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CLIENT DETAILS		LABORATORY DETAILS	
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Email		SGS Reference	PD22-00998
Project	Default Project	Received	25/03/2022
Order n°	Off. N. 205/C1/PD/Rev.0	Analysis Started	29/03/2022
Matrix/samples	GROUND WATER(1)	Analysis Completed	12/04/2022
		Date Reported	14/04/2022
		Report n°	PD22-00998.009_0

SAMPLE DETAILS

Sample Number	PD22-00998.009
Sample Name	S1-AL
Sample Location	RHAMA PORT HUB S.r.l.
Sample Matrix	GROUND WATER

SIGNATORIES

 Alberto Argiolas Project Leader	 Alessandro Loi Head of Laboratory
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COMMENTS

<p>Estimated measurement uncertainty extended to the 95% confidence level and the coverage factor K=2</p>
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LAB N° 0080 L

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**RESULTS**

<b>Sample Number</b>	PD22-00998.009						
<b>Sample Name</b>	S1-AL						
<b>Sample Location</b>	RHAMA PORT HUB S.r.l.						
<b>Sample Matrix</b>	GROUND WATER						
<b>Sample Date</b>	25/03/2022						
<b>Sample Time</b>	15:58						

Parameter	Units	RL	Result	L1	L2	L3	L4
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**Campionamento terreni e acque [ DLgs n.152 03/04/2006 GU n.88 14/04/2006 all. 2 parte IV ]**

*A	Campionamento	-	-	:	-	-	-	-
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**Cianuri [ Su campione tal quale + M.U. 2251:2008 (esclusi par. 8.2.2 e 8.2.3) ]**

*A	Free Cyanide	ug/L	2	<2,0	-	-	-	50
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**Anioni mg/l [ Su campione tal quale + APAT CNR IRSA 4020 Man 29 2003 ]**

A	Solfati (come SO4 mg/l)	mg/L SO4	1	216 ± 27	-	-	-	250
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**Anioni ug/l [ Su campione tal quale + APAT CNR IRSA 4020 Man 29 2003 ]**

A	Fluoruri (come F ug/l)	ug/L	200	800 ± 160	-	-	-	1500
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**Metalli ug/l [ Su campione dopo filtrazione 0.45 micron in campo + EPA 3005A 1992 + EPA 6020B 2014 ]**

A	Alluminio (come Al)	ug/L	10	<10	-	-	-	200
A	Antimonio (come Sb)	ug/L	0,5	0,736 ± 0,096	-	-	-	5
A	Arsenico (come As)	ug/L	1	<b>25,3 ± 2,8 L4</b>	-	-	-	10
A	Argento (come Ag)	ug/L	1	<1,0	-	-	-	10
A	Berillio (come Be)	ug/L	0,1	<0,10	-	-	-	4
A	Boro (come B)	ug/L	10	920 ± 110	-	-	-	1000
A	Cadmio (come Cd)	ug/L	0,5	<0,50	-	-	-	5
A	Cobalto (come Co)	ug/L	0,1	1,79 ± 0,21	-	-	-	50
A	Cromo totale (come Cr)	ug/L	1	<1,0	-	-	-	50
A	Ferro (come Fe)	ug/L	10	12,7 ± 1,6	-	-	-	200
A	Manganese (come Mn)	ug/L	1	<b>131 ± 16 L4</b>	-	-	-	50
*A	Mercurio (come Hg)	ug/L	0,1	<0,10	-	-	-	1
A	Nichel (come Ni)	ug/L	1	8,7 ± 1,3	-	-	-	20
A	Piombo (come Pb)	ug/L	1	<1,0	-	-	-	10
A	Rame (come Cu)	ug/L	1	2,47 ± 0,30	-	-	-	1000
A	Selenio (come Se)	ug/L	1	<1,0	-	-	-	10
A	Tallio (come Tl)	ug/L	1	<1,0	-	-	-	2
A	Zinco (come Zn)	ug/L	5	13,8 ± 2,4	-	-	-	3000

**Cromo esavalente (CrVI) [ Su campione tal quale + APAT CNR IRSA 3150 C Man 29 2003 ]**

A	Cromo esavalente	ug/L	1	<1,0	-	-	-	5
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**Composti organici persistenti [ Su campione tal quale + EPA3510C 1996 + EPA 8082A 2007 ]**

A	Policlorobifenili (PCB) Totali (Aroclor 1016+1260)	ug/L	0,01	<0,010	-	-	-	0,01
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**Idrocarburi totali [ Su campione tal quale + APAT CNR IRSA 5160 B2 Man 29 2003 ]**

A	8_Iidrocarburi totali (come n-esano ug/l)	ug/L	35	<35	-	-	-	350
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**Composti organici volatili (VOC) [ Su campione tal quale + EPA 5030C 2003 + EPA 8260D 2018 ]**

B	Benzene	ug/L	0,1	<0,10	-	-	-	1
B	Etilbenzene	ug/L	0,1	<0,10	-	-	-	50
B	Stirene	ug/L	0,1	<0,10	-	-	-	25
B	Toluene	ug/L	0,1	<0,10	-	-	-	15
B	P-M-Xilene	ug/L	0,1	<0,10	-	-	-	10
B	Cloro Metano	ug/L	0,05	<0,050	-	-	-	1,5
B	trichloromethane	ug/L	0,01	<0,010	-	-	-	0,15

**RESULTS**

<b>Sample Number</b>	PD22-00998.009
<b>Sample Name</b>	S1-AL
<b>Sample Location</b>	RHAMA PORT HUB S.r.l.
<b>Sample Matrix</b>	GROUND WATER
<b>Sample Date</b>	25/03/2022
<b>Sample Time</b>	15:58

Parameter	Units	RL	Result	L1	L2	L3	L4
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**Composti organici volatili (VOC) [ Su campione tal quale + EPA 5030C 2003 + EPA 8260D 2018 ] (continued)**

B	Cloruro di Vinile	ug/L	0,05	<0,050	-	-	-	0,5
B	1,2-Dicloro Etano	ug/L	0,05	<0,050	-	-	-	3
B	1,1-Dicloro Etilene	ug/L	0,005	<0,0050	-	-	-	0,05
B	Tricloro Etilene	ug/L	0,01	<0,010	-	-	-	1,5
B	Tetracloro Etilene	ug/L	0,01	<0,010	-	-	-	1,1
B	Esacloro Butadiene	ug/L	0,01	<0,010	-	-	-	0,15
B	Sommatoria organoalogenati (D.Leg. 152/06-All.5-Tab.2)	ug/L	0,098	0,098 ± 0,037	-	-	-	10
B	1,1-Dicloro Etano	ug/L	0,01	0,0150 ± 0,0049	-	-	-	810
B	1,2-Dicloro Etilene (cis)	ug/L	0,01	<0,010	-	-	-	-
B	1,2-Dicloro Etilene (trans)	ug/L	0,01	<0,010	-	-	-	-
B	1,2-Dicloro Etilene (cis+trans)	ug/L	0,01	0,0100 ± 0,0044	-	-	-	60
B	1,2-Dicloro Propano	ug/L	0,01	0,0197 ± 0,0055	-	-	-	0,15
B	1,1,2-Tricloro Etano	ug/L	0,01	<0,010	-	-	-	0,2
B	1,2,3-Tricloro Propano	ug/L	0,001	<0,0010	-	-	-	0,001
B	1,1,1,2,2-Tetracloro Etano	ug/L	0,005	<0,0050	-	-	-	0,05
B	Tribromometano	ug/L	0,01	<0,010	-	-	-	0,3
B	1,2-Dibromo Etano	ug/L	0,001	<0,0010	-	-	-	0,001
B	Dibromo Cloro Metano	ug/L	0,01	<0,010	-	-	-	0,13
B	Brc12metano	ug/L	0,01	<0,010	-	-	-	0,17
B	Clorobenzene	ug/L	0,01	<0,010	-	-	-	40
B	1,2-Diclorobenzene	ug/L	0,01	<0,010	-	-	-	270
B	1,4 Diclorobenzene	ug/L	0,01	<0,010	-	-	-	0,5
B	1,2,4-Triclorobenzene	ug/L	0,01	<0,010	-	-	-	0,5

**SVOC [ Su campione tal quale + EPA 3510C 1996 + EPA 8270E 2018 ]**

A	IDROCARBURI POLICICLICI AROMATICI	-	-	:	-	-	-	-
A	Benzo (a) Antracene	ug/L	0,01	<0,010	-	-	-	0,1
A	Benzo (a) Pirene	ug/L	0,01	<0,010	-	-	-	0,01
A	Benzo (b) Fluorantene	ug/L	0,01	<0,010	-	-	-	0,1
A	Benzo (k) Fluorantene	ug/L	0,01	<0,010	-	-	-	0,05
A	Benzo (g,h,i) Perilene	ug/L	0,01	<0,010	-	-	-	0,01
A	Crisene	ug/L	0,01	<0,010	-	-	-	5
A	Dibenzo (a,h) Antracene	ug/L	0,01	<0,010	-	-	-	0,01
A	Indeno (1,2,3-c,d) Pirene	ug/L	0,01	<0,010	-	-	-	0,1
A	Pirene	ug/L	0,01	<0,010	-	-	-	50
A	Sommatoria Policiclici Aromatici (31, 32, 33, 36 D.LGS.152/2006)	ug/L	0,02	0,020 ± 0,010	-	-	-	0,1
A	NITROBENZENI	-	-	:	-	-	-	-
A	Nitrobenzene	ug/L	0,01	<0,010	-	-	-	3,5
A	1,2-Dinitro Benzene	ug/L	0,05	<0,050	-	-	-	15
A	1,3-Dinitro Benzene	ug/L	0,05	<0,050	-	-	-	3,7
A	2-Cloro Nitro Benzene + 4-Cloro Nitro Benzene	ug/L	0,02	<0,020	-	-	-	0,5

**RESULTS**

<b>Sample Number</b>	PD22-00998.009
<b>Sample Name</b>	S1-AL
<b>Sample Location</b>	RHAMA PORT HUB S.r.l.
<b>Sample Matrix</b>	GROUND WATER
<b>Sample Date</b>	25/03/2022
<b>Sample Time</b>	15:58

Parameter	Units	RL	Result	L1	L2	L3	L4
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**SVOC [ Su campione tal quale + EPA 3510C 1996 + EPA 8270E 2018 ] (continued)**

A	3-Cloro Nitro Benzene	ug/L	0,01	<0,010	-	-	-	0,5
A	CLOROBENZENI	-	-	:	-	-	-	-
A	1,2,4,5-Tetraclorobenzene	ug/L	0,01	<0,010	-	-	-	1,8
A	Pentaclorobenzene	ug/L	0,01	<0,010	-	-	-	5
A	Esacloro Benzene	ug/L	0,005	<0,010†	-	-	-	0,01
A	FENOLI E CLOROFENOLI	-	-	:	-	-	-	-
A	2-Cloro Fenolo	ug/L	0,01	<0,010	-	-	-	180
A	2,4-Dicloro Fenolo	ug/L	0,01	<0,010	-	-	-	110
A	2,4,6-Tricloro Fenolo	ug/L	0,05	<0,050	-	-	-	5
A	Pentacloro Fenolo	ug/L	0,05	<0,050	-	-	-	0,5
A	AMMINE AROMATICHE	-	-	:	-	-	-	-
A	Anilina	ug/L	0,1	<0,10	-	-	-	10
A	Difenilammina	ug/L	0,05	<0,050	-	-	-	910
A	4-Toluidina	ug/L	0,01	<0,010	-	-	-	0,35
A	FITOFARMACI	-	-	:	-	-	-	-
A	Alaclor	ug/L	0,01	<0,010	-	-	-	0,1
A	Aldrin	ug/L	0,01	<0,010	-	-	-	0,03
A	Atrazina	ug/L	0,01	<0,010	-	-	-	0,3
A	alfa-BHC	ug/L	0,01	<0,010	-	-	-	0,1
A	beta-BHC	ug/L	0,01	<0,010	-	-	-	0,1
A	gamma-BHC (Lindano)	ug/L	0,01	<0,010	-	-	-	0,1
A	Clordano	ug/L	0,01	<0,010	-	-	-	0,1
A	alfa (cis) Clordano	ug/L	0,01	<0,010	-	-	-	-
A	gamma (trans) Clordano	ug/L	0,01	<0,010	-	-	-	-
A	2,4'-DDD	ug/L	0,01	<0,010	-	-	-	-
A	2,4'-DDE	ug/L	0,01	<0,010	-	-	-	-
A	2,4'-DDT	ug/L	0,01	<0,010	-	-	-	-
A	4,4'-DDE	ug/L	0,01	<0,010	-	-	-	-
A	4,4'-DDD	ug/L	0,01	<0,010	-	-	-	-
A	4,4'-DDT	ug/L	0,01	<0,010	-	-	-	-
A	Sommatoria DDD,DDT,DDE	ug/L	0,03	0,030 ± 0,015	-	-	-	0,1
A	Dieldrin	ug/L	0,01	<0,010	-	-	-	0,03
A	Endrin	ug/L	0,01	<0,010	-	-	-	0,1
A	Sommatoria Fitofarmaci	ug/L	0,08	<0,080	-	-	-	0,5

**GUIDELINE LIMITS**

Matrix description	Limits description
GROUND WATER	

Parameter	Units	L1	L2	L3	L4
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**Cianuri [ M.U. 2251:2008 (esclusi par. 8.2.2 e 8.2.3) ]**

Free Cyanide	ug/L	-	-	-	50
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**Anioni mg/l [ APAT CNR IRSA 4020 Man 29 2003 ]**

Solfati (come SO4 mg/l)	mg/L SO4	-	-	-	250
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**Anioni ug/l [ APAT CNR IRSA 4020 Man 29 2003 ]**

Fluoruri (come F ug/l)	ug/L	-	-	-	1500
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**Metalli ug/l [ EPA 3005A 1992 + EPA 6020B 2014 ]**

Alluminio (come Al)	ug/L	-	-	-	200
Antimonio (come Sb)	ug/L	-	-	-	5
Arsenico (come As)	ug/L	-	-	-	10
Argento (come Ag)	ug/L	-	-	-	10
Berillio (come Be)	ug/L	-	-	-	4
Boro (come B)	ug/L	-	-	-	1000
Cadmio (come Cd)	ug/L	-	-	-	5
Cobalto (come Co)	ug/L	-	-	-	50
Cromo totale (come Cr)	ug/L	-	-	-	50
Ferro (come Fe)	ug/L	-	-	-	200
Manganese (come Mn)	ug/L	-	-	-	50
Mercurio (come Hg)	ug/L	-	-	-	1
Nichel (come Ni)	ug/L	-	-	-	20
Piombo (come Pb)	ug/L	-	-	-	10
Rame (come Cu)	ug/L	-	-	-	1000
Selenio (come Se)	ug/L	-	-	-	10
Tallio (come Tl)	ug/L	-	-	-	2
Zinco (come Zn)	ug/L	-	-	-	3000

**Cromo esavalente (CrVI) [ APAT CNR IRSA 3150 C Man 29 2003 ]**

Cromo esavalente	ug/L	-	-	-	5
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**Composti organici persistenti [ EPA3510C 1996 + EPA 8082A 2007 ]**

Policlorobifenili (PCB) Totali (Aroclor 1016+1260)	ug/L	-	-	-	0,01
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**Idrocarburi totali [ APAT CNR IRSA 5160 B2 Man 29 2003 ]**

8_Idrocarburi totali (come n-esano ug/l)	ug/L	-	-	-	350
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**Composti organici volatili (VOC) [ EPA 5030C 2003 + EPA 8260D 2018 ]**

Benzene	ug/L	-	-	-	1
Etilbenzene	ug/L	-	-	-	50
Stirene	ug/L	-	-	-	25
Toluene	ug/L	-	-	-	15
P-M-Xilene	ug/L	-	-	-	10
Cloro Metano	ug/L	-	-	-	1,5
trichloromethane	ug/L	-	-	-	0,15

**GUIDELINE LIMITS**

Cloruro di Vinile	ug/L	-	-	-	0,5
1,2-Dicloro Etano	ug/L	-	-	-	3
1,1-Dicloro Etilene	ug/L	-	-	-	0,05
Tricloro Etilene	ug/L	-	-	-	1,5
Tetracloro Etilene	ug/L	-	-	-	1,1
Esaclo Butadiene	ug/L	-	-	-	0,15
Sommatoria organoclogenati (D.Leg. 152/06-All.5-Tab.2)	ug/L	-	-	-	10
1,1-Dicloro Etano	ug/L	-	-	-	810
1,2-Dicloro Etilene (cis+trans)	ug/L	-	-	-	60
1,2-Dicloro Propano	ug/L	-	-	-	0,15
1,1,2-Tricloro Etano	ug/L	-	-	-	0,2
1,2,3-Tricloro Propano	ug/L	-	-	-	0,001
1,1,2,2-Tetracloro Etano	ug/L	-	-	-	0,05
Tribromometano	ug/L	-	-	-	0,3
1,2-Dibromo Etano	ug/L	-	-	-	0,001
Dibromo Cloro Metano	ug/L	-	-	-	0,13
Brcl2metano	ug/L	-	-	-	0,17
Clorobenzene	ug/L	-	-	-	40
1,2-Diclorobenzene	ug/L	-	-	-	270
1,4 Diclorobenzene	ug/L	-	-	-	0,5
1,2,4-Triclorobenzene	ug/L	-	-	-	0,5

**SVOC [ EPA 3510C 1996 + EPA 8270E 2018 ]**

Benzo (a) Antracene	ug/L	-	-	-	0,1
Benzo (a) Pirene	ug/L	-	-	-	0,01
Benzo (b) Fluorantene	ug/L	-	-	-	0,1
Benzo (k) Fluorantene	ug/L	-	-	-	0,05
Benzo (g,h,i) Perilene	ug/L	-	-	-	0,01
Crisene	ug/L	-	-	-	5
Dibenzo (a,h) Antracene	ug/L	-	-	-	0,01
Indeno (1,2,3-c,d) Pirene	ug/L	-	-	-	0,1
Pirene	ug/L	-	-	-	50
Sommatoria Policiclici Aromatici (31, 32, 33, 36 D.LGS.152/2006)	ug/L	-	-	-	0,1
Nitrobenzene	ug/L	-	-	-	3,5
1,2-Dinitro Benzene	ug/L	-	-	-	15
1,3-Dinitro Benzene	ug/L	-	-	-	3,7
2-Cloro Nitro Benzene + 4-Cloro Nitro Benzene	ug/L	-	-	-	0,5
3-Cloro Nitro Benzene	ug/L	-	-	-	0,5
1,2,4,5-Tetraclorobenzene	ug/L	-	-	-	1,8
Pentaclorobenzene	ug/L	-	-	-	5
Esaclo Benzene	ug/L	-	-	-	0,01
2-Cloro Fenolo	ug/L	-	-	-	180
2,4-Dicloro Fenolo	ug/L	-	-	-	110
2,4,6-Tricloro Fenolo	ug/L	-	-	-	5
Pentacloro Fenolo	ug/L	-	-	-	0,5
Anilina	ug/L	-	-	-	10



LAB N° 0080 L

**GUIDELINE LIMITS**

Difenilammina	ug/L	-	-	-	910
4-Toluidina	ug/L	-	-	-	0,35
Alaclor	ug/L	-	-	-	0,1
Aldrin	ug/L	-	-	-	0,03
Atrazina	ug/L	-	-	-	0,3
alfa-BHC	ug/L	-	-	-	0,1
beta-BHC	ug/L	-	-	-	0,1
gamma-BHC (Lindano)	ug/L	-	-	-	0,1
Clordano	ug/L	-	-	-	0,1
Sommatoria DDD,DDT,DDE	ug/L	-	-	-	0,1
Dieldrin	ug/L	-	-	-	0,03
Endrin	ug/L	-	-	-	0,1
Sommatoria Fitofarmaci	ug/L	-	-	-	0,5



**LEGEND**

**FOOTNOTES**

IS	Insufficient sample for analysis.	QFH	QC result is above the upper tolerance
LNR	Sample listed, but not received.	QFL	QC result is below the lower tolerance
^	Performed by another SGS laboratory	NA	The sample was not analysed for this analyte
^^	Performed by outside laboratory.	↑	Reporting limit raised
RL	Reporting Limit	↓	Reporting limit lowered
↑ ↓	Raised or Lowered Limit of Reporting	MS	Matrix Spike
NCP	Non Client Parent	DUP/REP	Duplicate/Replicate sample
RPD	Relative Percent Difference	FD	Field Duplicate
LCS	Lab Control Samples		

**ACCREDITATION NOTES**

\* This analysis is not covered by the scope of accreditation.

This Report is issued by the Company under SGS General Conditions of Services (copy available upon request). The issuance of this Report does not exonerate the contracting parties from exercising all their rights and discharging all their liabilities under their agreed contract. Stipulations to the contrary are not binding on the Company.

The Company's responsibility under this Report is limited to proven negligence and will in no case be more than ten times the amount of the fees or commission. Except by special arrangement, samples, if drawn, will not be retained by the Company for more than one month.

The results contained in the following report refer only to the sample tested.

This Report or a copy thereof will be retained by the Company for a period of 10 years.

Comparison of the results with the respective limits, when present, does not take into account the uncertainty of the estimated extent.

Any results out of range are marked in red.

The recovery where provided, is to be understood comprised within the specific acceptability limits.

Unless otherwise stated the result is to be understood not corrected for recovery obtained.

The laboratory considers the result not conform to the specification if its value is greater than the upper limit, and/or smaller than the lower limit. Otherwise the result is considered conform the specification. The measurement uncertainty is not considered in the conformity assessment.

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--- End of the analytical report ---