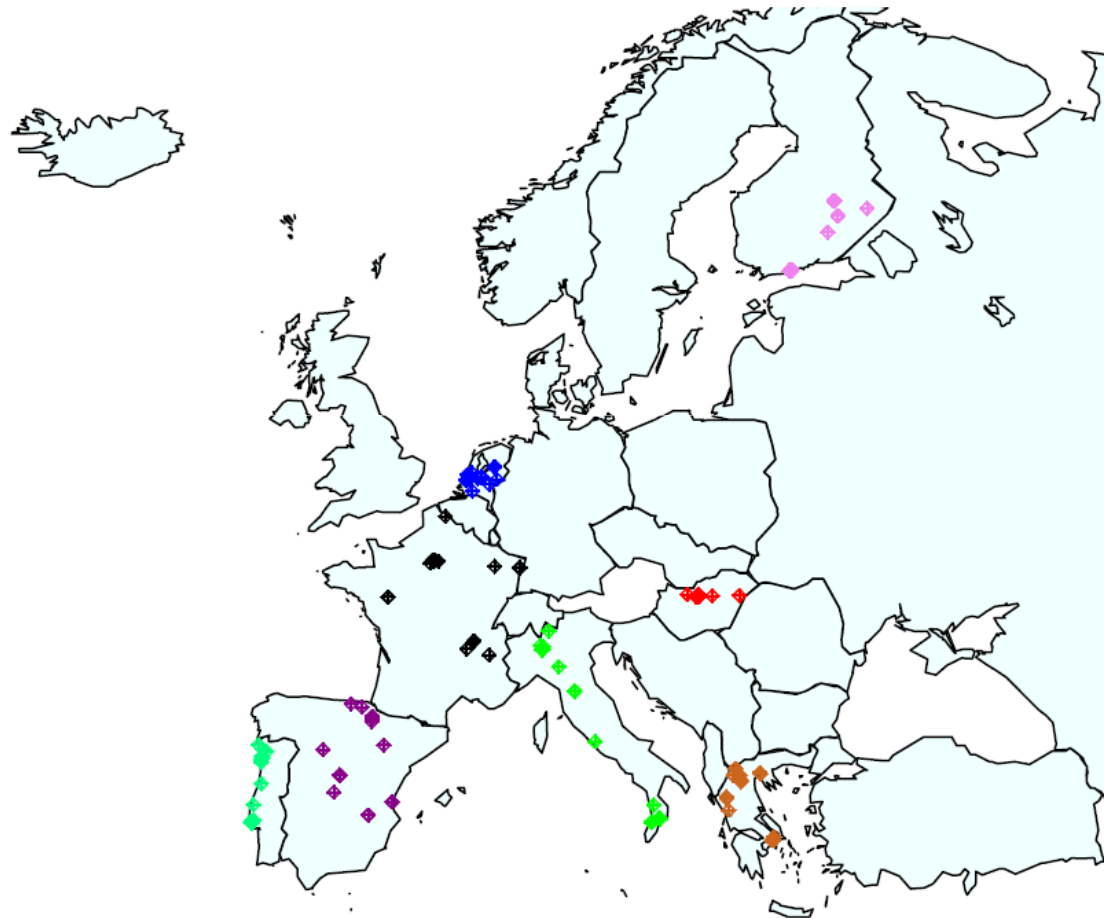


# 1. General Survey: global overview

- **167 office buildings** investigated in all the European climatic regions





# DETAILED STUDY

COUNTRIES	N° BUILDINGS	CODE BUILDINGS
ITALY (UMIL)	4	IT03 - IT04 - IT08 - IT12
NETHERLAND (TNO)	4	NL01 – NL02 - NL10 - NL15
SPAIN (UOWM)	3	ES01 - ES06 - ES07
GREECE (UOWM)	5	GR03 - GR04 - GR05 - GR22 - GR23
PORTUGAL (IDMEC)	4	P708 - PT16 - PT17 - PT21
FINLAND	3	FI01 – FI07 – FI08
HUNGARY (ELTE)	5	HU11 - HU14 - HU15 - HU18 - HU23
FRANCE (CSTB)	9	FR02 - FR04 - FR05 - FR09 - FR13 - FR16 - FR18 – FR19-FR20
<b>TOTALE</b>	<b>37</b>	

COUNTRIES	N° BUILDINGS	CODE BUILDINGS
ITALY (UMIL)	2	IT03 – IT04
NETHERLAND (TNO)	1	NL02
HUNGARY (ELTE)	1	HU12
GREECE (UOWM)	2	GR23 – GR22
PORTUGAL (IDMEC)	2	PT17 – PT13
<b>TOTALE</b>	<b>8</b>	

## Intervention study – Aldehydes and VOC

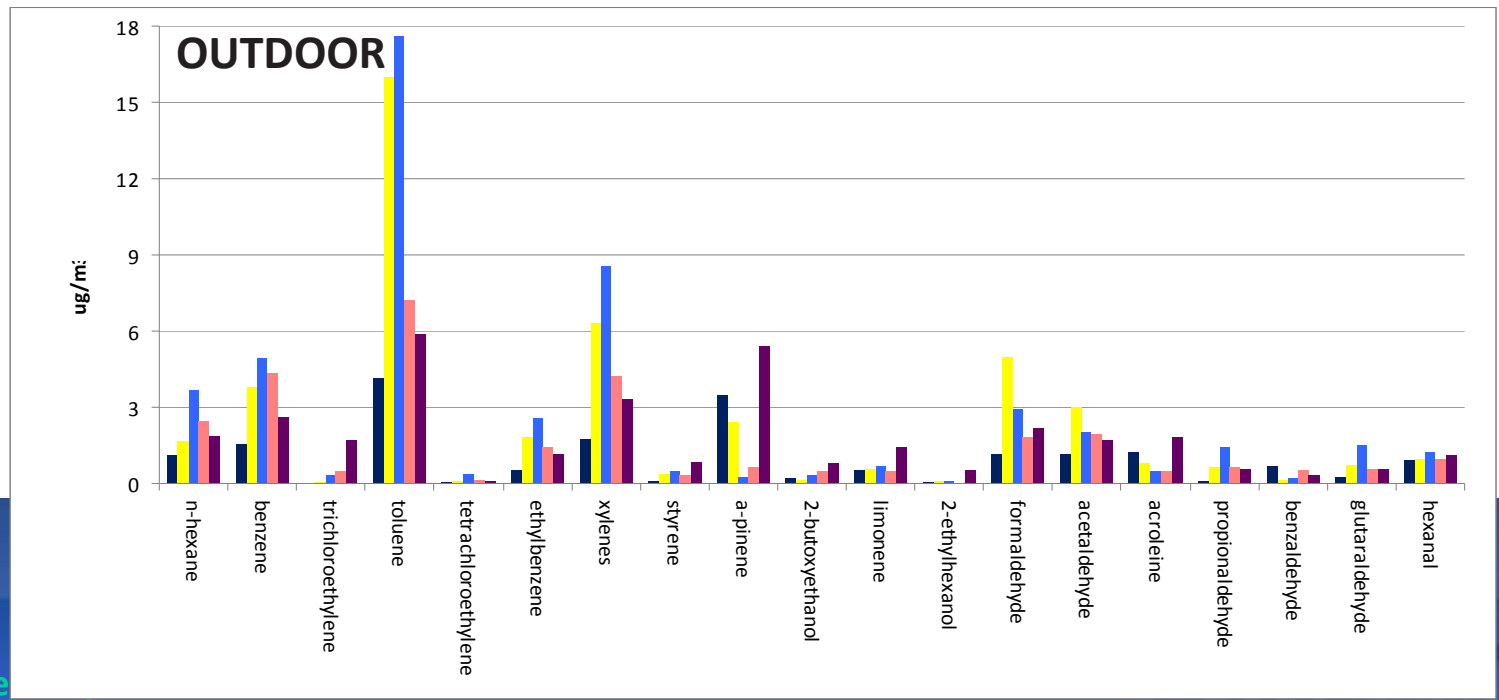
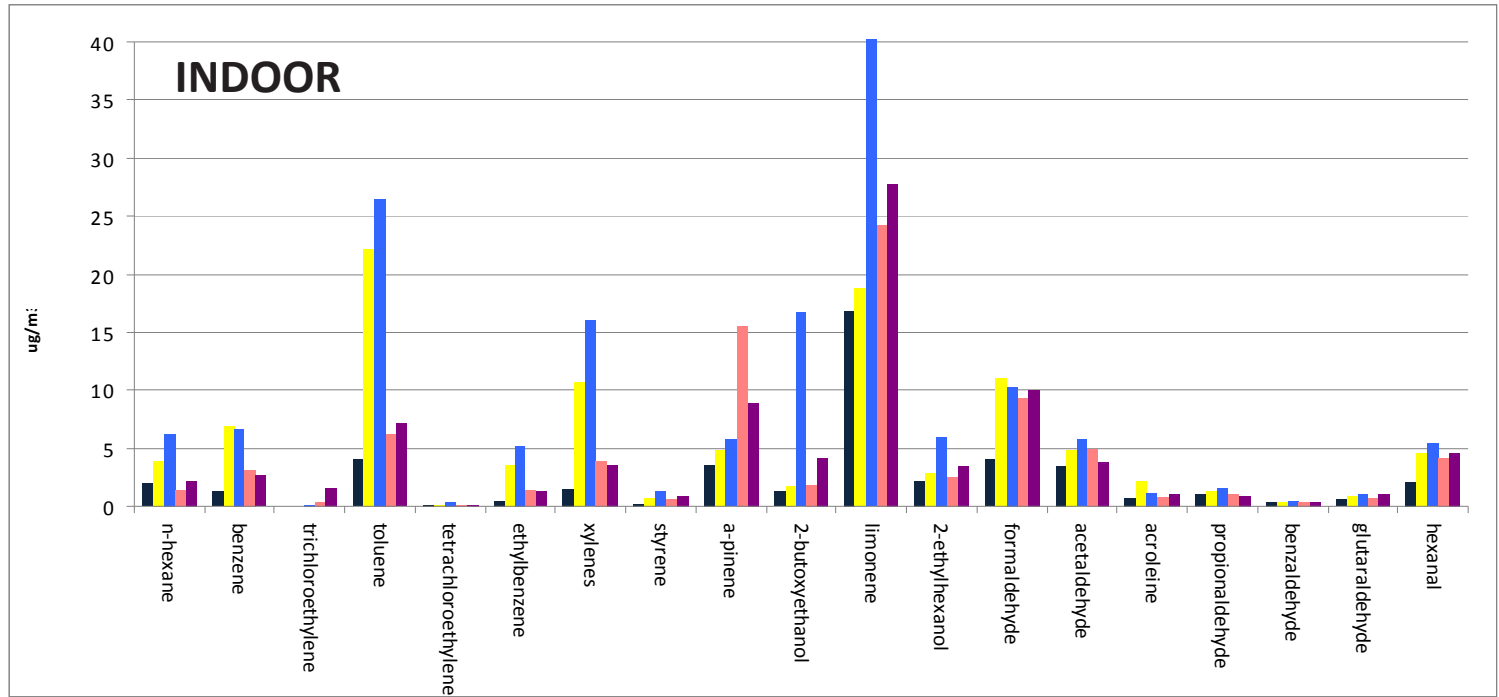
Aldehydes
Formaldehyde
Acetaldehyde
Acroleine
propionaldehyde
crotonaldehyde
benzaldehyde
o-, m-, p-tolualdehydes
hexanal
Glutaraldehyde
Methacroleine

VOCs
Benzene
Toluene
Xylenes
Ethylbenzene
Napthalene
n-hexane
Trichloroethylene
Tetrachloroethylene
$\alpha$ -pinene
Limonene
Linalool
Geraniol
$\alpha$ -terpineol,
2-butoxyethanol
2-ethylhexanol
Phenol
6-methyl-5-heptene-2-one (6-MHO)
Styrene
4-oxopentanal (4-OPA)
Methyl-naphthalenes

# GREECE

## WINTER

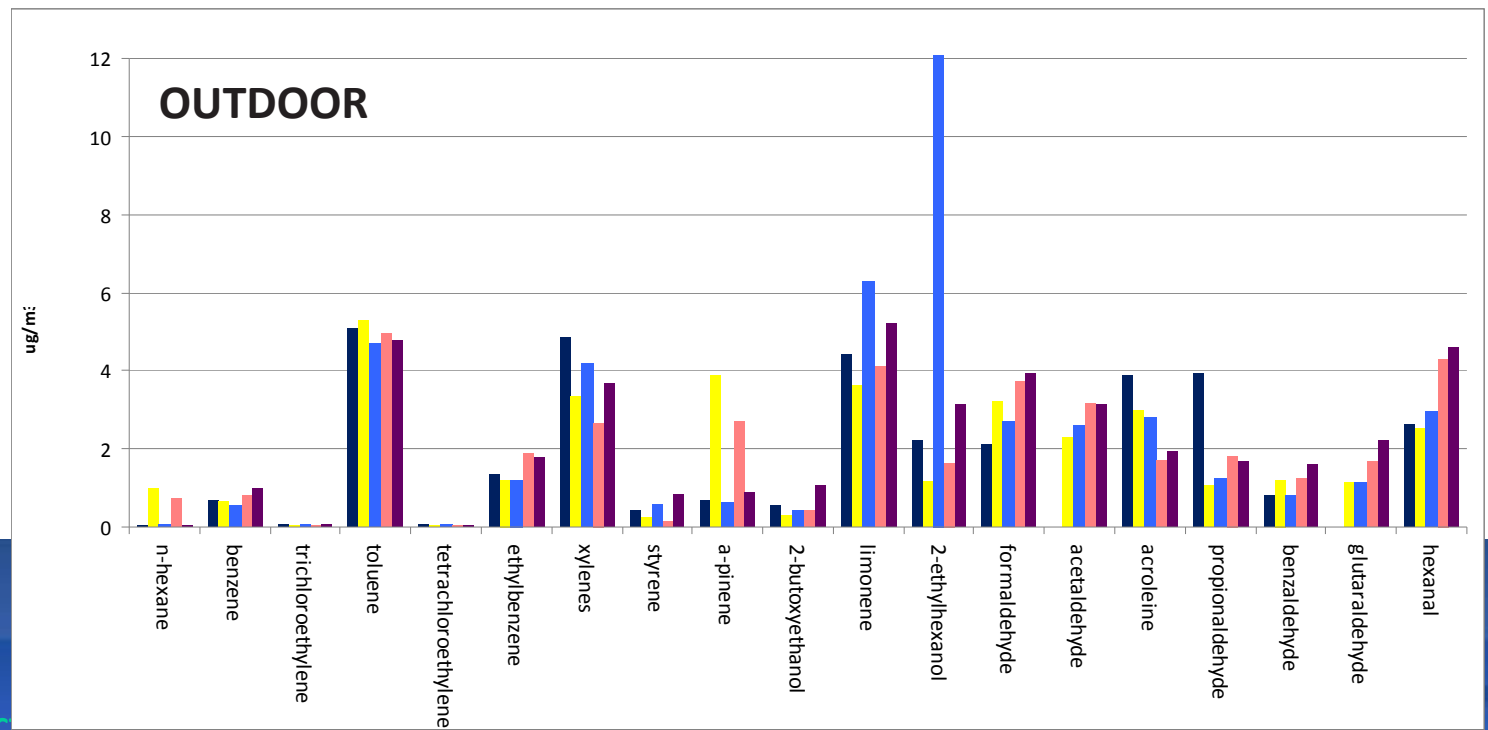
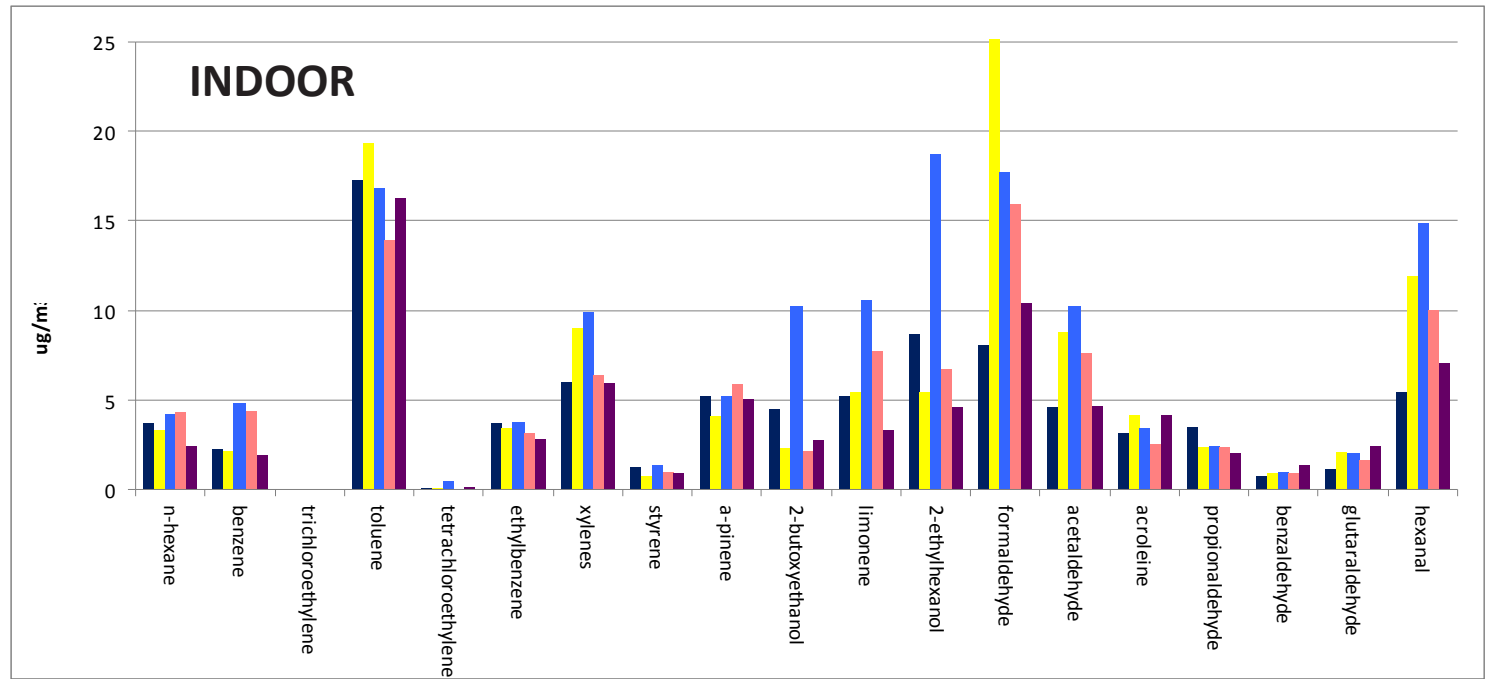
- GR03
- GR04
- GR05
- GR022
- GR23



# GREECE

## SUMMER

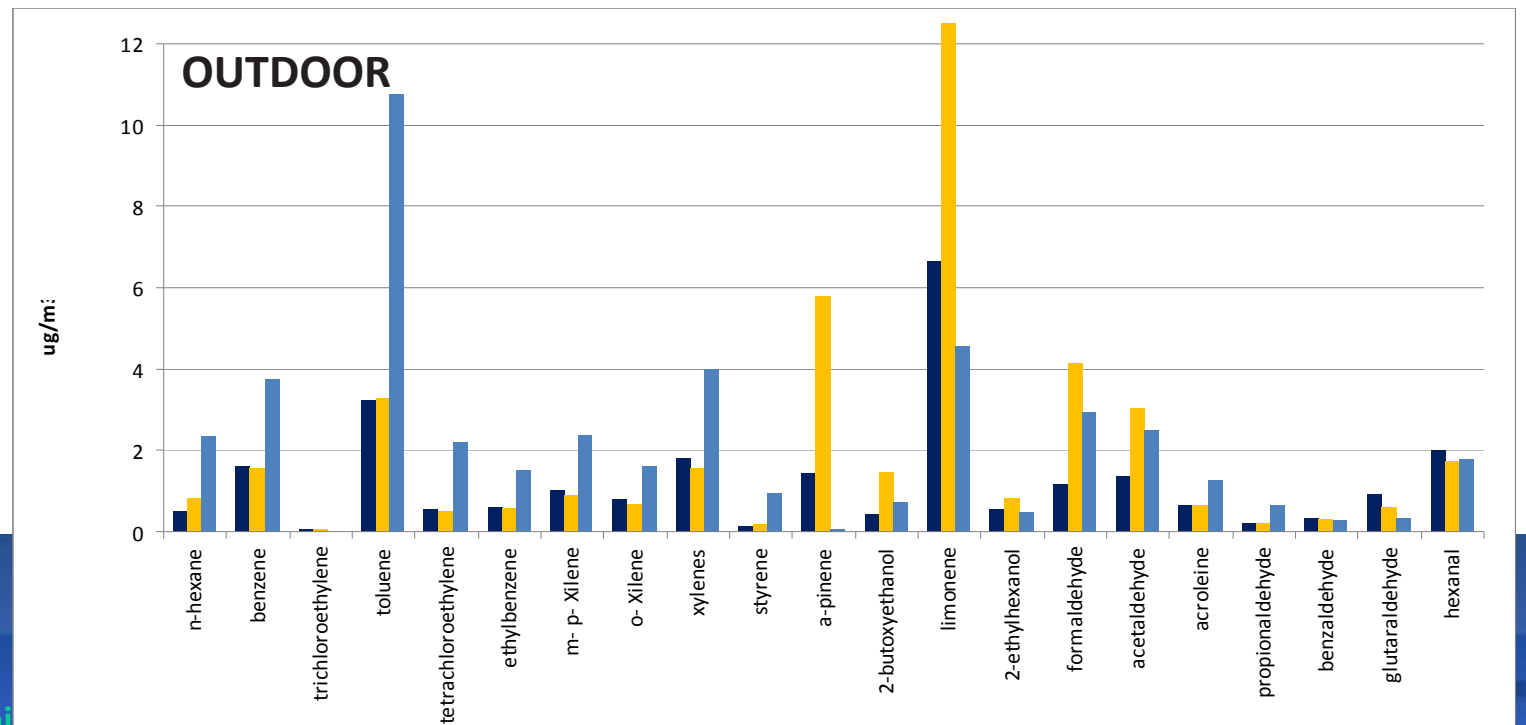
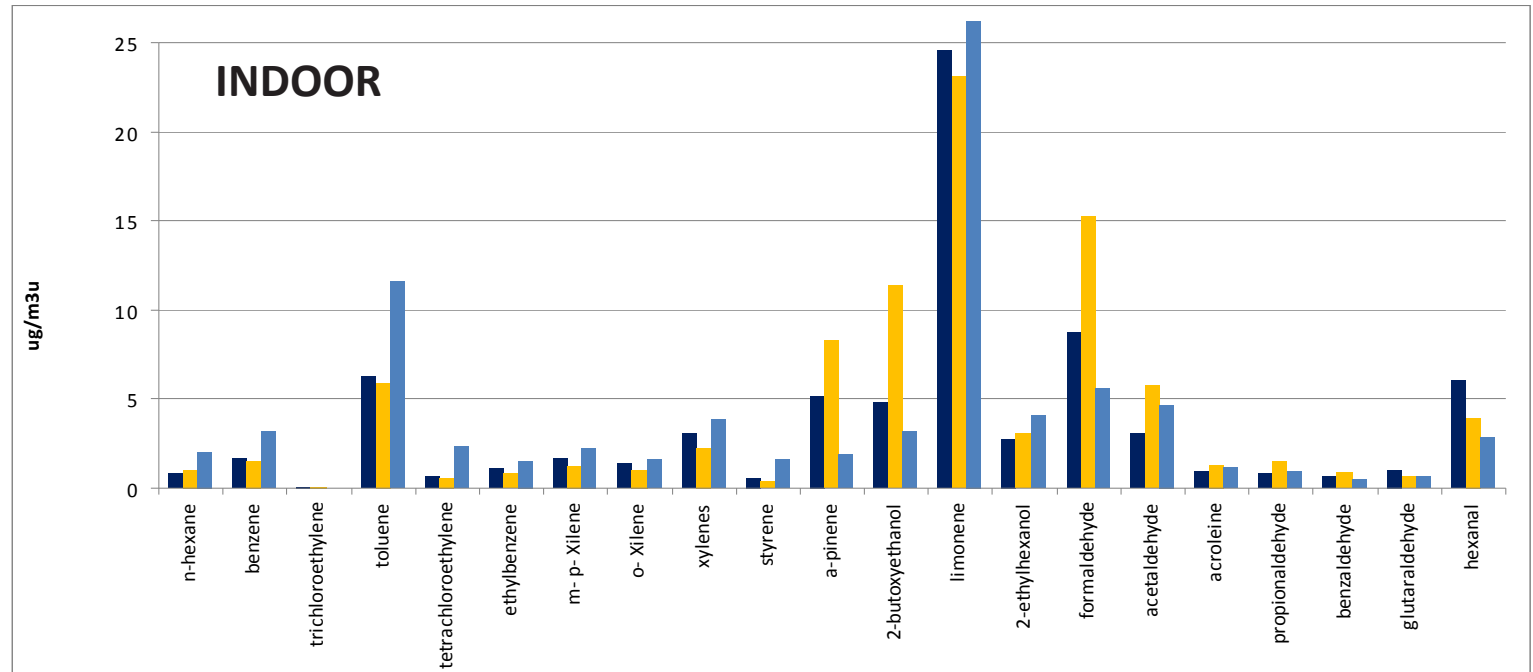
- GR03
- GR04
- GR05
- GR02



# ITALY

## WINTER

- IT03
- IT04
- IT08

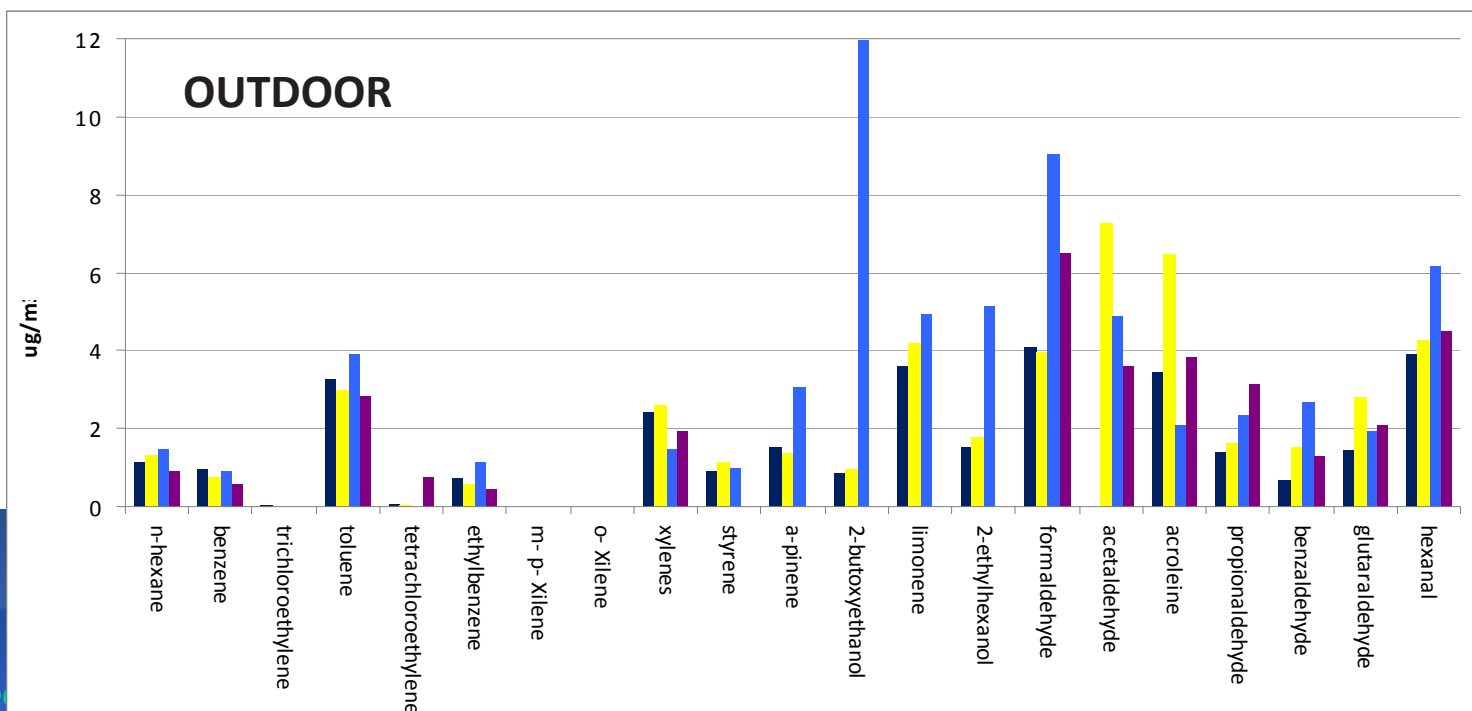
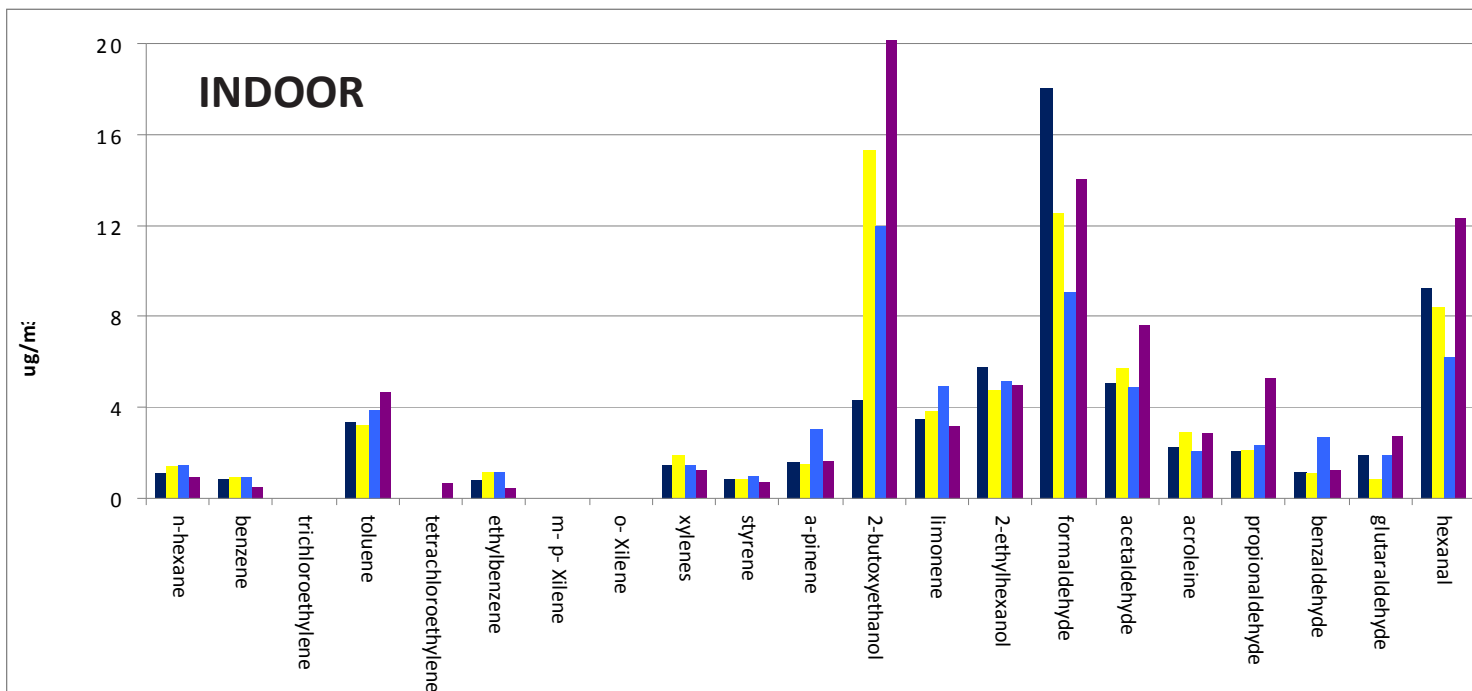




# ITALY

## SUMMER

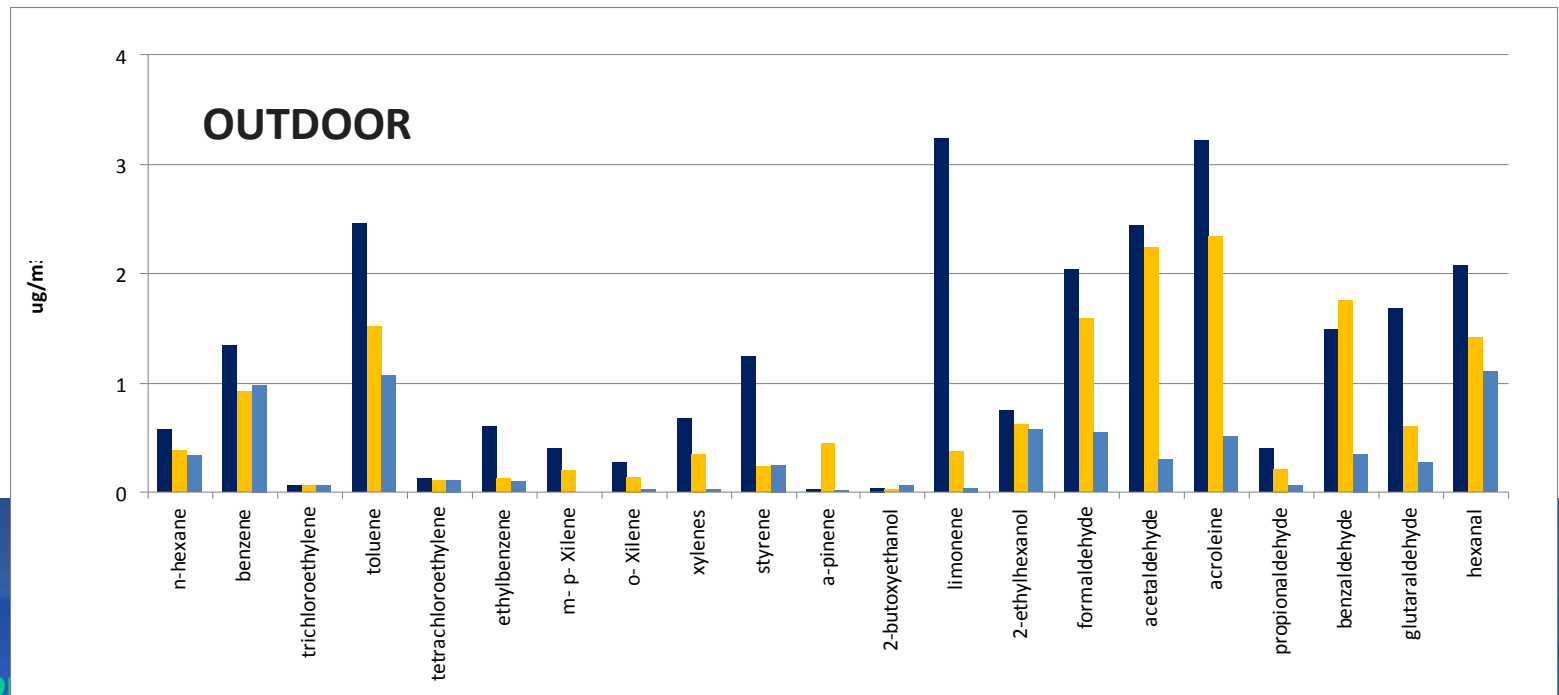
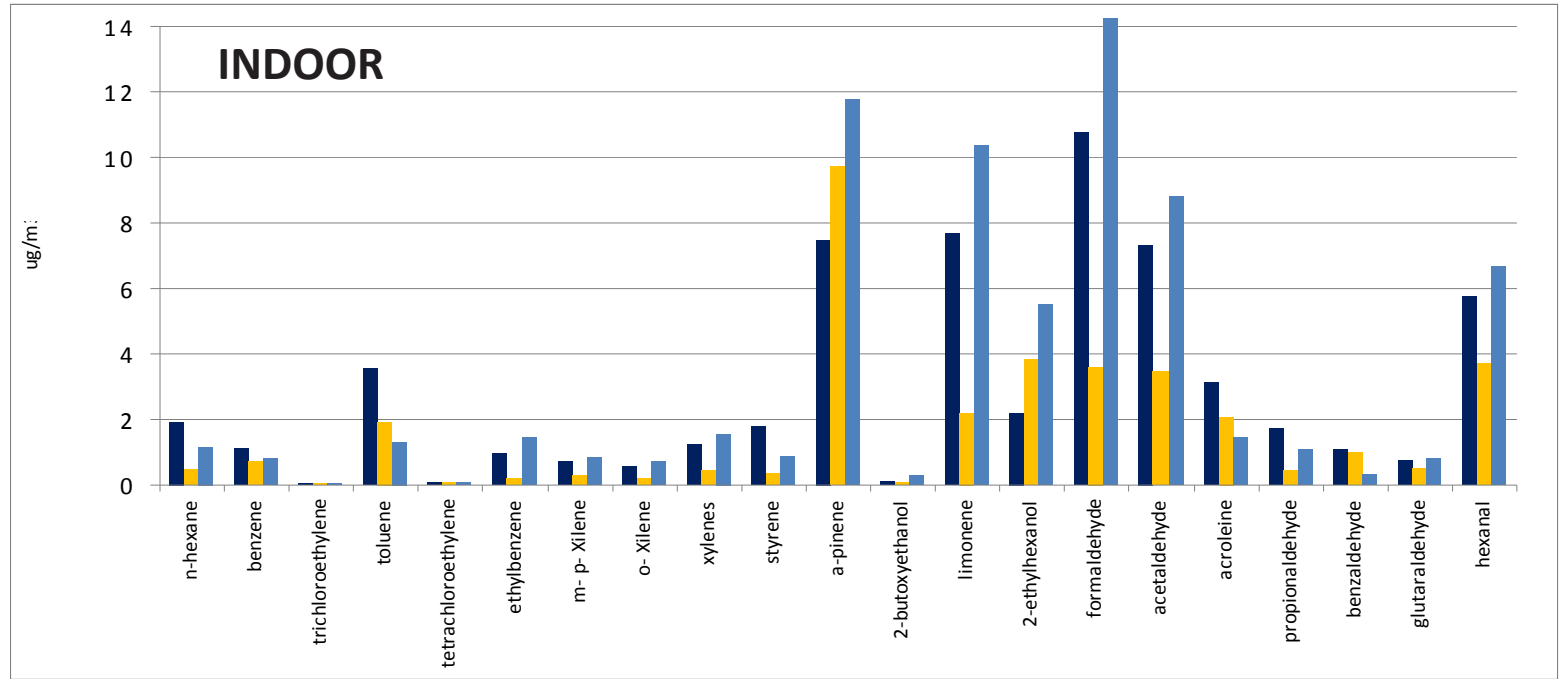
- IT 03
- IT 04
- IT 08
- IT 12



# FINLAND

## WINTER

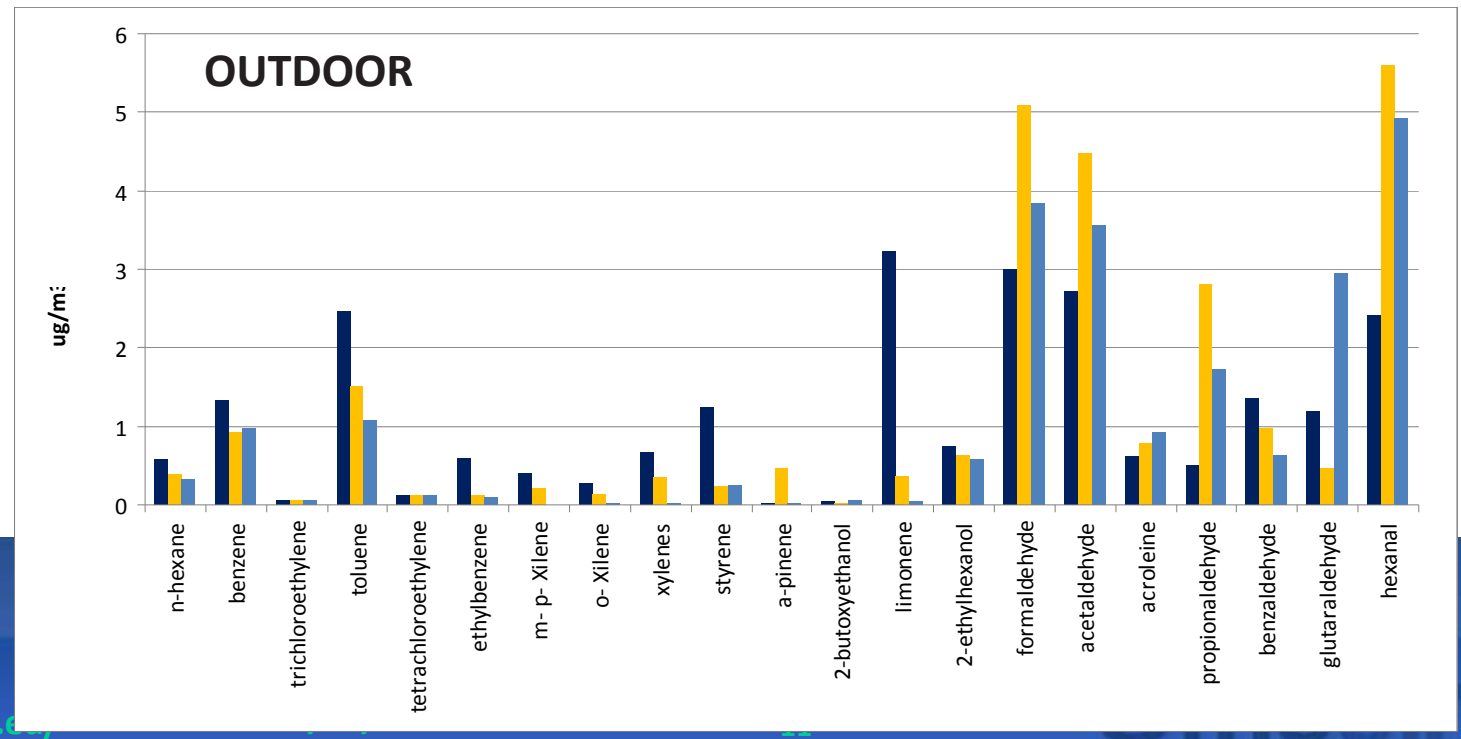
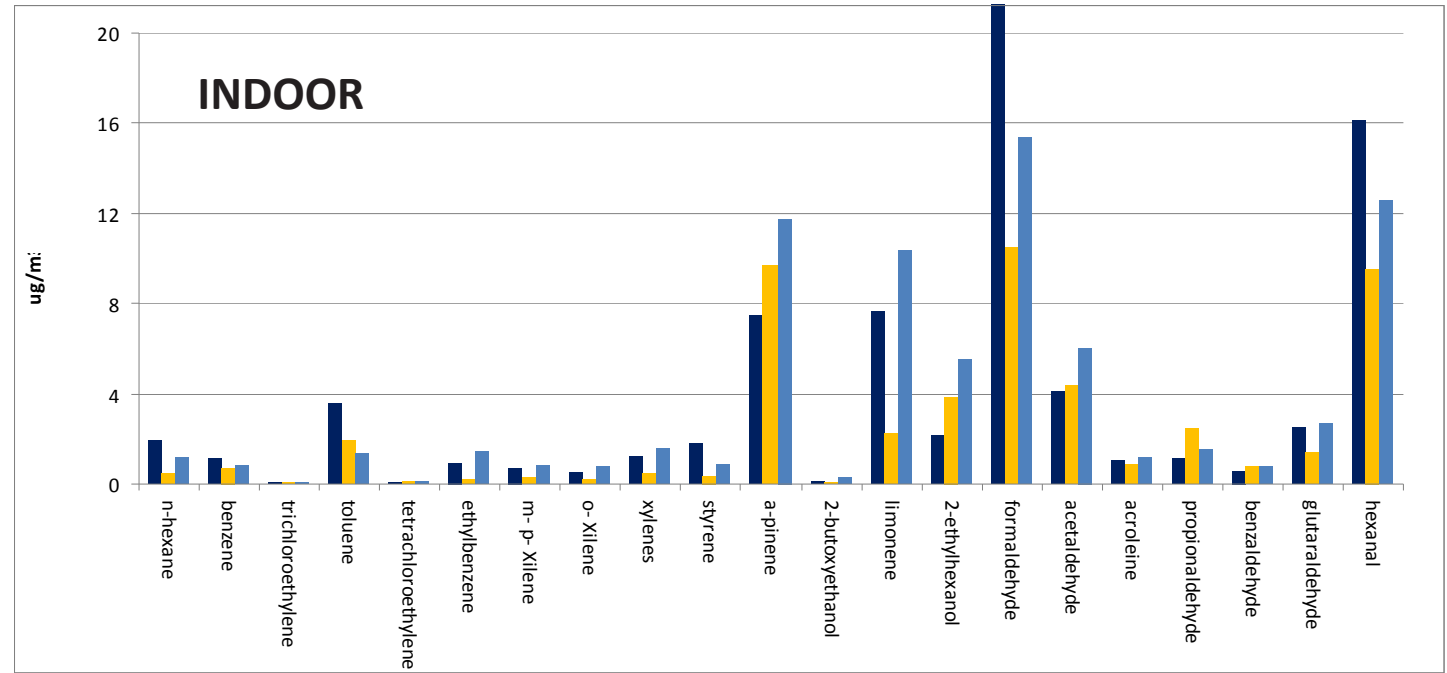
- F101
- F107
- F108



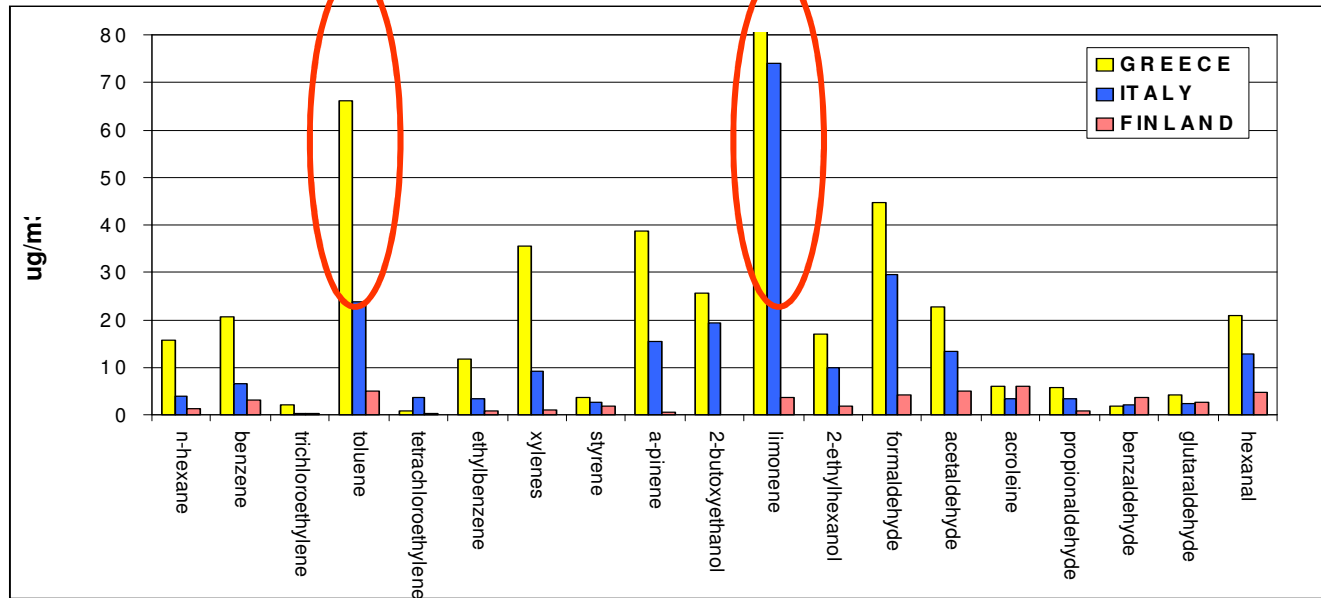
# FINLAND

## SUMMER

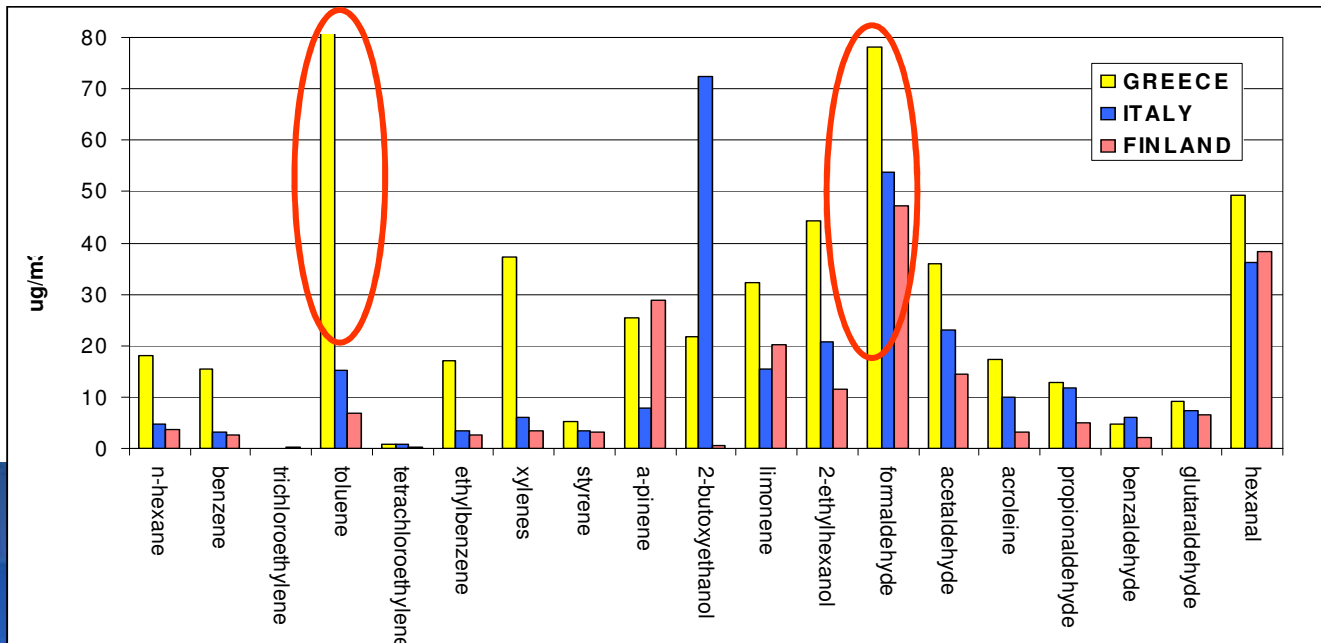
- FI01
- FI07
- FI08



# Geographical variability - indoor

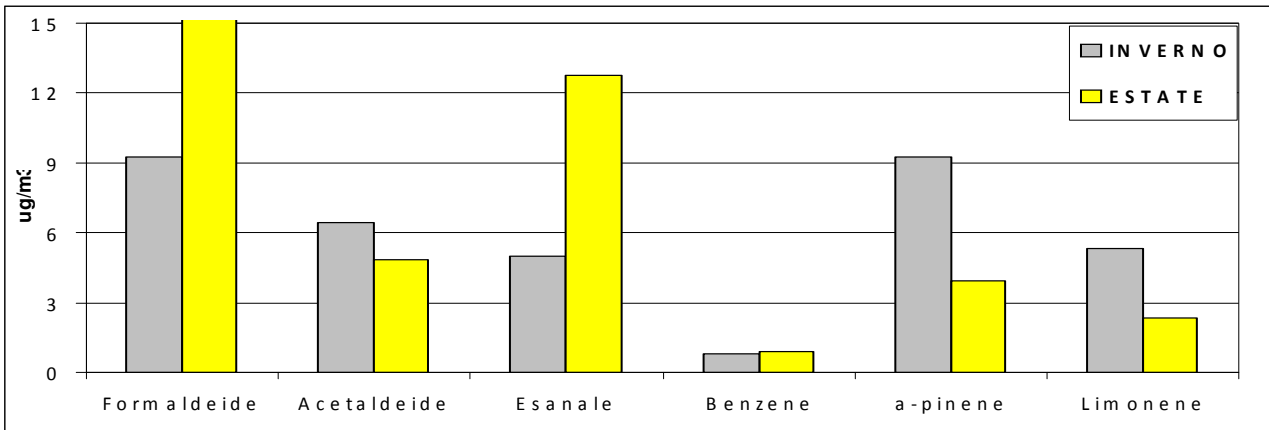


Winter

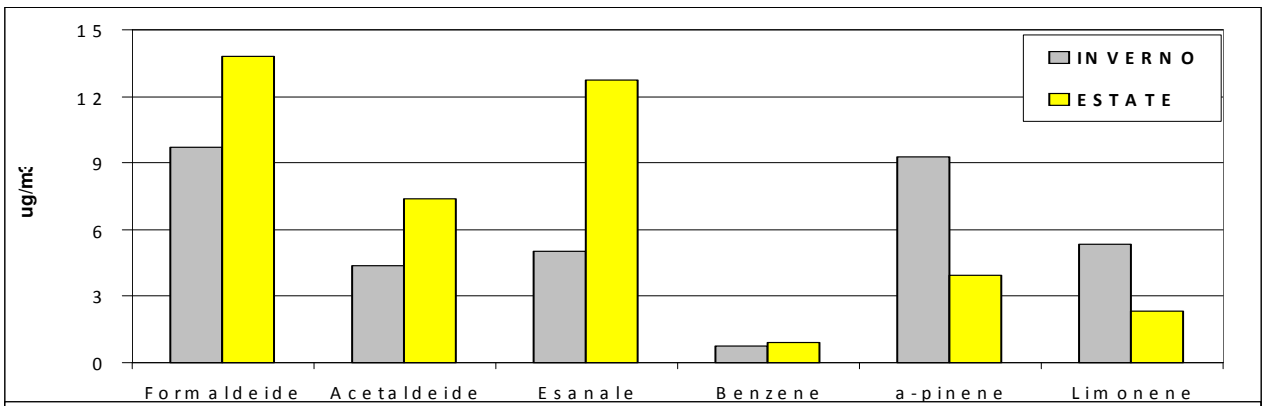


Summer

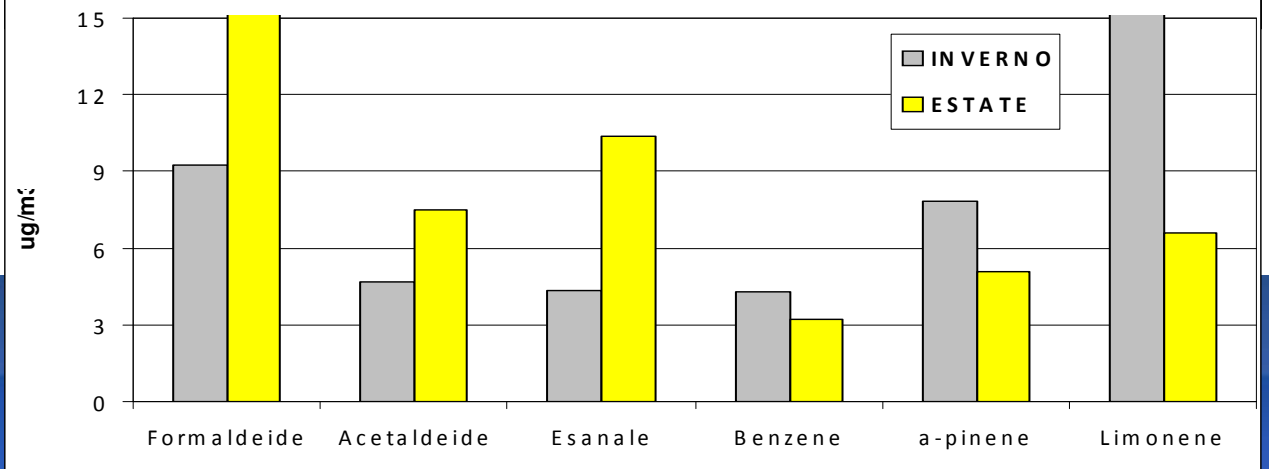
# Seasonal variabilities – indoor (Countries)



**Finland**



**Italy**



**Greece**



# AVERAGE BEFORE & AFTER INTERVENTION

## GREECE - Aldehydes

