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Supplement to the article

Release of ice nucleating particles from leaves during rainfall

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This supplement contains two Tables with the INP concentrations measured in rainwater and in runoff from the leaflets in events A (Tab. S1) and B (Tab. S2), and related parameters.

Tab. S1 Ice nucleating particles in rainwater and in leaf runoff collected during event A , and at the end of the experiment by sonicating the leaflet. The leaf was taken at 08:00 on 11.09.2024 from the lower, East-facing part of a mature tree behind Jazztone in Grütt Park, Lörrach. Leaf blade: 16.5 cm x 9.4 cm, 114 cm², dry mass 1.11 g

sample type	sampling		sample	cumulative	Concentration of INPs in sample ($k(T)$, see Vali 2019, Eq. 1)						
	interval		volume	rainfall	(INP mL ⁻¹ °C ⁻¹)						
	from	to	(ml)	(mm)	-4.5°C	-5.5°C	-6.5°C	-7.5°C	-8.5°C	-9.5°C	-10.5°C
rain	12:45	14:10	10.4	0.3	0.0	0.0	0.6	0.0	0.0	0.0	10.3
leaf run-off	12:45	14:10	2.0		12.9	9.6	6.4	38.1	31.1	73.1	144.6
rain	14:10	14:24	9.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	1.9
leaf run-off	14:10	14:24	2.0		0.6	0.6	0.6	4.5	1.9	6.0	38.4
rain	14:24	14:55	7.5	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.6
leaf run-off	14:24	14:55	1.9		1.9	0.0	2.5	2.6	1.3	13.5	27.6
rain	14:55	15:18	8.2	1.1	0.0	0.0	0.6	4.4	2.6	3.3	1.3
leaf run-off	14:55	15:18	2.1		0.6	0.0	0.0	5.7	2.6	2.6	18.0
rain	15:18	15:40	8.4	1.4	0.0	0.0	0.6	0.0	0.0	0.0	0.6
leaf run-off	15:18	15:40	2.4		1.3	0.6	3.2	2.6	5.3	6.8	9.9
rain	15:40	16:00	7.0	1.6	0.0	0.0	0.6		0.0	0.0	0.6
leaf run-off	15:40	16:00	2.1		0.6	0.0	0.6	2.5	0.6	1.9	6.6
rain	16:00	16:27	34.5	2.7	0.6	1.3	0.0	2.5	0.6	1.3	3.3
leaf run-off	16:00	16:27	7.1		0.0	0.6	1.3	0.6	0.0	13.1	15.4
rain	16:27	16:40	8.3	3.0	0.0	0.0	0.6	0.0	0.0	1.3	4.5
leaf run-off	16:27	16:40	2.4		1.3	1.3	0.0	0.6	3.8	14.1	12.9
rain	16:40	17:02	9.8	3.3	0.0	1.3	0.0	1.3	0.6	0.0	3.8
leaf run-off	16:40	17:02	2.0		0.0	0.0	1.3	7.0	4.6	14.5	25.2
rain	17:02	17:12	10.7	3.6	0.0	0.0	0.6	0.6	0.6	1.3	2.6
leaf run-off	17:02	17:12	2.4		0.0	0.0	1.9	0.0	3.8	18.9	23.2
rain	17:12	17:17	10.0	4.0	0.0	0.0	1.3	0.6	1.3	3.8	14.8
leaf run-off	17:12	17:17	2.3		0.0	0.0	1.3	5.7	2.6	6.7	20.7
rain	17:17	17:27	9.4	4.3	0.0	0.0	0.0	1.3	2.5	0.6	2.6
leaf run-off	17:17	17:27	2.5		0.0	0.6	1.9	0.6	1.9	3.9	14.2
rain	17:27	17:36	11.0	4.6	0.0	0.6	0.6	0.6	1.3	3.2	5.9
leaf run-off	17:27	17:36	2.7		0.0	0.6	2.5	1.9	0.0	7.8	16.7
rain	17:36	17:45	9.8	4.9	0.0	0.0	0.6	0.6	4.5	1.3	5.9
leaf run-off	17:36	17:45	2.3		0.0	0.0	4.4	7.8	9.5	10.0	20.0
rain	17:45	17:54	10.1	5.2	0.0	0.0	0.6	0.6	1.3	2.5	7.8
leaf run-off	17:45	17:54	2.2		0.0	0.0	0.0	0.0	0.6	6.4	9.3
rain	17:54	18:00	10.6	5.6	0.0	0.6	0.6	0.0	1.3	1.3	1.3
leaf run-off	17:54	18:00	2.5		1.3	0.0	0.6	1.9	1.3	2.6	9.3
rain	18:00	18:08	11.9	6.0	0.0	0.6	0.0	0.0	4.4	2.6	2.0
leaf run-off	18:00	18:08	2.9		0.0	0.0	0.0	0.6	3.2	5.2	6.6
rain	18:08	18:13	11.3	6.3	0.0	0.0	0.6	0.0	1.3	0.6	3.2
leaf run-off	18:08	18:13	2.5		0.0	0.0	0.6	2.5	0.6	1.3	6.5
rain	18:13	18:21	12.4	6.7	0.0	0.0	0.0	1.3	0.0	1.9	4.5
leaf run-off	18:13	18:21	3.4		0.0	0.6	0.0	0.6	1.9	11.1	11.0
rain	18:21	18:27	9.0	7.0	0.0	0.6	0.6	1.3	0.6	0.0	4.5
leaf run-off	18:21	18:27	2.4		0.6	0.6	0.6	1.9	1.3	2.6	5.3
rain	18:27	18:33	11.6	7.4	0.0	0.0	0.0	1.3	0.0	2.5	3.2
leaf run-off	18:27	18:33	2.7		0.6	0.6	0.0	1.3	1.3	5.2	15.6
rain	18:33	18:39	13.0	7.8	0.0	0.0	0.0	0.6	0.6	2.5	2.6
leaf run-off	18:33	18:39	3.1		0.0	0.0	0.0	1.9	2.5	63.4	267.0
NaCl solution in which leaf was sonicated			45.0	-	0.6	1.3	3.8	7.9	10.3	26.3	134.7

Tab. S2 Ice nucleating particles in rainwater and in leaf runoff collected during event *B*, and at the end of the experiment by sonicating the leaflet. The leaf was taken at 06:30 on 08.10.2024 from the lower, North-facing part of the same tree as sampled for event *A*, Lörrach. Leaf blade: 18.3 cm x 8.7 cm, 124 cm², 1.04 g

sample type	sampling		sample	cumulative	Concentration of INPs in sample ($k(T)$, see Vali 2019, Eq. 1)						
	interval		volume	rainfall	(INP mL ⁻¹ °C ⁻¹)						
	from	to	(ml)	(mm)	-4.5°C	-5.5°C	-6.5°C	-7.5°C	-8.5°C	-9.5°C	-10.5°C
rain	09:33	09:57	9.8	0.3	0.0	0.0	0.6	0.6	0.0	3.2	47.4
leaf run-off	09:33	09:57	3.2		3.8	1.9	2.6	8.0	13.3	122.0	232.1
rain	09:57	10:10	9.6	0.6	0.0	0.0	0.0	0.6	0.6	7.0	56.0
leaf run-off	09:57	10:10	2.4		1.3	4.5	9.2	9.0	15.4	20.8	82.4
rain	10:10	10:28	13.4	1.0	0.0	0.0	0.0	0.6	0.0	0.6	17.1
leaf run-off	10:10	10:28	2.6		0.6	0.0	3.2	7.1	9.5	20.4	41.6
rain	10:28	10:45	12.4	1.4	0.0	0.0	0.0	0.0	0.6	2.5	11.1
leaf run-off	10:28	10:45	2.7		6.3	0.0	2.6	7.3	24.5	50.3	60.5
rain	10:45	10:54	13.3	1.9	0.0	0.6	0.0	0.0	0.0	1.3	9.0
leaf run-off	10:45	10:54	3.1		0.0	0.0	0.6	6.4	2.6	11.5	27.5
rain	10:54	11:09	10.9	2.2	0.0	0.0	0.0	0.0	0.6	0.0	5.7
leaf run-off	10:54	11:09	2.7		0.0	0.6	0.6	1.9	4.5	10.0	15.6
rain	11:09	11:27	13.0	2.6	0.0	0.0	0.6	0.6	0.6	1.9	12.5
leaf run-off	11:09	11:27	3.1		0.0	0.6	1.9	2.5	6.5	6.7	13.5
rain	11:27	11:34	12.2	3.0	0.0	0.0	0.0	0.0	0.6	1.3	7.1
leaf run-off	11:27	11:34	3.0		0.0	0.0	0.6	2.5	1.3	7.8	18.8
rain	11:34	11:42	11.0	3.4	0.0	0.0	0.6	0.0	0.0	3.2	9.8
leaf run-off	11:34	11:42	2.8		0.0	0.0	0.6	3.2	3.2	13.4	27.4
rain	11:42	11:51	14.4	3.8	0.0	0.6	0.0	0.6	0.6	8.4	11.5
leaf run-off	11:42	11:51	3.4		0.6	0.6	1.3	1.9	3.2	14.8	40.1
rain	11:51	11:57	13.4	4.2	0.0	0.0	0.6	0.0	0.6	22.6	58.5
leaf run-off	11:51	11:57	3.1		1.3	1.3	3.2	3.2	6.0	21.3	68.0
rain	11:57	12:03	11.9	4.6	0.0	0.0	0.6	0.0	2.5	7.8	13.0
leaf run-off	11:57	12:03	3.1		0.0	0.6	0.6	0.0	5.1	15.4	53.2
rain	12:03	12:11	13.6	5.1	0.0	0.0	0.0	0.0	0.6	2.5	7.1
leaf run-off	12:03	12:11	3.7		0.6	0.0	1.3	3.8	5.9	13.7	50.6
rain	12:11	12:20	12.2	5.4	0.0	0.0	0.0	0.0	0.0	2.5	11.7
leaf run-off	12:11	12:20	3.7		0.0	0.0	0.6	0.6	1.3	8.4	41.7
rain	12:20	12:29	13.2	5.9	0.0	0.0	0.0	0.0	0.6	5.1	7.9
leaf run-off	12:20	12:29	3.6		0.0	0.6	1.9	2.5	0.6	3.9	52.1
rain	12:29	12:36	12.8	6.3	0.6	0.0	0.0	0.0	0.0	1.3	12.4
leaf run-off	12:29	12:36	3.6		0.0	0.0	0.0	0.0	2.5	9.1	22.4
rain	12:36	12:42	13.0	6.7	0.0	0.0	0.0	0.6	0.0	0.0	4.4
leaf run-off	12:36	12:42	3.3		0.0	0.6	0.0	2.5	4.5	22.7	28.9
rain	12:42	12:48	15.6	7.2	0.0	0.0	0.6	0.0	0.6	3.8	3.2
leaf run-off	12:42	12:48	4.7		0.0	0.0	0.6	2.5	2.6	7.9	18.2
rain	12:48	12:55	21.2	7.9	0.0	0.6	0.6	0.0	1.3	3.8	6.6
leaf run-off	12:48	12:55	6.1		0.0	1.3	1.3	1.3	2.6	10.6	29.2
rain	12:55	13:02	15.4	8.4	0.0	0.0	0.0	0.6	0.0	8.3	5.3
leaf run-off	12:55	13:02	4.0		0.0	0.0	0.6	0.0	0.6	2.5	9.8
rain	13:02	13:07	12.2	8.7	0.0	0.0	0.0	0.0	0.0	1.3	3.2
leaf run-off	13:02	13:07	3.3		0.0	0.0	0.0	0.0	0.0	5.7	12.6
rain	13:07	13:13	17.2	9.3	0.0	0.0	0.0	0.0	1.3	2.5	5.8
leaf run-off	13:07	13:13	4.6		0.0	0.6	1.3	0.6	1.3	3.9	7.9
rain	13:13	13:18	15.0	9.8	0.0	0.0	0.0	0.6	0.0	0.6	3.2
leaf run-off	13:13	13:18	4.2		0.0	0.0	0.0	0.0	1.3	1.9	3.8
rain	13:18	13:23	14.2	10.2	0.0	0.0	0.0	0.6	2.5	0.0	4.5
leaf run-off	13:18	13:23	3.6		0.0	0.0	7.0	2.6	2.0	9.5	23.6
NaCl solution in which leaf was sonicated			45.0	-	1.3	1.3	6.4	14.9	13.1	41.6	148.1