

Table 1: Outdoor photoreactors and analytical facilities to be operated within the EUROCHAMP project.

	<i>Operating partner</i>		
	<i>JRC</i>	<i>FZJ</i>	<i>CEAM</i>
<i>Properties</i>			
Shape	Bag	Cylinder	Half sphere (2)
Volume (l)	≤ 3,000	280,000	200,000 (each)
Wall material	FEP	FEP	FEP
Evacuable	no	no	no
T control	no	no	no (floor cooling only)
Light source	Sunlight	Sunlight	Sunlight
Spectral range	280-640 nm	280-640 nm	280-640 nm
<i>Analytical equipment</i>			
FTIR			x
UV/VIS absorption		x	
TDL			
GC		x	x
GC-MS		x	x
HPLC		x	x
MS	x	x	
DOAS		x	x
Laser absorption		x	
LIF		x	x
MI-ESR		x	optional
NO _x analyser	x	x	x
Ozone monitor		x	x
HO _x /RO _x analyser			optional
Humidity		x	x
Ion chromatography	x		
HONO monitor		planned	planned
Particle mass			x
Particle size distribution	x		x
Particle Counter	x		x
Other particle characterisation methods	x		Filter sampling
Spectral radiometer	x	x	x
Filter radiometer		x	x

Table 2a: Indoor photoreactors and analytical facilities to be operated within the EUROCHAMP project (see also Table III.3b).

	<i>Operating partners</i>						
	<i>JRC</i>	<i>JRC</i>	<i>PSI</i>	<i>UBAY</i>	<i>UBAY</i>	<i>UCC</i>	<i>UCC</i>
Properties							
Shape	Cylinder	Cube	Cube	Cylinder	Cylinder	Cylinder	Cylinder
Volume (l)	480	600	27,000	4,310	3,140	4,750	6,350
Wall material	Glass (Teflon coated)	FEP	FEP	FEP	Glass	FEP	FEP
Evacuable	yes	no	no	no	no	no	no
T control	no	no	yes (288-313 K)	yes (250-300K)	yes (250-300K)	no	no
Light source	Lamps	Lamps	Filtered Xe lamps	Lamps	Lamps	Lamps	Lamps
Spectral range	254, 320-480 nm	320-480 nm	290-800 nm	300-450 nm	300-450 nm	254, 320-480 nm	254, 320-480 nm
Analytical equipment							
FTIR	x	planned			x	x	
UV/VIS absorption							
TDL							
GC			x	x	x	x	x
GC-MS			x	x	x	x	x
HPLC				x	x		
MS	x	x	x			x	x
DOAS							
Laser absorption							
LIF							
MI-ESR							
NO _x analyser	x	x	x	x	x	x	x
Ozone monitor		x	x	x	x		
HO _x /RO _x analyser		x		x	x		
Humidity		x	x	x	x	x	x
Ion chromatography	x	x	x	x	x	planned	planned
HONO monitor							
Particle mass	x	x		x	x	x	x
Particle size distribution	x	x	x	x	x	x	x
Particle Counter	x	x	x	x	x	x	x
Other particle characterisation methods	x	x	x	x	x		
Spectral radiometer			x	x	x		
Filter radiometer				x	x		

Table 2b: Indoor photoreactors and analytical facilities to be operated within the EUROCHAMP project (see also Table III.3a).

	<i>Operating partners</i>						
	<i>BUW</i>	<i>BUW</i>	<i>BUW</i>	<i>BUW</i>	<i>CNRS</i>	<i>SP</i>	<i>SP</i>
Properties							
Shape	Cylinder	Cylinder	Cylinder	Cylinder	Cylinder	Cube	Cube
Volume (l)	1,080	480	405	336	8,000 ^{*)}	1000	17000
Wall material	Quartz	Duran glass	Duran glass	glass	FEP	stainless steel	stainless steel
Evacuable	yes	yes	yes	yes	no	no	no
T control	yes (283-303 K)	no	no	yes (223-298 K)	no	no	no
Light source	Lamps	Lamps	Lamps	Lamps	Lamps	Lamps optional	Lamps optional
Spectral range	254, 320-480 nm	320-480 nm	254, 320-480 nm	254, 320-480 nm	254, 270-400, 300-500 nm	320-480 nm	320-480 nm
Analytical equipment							
FTIR	x		x	x	x		
UV/VIS absorption		x					
TDL				x			
GC	x	x	x	x	x	x	x
GC-MS	x	x	x	x	x	x	x
HPLC						LC/MSMS	LC/MSMS
MS					x		
DOAS							
Laser absorption							
LIF							
MI-ESR							
NO _x analyser	x	x	x	x	x	x	x
Ozone monitor	x	x	x	x	x	x	x
HO _x /RO _x analyser					x		
Humidity						x	x
Ion chromatography						x	x
HONO monitor	x	x	x	x			
Particle mass							
Particle size distribution	x				planned	x	x
Particle Counter	x				planned		
Other particle characterisation methods							
Spectral radiometer							
Filter radiometer							

^{*)} also small FEP bags (150-200 l) available

Table 3: Dark chambers and analytical facilities to be operated within the EUROCHAMP project.

	<i>Operating partner</i>				
	<i>JRC</i>	<i>FZK</i>	<i>FZK</i>	<i>FZK</i>	<i>FZJ</i>
<i>Properties</i>					
Shape	Cube	Cube	Cylinder	Cylinder	Cylinder
Volume (l)	260,000	2000	3700	4300	84,000
Wall material	Teflon	FEP	Stainless steel	Aluminium	Aluminium
Evacuable	no	no	yes	yes	yes
T control	no	yes (263-303 K)	no	yes (263-303 K)	yes (183-323 K)
Spectral range		308 nm			
<i>Analytical equipment</i>					
FTIR	x				x
UV/VIS absorption					x
TDL					x (H ₂ O)
MS					CIMS
DOAS					optional
Laser absorption				scattering, depolaris.	scattering, depolaris.
Ozone monitor		x	x	x	x
NO _x analyser		x	x	x	x
Humidity	x	x	x	x	from 0% to supersat.
Ion chromatography	x	x	x	x	x
Particle mass		x	x	x	x
Particle size distribution	x	x	x	x	x
Particle Counter		x	x	x	x
Aerosol generation techniques		x	x	x	x
Other particle characterisation methods	x	x	x	x	x

Table 4: Abbreviations used in the Tables 1 – 3.

FTIR	Fourier transform infrared absorption spectroscopy
UV/VIS	Ultraviolet/visible absorption spectroscopy
TDL	Tuneable diode laser absorption spectroscopy
GC	Gas chromatography
GC-MS	Gas chromatography / Mass spectroscopy
HPLC	High pressure liquid chromatography
MS	Mass spectroscopy
DOAS	Differential optical absorption spectroscopy
LIF	Laser-induced fluorescence excitation spectroscopy
MI-ESR	Matrix isolation / Electron spin resonance