

Elementi Inorganici

V

Fe

Mn

Cu

Cd

Zn

Al

Pb

U

Co

Li

Microinquinanti Organici

PCB

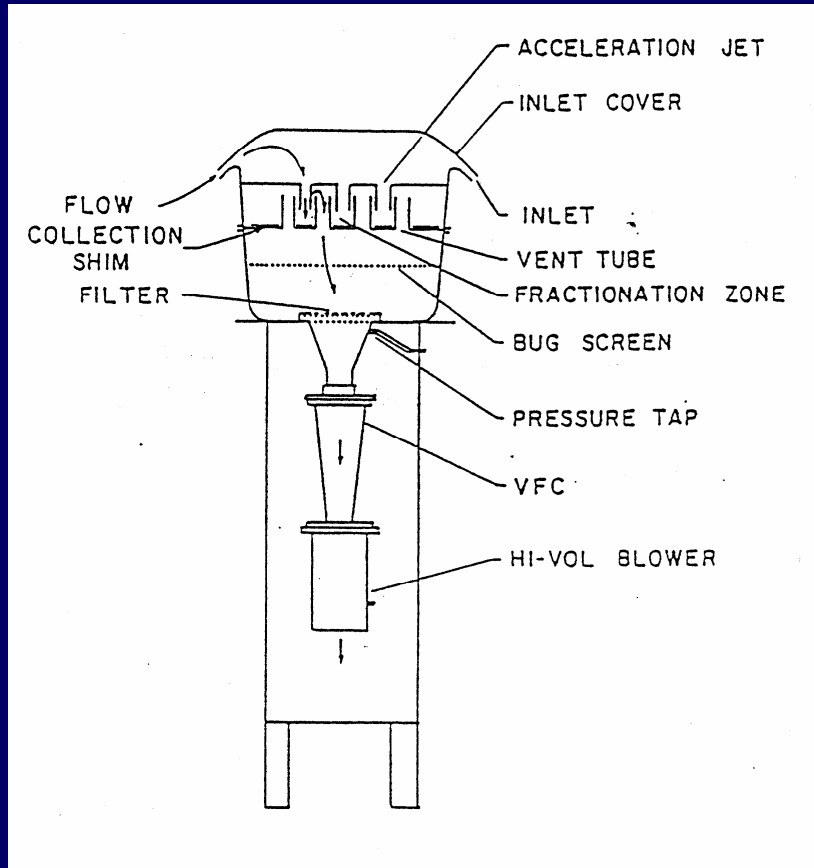
IPA

IA

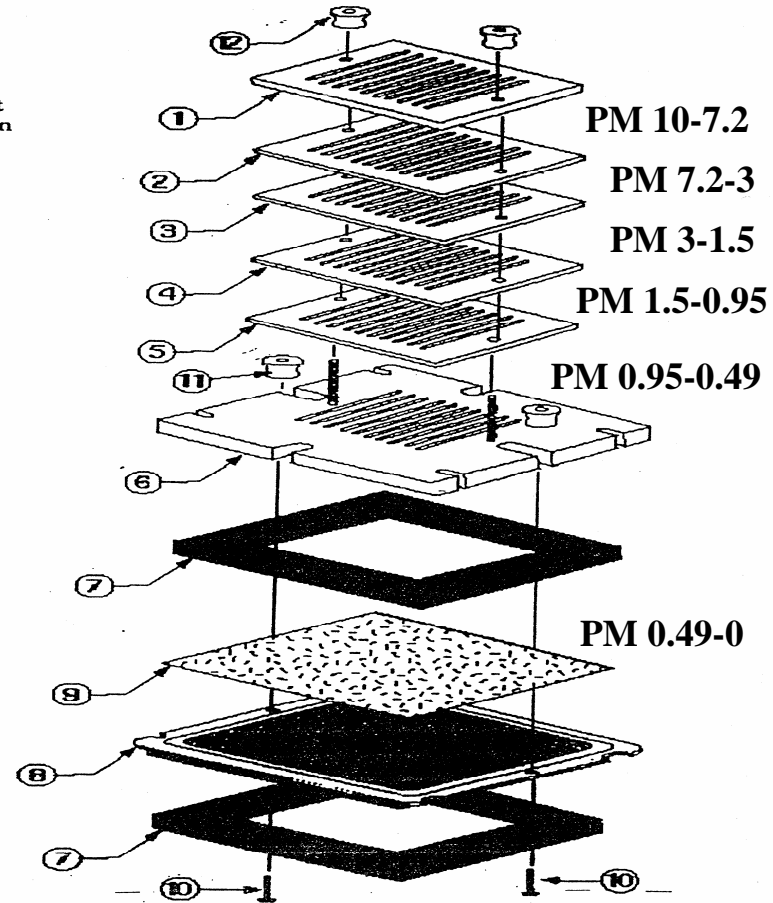
PCDD

PCDF

Campionatore di Aerosol



- 1 Stage 1
- 2 Stage 2
- 3 Stage 3
- 4 Stage 4
- 5 Stage 5
- 6 Base Plate
- 7 8" x 10" Gasket
- 8 Cartridge Screen
- 9 Filter Paper
- 10 Cartridge Bolt
- 11 Thumb-nut
- 12 Thumb-nut



Analisi chimica elementi inorganici

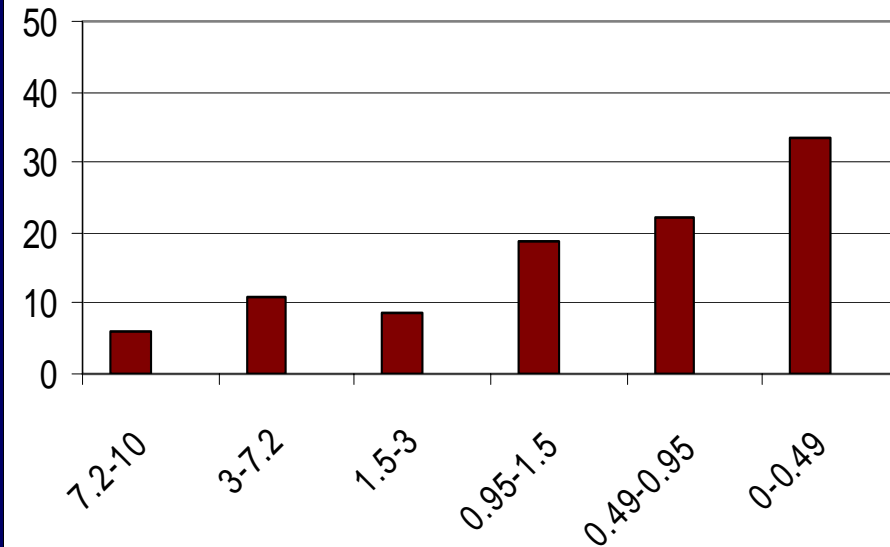
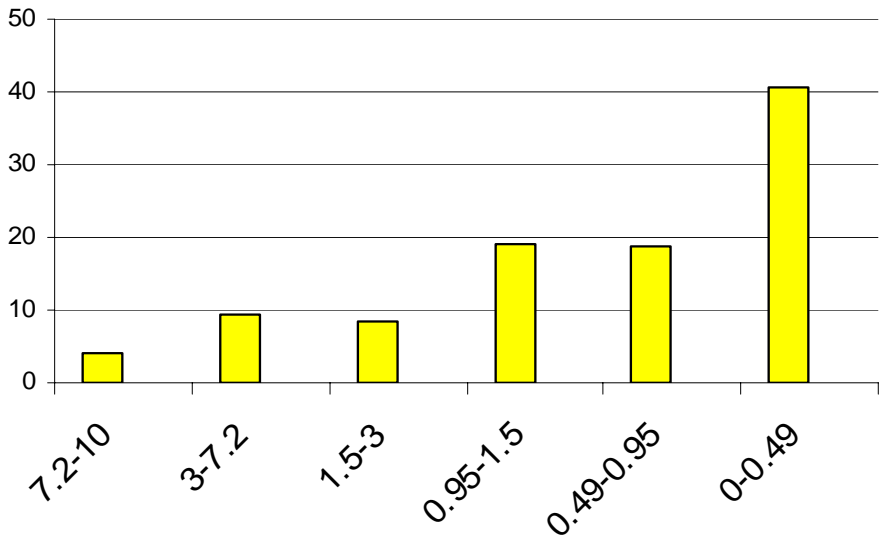
Analisi gravimetrica
del filtro

Disgregazione con
acidi Ultrapur
mediante microonde

Analisi con ICP-MS
(metalli di transizione)

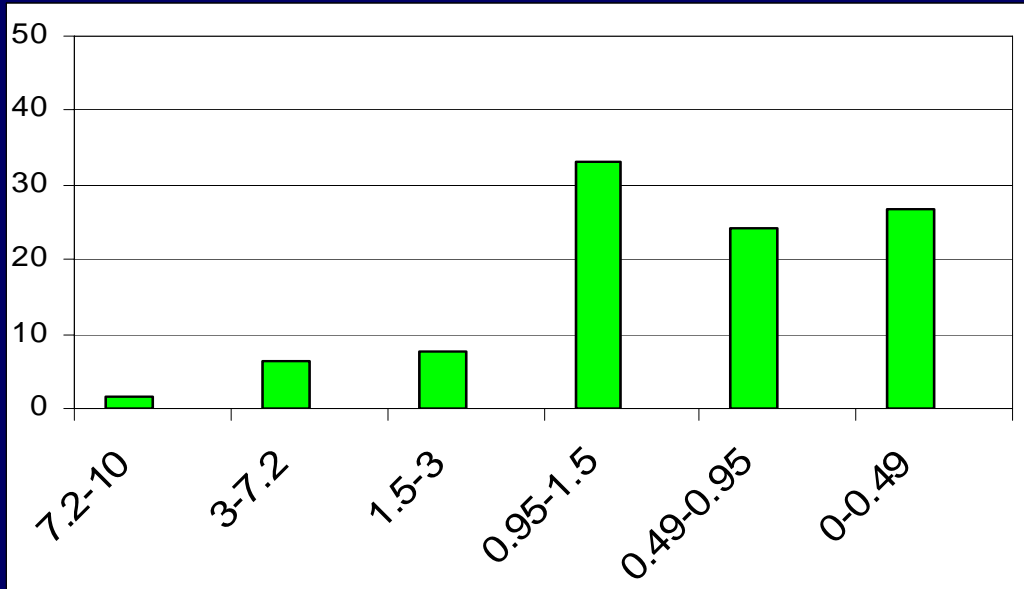
Analisi con AAS
ed AES
(metalli alcalini e
alcalino-terrosi)

DISTRIBUZIONE GRANULOMETRICA, %



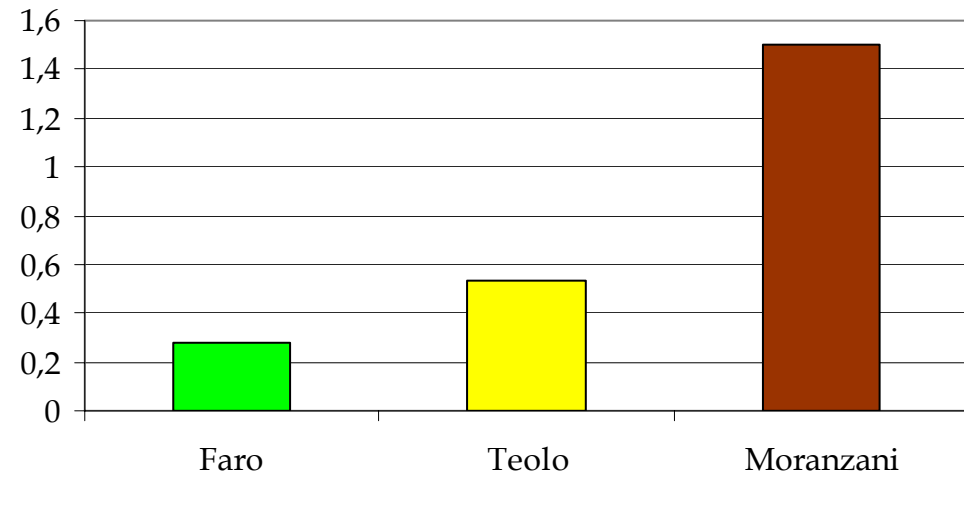
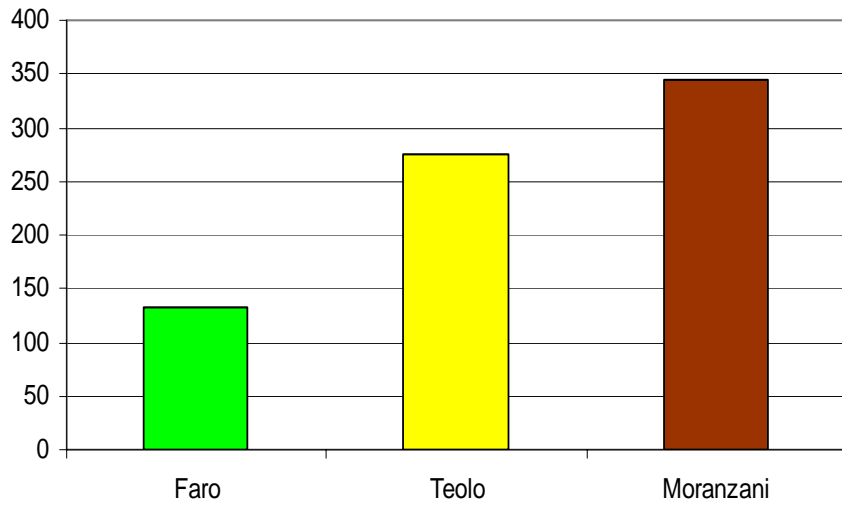
Teolo

Moranzani



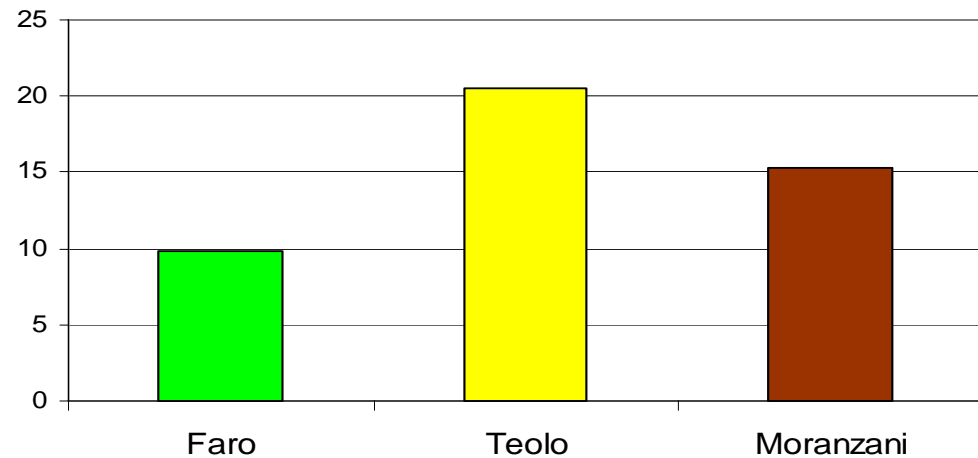
Faro

Ferro, ng/m³



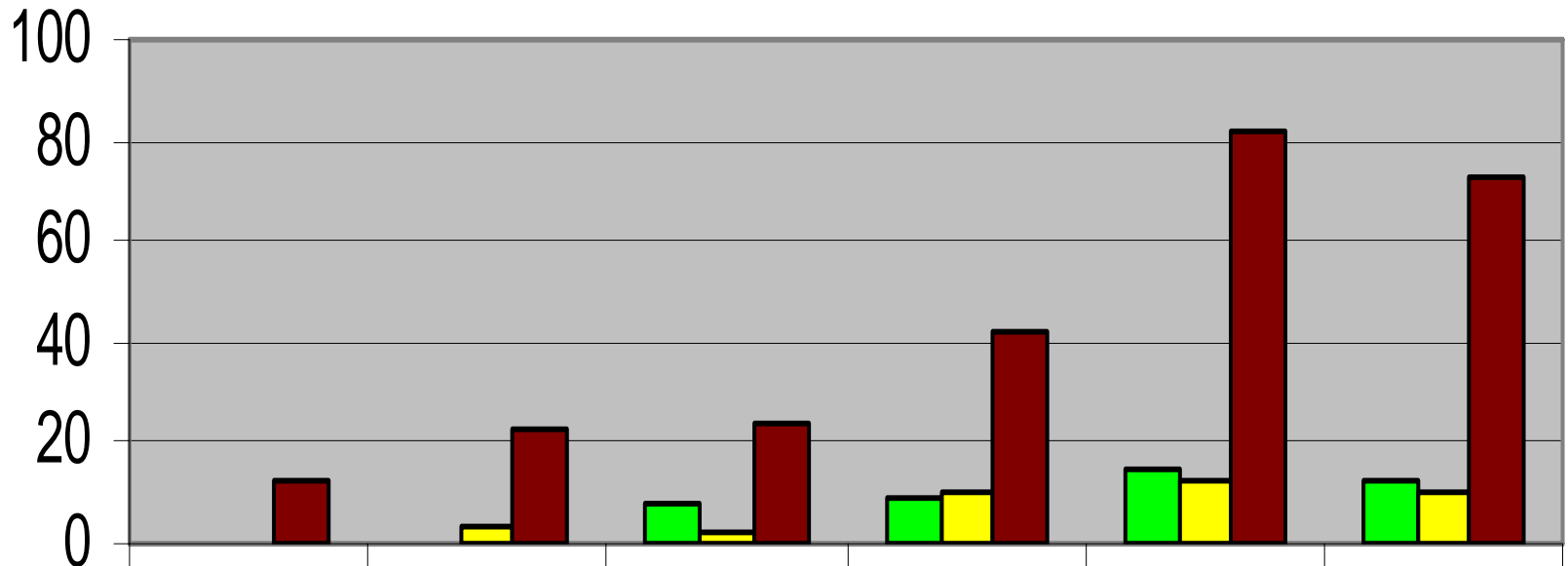
Cadmio, ng/m³

Piombo, ng/m³



Cd ($\mu\text{g/g}$)

Faro **Teolo** **Marghera**



7.2-10

3-7.2

1.5-3

0.95-1.5

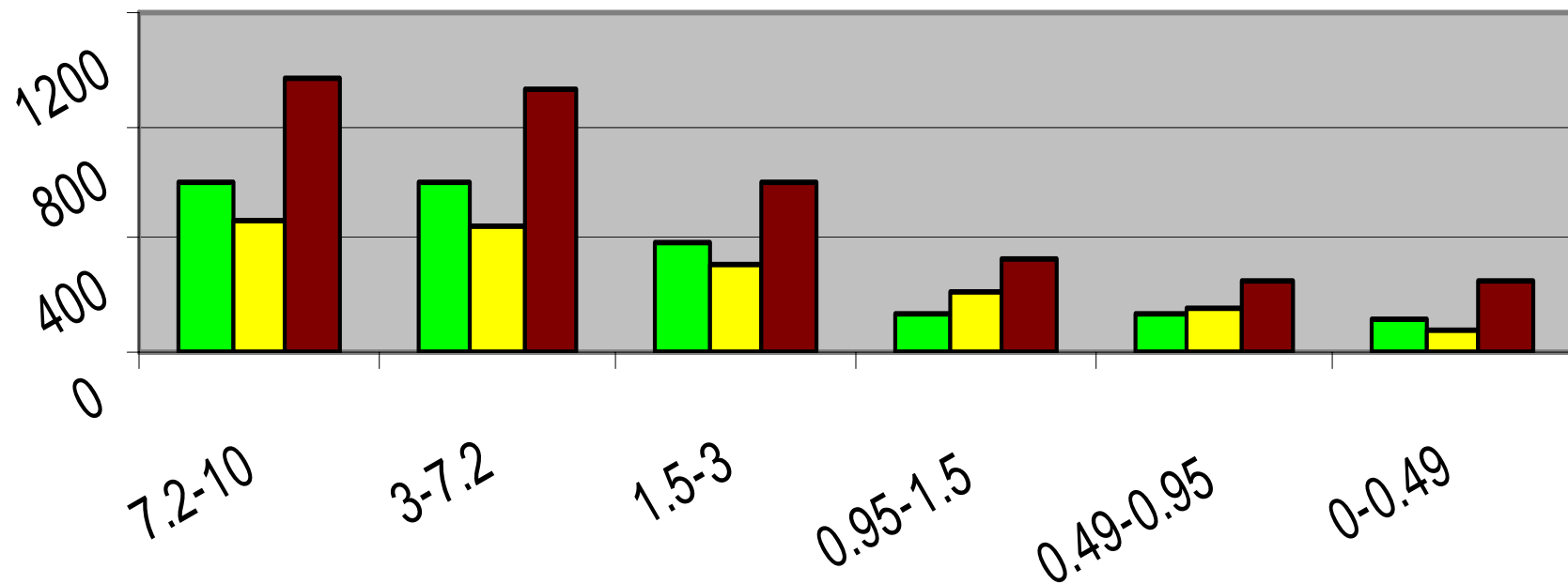
0.49-0.95

0-0.49

Granulometria

Mn ($\mu\text{g/g}$)

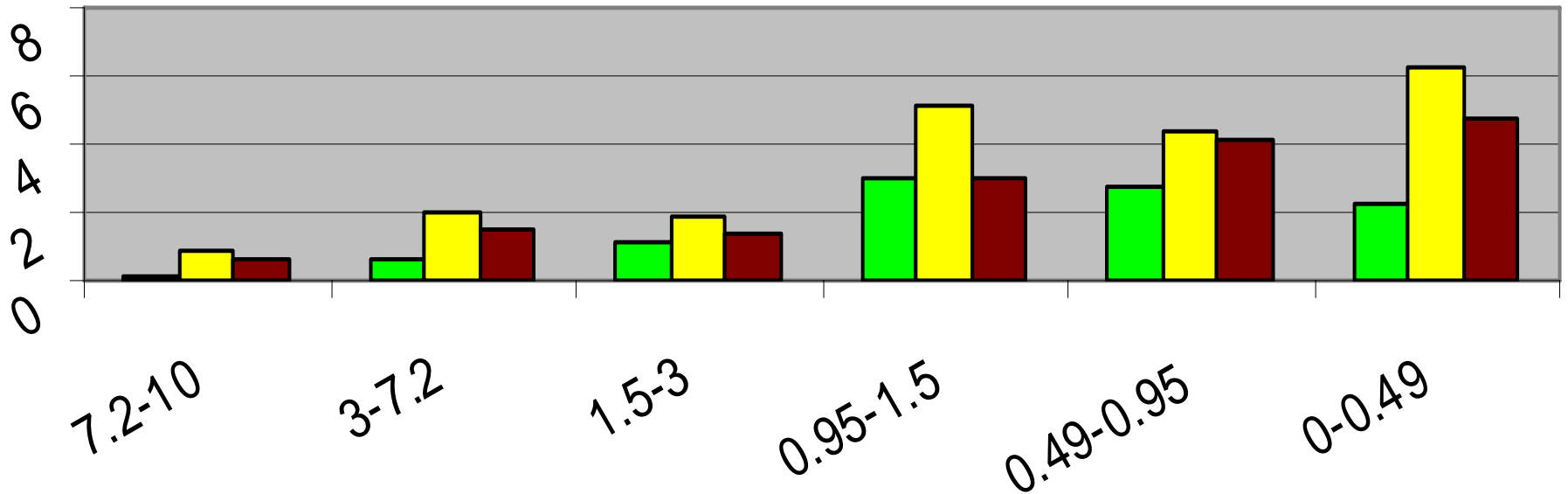
■ Faro ■ Teolo ■ Marghera



Granulometria

Pb (ng/m³)

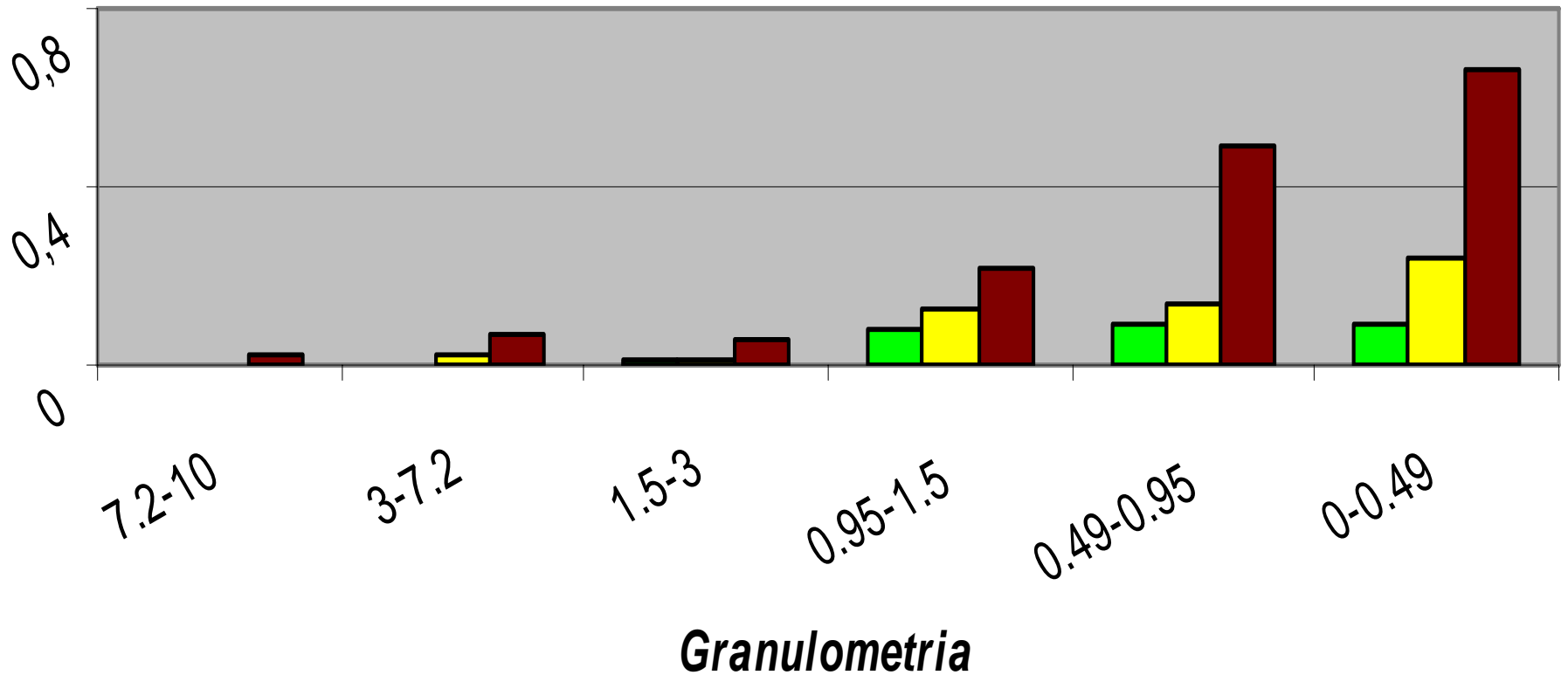
■ Faro ■ Teolo ■ Marghera



Granulometria

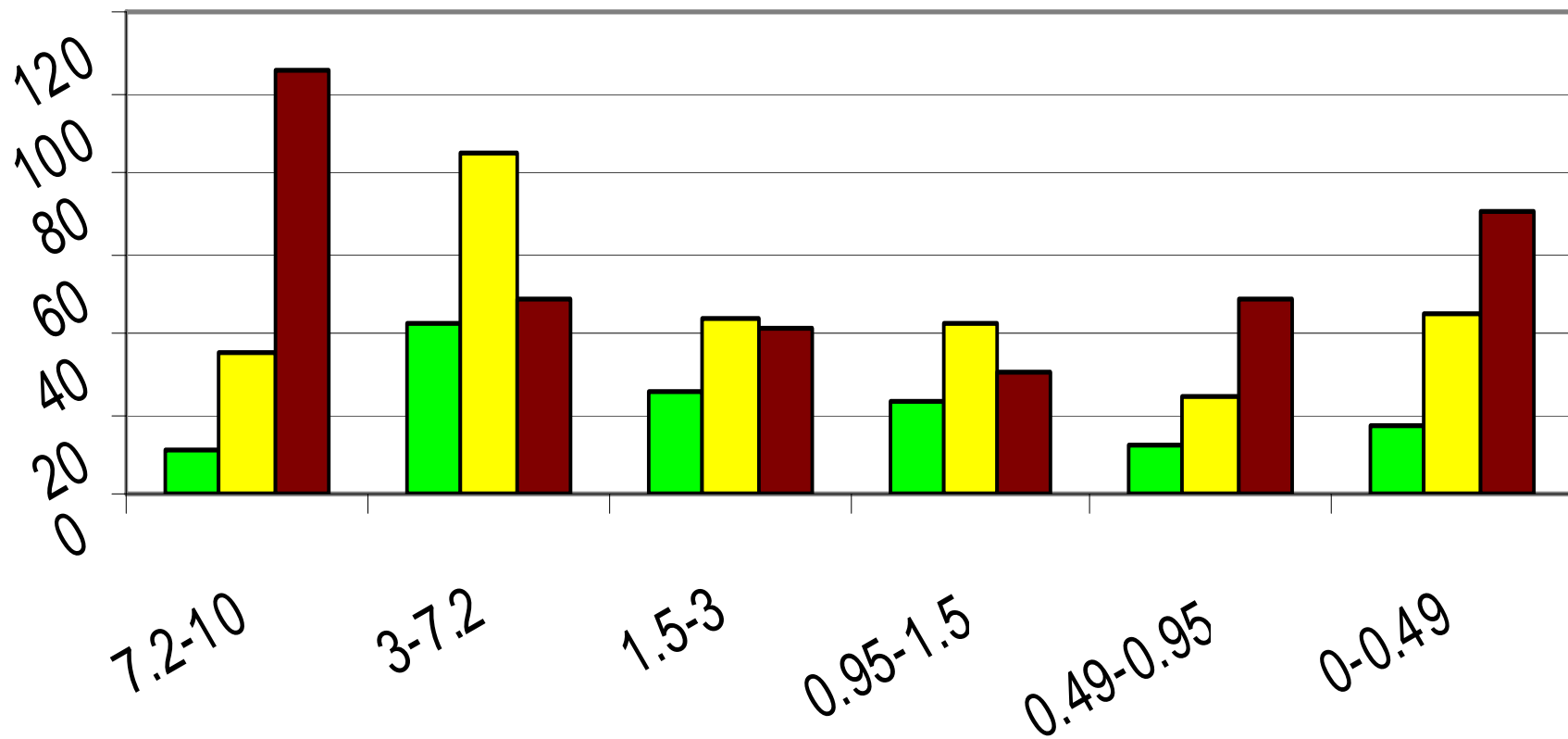
Cd (ng/m³)

Faro Teolo Marghera



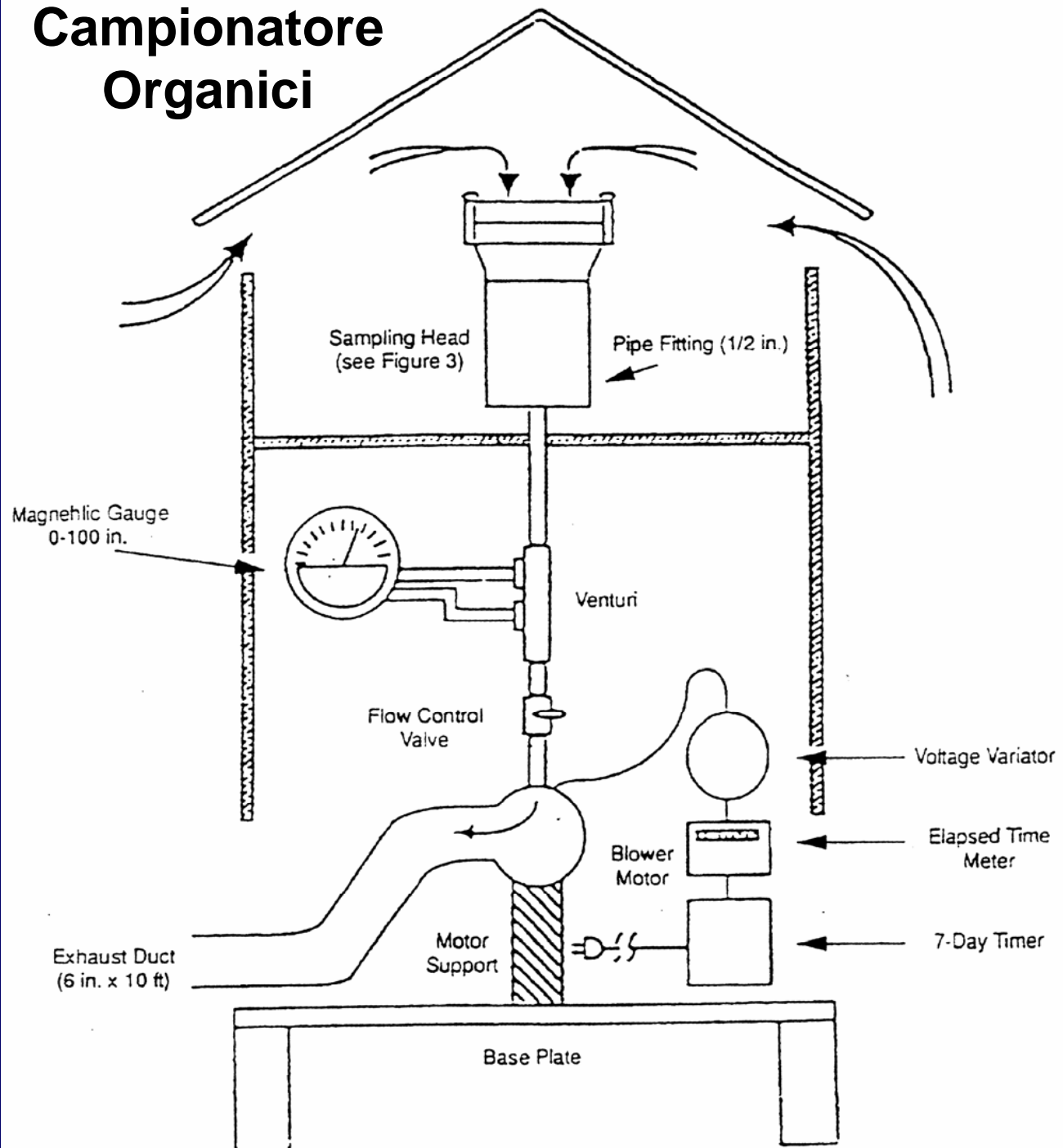
Fe(ng/m^3)

■ Faro ■ Teolo ■ Marghera



**TRASPORTO DI
MICROINQUINANTI
ORGANICI ATTRAVERSO
L'AEROSOL**

Campionatore Organici



Analisi chimica inquinanti organici

Analisi gravimetrica filtro

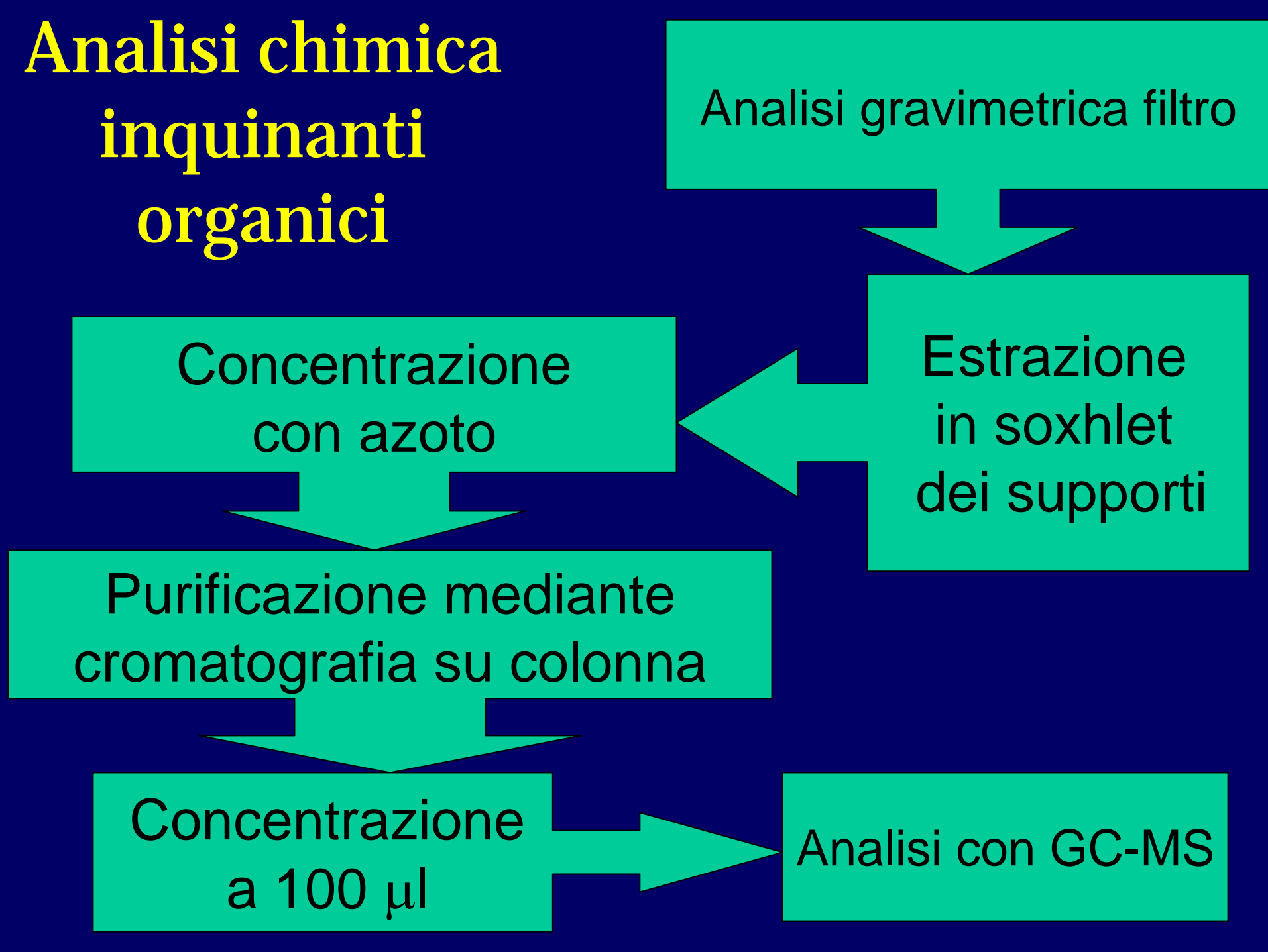
Estrazione
in soxhlet
dei supporti

Concentrazione
con azoto

Purificazione mediante
cromatografia su colonna

Concentrazione
a 100 μ l

Analisi con GC-MS

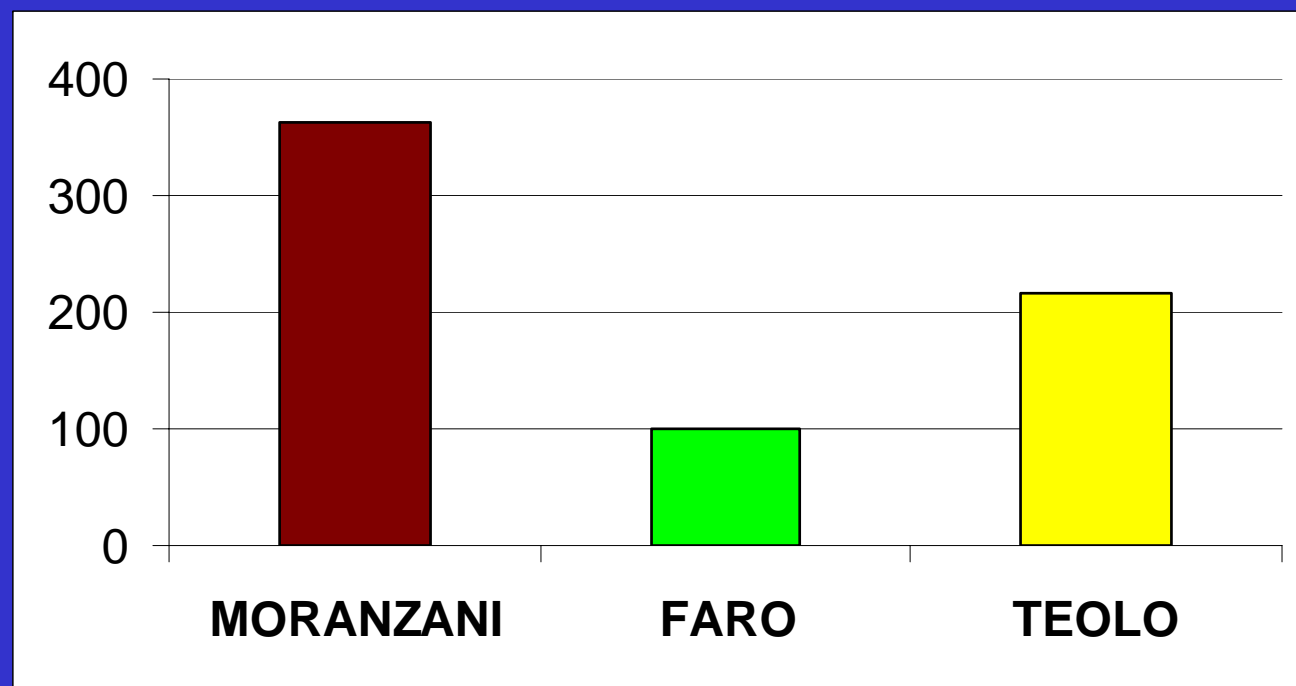


PCB	Marghera	Faro	Teolo
Totale, pg	592781	91314	72174
Bianco, pg	2558	2432	4043
%bianco	0,4	2,7	5,6
IPA	Marghera	Faro	Teolo
Totale, ng	7808	1120	4331
Bianco, ng	128	175	109
%bianco	1,6	15,6	2,5

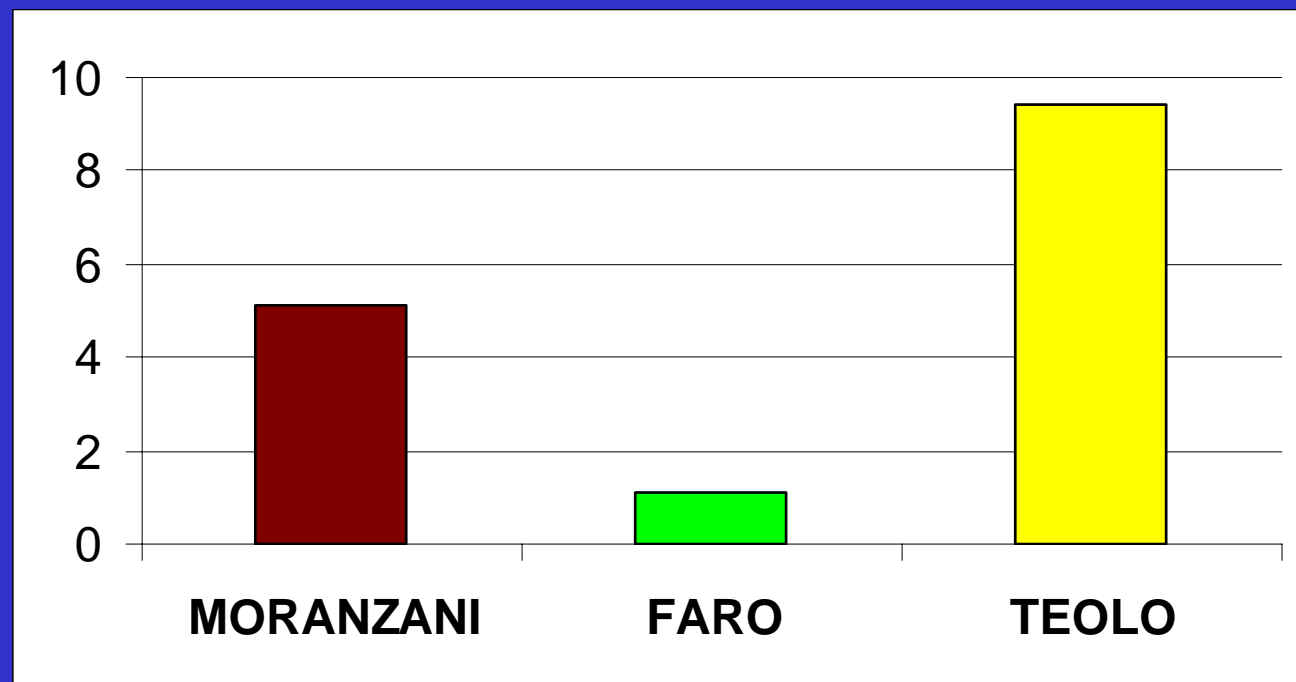
CONSERVAZIONE PCB, pg

PCB	CI	LAB	Moranz.	FARO	medio	DSR%	RIF	err%
18	3	11328,7	13270,6	10350,0	11649,8	13	9964,2	17
52	4	8813,8	13171,4	9802,1	10595,7	22	10164,3	4
70	4	10927,0	13635,0	11048,4	11870,2	13	12603,7	-6
92	5	8684,3	11513,8	9085,5	9761,2	16	8795,5	11
97	5	8702,1	11171,9	9062,1	9645,4	14	9811,4	-2
136	6	9579,3	12107,5	9019,1	10235,3	16	9211,5	11
135	6	8796,5	11229,7	8900,7	9642,3	14	9867,5	-2
118	5	8651,2	11635,2	8975,9	9754,1	17	9500,5	3
153	6	10534,0	13084,4	9919,1	11179,2	15	10278,5	9
141	6	10599,8	12386,0	10197,5	11061,1	11	11336,3	-2
137	6	10546,6	13191,1	10417,2	11385,0	14	11285,9	1
158	6	11588,2	14368,5	11614,2	12523,6	13	13164,8	-5
187	7	10557,2	13793,8	9643,3	11331,4	19	10433,0	9
170+190	7	13252,0	17525,4	12745,9	14507,8	18	13199,7	10
totale		452827,5	587120,3	452488,0	497478,6	16	458623,1	8

PCB, Totali
pg/m³

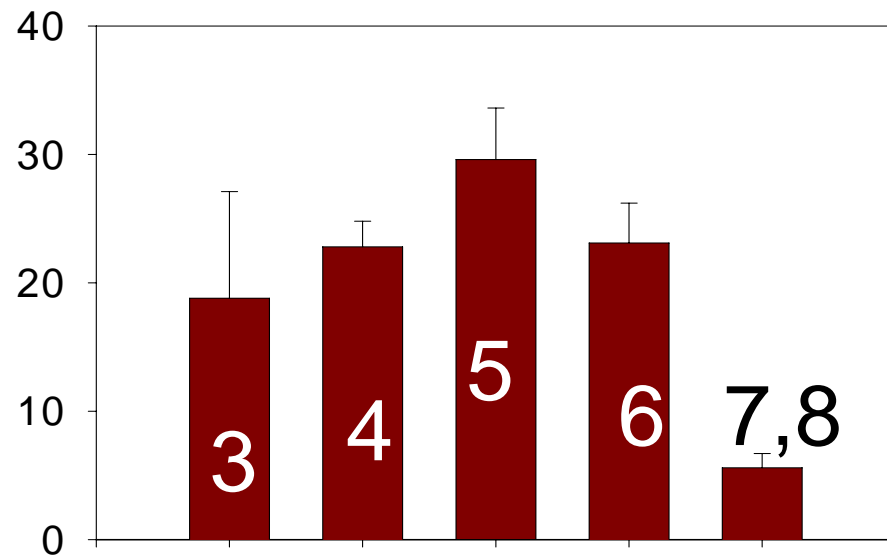


IPA, Totali
ng/m³

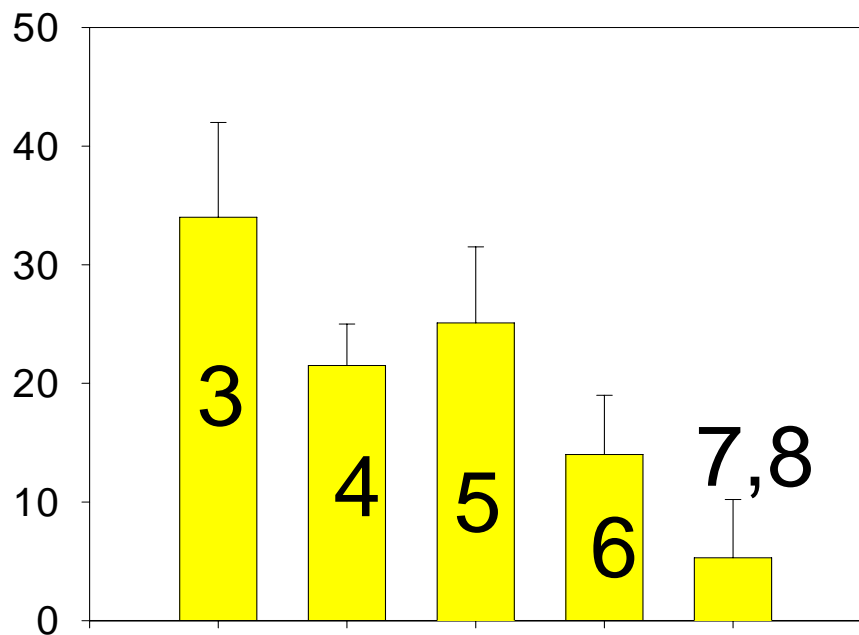


Moranzani

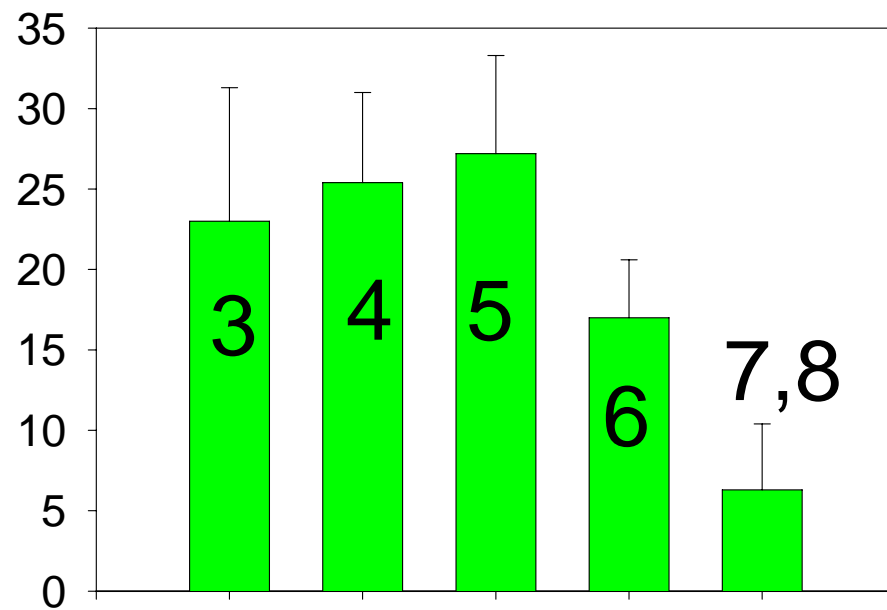
PCB
%



Teolo

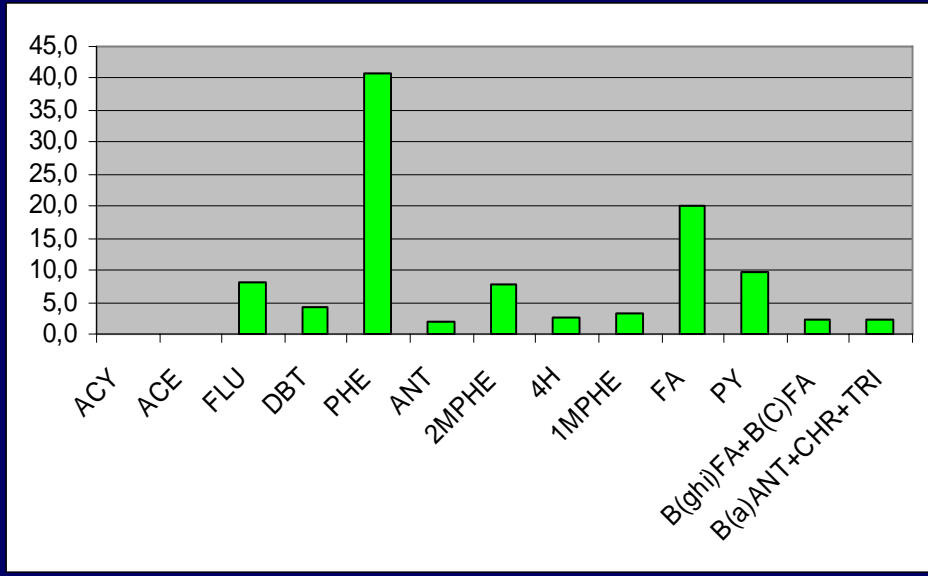
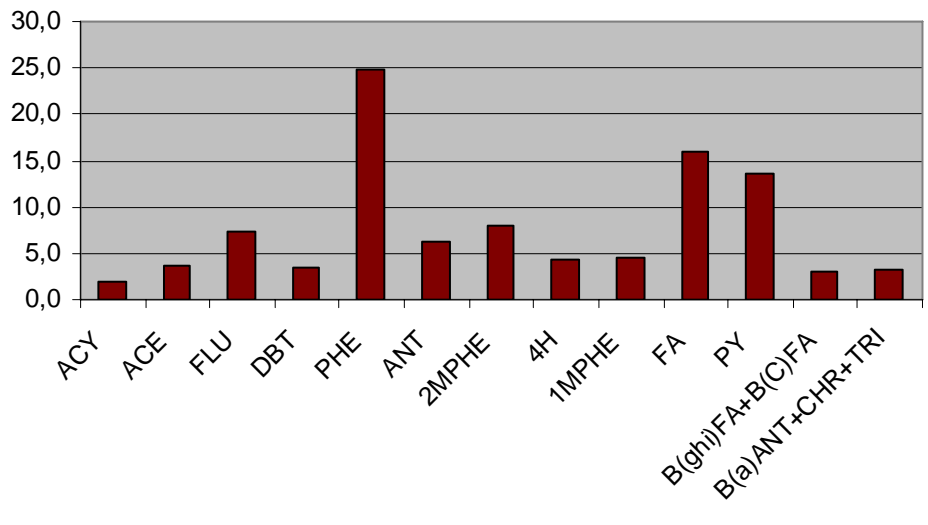


Faro



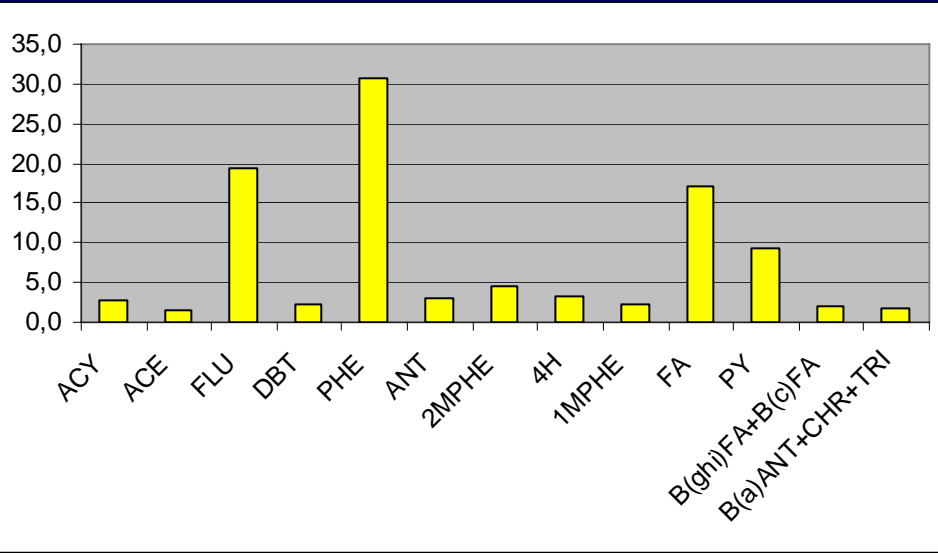
IPA
%

Faro

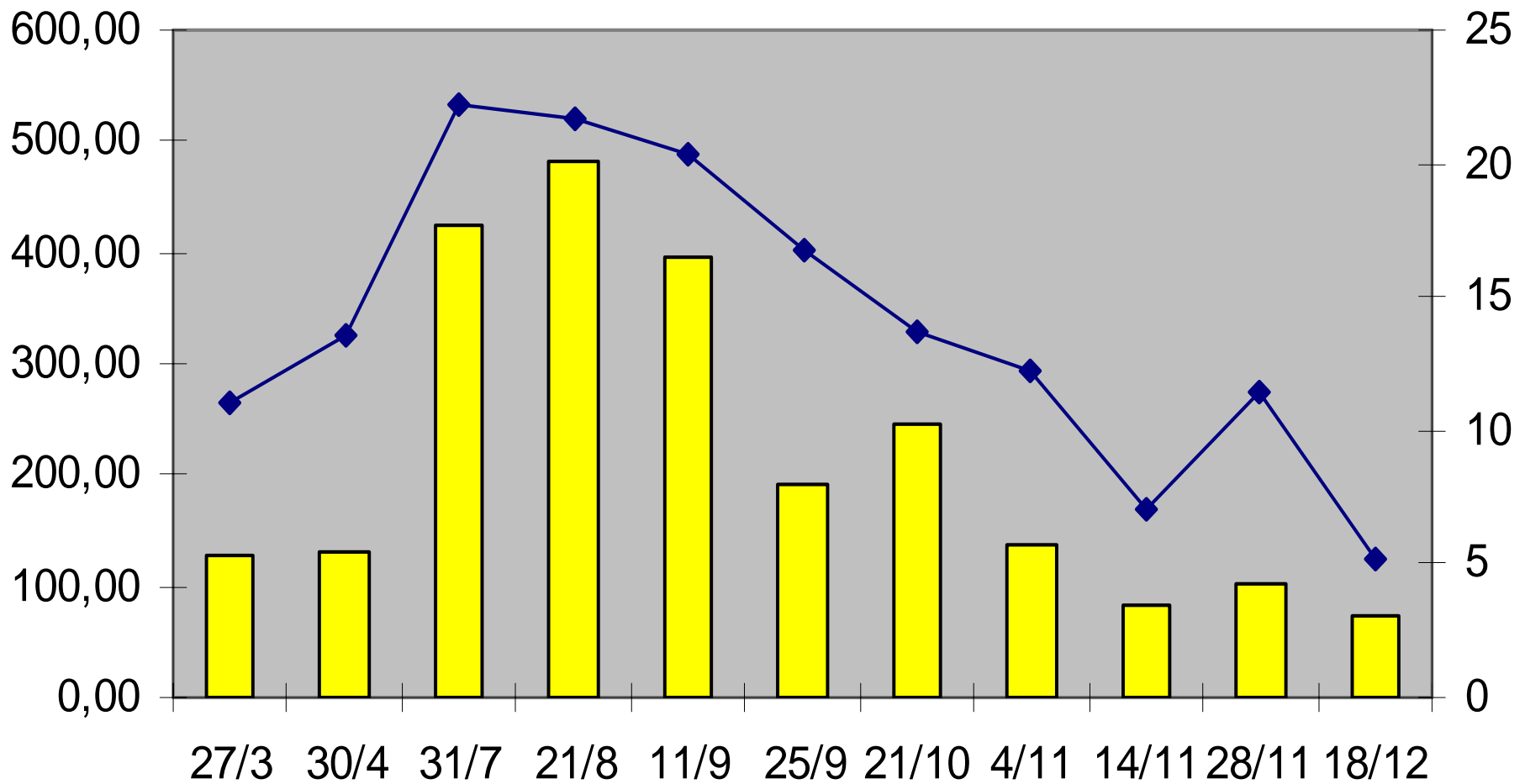


Moranzani

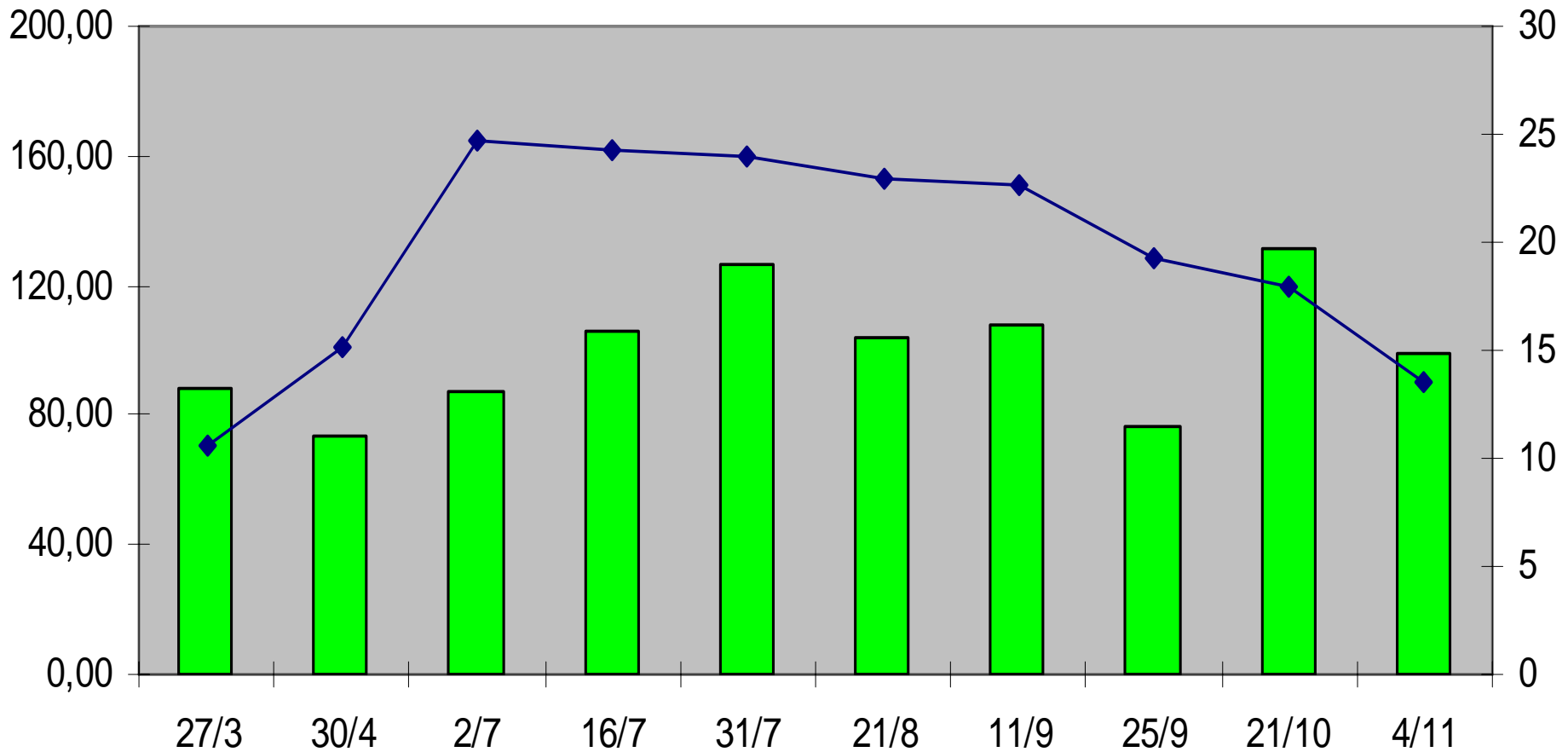
Teolo



TEOLO, PCB, PUF, $\mu\text{g}/\text{m}^3$ Temperatura media dell'aria

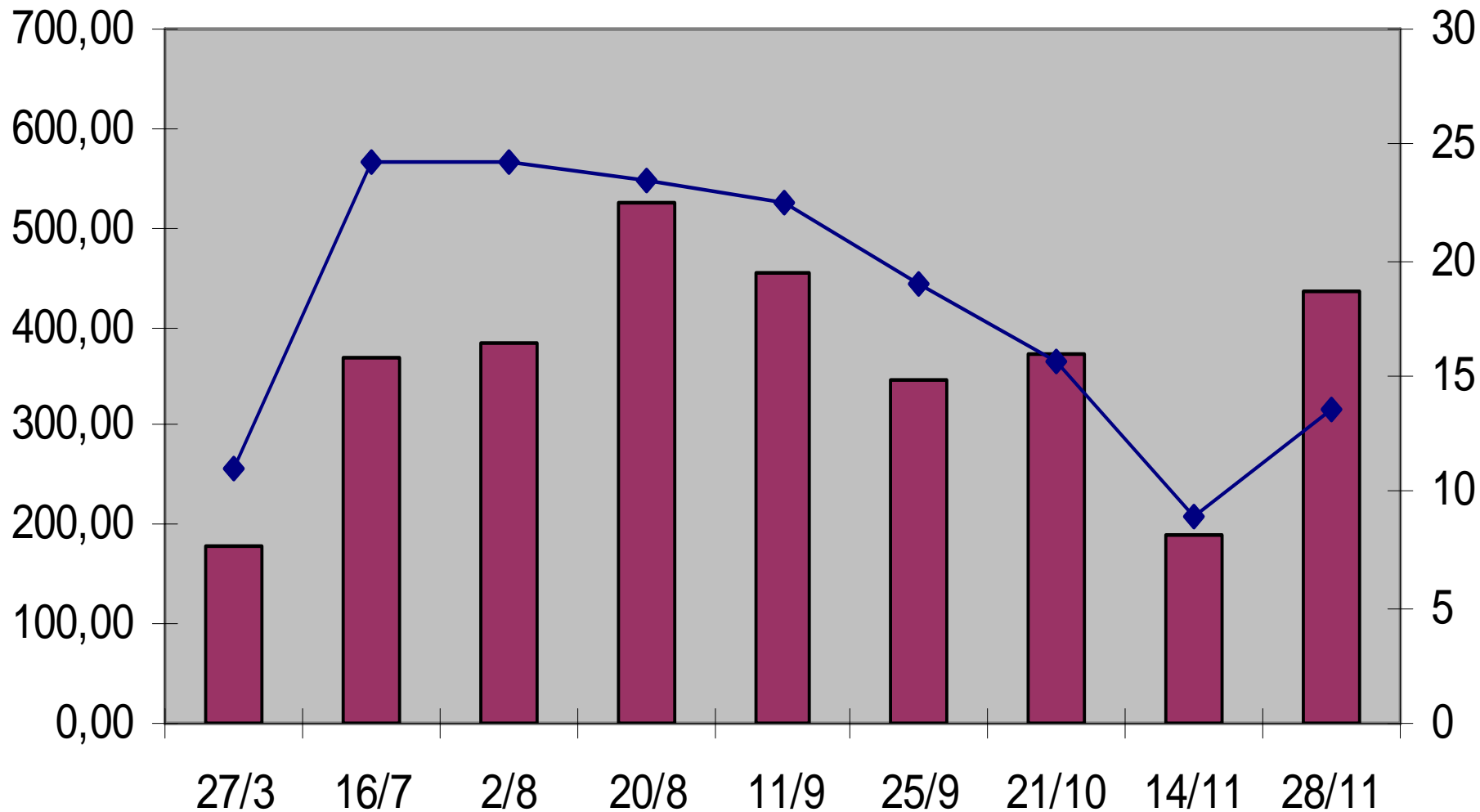


FARO, PCB, PUF, pg/m^3 Temperatura media dell'aria



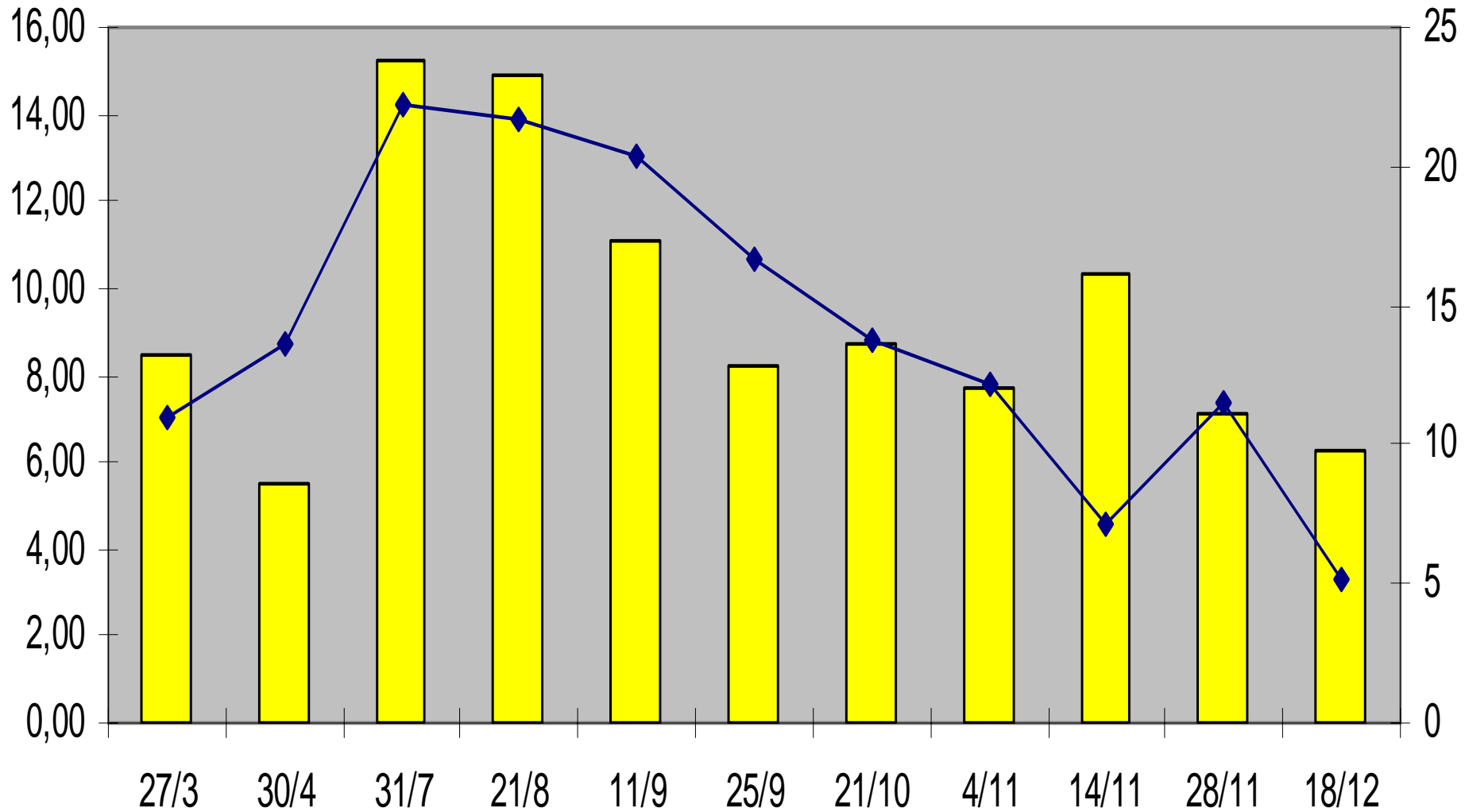
MORANZANI, PCB, PUF, pg/m^3

Temperatura media dell'aria

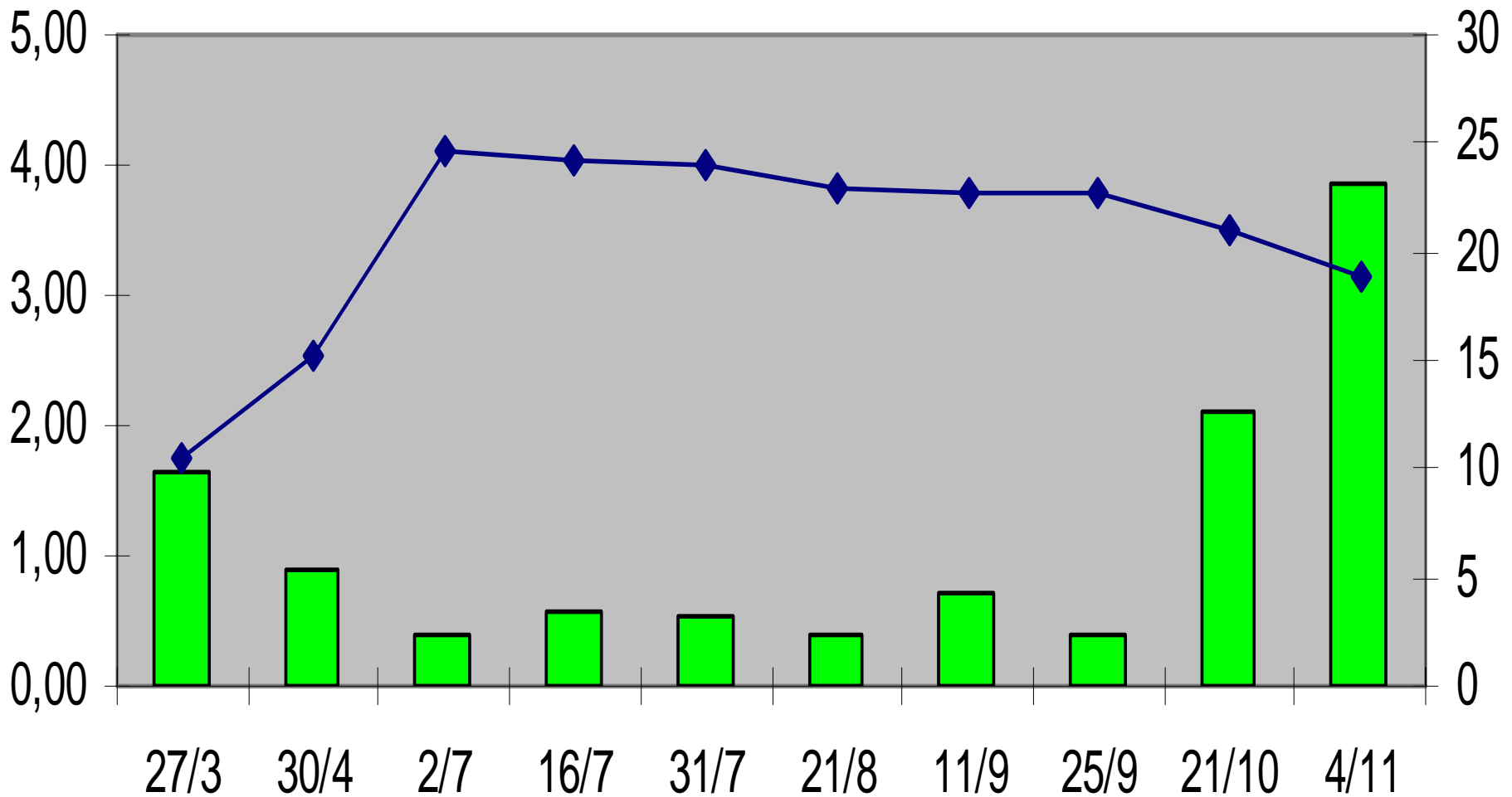


TEOLO, IPA, PUF, ng/m³

Temperatura media dell'aria

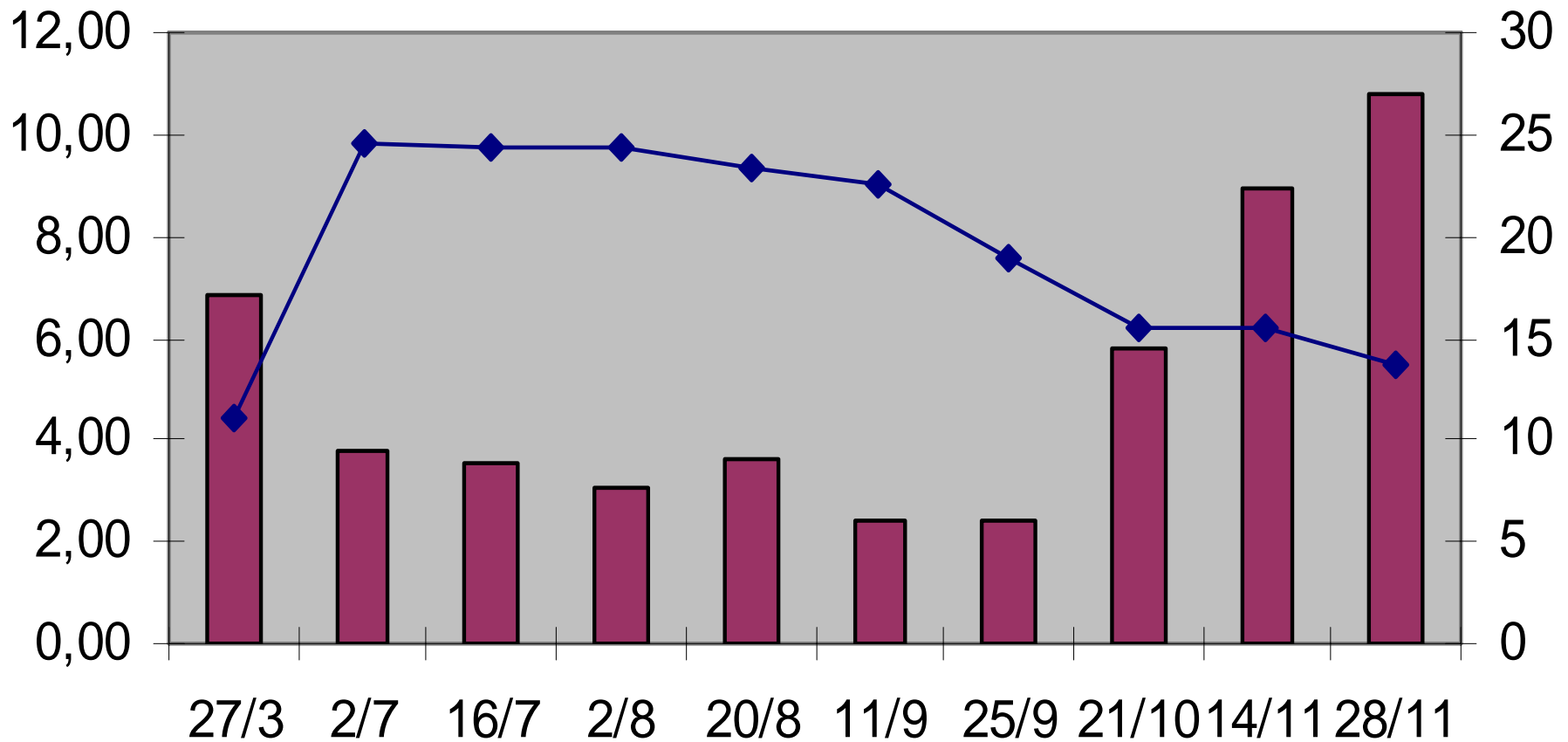


FARO, IPA, PUF, ng/m³ Temperatura media dell'aria

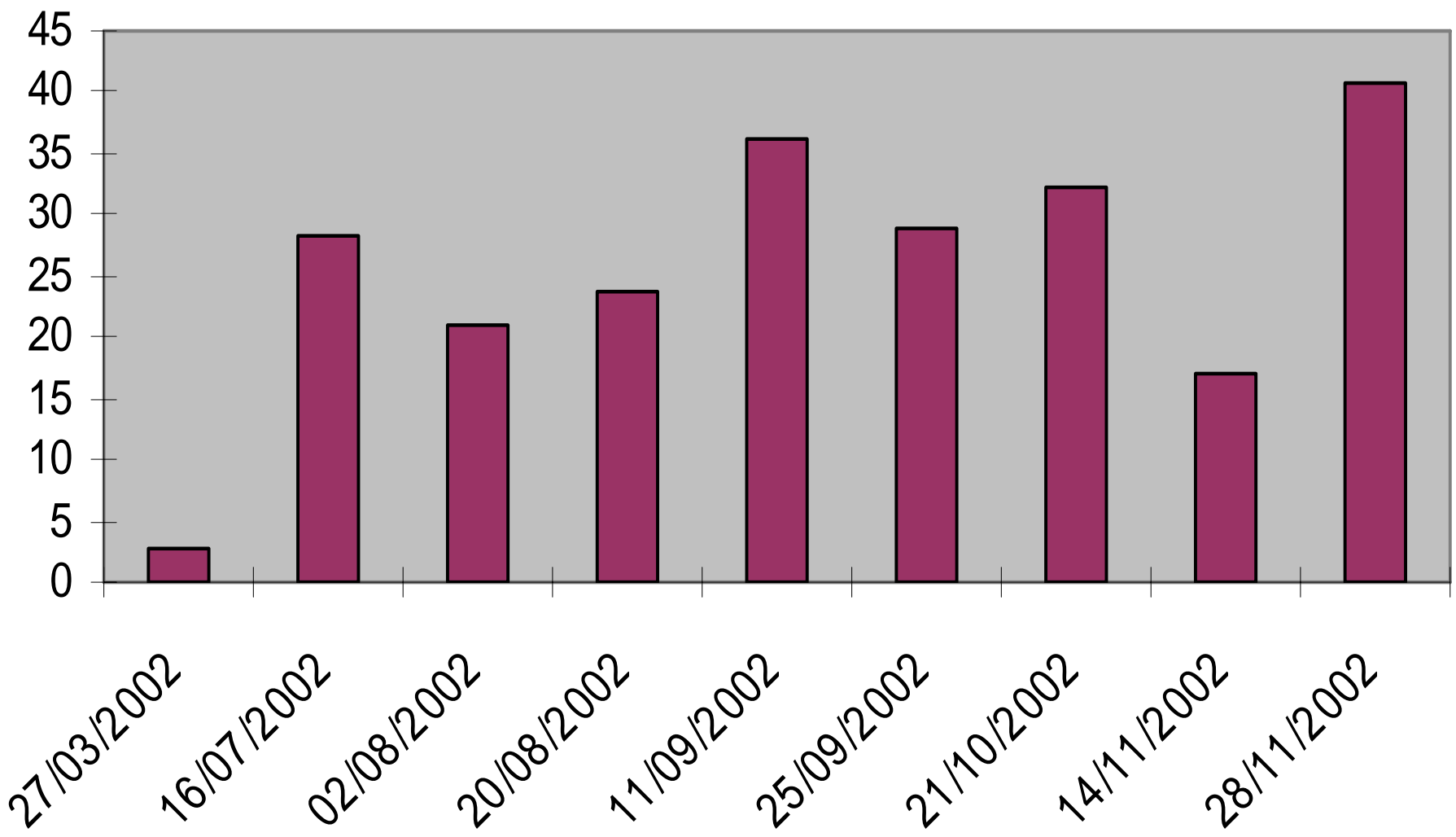


MORANZANI, IPA, PUF, ng/m³

Temperatura media dell'aria

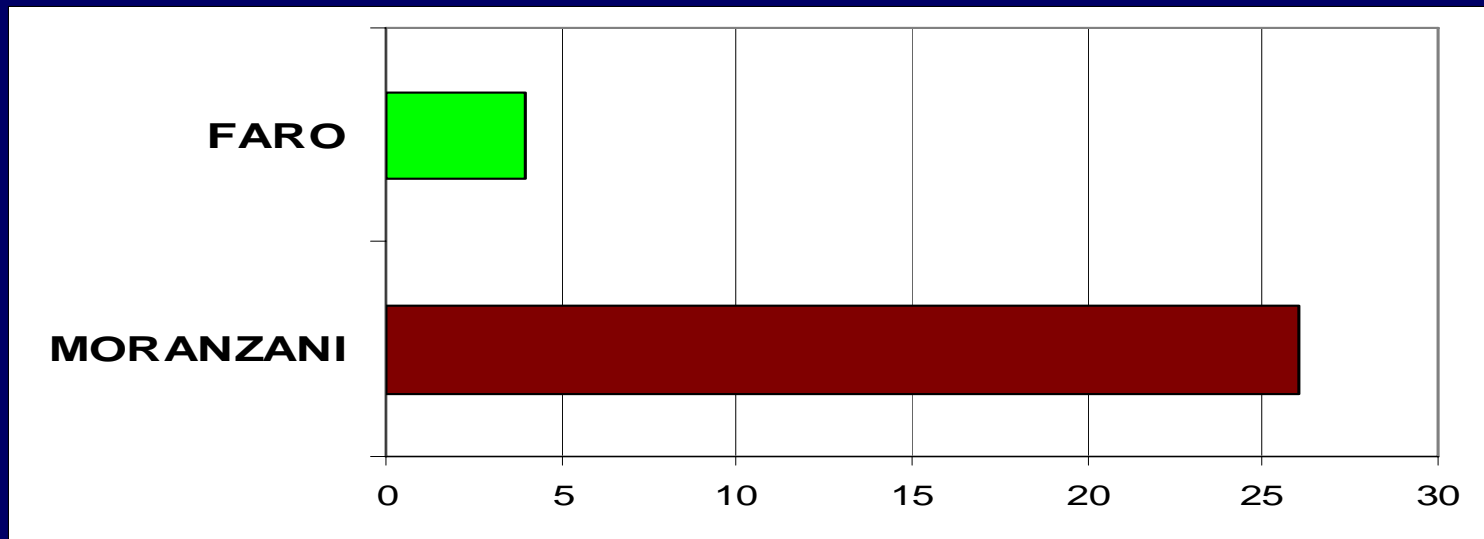


MORANZANI, FLUSSO PCB, PUF, $\mu\text{g}/\text{m}^2\text{g}$

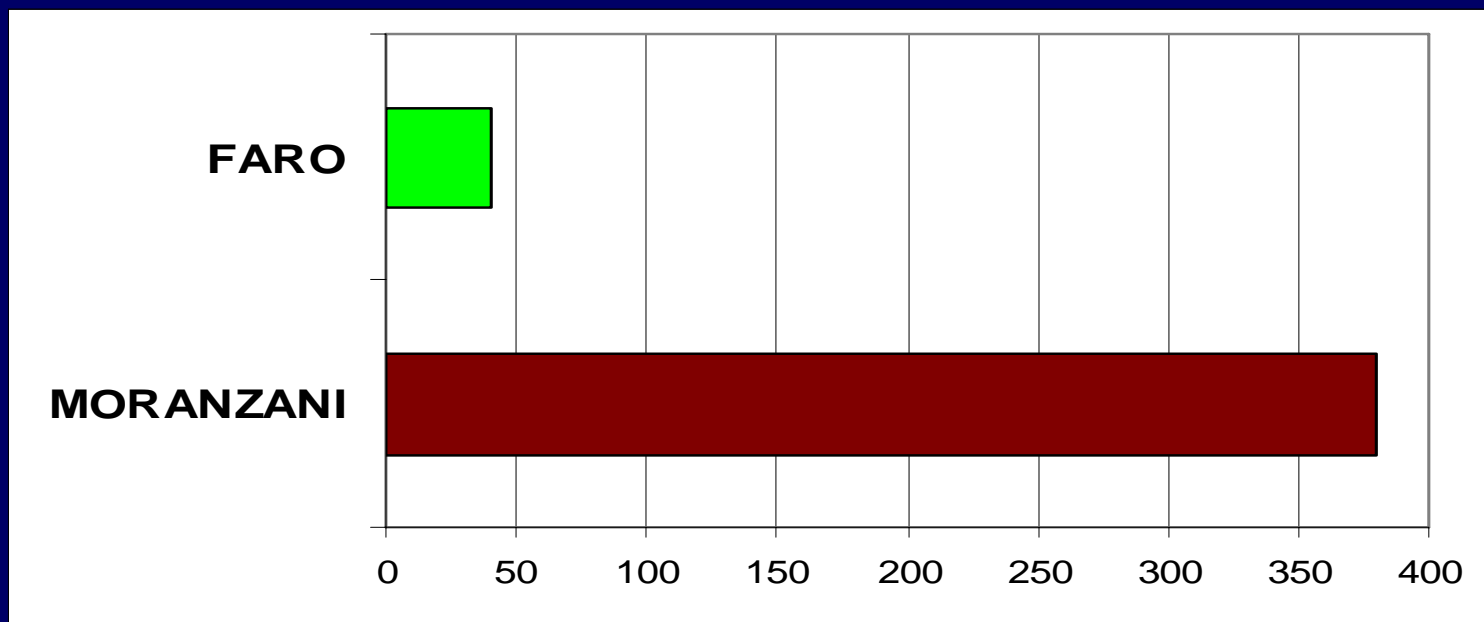


STIMA FLUSSO

PCB,
 $\mu\text{g}/\text{m}^2\text{g}$



IPA,
 $\mu\text{g}/\text{m}^2\text{g}$



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Dr. Giuseppa Toscano

Dr. Warren R.L. Cairns

Carlo Drommi

Si ringrazia :

A.R.P.A.V., Centro Meteorologico di Teolo

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Comando Zona Fari, Venezia

Ente della Zona Industriale di Marghera

CNR, ISDGM, Venezia

Magistrato alle acque di Venezia