

	Solution (mg L ⁻¹)	Average contact angle (θ)	Average surface tension (mN m ⁻¹)	Time (s)	Average number of fingers	Average velocity of fingers (cm s ⁻¹)	Average depth of wetting front (cm)	Average length of fingers (cm)	Width of fingers (cm) at specific percentage of their length				Average width of fingers (cm)
									25 %	50 %	75 %	90 %	
10 min finger average	NaCl + HNS	64.5 ± 2.6A	75.8 ± 0.5A	600	2.5C	0.029 ± 0.003AB	6.13 ± 2.63AB	17.32 ± 1.67AB	9.30	8.52	7.41	5.67	7.73 ± 1.17A
	Citrate 0.1 mg L ⁻¹	52.6 ± 2.3D	70.8 ± 0.4B	600	1.5B	0.037 ± 0.003AB	3.50 ± 1.00AB	22.36 ± 1.72AB	6.83	5.71	6.42	5.59	6.14 ± 0.65A
	Citrate 500 mg L ⁻¹	46 ± 4.9BC	73.6 ± 1.1C	600	2.0B	0.032 ± 0.011AB	2.50 ± 1.50AB	19.46 ± 6.63AB	9.23	7.56	6.68	5.50	7.24 ± 1.31A
	Oxalate 0.1 mg L ⁻¹	54.8 ± 0.6CD	73.1 ± 0.4C	600	2.5B	0.034 ± 0.005AB	3.38 ± 1.88AB	20.24 ± 2.94AB	7.50	7.90	7.89	6.31	7.40 ± 0.34A
	Oxalate 500 mg L ⁻¹	47.3 ± 2.3B	71.6 ± 0.6B	600	2.5A	0.037 ± 0.005AB	2.25 ± 0.25B	22.16 ± 2.88AB	8.41	6.55	6.77	6.13	6.97 ± 0.61A
	Tannic acid 0.1 mg L ⁻¹	52.3 ± 1.2B	72.7 ± 0.4C	600	2.0B	0.032 ± 0.003AB	4.25 ± 0.00AB	19.14 ± 1.64AB	10.35	9.11	6.71	5.11	7.82 ± 0.32A
	Tannic acid 500 mg L ⁻¹	54.4 ± 2.7BC	70.8 ± 0.3B	600	2.0B	0.042 ± 0.008A	2.50 ± 0.50AB	25.49 ± 4.87A	5.78	6.79	8.67	8.71	7.49 ± 0.63A
	Organics (SRNOM) 0.1 mg L ⁻¹	61.7 ± 2.6D	71.1 ± 0.2B	600	2.5B	0.029 ± 0.001AB	7.00 ± 2.00A	17.66 ± 0.81B	7.13	7.15	7.40	4.79	6.62 ± 0.38A
	Organics (SRNOM) 10 mg L ⁻¹	45.0 ± 2.6A	73.4 ± 0.4C	600	2.0B	0.022 ± 0.000B	3.25 ± 0.75AB	13.29 ± 0.15A	6.30	5.49	6.31	5.89	6.00 ± 0.16A
Fully formed finger average	NaCl + HNS	64.5 ± 2.6A	75.8 ± 0.5A	945	2.5A	0.031 ± 0.004B	8.13 ± 0.63AB	28.84 ± 1.25A	10.05	9.06	9.53	8.30	9.24 ± 0.84AB
	Citrate 0.1 mg L ⁻¹	52.6 ± 2.3D	70.8 ± 0.4B	750	1.5A	0.039 ± 0.002AB	3.50 ± 1.00BC	29.46 ± 0.64A	6.99	6.75	6.87	5.93	6.63 ± 0.67C
	Citrate 500 mg L ⁻¹	46 ± 4.9BC	73.6 ± 1.1C	840	2.0A	0.037 ± 0.008AB	3.88 ± 2.88BC	29.52 ± 0.08A	9.14	7.56	6.88	7.95	7.88 ± 1.15ABC
	Oxalate 0.1 mg L ⁻¹	54.8 ± 0.6CD	73.1 ± 0.4C	825	2.0A	0.034 ± 0.001AB	3.38 ± 1.88BC	27.86 ± 0.65AB	6.96	8.33	8.61	9.53	8.36 ± 0.95ABC
	Oxalate 500 mg L ⁻¹	47.3 ± 2.3B	71.6 ± 0.6B	720	2.5A	0.039 ± 0.006AB	2.25 ± 0.25C	27.52 ± 0.65AB	8.01	7.50	7.27	5.68	7.12 ± 1.32BC
	Tannic acid 0.1 mg L ⁻¹	52.3 ± 1.2B	72.7 ± 0.4C	930	2.0A	0.03 ± 0.001B	5.50 ± 1.00ABC	27.78 ± 1.32AB	10.63	9.41	10.09	10.65	10.19 ± 1.05A
	Tannic acid 500 mg L ⁻¹	54.4 ± 2.7BC	70.8 ± 0.3B	660	1.5A	0.046 ± 0.005A	2.50 ± 0.50BC	29.9 ± 0.46A	6.08	7.36	8.80	8.05	7.57 ± 1.44BC
	Organics (SRNOM) 0.1 mg L ⁻¹	61.7 ± 2.6D	71.1 ± 0.2B	870	2.5A	0.030 ± 0.001B	9.75 ± 2.75A	25.73 ± 0.59A	7.54	8.31	8.30	5.73	7.47 ± 1.11BC
	Organics (SRNOM) 10 mg L ⁻¹	45.0 ± 2.6A	73.4 ± 0.4C	975	2.0A	0.030 ± 0.001B	5.00 ± 2.50ABC	29.25 ± 0.05B	5.92	7.84	5.90	4.32	6.00 ± 1.35C