

APPENDIX 1

Table A1-A. Annual mean TSP, PM10 (highlighted with asterisk) and gaseous pollutants levels in air quality monitoring stations from Catalonia, Eastern Spain. ND: Data availability <60%.

Station	ANNUAL MEAN ($\mu\text{g}/\text{m}^3$)			Station	ANNUAL MEAN ($\mu\text{g}/\text{m}^3$)		
	TSP*	NO _x	SO ₂		TSP	NO _x	SO ₂
S. ANDREU	94	ND	13	BONAVISTA	61	35	8
1996	83	ND	14	1996	54	40	12
1997	127	ND	14	1997	63	33	11
1998	117	ND	17	1998	64	33	6
1999	78	68	9	1999	63	34	2
2000	58*	75	9	2000	54	32	3
CUBELLES	27	ND	21	FORNELLS	33	38	17
1996	28	ND	23	1996	34	37	17
1997	30	ND	21	1997	39	41	21
1998	30	ND	18	1998	34	42	20
1999	26	ND	19	1999	30	40	14
2000	19	ND	23	2000	25	39	19
IGUALADA	52	53	30	L'HOSPITALET	46	90	13
1996	53	52	37	1996	44	89	16
1997	60	57	33	1997	51	95	13
1998	56	53	30	1998	46	104	ND
1999	49	53	19	1999	40	79	14
2000	45	53	12	2000	49*	81	8
MARTORELL	54	118	15	MONTCADA	81	114	20
1996	55	144	19	1996	71	138	17
1997	57	119	15	1997	82	149	15
1998	57	106	12	1998	80	100	33
1999	50	89	11	1999	74	85	23
2000	46	87	9	2000	87	91	5
SAGRERA	47	84	13	S. VIÇENT	73	ND	16
1996	43	98	12	1996	ND	ND	10
1997	51	93	12	1997	108	ND	12
1998	48	73	16	1998	55	ND	23
1999	43	62	11	1999	53	121	19
2000	29*	76	12	2000	32*	81	21

Table A1-B. Annual mean TSP, PM10 (highlighted with asterisk) and gaseous pollutants levels in air quality monitoring stations from Valencia and Southern Aragon (only MONAGREGA), Eastern Spain. ND: Data availability <60%.

Station	ANNUAL MEAN ($\mu\text{g}/\text{m}^3$)			Station	ANNUAL MEAN ($\mu\text{g}/\text{m}^3$)		
	TSP*	NO _x	SO ₂		TSP	NO _x	SO ₂
PENYETA	33	27	9	ONDA	56	25	5
1996	32	25	11	1996	ND	ND	ND
1997	36	32	8	1997	50	28	5
1998	35	32	8	1998	61	31	6
1999	31	23	8	1999	55	27	6
2000	32	25	10	2000	60	16	5
ERMITA 77	46	7	4	SAGUNTO	62	94	7
1996	ND	62	10	1996	53	162	13
1997	70	68	9	1997	46	140	10
1998	82	34	6	1998	50	119	9
1999	82	44	7	1999	75	48	5
2000	73	37	8	2000	76	71	4
GRAN VIA	63	162	14	GANDIA	74	40	4
1996	65	168	21	1996	78	41	6
1997	68	186	14	1997	73	40	4
1998	61	163	13	1998	88	47	4
1999	53	168	12	1999	80	39	5
2000	48	125	8	2000	70	33	4
CORATXAR	16	12	17	MORELLA	19	10	9
1996	ND	15	18	1996	ND	13	7
1997	16	8	23	1997	21	9	11
1998	20	10	10	1998	20	10	10
1999	12	19	13	1999	19	10	6
2000	15	10	21	2000	21	8	7
MONAGREGA	17*	8	21				
1996	17*	7	27				
1997	18*	8	20				
1998	18*	7	21				
1999	17*	8	20				
2000	17*	8	15				

APPENDIX 2

Episodes of high and low PM10 and TSP levels simultaneously recorded in the air network in Eastern Spain, and the interpretation of the origin. In the "Range-levels" column the events is identified as a "high" or "low" episodes, it is also provided the mean TSP and PM10 levels in the air quality network between brackets. In the "Observations" column is provided the mean PM10 levels at MONAGREGA (MON) rural station during each episode. In the "Origin" column is provided the result of the interpretation in basis to the methodology described in chapter 3. High PM Episode (High): **ANT** anthropogenic – local origin; **Africa** transport of African dust; **EU** transport of air masses from mainland Europe; **RE** air masses with a regional origin. Low PM Episode: abrupt entries of air masses from the NW Atlantic (**ANW**), West (**AW**), Southeast (**ASW**) o Western Europe (**WE**), Central Europe (**CE**) o Eastern Europe (**EE**).

1996

JANUARY-1996

	Dates	Range levels	Observations	Origin
En96-1	1-2 JANUARY	Low(30)	MON: 6µgPM10/m ³	AW
En96-2	3-5 JANUARY	High(60)	MON: 15µgPM10/m ³	ANT-Urban+RE-rural
En96-3	6-14 JANUARY	Low(30)	MON: 7µgPM10/m ³	ASW+AW
En96-4	15-17 JANUARY	High(40)	MON: 20µgPM10/m ³	Africa
En96-5	18-21 JANUARY	High Urban(50)	MON: 10µgPM10/m ³	ANT-Urban+ASW-rural
En96-6	22-23 JANUARY	High(80)	MON: 40µgPM10/m ³	Africa
En96-7	24-25 JANUARY	Low(20)	MON: 5µgPM10/m ³	ASW
En96-8	26-29 JANUARY	High Urban(50)	MON: 10µgPM10/m ³	ANT-Urban
En96-9	30-31 JANUARY	Low(30)	MON: 10µgPM10/m ³	ASW

FEBRUARY-1996

	Dates	Range-levels	Observations	Origin
Feb96-1	1-14 FEBRUARY	Low(20)	MON: 6µgPM10/m ³	ANW
Feb96-2	15-17 FEBRUARY	High(40)	MON: 15µgPM10/m ³	ANT-Urban+CE-rural
Feb96-3	18-27 FEBRUARY	Low(20)	MON: 5µgPM10/m ³	ANW
Feb96-4	28 FEB. – 1 MARCH	High(40)	MON: 15µgPM10/m ³	Africa

MARCH-1996

	Dates	Range-levels	Observations	Origin
Mar96-1	2-9 MARCH	Low(30)	MON: 15µgPM10/m ³	WE+CE
Mar96-2	10-14 MARCH	High(50)	MON: 25µgPM10/m ³	ANT-Urban+EE-rural
Mar96-3	15-18 MARCH	Low(20)	MON: 7µgPM10/m ³	ANW
Mar96-4	19-23 MARCH	Intermediate(40)	MON: 20µgPM10/m ³	ANT-Urban+RE-rural

Mar96-5	24-26 MARCH	High(60)	MON: 25µgPM10/m ³	Africa
Mar96-6	27-31 MARCH	Low(30)	MON: 10µgPM10/m ³	ANW+AW

APRIL-1996

	Dates	Range-levels	Observations	Origin
Abr96-1	1-10 APRIL	Low(35)	MON: 15µgPM10/m ³	CE
Abr96-2	11-13 APRIL	High(60)	MON: 25µgPM10/m ³	ANT-Urban+RE-rural
Abr96-3	14-19 APRIL	Low(35)	MOR: 10µgPM10/m ³	CE+ANW
Abr96-4	20-22 APRIL	High (50)	MON: 30µgPM10/m ³	Africa
Abr96-5	23-30 APRIL	Low(30)	MON: 15µgPM10/m ³	AW+WE

MAY-1996

	Dates	Range-levels	Observations	Origin
May96-1	1-13 MAY	Low(20)	MON: 10µgPM10/m ³	AW+ASW
May96-2	14- 15 MAY	High(40)	MON: 30µgPM10/m ³	ANT-Urban+RE-rural
May96-3	16-28 MAY	High Urban (40)	MON: 15µgPM10/m ³	ANT-Urban+AW-rural
May96-4	29-31 MAY	High(50)	MON: 30µgPM10/m ³	ANT+WE-Urban+WE-rural

JUNE-1996

	Dates	Range-levels	Observations	Origin
Jun96-1	1-4 JUNE	Low(20)	MON: 10µgPM10/m ³	ANW
Jun96-2	5-20 JUNE	High(50)	MON: 25µgPM10/m ³	Africa(6-13)+WE
Jun96-3	21-26 JUNE	Low (20)	MON: 20µgPM10/m ³	WE
Jun96-4	27-29 JUNE	High (40)	MON: 30µgPM10/m ³	ANT+WE-Urban+WE-rural
Jun96-5	30 JUN-2JUL	Low(30)	MON: 15µgPM10/m ³	ANW

JULY-1996

	Dates	Range-levels	Observations	Origin
Jul96-1	3-5 JULY	High(50)	MON: 35µgPM10/m ³	ANT-Urban+RE-rural
Jul96-2	6-15 JULY	Low(35)	MON: 20µgPM10/m ³	ANW+WE
Jul96-3	16-22 JULY	Intermediate (50)	MON: 25µgPM10/m ³	ANT-Urban+RE+WE-rural
Jul96-4	23-29 JULY	High (70)	MON: 45µgPM10/m ³	Africa
Jul96-5	30-31 JULY	Low(35)	MON: 20µgPM10/m ³	ANW

AUGUST-1996

	Dates	Range-levels	Observations	Origin
Aug96-1	1-5 AUGUST	High(40)	MON: 35µgPM10/m ³	ANT-Urban+RE-rural
Aug96-2	6-8 AUGUST	Low(20)	MON: 8µgPM10/m ³	ANW
Aug96-3	9-16 AUGUST	Intermediate (30)	MON: 20µgPM10/m ³	ANT-Urban+RE-rural
Aug96-4	17-20 AUGUST	High(40)	MON: 25µgPM10/m ³	Africa
Aug96-5	21-27 AUGUST	Intermediate (20)	MON: 17µgPM10/m ³	ANT-Urban+ANW-rural
Aug96-6	28-31 AUGUST	Low(15)	MON: 10µgPM10/m ³	ANW+WE

SEPTIEMBRE-1996

	Dates	Range-levels	Observations	Origin
Sep96-1	1-4 SEPTEMBER	intermediate(25)	MON: 20µgPM10/m ³	ANT-Urban+WE+CE-rural
Sep96-2	5-7 SEPTEMBER	High(50)	MON: 30µgPM10/m ³	ANT+WE-Urban+RE+WE-rural
Sep96-3	8-14 SEPTEMBER	Low(25)	MON: 20µgPM10/m ³	WE+CE
Sep96-4	15-16 SEPTEMBER	High(35)	MON: 30µgPM10/m ³	ANT+WE-Urban+WE-rural
Sep96-5	17-26 SEPTEMBER	Low(20)	MON: 10µgPM10/m ³	ANW+AW
Sep96-6	27-30 SEPTEMBER	High(40)	MON: 30µgPM10/m ³	ANT-Urban+RE-rural

OCTUBRE-1996

	Dates	Range-levels	Observations	Origin
Oct96-1	1-9 OCTOBER	Low(20)	MON: 15µgPM10/m ³	ANW+WE
Oct96-2	10-12 OCTOBER	High(30)	MON: 20µgPM10/m ³	ANT-Urban+RE-rural
Oct96-3	13-20 OCTOBER	Low(20)	MON: 15µgPM10/m ³	ANW+AW
Oct96-4	21-29 OCTOBER	High(60)	MON: 30µgPM10/m ³	Africa
Oct96-5	30 OCT-2 NOVEMBER	Low(40)	MON: 15µgPM10/m ³	ANW

NOVIEMBRE-1996

	Dates	Range-levels	Observations	Origin
Nov96-1	3-4 NOVEMBER	High(50)	MON: 25µgPM10/m ³	ANT-Urban+RE-rural
Nov96-2	5-7 NOVEMBER	Low(40)	MOR: 10µgPM10/m ³	ANW
Nov96-3	8-10 NOVEMBER	High(50)	MON: 20µgPM10/m ³	ANT-Urban+RE-rural
Nov96-4	11-24 NOVEMBER	Low(20)	MON: 6µgPM10/m ³	AW
Nov96-5	25 NOV-2 DECEMBER	High Urban(40)	MON: 8µgPM10/m ³	ANT-Urban+ANW-rural

DICIEMBRE-1996

	Dates	Range-levels	Observations	Origin
Dic96-1	3-5 DECEMBER	High(50)	MON: 15µgPM10/m ³	ANT-Urban+RE-rural
Dic96-2	6-10 DECEMBER	Low(20)	MON: 5µgPM10/m ³	Lluvias
Dic96-3	11-13 DECEMBER	High Urban (50)	MON: 15µgPM10/m ³	ANT-Urban+ASW-rural
Dic96-4	14-15 DECEMBER	Low(25)	MON: 4µgPM10/m ³	WE
Dic96-5	16-17 DECEMBER	High Urban(70)	MON: 8µgPM10/m ³	ANT-Urban+ASW-rural
Dic96-6	18-19 DECEMBER	Low(30)	MON: 6µgPM10/m ³	ASW
Dic96-7	20-23 DECEMBER	High Urban(60)	MON: 10µgPM10/m ³	ANT-Urban+ASW-rural
Dic96-8	24-26 DECEMBER	Low(20)	MON: 4µgPM10/m ³	ASW
Dic96-9	27-28 DECEMBER	High Urban(40)	MON: 6µgPM10/m ³	ANT-Urban+CE-rural
Dic96-10	29-31 DECEMBER	Low(20)	MON: 10µgPM10/m ³	AW

1997**JANUARY-1997**

	Dates	Range-levels	Observations	Origin
En97-1	1-9 JANUARY	Low(20)	MON: 6µgPM10/m ³	ANW+ASW
En97-2	10-15 JANUARY	High Urban (50)	COR: 9µgPM10/m ³	ANT-Urban + CE-rural
En97-3	16-21 JANUARY	Low(30)	MON: 12µgPM10/m ³	ASW
En97-4	22-23 JANUARY	High (90)	COR: 70µgPM10/m ³	Africa
En97-5	24-26 JANUARY	Low(40)	MON: 13µgPM10/m ³	Lluvias
En97-6	27-28 JANUARY	High (60)	MON: 24µgPM10/m ³	Africa
En97-7	29-30 JANUARY	Low(30)	MON: 15µgPM10/m ³	Lluvias
En97-8	31ENE-1 FEBRUARY	High (80)	MON: 20µgPM10/m ³	Africa

FEBRUARY-1997

	Dates	Range-levels	Observations	Origin
Feb97-1	2-4 FEBRUARY	High Urban(60)	MON: 7µgPM10/m ³	ANT-Urban+AW-rural
Feb97-2	5-10 FEBRUARY	Low(50)	MON: 12µgPM10/m ³	ANT-Urban+CE+EE-rural
Feb97-3	11-14 FEBRUARY	High Urban (70)	MON: 10µgPM10/m ³	ANT-Urban+ANW-rural
Feb97-4	15-18 FEBRUARY	Low(30)	MON: 10µgPM10/m ³	ANW
Feb97-5	19-24 FEBRUARY	High(50)	MON: 20µgPM10/m ³	ANT-Urban+RE-rural
Feb97-5	25-26 FEBRUARY	High Urban (50)	MON: 10µgPM10/m ³	ANT-Urban+ANW-rural
Feb97-6	27-28 FEBRUARY	Low(40)	MON: 15µgPM10/m ³	ANW

MARCH-1997

	Dates	Range-levels	Observations	Origin
Mar97-1	1-2 MARCH	Intermediate(70)	MON: 30µgPM10/m ³	ANT-Urban+RE-rural
Mar97-2	3-7 MARCH	High(100)	MON: 60µgPM10/m ³	Africa
Mar97-3	8-11 MARCH	Low(40)	MON: 20µgPM10/m ³	CE
Mar97-4	12-14 MARCH	High(60)	MON: 35µgPM10/m ³	ANT-Urban+EE-rural
Mar97-5	15-17 MARCH	Low(40)	MON: 10µgPM10/m ³	A→WE
Mar97-6	18-19 MARCH	High (70)	MON: 25µgPM10/m ³	ANT-Urban+RE-rural
Mar97-7	20-21 MARCH	Low(40)	MON: 15µgPM10/m ³	ANW
Mar97-8	22-24 MARCH	High(50)	MON: 25µgPM10/m ³	ANT-Urban+RE-rural
Mar97-9	25-31 MARCH	Low(40)	MON: 18µgPM10/m ³	ANW

APRIL-1997

	Dates	Range-levels	Observations	Origin
Abr97-1	1-4 APRIL	High (50)	MON: 27µgPM10/m ³	ANT-Urban+WE-rural
Abr97-2	5-11 APRIL	Low (40)	MON: 20µgPM10/m ³	WE
Abr97-3	12-17 APRIL	High (60)	MON: 27µgPM10/m ³	ANT-Urban+RE-rural
Abr97-4	18-21 APRIL	Low(20)	MON: 10µgPM10/m ³	ASW

Abr97-5	22-26 APRIL	High(50)	MON: 20µgPM10/m ³	ANT-Urban-RE-rural
Abr97-6	27-30 APRIL	Low(30)	MON: 15µgPM10/m ³	ANW

MAY-1997

	Dates	Range-levels	Observations	Origin
May97-1	1-4 MAY	High (40)	MON: 23µgPM10/m ³	ANT-Urban+CE-rural
May97-2	5-9 MAY	High Urban (50)	MON: 8µgPM10/m ³	ANT-Urban+ASW-rural
May97-3	10-16 MAY	High (50)	MON: 23µgPM10/m ³	Africa(13-16)
May97-4	17-21 MAY	Low (30)	MON: 13µgPM10/m ³	ASW-AW
May97-5	22-26 MAY	Intermediate(40)	MON: 22µgPM10/m ³	ANT-Urban+ASW-rural
May97-6	27-30 MAY	High (50)	MON: 40µgPM10/m ³	Africa
May97-7	31 MAY- 1 JUN	High Urban(70)	MON: 10µgPM10/m ³	ANT-Urban+ASW-rural

JUNE-1997

	Dates	Range-levels	Observations	Origin
Jun97-1	2-8 JUNE	Low (30)	MON: 12µgPM10/m ³	ASW
Jun97-2	9-16 JUNE	High (40)	MON: 20µgPM10/m ³	ANT-Urban+RE-rural
Jun97-3	17-22 JUNE	Low (30)	MON: 17µgPM10/m ³	ANW
Jun97-4	23-26 JUNE	High (30)	MON: 26µgPM10/m ³	ANT-Urban+RE-rural
Jun97-5	27-30 JUNE	Low(20)	MON: 9µgPM10/m ³	ANW

JULY-1997

	Dates	Range-levels	Observations	Origin
Jul97-1	1-6 JULY	Low(25)	MON: 10µgPM10/m ³	ASW
Jul97-2	7-11 JULY	High(30)	MON: 23µgPM10/m ³	ANT-Urban+RE-rural
Jul97-3	12-13 JULY	High Urban (30)	MON: 15µgPM10/m ³	AW
Jul97-4	14-16 JULY	High(40)	MON: 25µgPM10/m ³	Africa
Jul97-5	17-19 JULY	Low(30)	MON: 10µgPM10/m ³	ANW
Jul97-6	20-23 JULY	High (30)	MON: 20µgPM10/m ³	ANT-Urban+RE-rural
Jul97-7	24-27 JULY	High Urban(30)	MON: 13µgPM10/m ³	ANW
Jul97-8	28-31 JULY	Intermediate (30)	MON: 30µgPM10/m ³	ANT-Urban+RE-rural

AUGUST-1997

	Dates	Range-levels	Observations	Origin
Aug97-1	1-9 AUGUST	Intermediate(50)	MON: 30µgPM10/m ³	ANT-Urban+RE-SW-rural
Aug97-2	10-11 AUGUST	High(80)	MON: 50µgPM10/m ³	Africa
Aug97-3	12-21 AUGUST	Intermediate(30)	MON: 23µgPM10/m ³	ANT-Urban+RE+WE-rural
Aug97-4	22-31 AUGUST	High Urban(30)	MON: 15µgPM10/m ³	ANW

SEPTIEMBRE-1997

	Dates	Range-levels	Observations	Origin
Sep97-1	1-7 SEPTEMBER	Low(40)	MON: 20µgPM10/m ³	ANW+EE
Sep97-2	8-13 SEPTEMBER	High(50)	MON: 30µgPM10/m ³	ANT-Urban+RE-rural

Sep97-3	14-17 SEPTEMBER	Low(35)	MON: 12µgPM10/m ³	WE
Sep97-4	18-23 SEPTEMBER	High(40)	MON: 27µgPM10/m ³	ANT-Urban+WE+EE-rural
Sep97-5	24-30 SEPTEMBER	High Urban(40)	MON: 24µgPM10/m ³	WE+Lluvias

OCTUBRE-1997

	Dates	Range-levels	Observations	Origin
Oct97-1	1-5 OCTOBER	High (80)	MON: 35µgPM10/m ³	ANT-Urban+WE-rural
Oct97-2	6-11 OCTOBER	Low (40)	MON: 15µgPM10/m ³	ASW+AW+ANW
Oct97-3	12-13 OCTOBER	High (40)	MON: 28µgPM10/m ³	ANT-Urban+RE-rural
Oct97-4	14-18 OCTOBER	Low (30)	MON: 15µgPM10/m ³	ANW
Oct97-5	19-20 OCTOBER	High (50)	MON: 38µgPM10/m ³	Africa
Oct97-6	21-31 OCTOBER	Low (30)	MON: 15µgPM10/m ³	ANW

NOVIEMBRE-1997

	Dates	Range-levels	Observations	Origin
Nov97-1	1-13 NOVEMBER	Low(40)	MON: 7µgPM10/m ³	AW
Nov97-2	14-18 NOVEMBER	High(30)	MON: 18µgPM10/m ³	ANT-Urban+RE-rural
Nov97-3	19-24 NOVEMBER	Low(20)	MON: 7µgPM10/m ³	AW
Nov97-4	25 NOV-1DECEMBER	AltiLows Urbans (20)	MON: 5µgPM10/m ³	ANT-Urban-AW-rural

DICIEMBRE-1997

	Dates	Range-levels	Observations	Origin
Dic97-1	1-4 DECEMBER	High Urban (40)	MON: 3µgPM10/m ³	ANT-Urban+ANW-rural
Dic97-2	5-7 DECEMBER	High rural (30)	MON: 10µgPM10/m ³	ANT-Urban+CE-rural
Dic97-3	8-12 DECEMBER	High Urban (50)	MON: 5µgPM10/m ³	ANT-Urban+AW-rural
Dic97-4	13-22 DECEMBER	Low(30)	MON: 7µgPM10/m ³	AW
Dic97-5	23-26 DECEMBER	High Urban(40)	MON: 5µgPM10/m ³	ANT-Urban+ANW-rural
Dic97-6	27-29 DECEMBER	Low(30)	MON: 4µgPM10/m ³	ANW
Dic97-7	30-31 DECEMBER	High Urban(40)	MON: 7µgPM10/m ³	ANT-Urban+ANW-rural

1998**JANUARY-1998**

	Dates	Range-levels	Observations	Origin
En98-1	1-7 JANUARY	Low(20)	MON: 7µgPM10/m ³	AW
En98-2	8-12 JANUARY	High(40)	MON: 20µgPM10/m ³	Africa 11-12
En98-3	13-14 JANUARY	Low(25)	MON: 7µgPM10/m ³	ASW+ANW
En98-4	15-18 JANUARY	High Urban(40)	MON: 7µgPM10/m ³	ANT-Urban+ANW-rural
En98-5	19-20 JANUARY	Low(25)	MON: 10µgPM10/m ³	ANW
En98-6	21-24 JANUARY	High Urban(40)	MON: 10µgPM10/m ³	ANT-Urban+CE-rural
En98-7	25-31 JANUARY	Low(25)	MON: 10µgPM10/m ³	ASW

FEBRUARY-1998

	Dates	Range-levels	Observations	Origin
Fe98-1	1-4 FEBRUARY	Low (30)	MON: 5µgPM10/m ³	ASW
Fe98-2	5-7 FEBRUARY	High (50)	MON: 15µgPM10/m ³	ANT-Urban+WE-rural
Fe98-3	8-9 FEBRUARY	Low (30)	MON: 10µgPM10/m ³	ANW
Fe98-4	10-15 FEBRUARY	Intermediate (50)	MON: 15 µgPM10/m ³	ANT
Fe98-5	16-21 FEBRUARY	High (80)	MON: 25µgPM10/m ³	Africa 16-17+21
Fe98-6	22-25 FEBRUARY	Low (30)	MON: 10µgPM10/m ³	ANW
Fe98-7	26-28 FEBRUARY	Intermediate (40)	MON: 15µgPM10/m ³	ANT-Urban+CE-rural

MARCH-1998

	Dates	Range-levels	Observations	Origin
Mr98-1	1-2MARCH	Intermediate (60)	MON: 25µgPM10/m ³	ANT-Urban+RE-rural
Mr98-2	3-7MARCH	High (80)	MON: 45µgPM10/m ³	Africa 3-7
Mr98-3	8-14MARCH	Low(30)	MON: 10µgPM10/m ³	ANW+WE
Mr98-4	15-20MARCH	High (70)	MON: 30µgPM10/m ³	ANT+WE-Urban+WE-rural
Mr98-5	21-22MARCH	Low (25)	MON: 15µgPM10/m ³	WE-FF
Mr98-6	23-28 MARCH	High(50)	MON: 25µgPM10/m ³	ANT+CE-Urban+CE-rural
Mr98-7	29-31 MARCH	Low (30)	MON: 10µgPM10/m ³	ASW

APRIL-1998

	Dates	Range-levels	Observations	Origin
Ab98-1	1-19 APRIL	Low(40)	MON: 7µgPM10/m ³	AW
Ab98-2	20-26 APRIL	High(MED,45)	MON: 17µgPM10/m ³	ANT-Urban+RE-rural
Ab98-3	27-30APRIL	Low(MED,20)	MON: 5µgPM10/m ³	AW

MAY-1998

	Dates	Range-levels	Observations	Origin
My98-1	1-4 MAY	Low (20)	MON: 5µgPM10/m ³	AW+CE
My98-2	5-12 MAY	Intermediate (30)	MON: 17µgPM10/m ³	Africa
My98-3	13-26 MAY	High (50)	MON: 25µgPM10/m ³	ANT+EE-Urban+CE-rural
My98-4	27-31 MAY	Low (40)	MON: 10µgPM10/m ³	AW

JUNE-1998

	Dates	Range-levels	Observations	Origin
Jn98-1	1-2 JUNE	Intermediate (40)	MON: 15µgPM10/m ³	ASW
Jn98-2	3-5 JUNE	High (80)	MON: 60µgPM10/m ³	Africa
Jn98-3	6-21 JUNE	Low(MED,40)	MON: 20µgPM10/m ³	ASW+ANW
Jn98-4	22-JUN.-1 JUL.	High(MED,50)	MON: 40µgPM10/m ³	Africa(22-25)+RE

JULY-1998

	Dates	Range-levels	Observations	Origin
J198-1	2-5 JULY	Low (40)	MON: 15µgPM10/m ³	AW
J198-2	6-7 JULY	High (60)	MON: 23µgPM10/m ³	ANT-Urban+RE-rural
J198-3	8-9 JULY	Low (40)	MOR: 18µgPM10/m ³	ANW
J198-4	10-13 JULY	High (50)	MON: 25µgPM10/m ³	ANT-Urban+RE-rural
J198-5	14-15 JULY	Low (40)	MON: 20µgPM10/m ³	ANW
J198-6	16-17 JULY	High (50)	MON: 25µgPM10/m ³	ANT-Urban+RE-rur
J198-7	18-20 JULY	High (40)	MON: 20µgPM10/m ³	Africa
J198-8	21-27 JULY	High (50)	MON: 35µgPM10/m ³	ANT-Urban+RE-rural
J198-9	28-29 JULY	Low (40)	MON: 15µgPM10/m ³	ANW
J198-10	30-31 JULY	High (60)	MON: 25µgPM10/m ³	Africa

AUGUST-1998

	Dates	Range-levels	Observations	Origin
Aug98-1	1-5 AUGUST	Low (30)	MON: 10µgPM10/m ³	ASW+ANW
Aug98-2	5- 10 AUGUST	Intermediate (40)	MON: 20µgPM10/m ³	ANT-Urban +RE-rural
Aug98-3	11-13 AUGUST	High (50)	MON: 40µgPM10/m ³	ANT-Urban+RE-rural
Aug98-4	14-16 AUGUST	High (45)	MON: 35µgPM10/m ³	Africa
Aug98-5	17-25 AUGUST	Low (40)	MON: 15µgPM10/m ³	ANW
Aug98-6	26-27 AUGUST	High rural (40)	MON: 30µgPM10/m ³	Africa
Aug98-7	28-29 AUGUST	Low (30)	MON: 20µgPM10/m ³	ANW
Aug98-8	30 AUGUST- 04SEP	High(70)	MON: 50µgPM10/m ³	Africa

SEPTIEMBRE-1998

	Dates	Range-levels	Observations	Origin
Sp98-1	05-12 SEPT	Intermediate (40)	MON: 20µgPM10/m ³	AW+ANW
Sp98-2	12-16 SEPT	Low (30)	MON: 10µgPM10/m ³	ANW
Sp98-3	17-26 SEPT	High (40)	MON: 20µgPM10/m ³	ANT+WE-Urban+RE-rural
Sp98-4	27SEPT-6 OCT	Low (30)	MON: 7µgPM10/m ³	ANW
Sp98-5	7-12 OCT	Low (30)	MON: 7µgPM10/m ³	CE+ANW

OCTUBRE-1998

	Dates	Range-levels	Observations	Origin
Oc98-1	14-19OCT	High(40)	MON: 20µgPM10/m ³	ANT-Urban+RE-rural
Oc98-2	20-21OCT	Low(30)	MON: 10µgPM10/m ³	ANW
Oc98-3	22-23OCT	High(40)	MON: 25µgPM10/m ³	ANT-Urban+RE-rural
Oc98-4	24-26OCT	Low rural(40)	MON: 12µgPM10/m ³	AW
Oc98-5	27-31OCT	High(40)	MON: 20µgPM10/m ³	ANT-Urban+RE-rural

NOVIEMBRE-1998

	Dates	Range-levels	Observations	Origin
No98-1	1-5NOV	Low(30)	MON: 10µgPM10/m ³	AW
No98-2	6-10 NOV	High(40)	MON: 20µgPM10/m ³	ANT+WE-Urban+RE-rural
No98-3	11-16 NOV	Low(30)	MON: 10µgPM10/m ³	ANW
No98-4	17-19 NOV	High (30)	MON: 15µgPM10/m ³	ANT-Urban+RE-rural
No98-5	20-23 NOV	High (35)	MON: 15µgPM10/m ³	ANT-Urban+CE-rural
No98-6	24-30 NOV	High Urban(40)	MON: 10µgPM10/m ³	ANT-Urban+ANW-rural

DICIEMBRE-1998

	Dates	Range-levels	Observations	Origin
Dc98-1	1-4 DICIEM	Low(20)	MON: 10µgPM10/m ³	Lluvia
Dc98-2	5-8 DICIEM	Low(25)	MON: 7 µgPM10/m ³	ANW
Dc98-3	8-14 DICIEM	High Urban(50)	MON: 8 µgPM10/m ³	ANT-Urban+ANW-rural
Dc98-4	15-16 DICIEM	High (50)	MON: 15 µgPM10/m ³	ANT-Urban+RE-rural
Dc98-5	17-19 DICIEM	High Urban (50)	MON: 10 µgPM10/m ³	ANT-Urban+ANW-rural
Dc98-6	20-21 DICIEM	Low (30)	MON: 10 µgPM10/m ³	AW+ANW
Dc98-7	22-24 DICIEM	Intermediate (40)	MON: 11 µgPM10/m ³	ANT-Urban+WE-rural
Dc98-8	25-27 DICIEM	Low (30)	MON: 5 µgPM10/m ³	AW+WE
Dc98-9	28-29 DICIEM	High I(30)	MON: 14 µgPM10/m ³	ANT-Urban+RE-rural
Dc98-19	30-31 DICIEM	Low (20)	MON: 6 µgPM10/m ³	ASW

1999**JANUARY-1999**

	Dates	Range-levels	Observations	Origin
En99-1	1-6 JANUARY	Low(40)	MON: 7µgPM10/m ³	ASW
En99-2	7-8 JANUARY	High(120)	MON: 80µgPM10/m ³	Africa
En99-3	9-10 JANUARY	Low(30)	MON: 10µgPM10/m ³	AW
En99-4	11-17 JANUARY	High Urban(50)	MON: 8µgPM10/m ³	ANT-Urban+ANW-rural
En99-5	18-19 JANUARY	Low(20)	MON: 7µgPM10/m ³	AW
En99-6	20-21 JANUARY	High Urban(40)	MON: 10µgPM10/m ³	ANT-Urban+ASW-rural
En99-7	22-24 JANUARY	Low(30)	MON: 15µgPM10/m ³	Lluvia
En99-8	25-26 JANUARY	High Urban(40)	MON: 15µgPM10/m ³	ANT-Urban
En99-9	27-31 JANUARY	Low(20)	MON: 10µgPM10/m ³	ANW

FEBRUARY-1999

	Dates	Range-levels	Observations	Origin
Feb99-1	1-4 FEBRUARY	High Urban(40)	MON: 10µgPM10/m ³	ANT-Urban+CE-rural
Feb99-2	5-13 FEBRUARY	Low(25)	MON: 10µgPM10/m ³	ANW
Feb99-3	14-23 FEBRUARY	High Urban(40)	MON: 10µgPM10/m ³	ANT-Urban+ANW-rural
Feb99-4	24-28 FEBRUARY	Low(30)	MON: 10µgPM10/m ³	AW

MARCH-1999

	Dates	Range-levels	Observations	Origin
Mar99-1	1-3 MARCH	High Urban(70)	MON: 10µgPM10/m ³	ANT-Urban-ANW-rural
Mar99-2	4-8 MARCH	Low(30)	MON: 6µgPM10/m ³	ANW
Mar99-3	9-11 MARCH	High(60)	MON: 35µgPM10/m ³	Africa
Mar99-4	12-15 MARCH	Low(30)	MON: 10µgPM10/m ³	Luvias
Mar99-5	16-21 MARCH	High(50)	MON: 20µgPM10/m ³	ANT-Urban+CE+WE-rural
Mar99-6	22-29 MARCH	Low(30)	MON: 10µgPM10/m ³	ANW
Mar99-7	29-31 MARCH	High(60)	MON: 15µgPM10/m ³	ANT-Urban+RE-rural

APRIL-1999

	Dates	Range-levels	Observations	Origin
Abr99-1	1-5 APRIL	Low(40)	MON: 10µgPM10/m ³	ANW
Abr99-2	6-7 APRIL	High(50)	MON: 30µgPM10/m ³	ANT-Urban+RE-rural
Abr99-3	8-14 APRIL	High Urban(50)	MON: 15µgPM10/m ³	ANT-Urban+ANW-rural
Abr99-4	15-18 APRIL	Low(20)	MON: 7µgPM10/m ³	ANW
Abr99-5	19-25 APRIL	High Urban(45)	MON: 10µgPM10/m ³	ANT-Urban+ANW-rural
Abr99-6	26-30 APRIL	Low(30)	MON: 8µgPM10/m ³	AW

MAY-1999

	Dates	Range-levels	Observations	Origin
May99-1	1-10 MAY	Low(40)	MON: 15µgPM10/m ³	ASW
May99-2	11-14 MAY	High(70)	MON: 20µgPM10/m ³	Africa
May99-3	15-24 MAY	Low(30)	MON: 10µgPM10/m ³	AW+ANW
May99-4	25 MAY-2JUN	High(80)	MON: 35µgPM10/m ³	Africa

JUNE-1999

	Dates	Range-levels	Observations	Origin
Jun99-1	3 JUNE	Low(30)	MON: 15µgPM10/m ³	ASW
Jun99-2	4-5 JUNE	High(40)	MON: 25µgPM10/m ³	ANT-Urban+RE-rural
Jun99-3	6-14 JUNE	Low(30)	MON: 15µgPM10/m ³	AW
Jun99-4	15-16 JUNE	High(45)	MON: 30µgPM10/m ³	ANT+WE-Urban+WE-rural
Jun99-5	17-21 JUNE	Low(30)	MON: 15µgPM10/m ³	WE
Jun99-6	22-29 JUNE	High (40)	MON: 30µgPM10/m ³	ANT-Urban+RE-rural

JULY-1999

	Dates	Range-levels	Observations	Origin
Jul99-1	29JUN-4JUL	High(60)	MON: 35µgPM10/m ³	Africa
Jul99-2	5-15 JULY	Low(40)	MON: 20µgPM10/m ³	ANW
Jul99-3	16-17 JULY	High(40)	MON: 32µgPM10/m ³	ANT-Urban+RE-rural
Jul99-4	18-19 JULY	Low(30)	MON: 20µgPM10/m ³	WE
Jul99-5	20-25 JULY	High(40)	MON: 30µgPM10/m ³	ANT-Urban+RE-rural

Jul99-6	26 JUL –1 AUGUST	Low(30)	MON: 20µgPM10/m ³	AW
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AUGUST-1999

	Dates	Range-levels	Observations	Origin
Aug99-1	2-6 AUGUST	High(40)	MON: 25µgPM10/m ³	ANT-Urban+RE-rural
Aug99-2	7-9 AUGUST	Low(30)	MON: 15µgPM10/m ³	AW
Aug99-3	10-15 AUGUST	Intermediate(40)	MON: 25µgPM10/m ³	ANT-Urban+RE-rural
Aug99-4	16-28 AUGUST	High(50)	MON: 40µgPM10/m ³	Africa
Aug99-5	29-31 AUGUST	Low(40)	MON: 25µgPM10/m ³	ASW

SEPTIEMBRE-1999

	Dates	Range-levels	Observations	Origin
Sep99-1	1-4 SEPTEMBER	High(50)	MON: 30µgPM10/m ³	Africa
Sep99-2	5-7 SEPTEMBER	Low(30)	MON: 10µgPM10/m ³	ASW
Sep99-3	8-13 SEPTEMBER	High(40)	MON: 20µgPM10/m ³	ANT-Urban+RE-rural
Sep99-4	14-15 SEPTEMBER	Low(30)	MON: 6µgPM10/m ³	ASW
Sep99-5	16-17 SEPTEMBER	High(35)	MON: 15µgPM10/m ³	ANT-Urban+RE-rural
Sep99-6	18-20 SEPTEMBER	Low(20)	MON: 7µgPM10/m ³	AW-
Sep99-7	21-25 SEPTEMBER	High(50)	MON: 15µgPM10/m ³	ANT-Urban+RE-rural
Sep99-8	26 SEPTEMBER	Low(20)	MON: 7µgPM10/m ³	AW
Sep99-9	27-30 SEPTEMBER	High(40)	MON: 15µgPM10/m ³	ANT-Urban+RE-rural

OCTUBRE-1999

	Dates	Range-levels	Observations	Origin
Oct99-1	1-2 OCTOBER	High(40)	MON: 15µgPM10/m ³	ANT-Urban+RE-rural
Oct99-2	4-7 OCTOBER	Low(20)	MON: 10µgPM10/m ³	ANW
Oct99-3	8-11 OCTOBER	High(40)	MON: 25µgPM10/m ³	ANT+WE-Urban+WE+RE-rural
Oct99-4	12-13 OCTOBER	Low(30)	MON: 13µgPM10/m ³	Lluvia
Oct99-5	14-17 OCTOBER	High(40)	MON: 15µgPM10/m ³	ANT-Urban+RE-rural
Oct99-6	18-26 OCTOBER	Low(20)	MON: 5µgPM10/m ³	ASW
Oct99-7	27-30 OCTOBER	High(60)	MON: 40µgPM10/m ³	Africa
Oct99-8	31 OCTOBER	Low(30)	MON: 10µgPM10/m ³	AW

NOVIEMBRE-1999

	Dates	Range-levels	Observations	Origin
Nov99-1	1-2 NOVEMBER	High Urban(40)	MON: 10µgPM10/m ³	ANT-Urban+ASW-rural
Nov99-2	3 NOVEMBER	Low(30)	MON: 5µg/m ³	ANW
Nov99-3	4-6 NOVEMBER	High(50)	MON: 30µgPM10/m ³	ANT-Urban+RE-rural
Nov99-4	7-21 NOVEMBER	Low(30)	MON: 10µgPM10/m ³	ANW+CE+WE
Nov99-5	22-28 NOVEMBER	High Urban (40)	MON: 10µgPM10/m ³	ANT-Urban+CE-rural
Nov99-6	29-30 NOVEMBER	Low(30)	MON: 10µgPM10/m ³	MED-lluvias

DICIEMBRE-1999

	Dates	Range-levels	Observations	Origin
Dic99-1	1-4 DECEMBER	High Urban (50)	MON: 15µgPM10/m ³	ANT-Urban+CE-rural
Dic99-2	5-6 DECEMBER	Low(30)	MON: 5µgPM10/m ³	ANW
Dic99-3	7-9 DECEMBER	High Urban(40)	MON: 10µgPM10/m ³	ANT-Urban+WE-rural
Dic99-4	10-12 DECEMBER	Low(20)	MON: 5µgPM10/m ³	ANW
Dic99-5	13-14 DECEMBER	High Urban(30)	MON: 7µgPM10/m ³	ANT-Urban+AW-rural
Dic99-6	15-20 DECEMBER	Low(20)	MON: 7µgPM10/m ³	ANW
Dic99-7	21-24 DECEMBER	High (60)	MON: 15µgPM10/m ³	ANT-Urban+ -RE-rural
Dic99-8	25-31 DECEMBER	Low(20)	MON: 7µgPM10/m ³	AW

20000**JANUARY-2000**

	Dates	Range-levels	Observations	Origin
En00-1	1-9 JANUARY	High Urban (40)	MON: 9µgPM10/m ³	ANT-Urban+ANW-rural
En00-2	10-11 JANUARY	Low (25)	MON: 8µgPM10/m ³	ANW
En00-3	12-14 JANUARY	High (40)	MON: 18µgPM10/m ³	ANT-Urban+RE-rural
En00-4	15-16 JANUARY	Low (20)	MON: 4µgPM10/m ³	ASW
En00-5	17-22 JANUARY	High (30)	MON: 11µgPM10/m ³	ANT-Urban+CE-rural
En00-6	23-24 JANUARY	Low(20)	MON: 7µgPM10/m ³	WE
En00-7	25-28 JANUARY	High (30)	MON: 13µgPM10/m ³	ANT-Urban+RE-rural
En00-8	29-31 JANUARY	High Urban(40)	MON: 9µgPM10/m ³	ANT-Urban+ANW-rural

FEBRUARY-2000

	Dates	Range-levels	Observations	Origin
Feb00-1	1-11- FEBRUARY	High Urban (50)	MON: 12 µgPM10/m ³	ANT-Urban+ANW-rural
Feb00-2	12-14 FEBRUARY	Low (30)	MON: 8µgPM10/m ³	ANW
Feb00-3	15-20 FEBRUARY	Intermediate (35)	MON: 14µgPM10/m ³	ANT-Urban+ANW-rural
Feb00-4	21-27 FEBRUARY	High (40)	MON: 16 µgPM10/m ³	ANT-Urban+RE-rural
Feb00-5	28 FEBRUARY-1 MAR.	High (60)	MON: 30µgPM10/m ³	Africa

MARCH-2000

	Dates	Range-levels	Observations	Origin
Mar00-1	2-5 MARCH	Low(35)	MON: 15µgPM10/m ³	ANW
Mar00-2	6-8 MARCH	High(40)	MON: 35µgPM10/m ³	Africa
Mar00-3	9-13 MARCH	High Urban(60)	MON: 24µgPM10/m ³	ANT-Urban+ANW-rural
Mar00-4	14-15 MARCH	High (60)	MON: 35µgPM10/m ³	Africa
Mar00-5	16-21 MARCH	Intermediate(40)	MON: 28µgPM10/m ³	ANT+WE-Urban+WE-rural
Mar00-6	22-31 MARCH	Low(30)	MON: 12µgPM10/m ³	ASW+AW

APRIL-2000

	Dates	Range-levels	Observations	Origin
Abr00-2	1-6 APRIL	Low(20)	MON: 10µgPM10/m ³	AW
Abr00-4	7-8 APRIL	High(30)	MON: 13µgPM10/m ³	ANT-Urban+RE-rural
Abr00-5	10-20 APRIL	Low(20)	MON: 6µgPM10/m ³	AW
Abr00-6	21-22 APRIL	High(30)	MON: 10µgPM10/m ³	ANT-Urban+RE-rural
Abr00-7	23-24 APRIL	Low(15)	MON: 8µgPM10/m ³	AW
Abr00-7	25-26 APRIL	High(30)	MON: 15µgPM10/m ³	ANT-Urban+RE-rural
Abr00-7	27-30 APRIL	Low(20)	MON: 5µgPM10/m ³	AW

MAY-2000

	Dates	Range-levels	Observations	Origin
May00-1	1 MAY	Low(20)	MON: 9µgPM10/m ³	ASW
May00-2	2-9 MAY	High(40)	MON: 20µgPM10/m ³	Africa
May00-3	10-12 MAY	High Urban(30)	MON: 9µgPM10/m ³	ANT-Urban+ASW-rural
May00-4	13-16 MAY	High(30)	MON: 25µgPM10/m ³	ANT-Urban+RE-rural
May00-5	17-25 MAY	Intermediate(25)	MON: 17µgPM10/m ³	ANT+urb+RE-rural
May00-6	26-29 MAY	Low(20)	MON: 10µgPM10/m ³	AW
May00-7	30-31 MAY	High(40)	MON: 20µgPM10/m ³	ANT-Urban+RE-rural

JUNE-2000

	Dates	Range-levels	Observations	Origin
Jun00-1	1-3 JUNE	High(30)	MON: 30µgPM10/m ³	ANT-Urban+RE-rural
Jun00-2	4-9 JUNE	High Urban(30)	MON: 15µgPM10/m ³	ANT-Urban+AW-rural
Jun00-3	10-12 JUNE	Low(15)	MON: 6µgPM10/m ³	AW
Jun00-4	13-17 JUNE	High(40)	MON: 25µgPM10/m ³	ANT+WE-Urban+RE+WE-rural
Jun00-5	18-19 JUNE	Low(25)	MON: 20µgPM10/m ³	AW
Jun00-6	20-23 JUNE	High(35)	MON: 30µgPM10/m ³	ANT+WE-Urban+RE+WE-rural
Jun00-7	24-25 JUNE	Low(20)	MON: 15µgPM10/m ³	ANW
Jun00-8	26-30 JUNE	High(30)	MON: 40µgPM10/m ³	Africa

JULY-2000

	Dates	Range-levels	Observations	Origin
Jul00-1	1-3 JULY	Intermediate(25)	MON: 20µgPM10/m ³	ASW
Jul00-2	4-5 JULY	Low(20)	MON: 15µgPM10/m ³	AW
Jul00-3	6-7 JULY	High(50)	MON: 45µgPM10/m ³	Africa
Jul00-4	8-17 JULY	Low(20)	MON: 15µgPM10/m ³	ANW
Jul00-5	18-21 JULY	High(30)	MON: 30µgPM10/m ³	ANT-Urban+RE-rural
Jul00-5	22-23 JULY	High(30)	MON: 30µgPM10/m ³	Africa
Jul00-6	24 JUL-1AUGUST	Intermediate(30)	MON: 25µgPM10/m ³	AW

AUGUST-2000

	Dates	Range-levels	Observations	Origin
Aug00-1	2-7 AUGUST	Low(15)	MON: 15µgPM10/m ³	WE

Aug00-2	8-23 AUGUST	Intermediate(30)	MON: 30µgPM10/m ³	ANT-Urban+RE-rural
Aug00-3	24-26 AUGUST	High(50)	MON: 50µgPM10/m ³	Africa
Aug00-4	27 AUG-1 SEPTEMBER	Intermediate(20)	MON: 20µgPM10/m ³	ANW

SEPTIEMBRE-2000

	Dates	Range-levels	Observations	Origin
Sep00-1	2-5 SEPTEMBER	Low(15)	MON: 15µgPM10/m ³	ANW
Sep00-2	6-12 SEPTEMBER	Intermediate(30)	MON: 30µgPM10/m ³	ANT+WE-Urban+RE-WE-rural
Sep00-3	14-17 SEPTEMBER	High(35)	MON: 45µgPM10/m ³	ANT-Urban+RE-rural
Sep00-4	18-24 SEPTEMBER	Low(20)	MON: 15µgPM10/m ³	ASW
Sep00-5	25-27 SEPTEMBER	High(40)	MON: 45µgPM10/m ³	Africa
Sep00-6	28-30 SEPTEMBER	Low(20)	MON: 15µgPM10/m ³	AW

OCTUBRE-2000

	Dates	Range-levels	Observations	Origin
Oct00-1	1-3 OCTOBER	Low(30)	MON: 15µgPM10/m ³	ANW
Oct00-2	4-6 OCTOBER	High(50)	MON: 20µgPM10/m ³	ANT-Urban+RE-rural
Oct00-3	7-16 OCTOBER	Low(30)	MON: 10µgPM10/m ³	ANW
Oct00-4	17-20 OCTOBER	High(60)	MON: 20µgPM10/m ³	ANT-Urban+RE-rural
Oct00-5	21-25 OCTOBER	Low(30)	MON: 10µgPM10/m ³	Lluvia
Oct00-6	26-30 OCTOBER	High(60)	MON: 20µgPM10/m ³	Africa

NOVIEMBRE-2000

	Dates	Range-levels	Observations	Origin
Nov00-1	31OCTOBER- 7NOVEMBER	Low(20)	MON: 7µgPM10/m ³	AW
Nov00-2	8-11 NOVEMBER	Intermediate(30)	MON: 10µgPM10/m ³	ANT-Urban+ -AW-rural
Nov00-3	12-13 NOVEMBER	High(40)	MON: 25µgPM10/m ³	Africa
Nov00-4	14-27 NOVEMBER	Low(30)	MON: 7µgPM10/m ³	AW
Nov00-5	28-29 NOVEMBER	High Urban(40)	MON: 15µgPM10/m ³	ANT-Urban+ -ASW-rural

DICIEMBRE-2000

	Dates	Range-levels	Observations	Origin
Dic00-1	30 NOV.- 3 DEC.	Low(40)	MON: 9µgPM10/m ³	AW
Dic00-2	4-7 DECEMBER	High Urban (50)	MON: 15µgPM10/m ³	ANT-Urban+ -AW-rural
Dic00-3	8-10 DECEMBER	Low(20)	MON: 5µgPM10/m ³	AW
Dic00-4	11- 14 DECEMBER	High Urban(60)	MON: 12µgPM10/m ³	ANT-Urban+ -AW-rural
Dic00-5	15-17 DECEMBER	Low(20)	MON: 6µgPM10/m ³	ANW
Dic00-6	18-21 DECEMBER	High(40)	MON: 20µgPM10/m ³	ANT-Urban+ -RE-rural
Dic00-7	22-31 DECEMBER	Low(15)	MON: 5µgPM10/m ³	AW

APPENDIX 3

Annual statistic of the air masses origin based on back-trajectories.

Table A3-A. Monthly number of days with air mass trajectories arriving to Northeast Spain (40.5°N, 0.1°W) from different regions from in 1996. ANW: NW-Atlantic, W-Atlantic; ASW: SW-Atlantic; NAF: North Africa; RE: Regional; EU: mainland Europe. Mean TSP or PM10 (highlighted with *) associated with each transport patter.

1996	ANW	AW	ASW	NAF	RE	EU
Number of days						
JANUARY	2	7	11	11	0	0
FEBRUARY	15	2	2	2	3	5
MARCH	5	3	5	4	5	9
APRIL	10	1	2	2	6	9
MAY	2	11	8	0	4	6
JUNE	3	1	1	5	4	16
JULY	8	3	1	3	7	9
AUG	9	3	3	2	11	3
SEPTEMBER	11	2	1	0	1	15
OCTOBER	12	4	3	3	0	8
NOVEMBER	18	4	4	0	0	3
DECEMBER	5	3	11	5	3	4
TOTAL	100	44	52	37	44	87
	27%	9%	14%	10%	12%	24%
TSP/PM10*						
MONAGREGA *	15	12	10	21	21	19
MORELLA	17	13	14	21	21	20
FORNELLS	34	30	31	43	35	34
PENYETA	31	32	34	45	38	32
SAGRERA	41	39	44	51	43	40
L'HOSPITALET	42	43	47	56	47	40
IGUALADA	51	54	57	62	55	49

Table A3-B. Monthly number of days with air mass trajectories arriving to Northeast Spain (40.5°N, 0.1°W) from different regions from in 1997. ANW: NW-Atlantic; W-Atlantic; ASW: SW-Atlantic; NAF: North Africa; RE: Regional; EU: mainland Europe. Mean TSP or PM10 (highlighted with *) associated with each transport patten.

1997	ANW	AW	ASW	NAF	RE	EU
Number of days						
JANUARY	4	1	6	11	3	6
FEBRUARY	9	9	0	3	2	5
MARCH	4	0	0	5	4	16
APRIL	4	1	2	0	7	16
MAY	1	5	11	10	0	4
JUNE	9	1	16	1	3	0
JULY	10	0	3	3	9	6
AUG	3	2	4	4	12	6
SEPTEMBER	2	1	2	4	6	15
OCTOBER	6	3	4	6	2	9
NOVEMBER	6	15	4	1	3	1
DECEMBER	9	8	7	0	0	7
TOTAL	67	46	59	48	51	91
	18%	13%	16%	13%	14%	25%
TSP/PM10*						
MONAGREGA *	14	9	13	26	23	22
CORATXAR	13	9	13	23	19	16
FORNELLS	34	39	30	47	41	44
PENYETA	31	38	33	48	41	34
SAGREGA	45	45	42	59	51	58
L'HOSPITALET	54	53	41	56	55	57
ONDA	40	44	44	61	58	57
IGUALADA	52	56	54	66	62	57

Table A3-C. Monthly number of days with air mass trajectories arriving to Northeast Spain (40.5°N, 0.1°W) from different regions from in 1998. ANW: NW-Atlantic; W-Atlantic; ASW: SW-Atlantic; NAF: North Africa; RE: Regional; EU: mainland Europe. Mean TSP or PM10 (highlighted with *) associated with each transport patten.

1998	ANW	AW	ASW	NAF	RE	EU
N° días						
JANUARY	5	11	4	5	0	6
FEBRUARY	2	1	4	7	2	12
MARCH	4	2	2	5	1	17
APRIL	8	19	1	0	2	0
MAY	6	4	2	4	1	13
JUNE	10	1	8	11	0	0
JULY	12	5	3	4	7	0
AUG	9	0	4	5	6	7
SEPTEMBER	9	9	3	3	0	6
OCTOBER	12	9	1	0	5	4
NOVEMBER	13	7	0	1	1	8
DECEMBER	9	5	3	2	7	5
TOTAL	102	73	35	44	32	78
	28%	20%	10%	12%	9%	21%
TSP/PM10*						
MONAGREGA *	14	12	19	30	24	18
CORATXAR	11	10	15	17	15	14
FORNELLS	30	29	30	40	39	38
PENYETA	32	33	31	48	36	33
SAGRERA	44	48	41	57	53	55
L'HOSPITALET	41	46	41	55	54	50
IGUALADA	51	53	46	66	63	63
ONDA	58	56	66	76	68	58

Table A3-D. Monthly number of days with air mass trajectories arriving to Northeast Spain (40.5°N, 0.1°W) from different regions from in 1999. ANW: NW-Atlantic, W-Atlantic; ASW: SW-Atlantic; NAF: North Africa; RE: Regional; EU: mainland Europe. Mean TSP or PM10 (highlighted with *) associated with each transport patten.

1999	ANW	AW	ASW	NAF	RE	EU
Number of days						
JANUARY	7	8	3	5	3	3
FEBRUARY	15	0	1	2	0	8
MARCH	10	3	0	8	2	7
APRIL	23	1	2	1	1	2
MAY	4	3	7	14	3	0
JUNE	2	6	5	3	10	4
JULY	5	2	2	3	16	3
AUG	1	4	8	13	5	0
SEPTEMBER	3	8	7	5	6	1
OCTOBER	5	6	10	6	0	4
NOVEMBER	9	0	0	0	3	18
DECEMBER	15	4	0	0	2	10
TOTAL	99	45	45	60	51	60
	27%	12%	12%	16%	14%	16%
TSP/PM10*						
MONAGREGA *	12	13	16	29	22	14
CORATXAR	9	10	12	19	14	11
FORNELLS	17	16	14	14	20	25
PENYETA	26	28	32	40	34	26
SAGRERA	36	42	43	47	41	39
L'HOSPITALET	37	38	44	46	44	41
IGUALADA	49	49	42	55	50	54
ONDA	49	51	53	73	61	48

Table A3-E. Monthly number of days with air mass trajectories arriving to Northeast Spain (40.5°N, 0.1°W) from different regions from in 2000. ANW: NW-Atlantic, W-Atlantic; ASW: SW-Atlantic; NAF: North Africa; RE: Regional; EU: mainland Europe. Mean TSP or PM10 (highlighted with *) associated with each transport patten.

2000	ANW	AW	ASW	NAF	RE	EU
Number of days						
JANUARY	9	1	0	1	6	14
FEBRUARY	17	3	1	2	3	3
MARCH	9	6	2	5	1	8
APRIL	4	13	10	0	2	1
MAY	0	7	13	4	1	6
JUNE	5	4	6	2	2	11
JULY	11	8	3	5	4	0
AUG	4	0	6	5	13	2
SEPTEMBER	7	5	3	3	7	5
OCTOBER	15	5	0	5	6	0
NOVEMBER	5	20	3	2	0	0
DECEMBER	4	14	7	4	2	0
TOTAL	90	86	54	38	47	50
	25%	24%	15%	10%	13%	14%
TSP/PM10*						
MONAGREGA*	13	11	18	26	26	19
CORATXAR	12	11	18	21	20	16
FORNELLS	23	19	26	27	26	26
PENYETA	28	28	36	37	34	35
L'HOSPITALET*	48	47	43	62	60	39
IGUALADA	40	39	46	52	47	48
ONDA	50	53	72	73	67	55

APPENDIX 4

Table A4-A. Monthly number of days exceeding the daily EU PM10 limit value ($50\mu\text{g}/\text{m}^3$) during African and non-African episodes in MONAGREGA rural site.

	1996		1997		1998		1999		2000	
	AFR	NO-AFR	AFR	NO-AFR	AFR	NO-AFR	AFR	NO-AFR	AFR	NO-AFR
J	0	0	0	0	0	0	2	0	0	0
F	0	0	0	0	0	0	0	0	0	0
M	0	0	3	0	2	0	0	0	0	1
A	0	0	0	0	0	0	0	0	0	0
M	0	0	0	0	0	0	0	0	0	0
J	0	0	0	0	2	0	0	0	0	0
J	1	0	0	0	0	0	0	0	0	0
A	0	0	1	0	2	0	1	0	3	0
S	0	0	0	0	1	0	0	0	1	0
O	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	1	0	0
D	0	0	0	0	0	0	0	0	0	0
Total	1	0	4	0	7	0	3	1	4	1

Table A4-B. Monthly number of days exceeding the daily EU PM10 limit value ($50\mu\text{g}/\text{m}^3$) during African and non-African episodes in CORATXAR rural site.

	1996		1997		1998		1999		2000	
	AFR	NO-AFR	AFR	NO-AFR	AFR	NO-AFR	AFR	NO-AFR	AFR	NO-AFR
J	ND	ND	1	0	0	0	1	0	0	0
F	ND	ND	0	0	0	0	0	0	0	0
M	ND	ND	0	0	0	0	0	0	0	0
A	ND	ND	0	0	0	0	0	0	0	0
M	ND	ND	0	0	0	0	0	0	0	0
J	ND	ND	0	0	0	0	0	0	0	0
J	ND	ND	0	0	0	0	0	0	0	0
A	0	0	1	0	1	0	0	0	1	0
S	0	0	0	0	0	0	0	0	0	0
O	0	0	0	0	0	0	1	0	0	0
N	0	0	0	0	0	0	0	0	0	0
D	0	0	0	0	0	0	0	0	0	0
Total	ND	ND	2	0	1	0	2	0	1	0

Table A4-C. Monthly number of days exceeding the daily EU PM10 limit value ($50\mu\text{g}/\text{m}^3$) during African and non-African episodes in MORELLA rural site.

	1996		1997		1998		1999		2000	
	AFR	NO-AFR	AFR	NO-AFR	AFR	NO-AFR	AFR	NO-AFR	AFR	NO-AFR
J	0	0	0	0	0	0	3	0	0	0
F	0	0	0	0	0	0	0	0	0	0
M	0	0	1	0	1	0	0	0	1	1
A	0	0	0	0	0	0	0	0	0	0
M	0	0	0	0	0	0	0	0	0	0
J	0	0	0	0	1	0	0	0	0	0
J	0	0	0	0	0	0	0	0	0	0
A	0	0	1	0	0	0	1	1	3	0
S	0	0	0	0	1	0	0	0	0	0
O	0	0	0	0	0	0	3	0	0	0
N	0	0	0	0	0	0	0	0	0	0
D	0	0	0	0	0	0	0	0	0	0
Total	0	0	2	0	3	0	7	1	4	1

Table A4-D. Monthly number of days exceeding the daily EU PM10 limit value ($50\mu\text{g}/\text{m}^3$) during African and non-African episodes in FORNELLS sub-urban site.

	1996		1997		1998		1999		2000	
	AFR	NO-AFR	AFR	NO-AFR	AFR	NO-AFR	AFR	NO-AFR	AFR	NO-AFR
J	1	0	0	0	0	0	0	0	ND	ND
F	0	0	0	3	2	0	0	0	0	0
M	0	0	4	4	1	2	0	0	ND	ND
A	0	0	0	6	0	0	0	0	0	0
M	0	0	0	0	0	0	0	0	0	0
J	0	0	0	0	0	0	0	0	0	0
J	0	0	0	0	0	0	0	0	0	0
A	0	0	1	0	0	0	ND	ND	0	0
S	0	0	0	0	0	0	ND	ND	0	0
O	0	0	0	1	0	1	0	0	ND	ND
N	0	1	0	0	0	1	0	0	0	0
D	0	0	0	1	0	1	0	0	0	0
Total	1	1	5	15	3	5	0	0	0	0

Table A4-E. Monthly number of days exceeding the daily EU PM10 limit value ($50\mu\text{g}/\text{m}^3$) during African and non-African episodes in PENYETA sub-urban site.

	1996		1997		1998		1999		2000	
	AFR	NO-AFR	AFR	NO-AFR	AFR	NO-AFR	AFR	NO-AFR	AFR	NO-AFR
J	1	0	2	0	0	0	1	0	0	1
F	0	0	2	4	6	1	0	0	0	0
M	1	0	4	2	4	3	0	0	1	1
A	0	2	0	1	0	7	0	0	0	0
M	0	0	0	0	0	0	3	0	0	1
J	0	0	0	1	2	1	0	0	0	0
J	1	2	0	0	0	0	0	0	0	0
A	0	0	2	0	1	0	0	0	0	0
S	0	0	0	0	2	0	0	0	0	0
O	4	2	1	0	0	0	2	0	0	0
N	0	0	0	1	0	0	0	0	0	0
D	0	0	0	0	0	0	0	0	0	2
Total	7	6	11	9	15	12	6	0	1	5

Table A4-F. Monthly number of days exceeding the daily EU PM10 limit value ($50\mu\text{g}/\text{m}^3$) during African and non-African episodes in L'HOSPITALET urban site.

	1996		1997		1998		1999		2000	
	AFR	NO-AFR	AFR	NO-AFR	AFR	NO-AFR	AFR	NO-AFR	AFR	NO-AFR
J	3	4	2	3	ND	ND	ND	ND	1	3
F	0	2	1	11	6	4	0	0	0	5
M	0	0	4	9	3	1	0	0	2	11
A	0	1	0	9	0	0	0	2	0	1
M	0	1	0	1	0	1	5	1	1	2
J	2	3	0	0	2	0	0	3	0	5
J	4	1	0	0	0	1	0	0	5	26
A	0	0	1	0	ND	ND	0	0	6	12
S	0	0	0	0	ND	ND	0	0	3	3
O	3	1	0	9	0	2	2	0	4	21
N	0	1	0	2	0	1	0	1	1	16
D	1	3	0	0	0	2	0	4	1	5
Total	13	17	8	44	11	12	7	11	24	110

Table A4-G. Monthly number of days exceeding the daily EU PM10 limit value ($50\mu\text{g}/\text{m}^3$) during African and non-African episodes in IGUALADA urban/industrial site.

	1996		1997		1998		1999		2000	
	AFR	NO-AFR	AFR	NO-AFR	AFR	NO-AFR	AFR	NO-AFR	AFR	NO-AFR
J	4	5	6	1	1	4	3	4	1	8
F	0	1	2	4	7	9	0	5	0	7
M	1	6	0	5	5	7	3	5	2	9
A	0	4	0	13	0	0	0	3	0	0
M	0	4	6	2	0	3	1	1	1	2
J	2	4	0	0	3	1	0	0	0	0
J	3	1	0	1	0	0	ND	ND	1	0
A	0	0	2	0	0	0	2	0	1	0
S	0	1	0	2	ND	ND	0	1	0	0
O	6	3	1	13	ND	ND	0	0	0	0
N	0	3	0	7	0	4	0	6	0	1
D	0	7	0	6	0	11	0	6	1	2
Total	16	39	17	54	16	39	9	31	7	29

Table A4-H. Monthly number of days exceeding the daily EU PM10 limit value ($50\mu\text{g}/\text{m}^3$) during African and non-African episodes in ONDA industrial site.

	1996		1997		1998		1999		2000	
	AFR	NO-AFR	AFR	NO-AFR	AFR	NO-AFR	AFR	NO-AFR	AFR	NO-AFR
J	ND	ND	4	0	0	0	3	0	0	0
F	ND	ND	1	5	6	1	0	3	2	4
M	ND	ND	4	3	5	16	3	4	3	10
A	ND	ND	0	1	0	2	0	3	0	1
M	ND	ND	1	0	1	7	6	0	2	10
J	ND	ND	0	0	9	12	1	2	1	11
J	ND	ND	0	1	2	15	0	9	3	5
A	3	0	2	1	8	1	11	4	5	8
S	ND	ND	2	10	1	7	1	3	1	4
O	3	0	1	7	0	6	0	1	2	6
N	0	0	0	0	1	5	0	0	0	2
D	0	1	0	0	0	2	0	0	1	7
Total	ND	ND	15	28	33	74	25	29	20	68

APPENDIX 5

Table A5. Factor loading matrixes for MONAGREGA rural site PM10 chemical composition obtained after apply a varimax normalised rotation, calculated for Spring-Summer (April to August 1999) and Autumn-Winter (October 1999 to March 2000) periods. Results obtained after introduce temperature and ozone levels are also shown.

	Spring-Summer				Autumn-Winter			
	Factor1	Factor2	Factor3	Factor4	Factor1	Factor2	Factor3	Factor4
PM10		0,70	0,48	0,32	0,33	0,71	0,22	
Ca	0,92				0,85			
Al	0,85				0,97			
Fe	0,94				0,95			
Mg	0,92		0,33		0,88			0,38
Ti	0,88				0,97			
Sr	0,73		0,39		0,87			
K	0,74			0,55	0,88	0,30		
Mn	0,75			0,54	0,80	0,34		
Pb		0,36		0,83		0,86		
Zn		0,71						0,75
V	0,34	0,32	0,56	0,59	0,61	0,60		
C		0,93				0,56	0,68	
Na	0,44	0,25	0,77					0,95
Cl			0,85					0,98
nss-SO ₄ ⁼		0,76		0,38	0,44	0,75		
NO ₃ ⁻				0,63		0,58	0,71	
NH ₄ ⁺		0,86		0,29		0,81	0,48	
O ₃		0,59					-0,75	
T		0,94				0,34	-0,77	
%var	34	23	13	14	38	20	13	12
	Crustal	Industrial	Marine	Vehicular	Crustal	Vehicular	Marine	Industrial

Note: Factor loading smaller than /± 0.25/ are not shown.

APPENDIX 6

Source apportionment of PM10 components at MONAGREGA rural site

Seasonal source apportionment of PM10 components, expressed as percentage (%) of mass associated with each factor (or source), obtained by Multi-linear Regression Analysis following the methodology explained in chapter 3. The interception constant represent the contributions of other non identified sources. When this intersection constant is negative, its has non physical meaning and the linear regression is forced to pass through the origin (this is indicated with "-").

Table A6-A. Sources apportionment of PM10 components at MONAGREGA in the period March – September 1999.

	Factor 1	Factor 2	Factor 3	Factor 4	Inter. Const.
%	Crustal	Industrial	Marine	Vehicles	Other
Ca	89	1	1	5	5
Al	94	-3	4	4	1
Fe	95	3	5	-8	5
Mg	81	-2	15	2	2
Ti	87	-2	4	11	-
Sr	89	-1	1	9	-
K	61	2	6	30	-
Mn	74	15	1	-2	9
Pb	9	25	-2	69	-
Zn	1	61	3	16	22
V	50	45	-2	4	-
OC+EC	-4	76	-8	25	11
Na	4	6	92	-3	-
Cl	3	4	89	3	1
nss SO ₄ ⁼	2	79	1	6	13
NO ₃ ⁻	-4	-3	-4	95	14
NH ₄ ⁺	-8	98	5	-6	12

Table A6-B. Sources apportionment of PM10 components at MONAGREGA in the period October 1999 – March 2000.

%	Factor 1	Factor 2	Factor 3	Factor 4	Inter. Const.
	Crustal	Industrial	Marine	Vehicles	Other
Ca	85	5	4	-5	11
Al	97	-8	3	7	-
Fe	94	-5	3	10	-
Mg	82	-2	15	5	-
Ti	96	-8	8	3	-
Sr	69	6	3	8	-
K	64	3	7	25	-
Mn	71	2	4	22	-
Pb	8	29	-2	65	-
Zn	14	67	-1	23	-
V	34	10	11	45	-
OC+EC	9	17	2	73	-
Na	17	-4	87	2	-
Cl	6	-2	79	0	17
nss SO ₄ ⁼	2	78	5	13	4
NO ₃ ⁻	-2	15	-1	82	7
NH ₄ ⁺	-5	50	-3	59	-

Table A6-C. Sources apportionment of PM10 components at MONAGREGA in the period April - July 2000.

%	Factor 1	Factor 2	Factor 3	Factor 4	Inter. Const.
	Crustal	Industrial	Marine	Vehicles	Other
Ca	89	5	1	3	3
Al	90	3	2	5	-
Fe	87	2	8	2	-
Mg	85	2	10	2	-
Ti	93	2	1	1	-
Sr	97	-3	4	2	-
K	65	2	2	27	4
Mn	51	2	-3	49	-
Pb	16	18	-6	72	-
Zn	0	63	-1	38	-
V	39	56	2	2	-
OC+EC	-1	95	-3	-1	9
Na	16	38	50	0	0
Cl	14	-36	67	1	5
nss SO ₄ ⁼	8	69	7	14	0
NO ₃ ⁻	5	6	7	65	9
NH ₄ ⁺	-4	85	-2	14	0

Source apportionment of PM10 and PM2.5 components at L'HOSPITALET urban site

Source apportionment of PM10 and PM2.5 components, expressed as percentage (%) of mass associated with each factor (or source), obtained by Multi-linear Regression Analysis following the methodology explained in chapter 3. The interception constant represent the contributions of other non identified sources. When this intersection constant is negative, its has non physical meaning and the linear regression is forced to pass through the origin (this is indicated with the symbol "-").

Table A6-D Sources apportionment of PM10 components at L'HOSPITALET in the June 1999 - June 2000.

%	Factor 1 Crustal	Factor 2 Industrial	Factor 3 Marine	Factor 4 Vehicles	Inter. Const. Other
Ca	89	1	-5	16	-
Al	96	3	4	-6	-
Fe	65	4	-2	34	-
Mg	67	4	32	-2	-
Ti	78	2	4	18	-
Sr	90	5	5	1	-
K	67	4	0	29	-
Mn	62	10	-15	45	-
Pb	20	4	-3	82	-
Zn	26	22	-1	53	-
Cu	24	8	-2	69	-
Cr	45	13	-4	48	-
Ni	2	52	-3	49	-
P	62	16	0	23	-
V	22	56	-1	25	-
OC+EC	4	6	-3	93	-
Na	7	5	90	-2	-
Cl	-2	-1	63	40	-
nss SO ₄ ⁼	3	95	5	-3	-
NO ₃ ⁻	1	52	-3	51	-
NH ₄ ⁺	-2	49	2	52	-

Table A6-E Sources apportionment of PM2.5 components at L'HOSPITALET in the June 1999 - June 2000.

%	Factor 1 Vehicles	Factor 2 Crustal	Factor 3 Industrial	Factor 4 Industrial?	Inter. Const. Other
Ca	1	104	-2	-1	-
Al	2	84	-4	20	-
Fe	49	51	-4	4	-
Mg	9	90	-1	2	-
Ti	6	93	-2	2	-
Sr	6	91	7	-4	-
K	52	43	5	-1	-
Mn	67	35	2	-4	-
Pb	94	3	-3	9	-
Zn	59	9	28	5	-
Cu	46	-1	9	46	-
Cr	87	7	-4	10	-
Ni	49	-2	52	5	-
P	25	19	-4	60	-
V	16	-3	75	12	-
OC+EC	92	2	-3	10	-
Na	8	7	8	76	-
Cl	97	-4	13	-5	-
nss SO ₄ ⁼	3	-2	89	9	-
NO ₃ ⁻	52	1	51	-4	-
NH ₄ ⁺	55	-4	52	-3	-

Source apportionment of PM10 components at ONDA industrial site

Source apportionment of PM10 components, expressed as percentage (%) of mass associated with each factor (or source), obtained by Multi-linear Regression Analysis following the methodology explained in chapter 3. The interception constant represent the contributions of other non identified sources. When this intersection constant is negative, its has non physical meaning and the linear regression is forced to pass through the origin (this is indicated with the symbol "-").

Table A6-F. Sources apportionment of PM10 components at ONDA in the June - October 1999.

	Factor 1 Crustal	Factor 2 Industrial-1	Factor 3 Marine + Industrial-2	Factor 4 Industrial-3	Factor 5 Bio-mass burning	Inter. Const. Other
%						
Ca	81	1	2	7	2	9
Al	85	3	-1	4	5	5
Fe	91	2	0	4	2	2
Mg	62	3	30	6	2	-
Ti	89	2	1	-1	3	9
Sr	89	3	2	2	2	2
K	45	3	17	34	2	
Mn	79	3	4	5	6	
Pb	3	32	-2	70	-3	
Zn	-2	73	0	26	-2	5
Cu	11	6	-2	82	2	
Cr	29	30	-1	38	-1	6
Ni	6	41	50	6	-2	
P	27	3	-5	69	2	
V	25	58	20	-1	-2	
OC+EC	-4	4	2	101	-7	2
Na	12	13	73	-17	19	
Cl	2	-5	82	1	11	9
nss SO ₄ ⁼	2	92	4	1	2	
NO ₃ ⁻	2	43	35	20	-1	
NH ₄ ⁺	1	91	3	4	2	