

Evaluating aerosol and splatter following dental procedures: addressing new challenges for oral healthcare and rehabilitation

Allison JR, Currie CC, Edwards DC, Bowes C, Coulter J, Pickering K, Kozhevnikova E, Durham J, Nile CJ, Jakubovics N, Rostami N, Holliday R

Supplementary Table 1

Position on operator/assistant/mannequin	Min	Total surface area (mm ²)					Fluorescence (RFU)		
	Mean (SD)	Anterior crown prep (no suction) [†]	Anterior crown prep with suction [‡]	Anterior crown prep with suction and assistant [§]	Ultrasonic scaling with suction [¶]	3-in-1 spray with suction [#]	Anterior crown prep (no suction) [†]		
	Max						Initial collection	30-40 min post-procedure collection	60-70 min post-procedure collection
Sum [n]									
Mannequin	Upper Left	98.69	105.02	370.96	213.92	247.77	777	0	0
		269.27	162.92	398.40	269.82	371.86	43,286	0	0
		(237.35)	(61.11)	(44.60)	(49.29)	(121.58)	(51,113)	(0)	(0)
		540.33	226.80	449.86	307.01	490.78	100,000	0	0
		807.81	488.77	1,195.19	809.46	1,115.59	129,858	0	0
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[2]
	Upper Right	43.06	30.40	19.28	88.91	41.35	997	0	0
		111.44	35.59	28.71	111.02	148.61	52,658	0	0
		(59.47)	(8.94)	(10.68)	(35.16)	(123.87)	(49,643)	(0)	(0)
		151.13	45.91	40.30	151.56	284.91	100,000	0	0
		334.31	106.76	86.14	333.06	445.83	157,973	0	0
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[2]
	Lower Left	14.07	4.48	10.46	0.00	11.24	680	0	0
		38.97	9.77	12.68	0.01	21.53	5,353	0	0
		(29.90)	(4.61)	(2.43)	(0.02)	(11.32)	(5,913)	(0)	(0)
		72.13	12.97	15.27	0.03	33.66	12,000	0	0
116.91		29.30	38.03	0.03	64.59	16,058	0	0	
	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	
Lower Right	0.82	1.69	0.02	0.00	1.38	743	0	0	
	2.75	4.11	0.95	0.01	3.87	3,213	0	0	
	(2.65)	(2.45)	(0.96)	(0.01)	(4.08)	(3,572)	(0)	(0)	
	5.77	6.59	1.94	0.02	8.58	7309	0	0	
	8.25	12.34	2.85	0.02	11.62	9639	0	0	
	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	
Operator	Head	0.00	0.08	0.00	0.00	0.00			
		0.14	0.53	0.20	0.01	0.00			
		(0.19)	(0.61)	(0.34)	(0.01)	(0.00)			
		0.27	1.23	0.60	0.02	0.00			
		0.27	1.58	0.60	0.02	0.00			
		[2]	[3]	[3]	[3]	[3]			
	Left chest	469.58	269.52	222.95	206.68	19.51			
		535.70	484.97	423.03	308.71	76.51			
		(59.23)	(199.98)	(212.60)	(89.07)	(50.68)			
		583.91	664.65	646.27	370.95	116.46			
1,607.11		1,454.90	1,269.10	926.12	229.53				
	[3]	[3]	[3]	[3]	[3]				
Right chest	0.53	0.00	0.00	1.38	0.01				
	2.83	2.02	0.50	11.25	7.04				
	(3.71)	(3.40)	(0.85)	(8.74)	(6.42)				
	7.12	5.95	1.49	18.01	12.58				
	8.50	6.07	1.50	33.75	6.34				
	[3]	[3]	[3]	[3]	[3]				

Evaluating aerosol and splatter following dental procedures: addressing new challenges for oral healthcare and rehabilitation

Allison JR, Currie CC, Edwards DC, Bowes C, Coulter J, Pickering K, Kozhevnikova E, Durham J, Nile CJ, Jakubovics N, Rostami N, Holliday R

Supplementary Table 1

Left arm	558.02	638.73	352.45	9.05	1.74
	638.17	660.86	527.30	17.02	9.04
	(77.48)	(27.20)	(157.84)	(8.46)	(7.87)
	712.67	691.23	659.26	25.89	17.37
	1,875.91	1,982.57	1,581.91	51.07	27.11
	[3]	[3]	[3]	[3]	[3]
Right arm	0.00	0.79	0.01	2.35	0.01
	9.59	1.05	0.60	11.25	7.04
	(8.57)	(0.40)	(1.01)	(13.47)	(6.42)
	16.51	1.51	1.76	26.75	12.58
	28.78	3.15	1.79	33.74	21.12
	[3]	[3]	[3]	[3]	[3]
Left leg	0.00	0.00	0.00	40.44	77.98
	0.03	1.28	30.92	194.70	173.71
	(334.69)	(2.09)	(46.90)	(208.73)	(118.20)
	579.72	3.70	84.89	432.20	305.83
	579.75	3.85	92.75	584.09	521.12
	[3]	[3]	[3]	[3]	[3]
Right leg	0.00	0.00	0.00	0.00	0.00
	0.76	0.02	0.01	0.14	1.06
	(0.31)	(0.03)	(0.02)	(0.02)	(1.00)
	2.27	0.05	0.03	0.04	2.00
	2.27	0.05	0.03	0.04	3.19
	[3]	[3]	[3]	[3]	[3]
Visor-upper right	0.00	0.00	0.00	0.00	0.00
	0.02	0.01	0.03	0.01	0.00
	(0.03)	(0.02)	(0.05)	(0.02)	(0.00)
	0.05	0.03	0.09	0.03	0.00
	0.07	0.03	0.09	0.03	0.00
	[3]	[3]	[3]	[3]	[3]
Visor-upper mid	0.00	0.00	0.00	0.00	0.00
	0.19	0.10	0.01	0.01	0.00
	(0.62)	(0.17)	(0.02)	(0.01)	(0.00)
	1.16	0.30	0.03	0.02	0.00
	1.35	0.30	0.03	0.02	0.00
	[3]	[3]	[3]	[3]	[3]
Visor-upper left	0.00	0.00	0.00	0.00	0.00
	0.79	0.01	0.01	0.01	0.00
	(0.96)	(0.02)	(0.01)	(0.01)	(0.00)
	1.86	0.03	0.02	0.03	0.00
	2.36	0.03	0.03	0.03	0.00
	[3]	[3]	[3]	[3]	[3]
Visor-lower left	8.33	0.09	0.12	0.00	0.00
	12.74	8.02	1.84	0.83	0.01
	(4.63)	(6.86)	(2.89)	(1.02)	(0.01)
	17.56	12.00	5.18	1.97	0.02
	38.22	24.05	5.52	2.49	0.02
	[3]	[3]	[3]	[3]	[3]
Visor-lower mid	348.98	17.92	11.41	74.03	0.00
	444.87	63.61	70.51	96.06	12.43
	(137.03)	(47.68)	(101.58)	(33.92)	(19.89)
	601.81	113.05	187.78	135.12	35.37
	1,334.60	190.82	211.53	288.19	37.30

Evaluating aerosol and splatter following dental procedures: addressing new challenges for oral healthcare and rehabilitation

Allison JR, Currie CC, Edwards DC, Bowes C, Coulter J, Pickering K, Kozhevnikova E, Durham J, Nile CJ, Jakubovics N, Rostami N, Holliday R

Supplementary Table 1

	[3]	[3]	[3]	[3]	[3]
Visor-lower right	0.01	0.00	0.00	0.00	0.00
	0.15	0.01	0.04	0.01	0.00
	(0.23)	(0.02)	(0.04)	(0.01)	(0.00)
	0.42	0.03	0.09	0.02	0.00
	0.45	0.03	0.12	0.02	0.00
	[3]	[3]	[3]	[3]	[3]
Mask- left			0.00		
			0.03		
			(0.03)		
			0.06		
			0.10		
		[3]			
Mask- mid			0.00		
			0.00		
			(0.01)		
			0.01		
			0.01		
		[3]			
Mask- right			0.00		
			0.00		
			(0.01)		
			0.01		
			0.01		
		[3]			
Assistant	Head		0.00		
			0.01		
			(0.01)		
			0.02		
			0.02		
		[3]			
	Left chest		0.12		
			21.94		
			(37.70)		
			65.46		
			65.81		
		[3]			
	Right chest		0.04		
			0.14		
			(0.14)		
		0.30			
		0.42			
	[3]				
Left arm		0.00			
		11.52			
		(15.37)			
		28.97			
		34.56			
	[3]				
Right arm		0.10			
		4.29			
		(3.99)			

Evaluating aerosol and splatter following dental procedures: addressing new challenges for oral healthcare and rehabilitation

Allison JR, Currie CC, Edwards DC, Bowes C, Coulter J, Pickering K, Kozhevnikova E, Durham J, Nile CJ, Jakubovics N, Rostami N, Holliday R

Supplementary Table 1

	8.04
	12.87
	[3]
Left leg	0.08
	0.58
	(0.48)
	1.04
	1.74
	[3]
Right leg	0.00
	0.37
	(0.64)
	1.12
	1.12
	[3]
Visor-upper right	0.00
	0.00
	(0.00)
	0.00
	0.00
	[3]
Visor-upper mid	0.00
	0.00
	(0.00)
	0.00
	0.00
	[3]
Visor-upper left	0.00
	0.00
	(0.00)
	0.00
	0.00
	[3]
Visor-lower left	0.00
	0.00
	(0.00)
	0.00
	0.00
	[3]
Visor-lower mid	0.00
	0.02
	(0.03)
	0.05
	0.05
	[3]
Visor-lower right	0.00
	0.00
	(0.01)
	0.01
	0.01
	[3]
Mask- left	0.00

Evaluating aerosol and splatter following dental procedures: addressing new challenges for oral healthcare and rehabilitation

Allison JR, Currie CC, Edwards DC, Bowes C, Coulter J, Pickering K, Kozhevnikova E, Durham J, Nile CJ, Jakubovics N, Rostami N, Holliday R

Supplementary Table 1

	0.01
	(0.01)
	0.01
	0.01
	[3]
Mask- mid	0.00
	0.00
	(0.00)
	0.00
	0.00
	[3]
Mask- right	0.00
	0.02
	(0.04)
	0.07
	0.07
	[3]

Supplementary Table 1. summary of surface area and spectrofluorometric data collected from the mannequin, operator and assistant. Each location represents three repetitions. RFU: relative fluorescence units.

† Anterior crown preparation on upper right central incisor without suction or assistant. 10 minutes duration.

‡ Anterior crown preparation on upper right central incisor with suction. 10 minutes duration.

§ Anterior crown preparation on upper right central incisor with suction and assistant. 10 minutes duration.

¶ Full mouth ultrasonic scaling with suction. 10 minutes duration.

3-in-1 spray with suction of a MO cavity in upper right first premolar tooth. 30 second duration to replicate washing acid etchant.