	7.76	0.41	18.3	8.35	7.89	37.57	0.87	0.47	0.01	No	0.769	Yes	-0.03	-0.62	65
0301	BATT	51	10.7	14.16	1.32	5.22	4.96	0.88	55.71	2.49	6.18	0	No	0.937	Yes	0.03	-0.14	669
0302	BATT	118	0.04	0.08	1.84	0.03	0.01	0.02	0.1	9.35	92.4	0	No	0	No	2.92	14.17	1,301
0303	BATT	29	8.73	7.58	0.87	12.55	6.28	0.06	20.08	-0.01	-1.46	0	No	0	No	-0.47	-1.72	291
0305	BATT	52	15.72	10.32	0.66	11.17	7.24	3.01	37.65	1.03	0.49	0	No	0.191	Yes	-0.17	-0.61	167
0306	BATT	93	25.4	9.07	0.36	23.44	5.41	14.3	46.5	0.85	0.77	0	No	0	No	-5.6	43.71	50
0401	BATT	121	18.59	9.72	0.52	17	9.64	5	40.83	0.86	0.37	0	No	0.022	No	-0.57	0.71	104
0402	BATT	29	17.09	13.28	0.78	13	7.71	2.06	56.5	1.82	3.32	0	No	0.026	No	-0.91	1.47	234
0403	BATT	7	19.34	24.34	1.26	3.48	3.14	1.45	60.43	0.78	-1.06	0.034	No	0.114	Yes	0.23	-2.05	610
0406	BATT	18	9.94	8.46	0.85	6.89	7.79	0.27	28.1	0.88	-0.27	0.041	No	0.003	No	-1.1	-0.04	278
0501	BATT	16	33.64	21.59	0.64	37.92	18.68	2.75	68.71	-0.08	-1.21	0.229	Yes	0.003	No	-0.92	-0.81	157
0506	BATT	15	24.92	15.83	0.64	22.86	18.32	3.11	54.09	0.42	-0.86	0.909	Yes	0.006	No	-1.65	2.63	157
0601	BATT	32	26	19.25	0.74	21.58	15.54	0.14	79.19	1.45	2.39	0.001	No	0	No	-2.42	6.01	210
0701	BATT	42	15.26	14.1	0.92	11.35	9.93	0.23	38.25	1.95	5.35	0	No	0.001	No	-1.36	2.11	325
0702	BATT	5	19	9.36	0.49	25	1.82	8.29	26.23	-0.29	-2.24	0.022	No	0.024	No	-0.3	-2.22	92

UNUkey	BATTkey	n	\bar{x}	SD	VC	\tilde{x}	MAD	2.5 th	97.5 th	S	K	SW	ND	SW _{log}	ND _{log}	S _{log}	K _{log}	n _{min} (PA)
0901	BATT	31	11.08	5.65	0.51	12.45	0	0.6	22.73	0.19	1.53	0	No	0	No	-1.7	1.9	100

n: number of observations, \bar{x} : mean, SD: standard deviation, VC: coefficient of variation, \tilde{x} : median, MAD: median absolute deviation, 95% CI: confidence interval [2.5th quantile, 97.5th quantile], p: p-value of Shapiro-Wilk test (normally distributed if p>0.05), ND: normally distributed data Yes/No, S: skewness, K: kurtosis; log(subscripted): respective values after log-transformation.

Table S9. Descriptive statistics for battery mass share of WEEE differentiated in subKeys. The table comprises descriptive statistics, the results of the Shapiro-Wilk test on the normal distribution (ND) for original and log-transformed (log) data sets, and the results of for minimum samples sizes according to the parametric approach n_{min}(PA).

subKey	BATTkey	n	\bar{x}	SD	VC	\tilde{x}	MAD	2.5 th	97.5 th	S	K	SW	ND	SW _{log}	ND _{log}	S _{log}	K _{log}	n _{min} (PA)
020108	BATT	20	12.79	12.24	0.96	8.75	7.46	0.98	37.75	1.03	-0.44	0.001	No	0.444	Yes	-0.42	-0.69	354
020206	BATT	11	3.31	5.36	1.62	1.94	2.54	0.15	15.35	2.08	3.23	0	No	0.221	Yes	0	-1.49	1008
020401	BATT	5	23.65	13.61	0.58	19.05	10.08	11.27	43.96	0.67	-1.37	0.355	Yes	0.953	Yes	0.22	-1.63	129
020402	BATT	24	26.87	14.55	0.54	21.08	11.87	11.38	55.23	0.81	-0.67	0.009	No	0.214	Yes	0.27	-1.29	112
020502	BATT	21	16.15	7.81	0.48	13.3	4.38	7.57	33.54	1.18	0.81	0.012	No	0.687	Yes	0.37	-0.77	89
020506	BATT	26	20.77	7.38	0.36	19.1	7.9	10.76	36.82	0.84	0.49	0.106	Yes	0.89	Yes	-0.02	-0.47	50
030101	BATT	6	18.14	9.17	0.51	15.96	2.12	9.68	33.55	1.02	-0.51	0.042	No	0.364	Yes	0.42	-0.91	100
030102	BATT	14	7.76	11.67	1.5	5.02	3.55	1.97	35.35	2.74	6.47	0	No	0.035	No	1.16	0.99	864
030108	BATT	20	6.56	6.93	1.06	3.71	3.18	0.91	23.43	1.58	1.7	0	No	0.774	Yes	0.17	-1.04	432
030109	BATT	7	16.25	23.47	1.44	6.65	5.67	2.91	60.57	1.51	0.56	0	No	0.415	Yes	0.7	-0.88	797
030201	BATT	118	0.04	0.08	1.84	0.03	0.01	0.02	0.1	9.35	92.4	0	No	0	No	2.92	14.17	1301
030301	BATT	27	7.85	6.99	0.89	12.14	5.21	0.06	16.53	-0.13	-1.92	0	No	0	No	-0.36	-1.82	304
030502	BATT	45	15.77	10.85	0.69	10.12	7.77	2.91	38.65	0.99	0.25	0	No	0.19	Yes	-0.12	-0.79	183
030503	BATT	7	15.44	6.44	0.42	12.97	4.98	9.66	25.48	0.51	-1.51	0.189	Yes	0.264	Yes	0.28	-1.84	68
030601	BATT	91	25.38	9.16	0.36	23.44	5.41	14.28	46.59	0.85	0.7	0	No	0	No	-5.54	42.71	50
040104	BATT	119	18.67	9.74	0.52	17	9.64	4.94	40.94	0.85	0.35	0	No	0.019	No	-0.59	0.78	104
040201	BATT	4	32.67	18.77	0.57	25.54	7.63	19.73	57.74	0.63	-1.78	0.115	Yes	0.313	Yes	0.5	-1.9	125
040202	BATT	18	14.97	12.55	0.84	11.7	8.85	1.66	43.47	1.69	3.06	0.003	No	0.3	Yes	-0.73	0.2	271
040205	BATT	7	13.61	3.27	0.24	13	2.97	9.27	18.64	0.29	-1.06	0.873	Yes	0.935	Yes	-0.12	-1.11	22
040304	BATT	5	19.47	27.71	1.42	2	0.93	1.42	61.21	0.73	-1.44	0.038	No	0.102	Yes	0.34	-2.12	775

subKey	BATTkey	n	\bar{x}	SD	VC	\tilde{x}	MAD	2.5 th	97.5 th	S	K	SW	ND	SW _{log}	ND _{log}	S _{log}	K _{log}	n _{min} (PA)
040601	BATT	17	10.51	8.36	0.8	7.11	5.87	0.27	28.16	0.86	-0.33	0.056	Yes	0.003	No	-1.36	1.07	246
050101	BATT	12	40.79	18.68	0.46	42.14	9.6	7.64	69.17	-0.33	-0.53	0.732	Yes	0	No	-2.04	3.39	81
050601	BATT	6	35.14	14.7	0.42	30.45	11.93	18.72	56.4	0.37	-1.63	0.609	Yes	0.847	Yes	-0.03	-1.58	68
050602	BATT	9	18.1	13.15	0.73	15.68	10.64	2.1	39.27	0.46	-1.31	0.48	Yes	0.048	No	-1.21	0.54	205
060102	BATT	18	27.78	12.72	0.46	31.27	11.76	4.43	44.12	-0.55	-0.85	0.349	Yes	0	No	-2.92	8.2	81
060109	BATT	10	14.72	4.84	0.33	14.26	4.24	7.39	22.11	0.05	-1.2	0.981	Yes	0.762	Yes	-0.52	-0.76	42
070101	BATT	36	16.36	14.69	0.9	12.58	10.47	0.2	42.92	1.85	4.63	0	No	0	No	-1.57	2.93	311
070102	BATT	6	8.64	7.66	0.89	7.23	8.48	1.13	19.45	0.32	-1.81	0.446	Yes	0.623	Yes	-0.21	-1.91	304
090102	BATT	31	11.08	5.65	0.51	12.45	0	0.6	22.73	0.19	1.53	0	No	0	No	-1.7	1.9	100

n: number of observations, \bar{x} : mean, SD: standard deviation, VC: coefficient of variation, \tilde{x} : median, MAD: median absolute deviation, 95% CI: confidence interval [2.5th quantile, 97.5th quantile], p: p-value of Shapiro-Wilk test (normally distributed if p>0.05), ND: normally distributed data Yes/No, S: skewness, K: kurtosis; log(subscripted): respective values after log-transformation.

7.2. Data on Battery Mass Share (BMS) for Batteries differentiated by BATTkey

Table S10. Descriptive statistics for battery mass share of batteries in WEEE differentiated in UNUkeys and BATTkeys. The table comprises descriptive statistics, the results of the Shapiro-Wilk test on the normal distribution (ND) for original and log-transformed (log) data sets, and the results of for minimum samples sizes according to the parametric approach n_{min}(PA).

UNUkey	BATTkey	n	\bar{x}	SD	VC	\tilde{x}	MAD	2.5 th	97.5 th	S	K	p	ND	p _{log}	ND _{log}	S _{log}	K _{log}	n _{min} (PA)
all	LiPrim	195	2.26	4.31	1.91	0.05	0.03	0.02	12.45	1.77	1.52	0	No	0	No	0.92	-0.87	1,401
all	LiRecharge	135	19.78	9	0.46	19.87	7.22	1.94	42.92	0.83	2.92	0	No	0	No	-3.95	21.38	81
all	NiCd	44	23.38	15.52	0.66	22.26	13.61	0.5	45.75	1.61	4.87	0	No	0	No	-2.77	8.67	167
all	NiMH	130	19.01	11.53	0.61	18.05	10.87	0.65	45.18	0.72	-0.08	0	No	0	No	-2.45	8.19	143
all	Pb	13	46.09	19.3	0.42	47.89	11.76	8.81	74.05	-0.58	-0.4	0.284	Yes	0.002	No	-1.52	1.08	68
all	Zn	257	17.97	13.66	0.76	14.85	11.47	1.96	53	1.36	2.22	0	No	0	No	-0.69	0.27	222
all	unspecified	16	12.26	14.05	1.15	8.36	11.56	0.1	43.14	1.15	0.43	0.008	No	0.125	Yes	-0.76	-0.57	508
0201	Zn	13	15.06	12.01	0.8	10.91	5.19	3.83	37.96	1.01	-0.69	0.003	No	0.374	Yes	0.21	-0.88	246
0201	LiPrim	4	2.14	1.95	0.91	1.46	0.69	0.68	4.74	0.65	-1.74	0.121	Yes	0.745	Yes	0.24	-1.87	318
0202	Zn	6	5.73	6.46	1.13	3.06	1.41	1.98	17.02	1.26	-0.26	0.002	No	0.145	Yes	0.89	-0.9	491

UNUkey	BATTkey	n	\bar{x}	SD	VC	\tilde{x}	MAD	2.5 th	97.5 th	S	K	p	ND	p _{log}	ND _{log}	S _{log}	K _{log}	n _{min} (PA)
0202	LiPrim	5	0.41	0.51	1.24	0.2	0.05	0.15	1.22	1.06	-0.93	0.001	No	0.019	No	0.98	-1.03	591
0204	Pb	6	48.78	7.49	0.15	48.62	3.89	38.66	59.48	0.11	-1.12	0.821	Yes	0.804	Yes	-0.16	-1.11	9
0204	NiMH	15	22.01	9.44	0.43	18.63	7.22	11.43	40.39	0.85	-0.3	0.097	Yes	0.734	Yes	0.28	-1.14	71
0205	NiCd	11	17.98	10.93	0.61	13.23	5.92	8.61	38.89	0.9	-0.68	0.017	No	0.103	Yes	0.51	-1.47	143
0205	NiMH	30	18.06	5.86	0.32	18.45	6.05	7.66	29.84	0.43	0.23	0.295	Yes	0.162	Yes	-0.55	0.11	39
0205	LiRecharge	4	19.17	6.28	0.33	19.24	7.95	13.6	24.61	0	-2.44	0.032	No	0.035	No	0	-2.44	42
0301	Zn	29	10.33	10.67	1.03	6.08	5.31	1.87	39.29	1.92	3.44	0	No	0.576	Yes	0.2	-0.85	408
0301	LiPrim	10	4.19	2.82	0.67	3.5	2.54	1.48	9.57	0.95	-0.32	0.086	Yes	0.781	Yes	0.18	-1.36	172
0301	unspecified	5	2.09	2	0.96	1	1.06	0.34	4.83	0.43	-1.9	0.271	Yes	0.744	Yes	-0.07	-1.91	354
0302	LiPrim	116	0.04	0.02	0.63	0.03	0.01	0.02	0.09	5.33	38.9	0	No	0	No	1.51	4.38	152
0303	LiPrim	8	0.11	0.02	0.22	0.11	0.02	0.08	0.15	0.25	-0.94	0.919	Yes	0.944	Yes	-0.16	-1	19
0303	LiRecharge	19	13.26	5.16	0.39	13.62	1.64	1.01	21.68	-0.78	1.66	0.002	No	0	No	-3.16	9.35	58
0305	Zn	10	12.82	9.9	0.77	10.16	5.54	2.84	31.9	0.93	-0.51	0.057	Yes	0.468	Yes	-0.16	-1.19	228
0305	NiMH	33	13.16	7.9	0.6	9.46	3.7	3.86	29.7	1.04	-0.08	0	No	0.111	Yes	0.19	-0.69	138
0305	LiRecharge	6	25.97	7.4	0.29	24.87	5.99	18.91	37.83	0.71	-1.06	0.353	Yes	0.713	Yes	0.44	-1.37	32
0306	NiMH	24	30.57	12.38	0.4	32.88	16.73	10.07	46.38	-0.36	-0.69	0.069	Yes	0	No	-3.61	13.34	61
0306	LiRecharge	69	23.61	6.84	0.29	22.98	4.48	14.49	45.54	1.6	3.74	0	No	0.002	No	0.18	2.11	32
0401	Zn	105	19.11	9.75	0.51	17.43	9.04	7.01	41.7	0.89	0.35	0	No	0.012	No	-0.5	1.06	100
0401	LiPrim	6	8.5	5.26	0.62	6.75	4.31	3.83	14.98	0.33	-2.02	0.071	Yes	0.14	Yes	0.15	-2.08	148
0401	NiMH	4	21.48	11.56	0.54	20.78	10.21	8.97	35.17	0.13	-1.88	0.841	Yes	0.666	Yes	-0.33	-1.85	112
0402	Zn	16	18.81	16.87	0.9	12.12	10.04	2.73	58.12	1.36	0.71	0.002	No	0.798	Yes	-0.11	-0.71	311
0402	LiRecharge	9	16.26	6.36	0.39	15	5.28	9.4	28.15	0.9	-0.35	0.229	Yes	0.913	Yes	0.35	-0.99	58
0403	Zn	5	26.29	26.02	0.99	27.06	34.95	1.58	61.95	0.35	-1.73	0.5	Yes	0.384	Yes	-0.29	-2.05	377
0406	Zn	6	15.6	10.03	0.64	12.52	9.17	5.76	28.8	0.35	-1.94	0.222	Yes	0.563	Yes	0.04	-1.93	157
0406	LiPrim	4	2.5	2.57	1.03	2.39	3.12	0.24	4.96	0.01	-2.42	0.086	Yes	0.107	Yes	-0.02	-2.41	408
0406	LiRecharge	7	8.88	6.62	0.75	6.67	3.22	1.02	18.41	0.36	-1.58	0.402	Yes	0.031	No	-1.15	-0.05	216
0501	Zn	9	45.92	14.76	0.32	45	12.36	26.2	69.52	0.33	-1.19	0.668	Yes	0.843	Yes	-0.18	-1	39
0506	Zn	7	30.4	14.06	0.46	28.84	11.36	16.2	54.5	0.8	-0.73	0.347	Yes	0.967	Yes	0.25	-1.34	81

UNUkey	BATTkey	n	\bar{x}	SD	VC	\tilde{x}	MAD	2.5 th	97.5 th	S	K	p	ND	p _{log}	ND _{log}	S _{log}	K _{log}	n _{min} (PA)
0506	NiMH	4	23.81	17.69	0.74	18.9	12.82	10.04	45.93	0.37	-2.03	0.286	Yes	0.306	Yes	0.16	-2.25	210
0601	NiCd	19	31.67	18.13	0.57	31.58	12.59	4.37	69.57	1.25	2.87	0.014	No	0	No	-2.96	8.78	125
0601	NiMH	6	13.77	4.44	0.32	13.12	4.17	7.48	18.87	-0.24	-1.49	0.545	Yes	0.257	Yes	-0.66	-1.06	39
0601	LiRecharge	5	14.18	3.78	0.27	14.77	6.16	10.28	18.85	0.09	-1.99	0.541	Yes	0.462	Yes	-0.04	-2.08	28
0701	Zn	37	16.59	14.41	0.87	14.17	10.5	1.76	42	1.88	4.88	0	No	0.299	Yes	-0.54	-0.15	291
0901	Zn	8	8.6	10.4	1.21	2.64	2.02	0.81	26.93	0.88	-1.07	0.011	No	0.46	Yes	0.13	-1.5	562
0901	LiPrim	23	11.94	2.47	0.21	12.45	0	7.13	12.45	-4.19	16.26	0	No	0	No	-4.19	16.26	17

n: number of observations, \bar{x} : mean, SD: standard deviation, VC: coefficient of variation, \tilde{x} : median, MAD: median absolute deviation, 95% CI: confidence interval [2.5th quantile, 97.5th quantile], p: p-value of Shapiro-Wilk test (normally distributed if $p > 0.05$), ND: normally distributed data Yes/No, S: skewness, K: kurtosis; log(subscripted): respective values after log-transformation.

Table S11. Descriptive statistics for battery mass share of batteries in WEEE differentiated in subKeys and BATTkeys. The table comprises descriptive statistics, the results of the Shapiro-Wilk test on the normal distribution (ND) for original and log-transformed (log) data sets, and the results of for minimum samples sizes according to the parametric approach $n_{\min}(\text{PA})$.

subKey	BATTkey	n	\bar{x}	SD	VC	\tilde{x}	MAD	2.5 th	97.5 th	p	ND	S	K	p _{log}	ND _{log}	S _{log}	K _{log}	n _{min} (PA)
020108	Zn	11	15.74	12.96	0.82	10.91	6.13	3.68	38.02	0.005	No	0.82	-1.18	0.35	Yes	0.16	-1.18	258
020108	LiPrim	4	2.14	1.95	0.91	1.46	0.69	0.68	4.74	0.121	Yes	0.65	-1.74	0.745	Yes	0.24	-1.87	318
020206	Zn	6	5.73	6.46	1.13	3.06	1.41	1.98	17.02	0.002	No	1.26	-0.26	0.145	Yes	0.89	-0.9	491
020206	LiPrim	5	0.41	0.51	1.24	0.2	0.05	0.15	1.22	0.001	No	1.06	-0.93	0.019	No	0.98	-1.03	591
020402	Pb	5	49.35	8.24	0.17	49.35	2.78	38.64	59.72	0.794	Yes	-0.06	-1.46	0.702	Yes	-0.28	-1.43	11
020402	NiMH	12	22.38	10.42	0.47	18.61	8.29	11.32	41.29	0.131	Yes	0.7	-0.84	0.56	Yes	0.24	-1.45	85
020502	NiCd	6	11.09	1.88	0.17	10.64	1.87	8.64	13.29	0.34	Yes	0.01	-1.7	0.371	Yes	-0.16	-1.56	11
020502	NiMH	12	15.91	5.98	0.38	15.55	6.16	7.47	24.17	0.378	Yes	0.08	-1.49	0.342	Yes	-0.35	-1.27	55
020506	NiCd	5	26.25	11.72	0.45	25.3	8.44	10.74	40.46	0.871	Yes	-0.16	-1.53	0.293	Yes	-0.69	-1.28	78
020506	NiMH	17	19.53	5.64	0.29	19.05	2.3	12.09	31.71	0.054	Yes	0.89	0.43	0.298	Yes	0.2	-0.39	32
020506	LiRecharge	4	19.17	6.28	0.33	19.24	7.95	13.6	24.61	0.032	No	0	-2.44	0.035	No	0	-2.44	42
030101	Zn	6	18.14	9.17	0.51	15.96	2.12	9.68	33.55	0.042	No	1.02	-0.51	0.364	Yes	0.42	-0.91	100
030102	Zn	12	8.27	12.55	1.52	5.02	3.5	2.21	37.19	0	No	2.47	4.84	0.026	No	1.23	0.91	888

subKey	BATTkey	n	\bar{x}	SD	VC	\tilde{x}	MAD	2.5 th	97.5 th	p	ND	S	K	p _{log}	ND _{log}	S _{log}	K _{log}	n _{min} (PA)
030108	Zn	10	8.07	7.95	0.99	5	4.7	1.46	24.41	0.015	No	1.28	0.49	0.96	Yes	0.11	-1.23	377
030108	LiPrim	5	4.19	3.65	0.87	3.67	2.91	1.45	9.75	0.066	Yes	0.85	-1.18	0.533	Yes	0.33	-1.71	291
030108	unspecified	4	2.54	2	0.79	2.17	1.85	0.85	4.88	0.355	Yes	0.21	-2.2	0.318	Yes	0.05	-2.35	240
030109	LiPrim	4	4.77	1.97	0.41	4.8	2.46	2.87	6.63	0.181	Yes	-0.01	-2.4	0.21	Yes	-0.04	-2.38	65
030201	LiPrim	116	0.04	0.02	0.63	0.03	0.01	0.02	0.09	0	No	5.33	38.9	0	No	1.51	4.38	152
030301	LiPrim	8	0.11	0.02	0.22	0.11	0.02	0.08	0.15	0.919	Yes	0.25	-0.94	0.944	Yes	-0.16	-1	19
030301	LiRecharge	17	12.39	4.51	0.36	13.12	1.57	0.9	17.15	0	No	-1.71	2.03	0	No	-2.98	8.01	50
030502	Zn	5	11.76	12.91	1.1	6.08	4.81	2.84	31.49	0.068	Yes	0.8	-1.3	0.416	Yes	0.32	-1.9	465
030502	NiMH	33	13.16	7.9	0.6	9.46	3.7	3.86	29.7	0	No	1.04	-0.08	0.111	Yes	0.19	-0.69	138
030502	LiRecharge	4	29.26	6.9	0.24	27.16	3.39	23.71	38.39	0.272	Yes	0.58	-1.78	0.448	Yes	0.51	-1.82	22
030503	Zn	5	13.87	7.16	0.52	10.39	1.15	9.64	25.1	0.008	No	0.99	-1.04	0.035	No	0.89	-1.18	104
030601	NiMH	24	30.57	12.38	0.4	32.88	16.73	10.07	46.38	0.069	Yes	-0.36	-0.69	0	No	-3.61	13.34	61
030601	LiRecharge	67	23.53	6.91	0.29	22.85	4.42	14.46	45.64	0	No	1.62	3.71	0.002	No	0.21	2.08	32
040104	Zn	105	19.11	9.75	0.51	17.43	9.04	7.01	41.7	0	No	0.89	0.35	0.012	No	-0.5	1.06	100
040104	LiPrim	6	8.5	5.26	0.62	6.75	4.31	3.83	14.98	0.071	Yes	0.33	-2.02	0.14	Yes	0.15	-2.08	148
040104	NiMH	4	21.48	11.56	0.54	20.78	10.21	8.97	35.17	0.841	Yes	0.13	-1.88	0.666	Yes	-0.33	-1.85	112
040202	Zn	15	16.06	13.25	0.82	11.38	10.12	2.71	45.51	0.005	No	1.58	2.22	0.86	Yes	-0.22	-0.59	258
040205	LiRecharge	7	13.61	3.27	0.24	13	2.97	9.27	18.64	0.873	Yes	0.29	-1.06	0.935	Yes	-0.12	-1.11	22
040601	Zn	6	15.6	10.03	0.64	12.52	9.17	5.76	28.8	0.222	Yes	0.35	-1.94	0.563	Yes	0.04	-1.93	157
040601	LiPrim	4	2.5	2.57	1.03	2.39	3.12	0.24	4.96	0.086	Yes	0.01	-2.42	0.107	Yes	-0.02	-2.41	408
040601	LiRecharge	6	10.31	5.95	0.58	7.75	3.49	5.1	18.45	0.1	Yes	0.46	-1.92	0.279	Yes	0.3	-1.97	129
050101	Zn	8	47.29	15.16	0.32	46.52	12.76	26.22	69.64	0.781	Yes	0.16	-1.31	0.73	Yes	-0.37	-0.96	39
050602	Zn	4	23.55	9.12	0.39	21.01	5.32	15.94	35.48	0.398	Yes	0.53	-1.83	0.737	Yes	0.36	-1.91	58
060102	NiCd	15	30.69	11.78	0.38	33.08	8.43	5.13	44.47	0.093	Yes	-1.08	0.58	0	No	-2.92	7.47	55
060109	NiMH	5	12.73	4.06	0.32	12.5	1.85	7.34	17.69	0.641	Yes	-0.16	-1.44	0.33	Yes	-0.57	-1.31	39
070101	Zn	33	17.47	14.76	0.84	15.43	10.71	2.37	45.67	0	No	1.85	4.49	0.762	Yes	-0.25	-0.48	271
070102	Zn	4	9.35	9.39	1	8.09	9.76	1.08	19.76	0.321	Yes	0.13	-2.29	0.366	Yes	-0.05	-2.33	384
090102	Zn	8	8.6	10.4	1.21	2.64	2.02	0.81	26.93	0.011	No	0.88	-1.07	0.46	Yes	0.13	-1.5	562

subKey	BATTkey	n	\bar{x}	SD	VC	\tilde{x}	MAD	2.5 th	97.5 th	p	ND	S	K	p _{log}	ND _{log}	S _{log}	K _{log}	n _{min} (PA)
090102	LiPrim	23	11.94	2.47	0.21	12.45	0	7.13	12.45	0	No	-4.19	16.26	0	No	-4.19	16.26	17

n: number of observations, \bar{x} : mean, SD: standard deviation, VC: coefficient of variation, \tilde{x} : median, MAD: median absolute deviation, 95% CI: confidence interval [2.5th quantile, 97.5th quantile], p: p-value of Shapiro-Wilk test (normally distributed if p>0.05), ND: normally distributed data Yes/No, S: skewness, K: kurtosis; log(subscripted): respective values after log-transformation.

7.3. Bootstrap Data on Battery Mass Share (BMS) for all Batteries (BATT)

Table S12. Descriptive statistics for battery mass share of batteries in WEEE differentiated in UNUkeys. The table comprises descriptive statistics, the results of the Shapiro-Wilk test on the normal distribution (ND) for original and log-transformed (log) data sets, and the results of for minimum samples sizes according to the parametric approach n_{min}(PA).

UNUkey	BATTkey	B	\bar{x}^*	SD*	VC*	\tilde{x}^*	MAD*	2.5 th *	97.5 th *	p*	ND*	S*	K*	n _{min} (PA)
0201	BATT	5000	12.32	2.4	0.19	12.2	2.43	7.99	17.23	0	No	0.29	-0.02	14
0202	BATT	5000	4.47	1.62	0.36	4.38	1.7	1.66	7.92	0	No	0.41	-0.01	50
0204	BATT	5000	26.28	2.58	0.1	26.22	2.64	21.26	31.38	0.111	Yes	0.06	-0.11	4
0205	BATT	5000	18.74	1.11	0.06	18.71	1.09	16.66	21.04	0	No	0.17	0.12	1
0301	BATT	5000	10.68	1.96	0.18	10.57	1.96	7.19	14.74	0	No	0.35	0.05	12
0302	BATT	5000	0.04	0.01	0.17	0.04	0	0.03	0.06	0	No	0.91	1.38	11
0303	BATT	5000	8.74	1.41	0.16	8.74	1.42	6.01	11.4	0.296	Yes	-0.04	-0.07	10
0304	BATT	5000	0.17	0.08	0.49	0.17	0.16	0.05	0.28	0	No	-0.09	-1.03	92
0305	BATT	5000	15.7	1.41	0.09	15.65	1.39	13.02	18.53	0.004	No	0.11	-0.02	3
0306	BATT	5000	25.4	0.94	0.04	25.38	0.93	23.56	27.25	0.141	Yes	0.07	-0.02	1
0308	BATT	5000	0.04	0.01	0.2	0.04	0.01	0.03	0.06	0	No	0.42	-0.46	15
0309	BATT	5000	2.77	1.3	0.47	3	1.48	1	5	0	No	0.11	-1.14	85
0401	BATT	5000	18.57	0.88	0.05	18.56	0.9	16.85	20.28	0.142	Yes	0.05	-0.11	1
0402	BATT	5000	17.14	2.47	0.14	16.99	2.42	12.82	22.38	0	No	0.37	0.13	8
0403	BATT	5000	19.54	8.53	0.44	19.25	7.93	5.46	37.82	0	No	0.4	0.1	74
0404	BATT	5000	9.15	6.32	0.69	9.14	0	0.1	18.18	0	No	0	-0.95	183
0406	BATT	5000	9.96	1.92	0.19	9.87	1.91	6.41	14.03	0	No	0.25	0.06	14
0407	BATT	5000	0.86	0.59	0.68	0.84	1.23	0.01	1.67	0	No	-0.03	-1	178

UNUkey	BATTkey	B	\bar{x}^*	SD*	VC*	\tilde{x}^*	MAD*	2.5 th *	97.5 th *	p*	ND*	S*	K*	n _{min} (PA)
0408	BATT	5000	30.75	7.16	0.23	30.72	14.89	20.68	40.76	0	No	0	-1.03	20
0501	BATT	5000	33.66	5.16	0.15	33.53	5.14	23.58	43.81	0.2	Yes	-0.01	-0.06	9
0506	BATT	5000	24.91	3.92	0.16	24.8	4.05	17.65	32.72	0	No	0.12	-0.15	10
0601	BATT	5000	25.96	3.36	0.13	25.8	3.25	19.81	32.97	0	No	0.26	0.13	6
0602	BATT	5000	27.53	15.66	0.57	27	20.76	2	53	0	No	0.01	-1.2	125
0701	BATT	5000	15.25	2.19	0.14	15.08	2.18	11.46	19.86	0	No	0.42	0.18	8
0702	BATT	5000	18.94	3.75	0.2	19	5	12.02	25.98	0	No	-0.18	-0.37	15
0801	BATT	5000	5.07	0.63	0.12	5.06	0.71	3.75	6.44	0	No	0.02	-0.5	6
0901	BATT	5000	11.08	0.99	0.09	11.07	0.98	9.15	13.06	0.567	Yes	0.04	0.07	3

B: number of bootstrap samples, \bar{x} : mean, SD: standard deviation, VC: coefficient of variation, \tilde{x} : median, MAD: median absolute deviation, 95% CI: confidence interval [2.5th quantile, 97.5th quantile], p: p-value of Shapiro-Wilk test (normally distributed if p>0.05), ND: normally distributed data Yes/No, S: skewness, K: kurtosis.

Table S13. Descriptive statistics for battery mass share of batteries in WEEE differentiated in subKeys. The table comprises descriptive statistics, the results of the Shapiro-Wilk test on the normal distribution (ND) for original and log-transformed (log) data sets, and the results of for minimum samples sizes according to the parametric approach n_{min}(PA).

subKey	BATTkey	B	\bar{x}^*	SD*	VC*	\tilde{x}^*	MAD*	2.5 th *	97.5 th *	p*	ND*	S*	K*	n _{min} (PA)
020108	BATT	5000	12.78	2.68	0.21	12.67	2.67	7.89	18.45	0	No	0.26	0.08	17
020402	BATT	5000	26.84	2.86	0.11	26.74	2.88	21.53	32.67	0	No	0.17	-0.02	5
020502	BATT	5000	16.15	1.65	0.1	16.05	1.66	13.1	19.52	0	No	0.26	0.1	4
020506	BATT	5000	20.75	1.43	0.07	20.71	1.44	18.08	23.69	0	No	0.16	0.06	2
030108	BATT	5000	6.57	1.51	0.23	6.47	1.5	3.88	9.75	0	No	0.35	0.21	20
030201	BATT	5000	0.04	0.01	0.17	0.04	0	0.03	0.06	0	No	0.92	1.2	11
030301	BATT	5000	7.86	1.32	0.17	7.85	1.35	5.27	10.5	0.763	Yes	0.02	-0.04	11
030502	BATT	5000	15.81	1.61	0.1	15.75	1.6	12.82	19.02	0	No	0.12	-0.09	4
030601	BATT	5000	25.38	0.96	0.04	25.35	0.98	23.59	27.33	0	No	0.13	-0.01	1
040104	BATT	5000	18.67	0.89	0.05	18.66	0.87	17.02	20.47	0.035	No	0.09	-0.05	1
040202	BATT	5000	14.95	2.89	0.19	14.74	2.91	9.97	21.17	0	No	0.44	0.28	14
040601	BATT	5000	10.54	1.97	0.19	10.47	1.96	6.87	14.58	0	No	0.22	0.05	14

subKey	BATTkey	B	\bar{x}^*	SD*	VC*	\tilde{x}^*	MAD*	2.5 th *	97.5 th *	p*	ND*	S*	K*	n _{min} (PA)
060102	BATT	5000	27.7	2.89	0.1	27.75	2.95	21.86	33.18	0.001	No	-0.11	-0.12	4
070101	BATT	5000	16.4	2.44	0.15	16.3	2.46	12.07	21.44	0	No	0.36	0.33	9
090102	BATT	5000	11.09	1	0.09	11.09	0.98	9.12	13.11	0.222	Yes	0.06	0.1	3

B: number of bootstrap samples, \bar{x} : mean, SD: standard deviation, VC: coefficient of variation, \tilde{x} : median, MAD: median absolute deviation, 95% CI: confidence interval [2.5th quantile, 97.5th quantile], p: p-value of Shapiro-Wilk test (normally distributed if p>0.05), ND: normally distributed data Yes/No, S: skewness, K: kurtosis.

7.4. Bootstrap Data on Battery Mass Share (BMS) for Batteries differentiated by BATTkey

Table S14. Descriptive statistics for battery mass share of batteries in WEEE differentiated in UNUkeys and BATTkeys. The table comprises descriptive statistics, the results of the Shapiro-Wilk test on the normal distribution (ND) for original and log-transformed (log) data sets, and the results of for minimum samples sizes according to the parametric approach n_{min}(PA).

UNUkey	BATTkey	B	\bar{x}^*	SD*	VC*	\tilde{x}^*	MAD*	2.5 th *	97.5 th *	p*	ND*	S*	K*	n _{min} (PA)
0301	Zn	5000	10.32	1.93	0.19	10.19	1.91	6.91	14.43	0	No	0.37	0.13	14
0301	LiPrim	5000	4.21	0.85	0.2	4.15	0.85	2.72	6.04	0	No	0.42	0.18	15
0301	NiMH	5000	8.27	3.18	0.38	8.26	3.9	1.89	15.4	0	No	0.08	-0.54	55
0301	LiRecharge	5000	33.31	10.16	0.31	33.45	17.79	19.34	58.5	0	No	0.38	-0.53	37
0301	unspecified	5000	2.09	0.8	0.38	2.09	0.86	0.65	3.83	0	No	0.28	-0.23	55
0302	LiPrim	5000	0.04	0	0.11	0.04	0	0.03	0.04	0	No	-1.37	0.08	5
0306	NiMH	5000	30.53	2.48	0.08	30.55	2.49	25.66	35.29	0.558	Yes	-0.05	0.01	2
0306	LiRecharge	5000	23.62	0.82	0.03	23.59	0.82	22.14	25.33	0	No	0.24	0.16	0
0401	Zn	5000	19.11	0.94	0.05	19.09	0.95	17.31	20.98	0.279	Yes	0.06	-0.03	1
0401	LiPrim	5000	8.54	1.95	0.23	8.49	2	4.81	12.23	0	No	0.18	-0.3	20
0401	NiMH	5000	21.54	5.03	0.23	21.48	5.32	11.54	32.11	0	No	0.13	-0.24	20
0401	unspecified	5000	18.16	2.9	0.16	18.19	4.23	13.08	25.02	0	No	0.25	-0.52	10

B: number of bootstrap samples, \bar{x} : mean, SD: standard deviation, VC: coefficient of variation, \tilde{x} : median, MAD: median absolute deviation, 95% CI: confidence interval [2.5th quantile, 97.5th quantile], p: p-value of Shapiro-Wilk test (normally distributed if p>0.05), ND: normally distributed data Yes/No, S: skewness, K: kurtosis

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Table S15. Descriptive statistics for battery mass share of batteries in WEEE differentiated in subKeys and BATTkeys. The table comprises descriptive statistics, the results of the Shapiro-Wilk test on the normal distribution (ND) for original and log-transformed (log) data sets, and the results of for minimum samples sizes according to the parametric approach $n_{min}(PA)$.

subKey	BATTkey	B	\bar{x}^*	SD*	VC*	\tilde{x}^*	MAD*	2.5 th *	97.5 th *	p*	ND*	S*	K*	$n_{min}(PA)$
020506	battNiMH	5000	19.54	1.3	0.07	19.52	1.3	17.06	22.2	0	No	0.14	0	2
030201	battLiPrim	5000	0.04	0	0.11	0.04	0	0.03	0.04	0	No	-1.45	0.3	5
030301	battLiRecharge	5000	12.38	1.06	0.09	12.46	1.07	10.11	14.19	0	No	-0.45	0.13	3
030502	battNiMH	5000	13.19	1.35	0.1	13.18	1.36	10.65	16.02	0	No	0.18	-0.02	4
030601	battNiMH	5000	30.56	2.45	0.08	30.62	2.42	25.67	35.22	0.005	No	-0.12	0.02	2
030601	battLiRecharge	5000	23.54	0.84	0.04	23.51	0.85	21.97	25.23	0	No	0.14	-0.08	1
040104	battZn	5000	19.09	0.94	0.05	19.08	0.95	17.28	20.96	0.08	Yes	0.09	-0.01	1
040202	battZn	5000	16.07	3.35	0.21	15.84	3.36	10.27	23.39	0	No	0.46	0.22	17
060102	battNiCd	5000	30.78	2.96	0.1	30.96	2.99	24.6	36.01	0	No	-0.31	0	4
070101	battZn	5000	17.47	2.55	0.15	17.31	2.52	12.9	22.68	0	No	0.34	0.24	9
090102	battLiPrim	5000	11.93	0.5	0.04	11.94	0.76	10.91	12.45	0	No	-0.91	0.62	1

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B: number of bootstrap samples, \bar{x} : mean, SD: standard deviation, VC: coefficient of variation, \tilde{x} : median, MAD: median absolute deviation, 95% CI: confidence interval [2.5th quantile, 97.5th quantile], p: p-value of Shapiro-Wilk test (normally distributed if $p > 0.05$), ND: normally distributed data Yes/No, S: skewness, K: kurtosis

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8. WEEE Classification

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Table S16. UNUkey classification and allocation to WEEE categories EU-10 (Annex I to the WEEE Directive 2012/19/EU) and EU-6 (Annex III to the WEEE Directive 2012/19/EU).

UNU key	WEEE category		Description
	EU-10	EU-6	
0001	01	04	Central Heating (household installed)
0002	04	04	Photovoltaic Panels (incl. inverters)
0101	01	04	Professional Heating & Ventilation (excl. cooling equipment)
0102	01	04	Dishwashers
0103	01	04	Kitchen (e.g., large furnaces, ovens, cooking equipment)

UNU key	WEEE category		Description
	EU-10	EU-6	
0104	01	04	Washing Machines (incl. combined dryers)
0105	01	04	Dryers (wash dryers, centrifuges)
0106	01	04	Household Heating & Ventilation (e.g., hoods, ventilators, space heaters)
0108	01	01	Fridges (incl. combi-fridges)
0109	01	01	Freezers
0111	01	01	Air Conditioners (household installed and portable)
0112	01	01	Other Cooling (e.g., dehumidifiers, heat pump dryers)
0113	01	01	Professional Cooling (e.g., large air conditioners, cooling displays)
0114	01	05	Microwaves (incl. combined, excl. grills)
0201	02	05	Other Small Household (e.g., small ventilators, irons, clocks, adapters)
0202	02	05	Food (e.g., toaster, grills, food processing, frying pans)
0203	02	05	Hot Water (e.g., coffee, tea, water cookers)
0204	02	05	Vacuum Cleaners (excl. professional)
0205	02	05	Personal Care (e.g., toothbrushes, hairdryers, razors)
0301	03	06	Small IT (e.g., routers, mice, keyboards, external drives & accessories)
0302	03	06	Desktop PCs (excl. monitors, accessoires)
0303	03	02	Laptops (incl. tablets)
0304	03	06	Printers (e.g. scanners, multi functionals, faxes)
0305	03	06	Telecom (e.g. (cordless) phones, answering machines)
0306	03	06	Mobile Phones (incl. smartphones, pagers)
0307	03	04	Professional IT (e.g., servers, routers, data storage, copiers)
0308	03	02	Cathode Ray Tube Monitors
0309	03	02	Flat Display Panel Monitors (LCD, LED)
0401	04	05	Small Consumer Electronics (e.g. headphones, remote controls)
0402	04	05	Portable Audio & Video (e.g. MP3, e-readers, car navigation)
0403	04	05	Music Instruments, Radio, Hi-Fi (incl. audio sets)
0404	04	05	Video (e.g., video recorders, DVD, Blue Ray, set-top boxes)

UNU key	WEEE category		Description
	EU-10	EU-6	
0405	04	05	Speakers
0406	04	05	Cameras (e.g. camcorders, photo & digital still cameras)
0407	04	02	Cathode Ray Tube TVs
0408	04	02	Flat Display Panel TVs (LCD, LED, Plasma)
0501	05	05	Lamps (e.g. pocket, Christmas, excl. LED & incandescent)
0502	05	03	Compact Fluorescent Lamps (incl. retrofit & non-retrofit)
0503	05	03	Straight Tube Fluorescent Lamps
0504	05	03	Special Lamps (e.g. professional mercury, high- & low-pressure sodium)
0505	05	03	LED Lamps (incl. retrofit LED lamps & household LED luminaires)
0506	05	05	Household Luminaires (incl. household incandescent fittings)
0507	05	05	Professional Luminaires (offices, public space, industry)
0601	06	05	Household Tools (e.g., drills, saws, high-pressure cleaners, lawnmowers)
0602	06	04	Professional Tools (e.g., for welding, soldering, milling)
0701	07	05	Toys (e.g., car racing sets, electric trains, music toys, biking computers)
0702	07	06	Game Consoles
0703	07	04	Leisure (e.g. large exercise, sports equipment)
0801	08	05	Household Medical (e.g., thermometers, blood pressure meters)
0802	08	04	Professional Medical (e.g. hospital, dentist, diagnostics)
0901	09	05	Household Monitoring & Control (alarm, heat, smoke, excl. screens)
0902	09	04	Professional Monitoring & Control (e.g. laboratory, control panels)
1001	10	04	Non-Cooled Dispensers (e.g., for vending, hot drinks, tickets, money)
1002	10	01	Cooled Dispensers (e.g., for vending, cold drinks)

Table S17. UNUkey and sub-key classification and description of product groups.

UNUkey	Description	subKey	Description
0001	Central Heating (household installed)	000101	Central heating and combi-warm water (gas)
0001	Central Heating (household installed)	000102	Boilers (electric)
0001	Central Heating (household installed)	000103	Geysers (gas)
0001	Central Heating (household installed)	000104	Other hot water (installations)
0002	Photovoltaic Panels (incl. inverters)	000201	PV panels (roof-mounted)
0002	Photovoltaic Panels (incl. inverters)	000202	PV panels (other types)
0002	Photovoltaic Panels (incl. inverters)	000203	Inverter (for PV panels)
0101	Professional Heating & Ventilation (excl. cooling equipment)	010101	Small PROF heating (terraces, panels)
0101	Professional Heating & Ventilation (excl. cooling equipment)	010102	Large PROF heating (installations)
0101	Professional Heating & Ventilation (excl. cooling equipment)	010103	PROF Kitchen (non-cooled)
0101	Professional Heating & Ventilation (excl. cooling equipment)	010104	Other house/office heating equipment
0102	Dishwashers	010201	Dishwashers
0102	Dishwashers	010202	Professional dishwashers
0103	Kitchen (e.g., large furnaces, ovens, cooking equipment)	010301	Combi-ovens
0103	Kitchen (e.g., large furnaces, ovens, cooking equipment)	010302	Furnaces
0103	Kitchen (e.g., large furnaces, ovens, cooking equipment)	010303	Ovens
0104	Washing Machines (incl. combined dryers)	010401	Washing machines
0104	Washing Machines (incl. combined dryers)	010402	Washing machines + combi-dryers
0105	Dryers (wash dryers, centrifuges)	010501	Dryers
0105	Dryers (wash dryers, centrifuges)	010502	Centrifuges
0106	Household Heating & Ventilation (e.g., hoods, ventilators, space heaters)	010601	Hoods
0106	Household Heating & Ventilation (e.g., hoods, ventilators, space heaters)	010602	HH room ventilation (fixed)
0106	Household Heating & Ventilation (e.g., hoods, ventilators, space heaters)	010603	Room heaters (non-central)
0108	Fridges (incl. combi-fridges)	010801	Fridges (excl. combi freezers)
0108	Fridges (incl. combi-fridges)	010802	Wine fridge
0108	Fridges (incl. combi-fridges)	010803	Absorption fridge
0108	Fridges (incl. combi-fridges)	010804	Combined Refrigerator-freezer
0109	Freezers	010901	Freezers

UNUkey	Description	subKey	Description
0109	Freezers	011001	Combi fridges and freezers
0111	Air Conditioners (household installed and portable)	011101	HH airconditioning (moveable, ex split sys)
0111	Air Conditioners (household installed and portable)	011102	HH airconditioning (fixed, split sys)
0111	Air Conditioners (household installed and portable)	011103	Other airconditioning and dehumidifying
0112	Other Cooling (e.g., dehumidifiers, heat pump dryers)	011201	HH Watercoolers
0112	Other Cooling (e.g., dehumidifiers, heat pump dryers)	011202	Ice(cube) makers
0112	Other Cooling (e.g., dehumidifiers, heat pump dryers)	011203	Heat-pump dryers
0112	Other Cooling (e.g., dehumidifiers, heat pump dryers)	011204	Heat-pump boilers
0113	Professional Cooling (e.g., large air conditioners, cooling displays)	011301	PROF Watercoolers
0113	Professional Cooling (e.g., large air conditioners, cooling displays)	011302	PROF Icemakers
0113	Professional Cooling (e.g., large air conditioners, cooling displays)	011303	Cooling displays
0113	Professional Cooling (e.g., large air conditioners, cooling displays)	011304	PROF Fridges and freezers
0113	Professional Cooling (e.g., large air conditioners, cooling displays)	011305	PROF Kitchen C&F Other
0114	Microwaves (incl. combined, excl. grills)	011401	Combi-microwave
0114	Microwaves (incl. combined, excl. grills)	011402	Microwave (non-combi)
0201	Other Small Household (e.g., small ventilators, irons, clocks, adapters)	020101	Irons
0201	Other Small Household (e.g., small ventilators, irons, clocks, adapters)	020102	Sewing
0201	Other Small Household (e.g., small ventilators, irons, clocks, adapters)	020103	Other Clothing
0201	Other Small Household (e.g., small ventilators, irons, clocks, adapters)	020104	Ventilators (small moveable)
0201	Other Small Household (e.g., small ventilators, irons, clocks, adapters)	020105	Other ventilation small, insect removal
0201	Other Small Household (e.g., small ventilators, irons, clocks, adapters)	020106	Other ventilation small, odors
0201	Other Small Household (e.g., small ventilators, irons, clocks, adapters)	020107	Sleeping
0201	Other Small Household (e.g., small ventilators, irons, clocks, adapters)	020108	Clocks
0201	Other Small Household (e.g., small ventilators, irons, clocks, adapters)	020109	Other SHA
0201	Other Small Household (e.g., small ventilators, irons, clocks, adapters)	020110	External power supply and adapters
0202	Food (e.g., toaster, grills, food processing, frying pans)	020201	Cooking plates (excl. oven)
0202	Food (e.g., toaster, grills, food processing, frying pans)	020202	Frying pans
0202	Food (e.g., toaster, grills, food processing, frying pans)	020203	Warming food (BBQ, toasters, etc.)

UNUkey	Description	subKey	Description
0202	Food (e.g., toaster, grills, food processing, frying pans)	020204	Grills
0202	Food (e.g., toaster, grills, food processing, frying pans)	020205	Blending and mixing
0202	Food (e.g., toaster, grills, food processing, frying pans)	020206	Other kitchen equip, incl elec. coolers
0203	Hot Water (e.g., coffee, tea, water cookers)	020301	Coffeemaker
0203	Hot Water (e.g., coffee, tea, water cookers)	020302	Espressomaker
0203	Hot Water (e.g., coffee, tea, water cookers)	020303	Watercooker
0203	Hot Water (e.g., coffee, tea, water cookers)	020304	Other hot water and steam
0204	Vacuum Cleaners (excl. professional)	020401	HH Vacuum cleaners
0204	Vacuum Cleaners (excl. professional)	020402	Other vacuum and carpet cleaners
0205	Personal Care (e.g., toothbrushes, hairdryers, razors)	020501	Hairdryers
0205	Personal Care (e.g., toothbrushes, hairdryers, razors)	020502	Shavers and trimmers
0205	Personal Care (e.g., toothbrushes, hairdryers, razors)	020503	Other hairstyling
0205	Personal Care (e.g., toothbrushes, hairdryers, razors)	020504	Foot, face, skin and other massage
0205	Personal Care (e.g., toothbrushes, hairdryers, razors)	020505	Other equipment for facial beauty
0205	Personal Care (e.g., toothbrushes, hairdryers, razors)	020506	Toothbrushes
0205	Personal Care (e.g., toothbrushes, hairdryers, razors)	020507	Face scrubber
0205	Personal Care (e.g., toothbrushes, hairdryers, razors)	020508	Other personal care
0301	Small IT (e.g., routers, mice, keyboards, external drives & accessories)	030101	Mouses
0301	Small IT (e.g., routers, mice, keyboards, external drives & accessories)	030102	Keyboards
0301	Small IT (e.g., routers, mice, keyboards, external drives & accessories)	030103	External optical drives
0301	Small IT (e.g., routers, mice, keyboards, external drives & accessories)	030104	External storage (drives)
0301	Small IT (e.g., routers, mice, keyboards, external drives & accessories)	030105	External storage (flash)
0301	Small IT (e.g., routers, mice, keyboards, external drives & accessories)	030106	Computer accessoires (speakers, modems, etc.)
0301	Small IT (e.g., routers, mice, keyboards, external drives & accessories)	030107	External power supply and adapters IT
0301	Small IT (e.g., routers, mice, keyboards, external drives & accessories)	030108	(Pocket) calculators
0301	Small IT (e.g., routers, mice, keyboards, external drives & accessories)	030109	Other small IT (non PC access.)
0302	Desktop PCs (excl. monitors, accessoires)	030201	Desktop personal computers
0303	Laptops (incl. tablets)	030301	Laptops

UNUkey	Description	subKey	Description
0303	Laptops (incl. tablets)	030302	Tablets
0303	Laptops (incl. tablets)	030303	Notebooks
0303	Laptops (incl. tablets)	030304	Other laptops, palmtops
0304	Printers (e.g., scanners, multi functionals, faxes)	030401	HH Multifunctionals (fax, print, scan, copy, etc.)
0304	Printers (e.g., scanners, multi functionals, faxes)	030402	Inkjet printers
0304	Printers (e.g., scanners, multi functionals, faxes)	030403	Laser printers
0304	Printers (e.g., scanners, multi functionals, faxes)	030404	Other printers (matrix, thermal)
0304	Printers (e.g., scanners, multi functionals, faxes)	030405	Scanners
0304	Printers (e.g., scanners, multi functionals, faxes)	030406	Typewriters
0304	Printers (e.g., scanners, multi functionals, faxes)	030407	Faxes
0305	Telecom (e.g., (cordless) phones, answering machines)	030501	Cordless phones
0305	Telecom (e.g., (cordless) phones, answering machines)	030502	Telephones (fixed)
0305	Telecom (e.g., (cordless) phones, answering machines)	030503	Other HH telecom
0306	Mobile Phones (incl. smartphones, pagers)	030601	Mobile phones
0306	Mobile Phones (incl. smartphones, pagers)	030602	Smartphones
0306	Mobile Phones (incl. smartphones, pagers)	030603	Other mobile phone devices (pagers)
0307	Professional IT (e.g., servers, routers, data storage, copiers)	030701	PROF Multifunctionals (fax, print, scan, copy, etc)
0307	Professional IT (e.g., servers, routers, data storage, copiers)	030702	Copiers
0307	Professional IT (e.g., servers, routers, data storage, copiers)	030703	Plotters and blueprinting
0307	Professional IT (e.g., servers, routers, data storage, copiers)	030704	Servers and workstations
0307	Professional IT (e.g., servers, routers, data storage, copiers)	030705	Overhead projectors and beamers
0307	Professional IT (e.g., servers, routers, data storage, copiers)	030706	Other PROF and network equipment
0308	Cathode Ray Tube Monitors	030801	CRT Monitors
0309	Flat Display Panel Monitors (LCD, LED)	030901	LCD Monitors
0309	Flat Display Panel Monitors (LCD, LED)	030902	LED Monitors
0309	Flat Display Panel Monitors (LCD, LED)	030903	Small flat screens
0401	Small Consumer Electronics (e.g., headphones, remote controls)	040101	Headphones and headsets
0401	Small Consumer Electronics (e.g., headphones, remote controls)	040102	Microphones

UNUkey	Description	subKey	Description
0401	Small Consumer Electronics (e.g., headphones, remote controls)	040103	Adapters and power supply CE
0401	Small Consumer Electronics (e.g., headphones, remote controls)	040104	Remote controls
0401	Small Consumer Electronics (e.g., headphones, remote controls)	040105	Other small CE
0402	Portable Audio & Video (e.g., MP3, e-readers, car navigation)	040201	mp3 and mp4 players
0402	Portable Audio & Video (e.g., MP3, e-readers, car navigation)	040202	radio and CD (portable)
0402	Portable Audio & Video (e.g., MP3, e-readers, car navigation)	040203	radio alarm clock with CD
0402	Portable Audio & Video (e.g., MP3, e-readers, car navigation)	040204	speakers (portable)
0402	Portable Audio & Video (e.g., MP3, e-readers, car navigation)	040205	Navigation systems (portable)
0402	Portable Audio & Video (e.g., MP3, e-readers, car navigation)	040206	E-readers
0402	Portable Audio & Video (e.g., MP3, e-readers, car navigation)	040207	Other portable audio
0403	Music Instruments, Radio, Hi-Fi (incl. audio sets)	040301	Receivers and amplifiers
0403	Music Instruments, Radio, Hi-Fi (incl. audio sets)	040302	Mini-midi and micro sets
0403	Music Instruments, Radio, Hi-Fi (incl. audio sets)	040303	Car stereo
0403	Music Instruments, Radio, Hi-Fi (incl. audio sets)	040304	Other audio components
0403	Music Instruments, Radio, Hi-Fi (incl. audio sets)	040305	Musical instruments, sound mixing boards
0404	Video (e.g., video recorders, DVD, Blue Ray, set-top boxes)	040401	DVD players and recorders
0404	Video (e.g., video recorders, DVD, Blue Ray, set-top boxes)	040402	Blue-ray players and recorders
0404	Video (e.g., video recorders, DVD, Blue Ray, set-top boxes)	040403	VCR players and recorders
0404	Video (e.g., video recorders, DVD, Blue Ray, set-top boxes)	040404	Decoders and satellite receivers
0404	Video (e.g., video recorders, DVD, Blue Ray, set-top boxes)	040405	Video and antenna equipment
0404	Video (e.g., video recorders, DVD, Blue Ray, set-top boxes)	040406	PROF CE equipment
0405	Speakers	040501	Speakers (individual)
0405	Speakers	040502	Speakers (set)
0406	Cameras (e.g., camcorders, photo & digital still cameras)	040601	Digital Still Camera (photo)
0406	Cameras (e.g., camcorders, photo & digital still cameras)	040602	Video Camera (incl. photo function)
0407	Cathode Ray Tube TVs	040701	CRT TV's (incl. combi DVD, VCR)
0408	Flat Display Panel TVs (LCD, LED, Plasma)	040801	LCD TV's
0408	Flat Display Panel TVs (LCD, LED, Plasma)	040802	LED TV's

UNUkey	Description	subKey	Description
0408	Flat Display Panel TVs (LCD, LED, Plasma)	040803	Plasma TV's
0501	Lamps (e.g., pocket, Christmas, excl. LED & incandescent)	050101	Pocket lamps
0501	Lamps (e.g., pocket, Christmas, excl. LED & incandescent)	050102	Christmas lights and light strings (non-LED)
0501	Lamps (e.g., pocket, Christmas, excl. LED & incandescent)	050103	Other lamps (insects, tanning)
0501	Lamps (e.g., pocket, Christmas, excl. LED & incandescent)	050104	Electric lighting or visual signaling equipment
0501	Lamps (e.g., pocket, Christmas, excl. LED & incandescent)	050105	Halogen lamps with fittings
0502	Compact Fluorescent Lamps (incl. retrofit & non-retrofit)	050201	CFL lamps (integrated, HH)
0502	Compact Fluorescent Lamps (incl. retrofit & non-retrofit)	050202	CFL lamps (non-integrated, PROF)
0503	Straight Tube Fluorescent Lamps	050301	Straight fluorescent HH
0503	Straight Tube Fluorescent Lamps	050302	Straight fluorescent B2C
0503	Straight Tube Fluorescent Lamps	050303	UV lamps (lamps only)
0504	Special Lamps (e.g., professional mercury, high- & low-pressure sodium)	050401	High-pressure sodium
0504	Special Lamps (e.g., professional mercury, high- & low-pressure sodium)	050402	Low-pressure sodium
0504	Special Lamps (e.g., professional mercury, high- & low-pressure sodium)	050403	Metal halide lamps
0504	Special Lamps (e.g., professional mercury, high- & low-pressure sodium)	050404	High-pressure mercury
0505	LED Lamps (incl. retrofit LED lamps & household LED luminaires)	050501	Retrofit LED lamps
0505	LED Lamps (incl. retrofit LED lamps & household LED luminaires)	050502	LED inc. luminaire HH
0505	LED Lamps (incl. retrofit LED lamps & household LED luminaires)	050503	LED strings
0506	Household Luminaires (incl. household incandescent fittings)	050601	HH luminaires
0506	Household Luminaires (incl. household incandescent fittings)	050602	HH luminaires accessoires
0507	Professional Luminaires (offices, public space, industry)	050701	PROF Luminaires
0507	Professional Luminaires (offices, public space, industry)	050702	PROF LED Luminaires
0601	Household Tools (e.g., drills, saws, high-pressure cleaners, lawnmowers)	060101	Sanders and grinders
0601	Household Tools (e.g., drills, saws, high-pressure cleaners, lawnmowers)	060102	Drills
0601	Household Tools (e.g., drills, saws, high-pressure cleaners, lawnmowers)	060103	Saws
0601	Household Tools (e.g., drills, saws, high-pressure cleaners, lawnmowers)	060104	Power supplies and adapters
0601	Household Tools (e.g., drills, saws, high-pressure cleaners, lawnmowers)	060105	Cleaning, spraying, liquids
0601	Household Tools (e.g., drills, saws, high-pressure cleaners, lawnmowers)	060106	Welding and soldering

UNUkey	Description	subKey	Description
0601	Household Tools (e.g., drills, saws, high-pressure cleaners, lawnmowers)	060107	Other handheld tools
0601	Household Tools (e.g., drills, saws, high-pressure cleaners, lawnmowers)	060108	Water filtering and pumps
0601	Household Tools (e.g., drills, saws, high-pressure cleaners, lawnmowers)	060109	Grass and hedges
0602	Professional Tools (e.g., for welding, soldering, milling)	060201	PROF paint, mixing fluids
0602	Professional Tools (e.g., for welding, soldering, milling)	060202	PROF compressors
0602	Professional Tools (e.g., for welding, soldering, milling)	060203	PROF sanders and grinders
0602	Professional Tools (e.g., for welding, soldering, milling)	060204	PROF saws
0602	Professional Tools (e.g., for welding, soldering, milling)	060205	PROF power and air supply
0602	Professional Tools (e.g., for welding, soldering, milling)	060206	PROF cleaning
0602	Professional Tools (e.g., for welding, soldering, milling)	060207	PROF drills
0602	Professional Tools (e.g., for welding, soldering, milling)	060208	PROF Others
0701	Toys (e.g., car racing sets, electric trains, music toys, biking computers)	070101	Small toys
0701	Toys (e.g., car racing sets, electric trains, music toys, biking computers)	070102	Vehicle toys
0701	Toys (e.g., car racing sets, electric trains, music toys, biking computers)	070103	Small music toys
0702	Game Consoles	070201	Game consoles (TV, Monitor connected)
0702	Game Consoles	070202	Game consoles (portable)
0702	Game Consoles	070203	Games consoles accessoires
0702	Game Consoles	070204	Games (cards)
0703	Leisure (e.g., large exercise, sports equipment)	070301	Bicycle trainer
0703	Leisure (e.g., large exercise, sports equipment)	070302	Other exercise equipment
0703	Leisure (e.g., large exercise, sports equipment)	070303	E-bikes
0703	Leisure (e.g., large exercise, sports equipment)	070304	Other Leisure
0801	Household Medical (e.g., thermometers, blood pressure meters)	080101	Small Medical
0802	Professional Medical (e.g., hospital, dentist, diagnostics)	080201	Large Medical
0901	Household Monitoring & Control (alarm, heat, smoke, excl. screens)	090101	Smoke detectors
0901	Household Monitoring & Control (alarm, heat, smoke, excl. screens)	090102	Other small monitoring
0902	Professional Monitoring & Control (e.g., laboratory, control panels)	090201	PROF Monitoring
1001	Non-Cooled Dispensers (e.g., for vending, hot drinks, tickets, money)	100101	PROF Dispensers non-cooled food

UNUkey	Description	subKey	Description
1002	Cooled Dispensers (e.g., for vending, cold drinks)	100201	PROF Dispensers cooled food

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