

Supplementary Material-B

Study Location	Mineral Specimen	Study population	Study levels mean (σ)	Control population	Control levels mean (σ)
Schwertner 2016 Brazil	Calcium Saliva	Down's syndrome (DS) ($N = 61$)	31.91 (1.67405)	Control ($N = 83$) Male %: 54.2% $\mu_{age} \pm \sigma: 9.43 \pm 1.84$ years	29.283 (6.948)
	Phosphorus Saliva	Male %: 57.40% mean age (μ_{age}) \pm standard deviation (σ): 9 ± 2.06 years	0.287 (0.12593)		0.27 (0.0963)
Stagi 2015 Italy	Calcium Plasma	DS ($N = 31$) Male %, 54.84%	2.42 (0.14)	Healthy ($N = 99$) Male %: 51.51% Range: 4.8 - 19.8 years	2.51 (0.1)
	Phosphate Plasma	Range: 4.5 - 18.9 years	1.32 (0.24)		1.3 (0.32)
Areias 2013 Portugal	Calcium Saliva	DS ($N = 45$) Male %: 49% $\mu_{age} \pm \sigma: 12.7 \pm 4$ years	3.34 (2.27)	Control ($N = 45$) Male %: 60% $\mu_{age} \pm \sigma: 12.8 \pm 3.7$ years	4.26 (3.13)
	Phosphate Saliva		11 (5.7)		12.8 (6)
	Potassium Saliva		15.8 (7.6)		17.1 (6.7)
	Chloride Saliva		20.5 (5.1)		22.3 (4,6)

Yamato 2009 Japan	Calcium Serum	DS (<i>N</i> = 27) Male %: 59.26% $\mu_{age} \pm \sigma$: 8.6 \pm 4.6 years	8.2 (0.9)	Healthy (<i>N</i> = 14) Male %: 57.14% $\mu_{age} \pm \sigma$: 12 \pm 3.9 years	9.2 (0.2)
Siqueira 2007 US	Sodium Saliva	DS (<i>N</i> = 20) Range: 12-60 months	8.7 (0.87)	Healthy (<i>N</i> = 18) Range: 12-60 months	5.44 (1.19)
	Potassium Saliva		5.6 (1.04)		7.93 (1.49)
	Phosphorus Saliva		1.09 (0.12)		1.17 (0.17)
	Calcium Saliva		0.5 (0.08)		0.47 (0.1)
	Magnesium Saliva		0.06 (0.03)		0.06 (0.02)
Sakadamis 2002 Greece	Calcium Serum	DS (<i>N</i> = 11) Male %: 100%	2.43 (0.21)	Healthy (<i>N</i> = 12) $\mu_{age} \pm \sigma$: 24.92 \pm 3.06 years	2.5 (0.01)
	Phosphate Serum	$\mu_{age} \pm \sigma$: 26.45 \pm 3.91 years	1.47 (0.2)		1.48 (0.18)
Siqueira 2004 Brazil	Sodium Saliva	DS (<i>N</i> = 22) Male %: 54.54	9.49 (2.1)	Healthy (<i>N</i> = 21) Male %: 52.38 Range: 6-10 years	5.69 (1.54)
	Potassium Saliva	Range: 6-10 years	5.32 (1.88)		7.52 (1.28)

	Phosphorus Saliva		1.16 (0.31)		1.1 (0.31)
	Calcium Saliva		0.45 (0.16)		0.42 (0.09)
	Magnesium Saliva		0.06 (0.014)		0.06 (0.027)
Hestnes 1991 Norway	Sodium Serum	Down's syndrome ($N = 29$) Male %: 79.3 $\mu_{age} \pm \sigma: 43.6 \pm 11.8$ years	142 (4)	Control ($N = 29$) Male %: 79.3 $\mu_{age} \pm \sigma: 44.6 \pm 12.3$ years	140 (3)
	Potassium Serum		4.1 (0.3)		4 (0.4)
	Calcium Serum		2.3 (0.09)		2.3 (0.1)
	Phosphate Serum		1.1 (0.14)		1.1 (0.15)
	Chloride Serum		102 (3)		102 (3)
Jara 1991 Chile	Chloride Saliva	DS ($N = 19$) Male %: 52.6% Mean (range): 19.5 (10-25) years	19.69 (8.04)	Normal ($N = 20$) Male %: 85 % Mean (range): 14 (10-19) years	19.3 (3.49)

				Non- DS mentally retarded (<i>N</i> = 21) Male %: 80.95 % Mean (range): 15 (11-22) years	19.25 (10.6)
		DS (<i>N</i> = 20)	16.5 (8.6)	Normal (<i>N</i> = 10)	23.93 (11.82)
				Non- DS mentally retarded (<i>N</i> = 13)	16.4 (5.8)
	Sodium Saliva	DS (<i>N</i> = 19) Male %: 52.6% Mean (range): 19.5 (10- 25) years	22.79 (11.35)	Normal (<i>N</i> = 20) Male %: 85 % Mean (range): 14 (10-19) years	17.1 (3.07)
				Non- DS mentally retarded (<i>N</i> = 21) Male %: 80.95 % Mean (range): 15 (11-22) years	19 (13.65)
		DS (<i>N</i> = 20)	22.6 (17.8)	Normal (n = 10)	20.5 (19.91)

				Non- DS mentally retarded (<i>N</i> = 13)	21.1 (11.9)
	Potassium Saliva	DS (<i>N</i> = 19) Male %: 52.6% Mean (range): 19.5 (10- 25) years	21.01 (2.21)	Normal (<i>N</i> = 20) Male %: 85 % Mean (range): 14 (10-19) years	23.58 (2.93)
Non- DS mentally retarded (<i>N</i> = 21) Male %: 80.95 % Mean (range): 15 (11-22) years				23.27 (3.98)	
DS (<i>N</i> = 20)		20 (4.9)	Normal (<i>N</i> = 10)	19 (2.6)	
				Non- DS mentally retarded (<i>N</i> = 13)	20.21 (3.31)
Chapman 1967 Surrey	Sodium Parotid saliva	DS (<i>N</i> = 33) Mean (range): 6 (1-12) years	26.1 (21.05)	Normal controls (<i>N</i> = 31) Range: 18-43 years	5.9 (3)
				Severely subnormal control subjects (<i>N</i> = 29) Mean (range): 6 (2-14) years	10.4 (9.375)

Barlow 1981 England	Calcium	DS ($N = 69$) Male %: 100 $\mu_{age} \pm \sigma$: 39.4 ± 9.3 years	391 (167) 34.1 (18.8)	Normal controls ($N = 35$) Male %: 100 $\mu_{age} \pm \sigma$: 32.7 ± 20.1 years	726 (472) 63.8 (31.6)
				Patients without DS ($N = 49$) Male %: 100 $\mu_{age} \pm \sigma$: 41.4 ± 8.3 years	583 (241) 37.3 (15.5)
	Magnesium	DS ($N = 67$) Male %: 0 $\mu_{age} \pm \sigma$: 37.1 ± 12.7 years	525 (290) 41.1 (26)	Normal controls ($N = 51$) Male %: 0 Mean \pm SD: 39.9 ± 22.9 years	1123 (686) 81.2 (62.1)
				Patients without DS ($N = 20$) Male %: 0 $\mu_{age} \pm \sigma$: 53.7 ± 16.6 years	1031 (567) 46.3 (32.1)
	Hair	DS ($N = 36$) Male %: 52.78 Range: 6-22 years	47.4 (11.4) 4.7 (1.9)	Non-trisomy mentally retarded ($N = 28$) Male %: 57.14 Range: 6-22 years	38.3 (11.7) 3.6 (2.6)
				Non-trisomy mentally retarded ($N = 16$)	18.9 (8) 2 (0.71)
Cutress 1972 New Zealand	Calcium	DS ($N = 20$) Male %: 40	21 (5) 2 (0.9)		

	Parotid saliva	Range: 7-22 years		Male %: 50 Range: 8-23 years	
	Sodium Potassium Whole saliva	DS (n = 36) Male %: 52.78 Range: 6-22 years	178 (79) 815 (154)	Non-trisomy mentally retarded (N = 28) Male %: 57.14 Range: 6-22 years	208 (122) 698 (90)
	Sodium Potassium Parotid saliva	DS (N = 20) Male %: 40 Range: 7-22 years	257 (202) 742 (119)	Non-trisomy mentally retarded (N = 16) Male %: 50 Range: 8-23 years	125 (86) 828 (179)
	Phosphate Whole saliva	DS (N = 36) Male %: 52.78 Range: 6-22 years	148 (50)	Non-trisomy mentally retarded (N = 28) Male %: 57.14 Range: 6-22 years	118 (33)
	Phosphate Parotid saliva	DS (N = 20) Male %: 40 Range: 7-22 years	135 (22)	Non-trisomy mentally retarded (N = 16) Male %: 50 Range: 8-23 years	128 (57)