Item #	Processed File Name	Processed File Description	Variables/Columns	Variables/Columns Explanation
1	Filter_loading_master.xlsx	All filter loading-related parameters measured during loading	All variables in "LDS_Filter_Loading_ Master_MAIN_test.xlsx" (in Table 1) in raw data except "test date" PLUS	See Table 1 for "LDS_Filter_Loading_Master_MAIN_test.xlsx"
			Dust_sprinkled_m	Amount of dust sprinkled over the filter (g)
			Filter_m_change	Filter weight change before and after loading (g)
			Flow_dust_m	Dust passing through filters by backflow during loading (g)
			Lost_dust_m	Dust mass lost during loading (g)
			Mass_closure	Mass closure after loading (controlled per total dust)
2	artl_dataset_summary.xlsx	Recovery data from every single cycle from all tests	Appended All variables in "lds_extraction_tddd_exp_si_ftt_yymmdd .xlsx" (in Table 1) in raw data except "M_filter_blank ", "M_filter_pre", "M_vs_empty", "M_vs_empty", "M_ph_clean", "M_ph_clean", "M_ph_full", "M_ph_dumped", "M_vd", "M_vs", PLUS	See Table 1 for "lds_extraction_tddd_exp_si_ftt_yymmdd.xlsx"
			ExpN	Experiment number of extraction test (#)
			ft	Filter type extraction taking place over the filter (-)
			td	Test dust type filter had been initially loaded with (-)
			M_filter_post	Mass of filter after each extraction cycle (g)
			M_filter_change	Filter weight change after each extraction cycle (g)
			M_filter_change_cum	Filter weight change integrated over all extraction cycles (to the existing cycle) (g)
			Mass_C	Mass of dust collected by the after-sieve sampler (g)
			M_t	Pre- and after-sieve dust recovered after each cycle (g)
			M_t_cum	Pre- and after-sieve dust recovered over all extraction cycles (to the existing cycle) (g)
			sCE	After-sieve recovery efficiency after each cycle (%)
			sCE_cum	After-sieve recovery efficiency over all extraction cycles (to the existing cycle) (%)
			tCE	Pre- and after-sieve recovery efficiency after each cycle (%)
			t_CE_cum	Pre- and after-sieve recovery efficiency over all extraction cycles (to the existing cycle) (%)
			d_t_rat	After-sieve per total dust recovery ratio after each cycle (-)
			d_t_rat_cum	After-sieve per total dust recovery ratio over all extraction cycles (to the existing cycle) (-)
3	artl_dataset_summary_ collapsed.xlsx	Recovery data after all cycles (groupby by ExpN)	All variables from artl_dataset_summary.xlsx ending with "_cum" corresponding to the last cycle of extraction over the same filter PLUS ExpN, Cycle_N, dustmass, ft, and td	See "artl_dataset_summary.xlsx" for more info

4	artl_dataset_summary_w_cv.xlsx	Recovery data from every single cycle from all tests with the CV of recovery after 1st cycle	All variables from artl_dataset_summary.xlsx PLUS 8 more variables corresponding to CVs of recovery amount and efficiency corresponding to two test dust types and four filter types (2×4)	See "artl_dataset_summary.xlsx" for more info CV of recovery amount and efficiency (2×4)
5-7	artl_v_psd_master.xlsx artl_c_psd_master.xlsx artl_c_psd_master_master.xlsx	Descriptive statistics of PSD from 5 measurement runs	Size	Bin size of PSD (µm)
			Volume/count PSD and count	Min, max, median, mean, and count of five runs of LDPS volume/count PSD measurements per bin (%, #)
8	artl_psd_sieve.xlsx	Min, mean, and max of PSD of those samples with sieve dust LDPS measurements	Size	Bin size of PSD (µm)
			Volume/count PSD and count	Min, mean, and max of all runs of LDPS volume/count size PSD measurements per bin (%)
9	fit_mode_exp_tdd_ftt.xlsx (×22)	PSD of measured and fitted (with modal analysis)	Size	Bin size of PSD (µm)
			fit_{expN}	Mean of all (5) runs from a PSD measurement by LDPS (%)
			measure_{expN}	Fitted PSD after modal analysis (%)
10	psd_modal_analysis_summary.xlsx	Volume fractions of all modes of all samples and recovered dust samples from modal analyses	expn	Experiment number (#)
			td	Test dust filter was originally loaded with (-)
			ft	Filter type going through extraction (-)
			mode_1_v	Volume of mode 1 in overall PSD
			mode_2_v	Volume of mode 2 in overall PSD
			mode_3_v	Volume of mode 3 in overall PSD
			mode_1_f	Volume fraction of mode 1 in overall PSD
			mode_2_f	Volume fraction of mode 2 in overall PSD
			mode_3_f	Volume fraction of mode 3 in overall PSD
			mode_4_v	Volume of mode 4 in overall PSD
			mode_5_v	Volume of mode 5 in overall PSD
			mode_6_v	Volume of mode 6 in overall PSD
			mode_4_f	Volume fraction of mode 4 in overall PSD
			mode_5_f	Volume fraction of mode 5 in overall PSD
			mode_6_f	Volume fraction of mode 6 in overall PSD
11	modal_combine_all.xlsx	Fitted PSD of all recovered samples vs. particle size bins (merge of (9) files all in one)	Size	Bin size of PSD (µm)
			fit_{expn}_{ft}_{td} (×22)	Fitted PSD after modal analysis (%)
12,13	sign_rank_all.xlsx sign_rank_all_log.xlsx	Binary columns of various variables from Cycles 1 and 2	ExpN	Experiment number (#)
			Binary variables for:	See "lds_extraction_tddd_exp_si_ftt_yymmdd.xlsx" (Table 1), "artl_dataset_summary.xlsx" for more information

			M_d, M_d_cum, M_s, M_s_cum, M_t, M_t_cum, CE, CE_cum, sCE, sCE_cum, t_CE, t_CE_cum, E, C, D, M_C_cum	
14	k_s_all.xlsx	Kolmogorov-Smirnov results for comparison of test and recovered dust	ExpN	Experiment number (#)
			P Value	P value of comparison of PSDs between test and recovered dust (-)
15	s_w_p_all.xlsx	Shapiro-Wilk normality test results	Index	Sample ID (-)
			Shapiro-Wilk normality test results	P value from Shapiro-Wilk normality test (-)

(1) CV: Coefficient of Variation
(2) LDPS: Laser Diffraction Particle Sizer
(3) PSD: Particle Size Distibuion