



LIFE Integrated Projects 2016
Optimising the implementation of the 2nd RBMP in the Malta River Basin District
LIFE 16 IPE MT 0008



Action C.18
Monitoring for emerging pollutants of potential concern
Focused Monitoring Report 2025-2026

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1.0 Introduction. Purpose, objective and context of this document

- 1.1 The Water Framework Directive (WFD) (Directive 2000/60/EC), the main law for water protection in Europe, requires that member states develop River Basin Management Plans (RBMPs) to monitor and protect their aquatic resources. To this end, AquaBioTech Ltd (ABT) was commissioned by the Environment and Resources Authority (ERA) to undertake a two-year monitoring campaign of Malta's water resources in order to ascertain the prevalence and levels of contaminants of emerging concern (CECs) and pollutants attributed to diffuse sources of pollution. The investigation was part of a project funded by the LIFE Programme under the Project Policy Area LIFE Integrated Project Environment (LIFE16/IPE/MT0008, Action C.18).
- 1.2 One of the objectives of the investigation was to provide an updated monitoring strategy on the basis of the results of the two year monitoring exercise, to enable focused monitoring of CECs and their sources, and diffuse sources of pollution.
- 1.3 This focussed monitoring, also undertaken by ABT, was carried out between May 2025 and January 2026. This document provides the collation and analysis of results of that monitoring.

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2.0 Sampling Strategy

The primary directive of the sampling strategy was to reveal the water quality status in the Maltese archipelago. Specifically, this status is determined by what compounds are found, their distribution, frequency of detection and concentration. The sampling strategy, therefore, is concerned with the sampling locations, the sampling frequency, and the parameters analysed.

2.1 Sample locations

The two-year sampling of Maltese waters from 2023-2025 (Tender SPD8/2021/066), hereafter referred to as ERA12, categorised Maltese water resources according to their origin:

Groundwater: all subsurface water contained in the pores and interstices of rock and substrate.

Stormwater: water drained from surface of conurbation immediately after substantial precipitation

Inland surface water: water bodies found at the surface fed largely, or sometimes entirely, from drainage.

Transitional water: water bodies that, while technically inland, are majorly influenced by sea water influx

Coastal water: Sea water sampled adjacent to the coastline

New water: wastewater that, after standard secondary sewage treatment, undergoes further extensive cleaning and purification using ozone and UV¹.

Additional monitoring sites: A primary objective of ERA12 was the characterisation and quantification of contaminants from diffuse urban, industrial, and agricultural sources of pollution that pose a risk to Malta's natural water resources. To this end, eight monitoring stations, additional to those representing the aforementioned water types, were identified. These were considered as representative of potential sources of diffuse pollution and were complimentary to sites proposed as part of LIFE16/IPE/MT008 Action A.6² for inland surface waters.

ERA12 identified the water categories that were more heavily contaminated and should be prioritised for sampling in the focused monitoring strategy. Though arguably presenting a 'worst-case' scenario, this approach would highlight specific areas of concern as well as potentially reveal improvements. Other sample locations considered for focussed monitoring are from the sewage network; these were sampled for the LIFE IP Action C.10 project³. The location of all sampling sites – C.10 and ERA12 - are given in figure 1.

¹ <https://www.wsc.com.mt/information/new-water/>

² <https://www.rbmplife.org.mt/sites/default/files/Deliverable%201%20-%20Identification%20of%20Indicator%20Parameters.pdf>

³ <https://www.rbmplife.org.mt/content/action-c10-enhancing-sewer-discharge-control-malta>

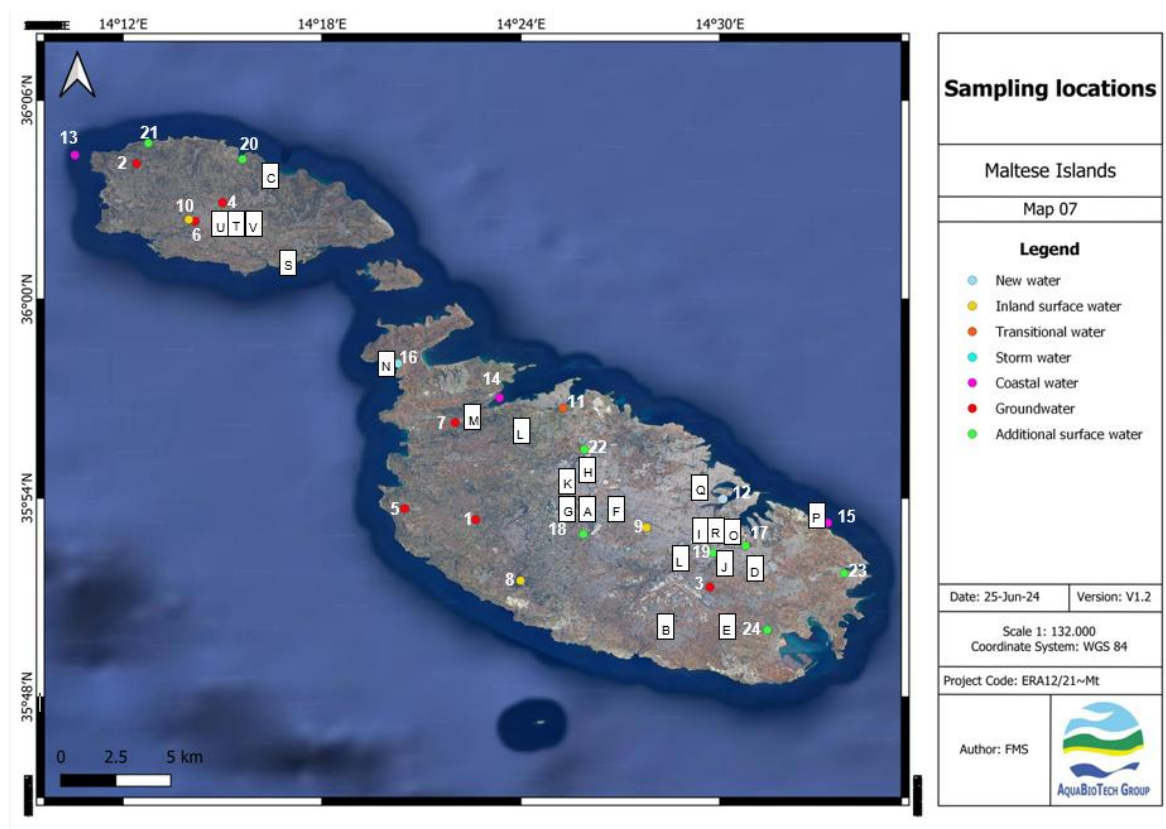


Figure 1 Map of sample sites. Letters refer to sampling sites which definition may be found in the table below (Table 1)

Table 1 Identification of sample sites for ERA12 and C.10

Label	Study	Identification	Type
1	ERA12	Fiddien Station	Groundwater
2		Ta' Pinu	Groundwater
3		Ġnien	Groundwater
4		Sellun	Groundwater
5		Baħrija	Groundwater
6		Victoria Station	Groundwater
7		Pwales Station	Groundwater
8		Wied il-Luq	Inland surface
9		Wied is-Sewda	Inland surface
0		Wied il-Lunzjata	Inland surface
11		Is-Salini	Transitional
12		Ta' Xbiex	Stormwater
13		Off Ta' Barkat STP (sewage treatment plant)	Coastal water
14		Xemxija Bay	Coastal water
15		San Dimitri Point	Coastal water

16		Ċumnija STW	New water
17		Wied Blandun	Additional surface
18		Wied Inċita	Additional surface
19		Marsa Storm water catchment	Additional surface
20		Marsalforn	Additional surface
21		Wied il Mielat	Additional surface
22		Burmarrad, Mosta	Additional surface
23		IL-Magħluq ta' Marsaskala	Additional surface
24		Wied Qoton	Additional surface
A	C.10	B1 Attard Res	Sewage network
B		B2 Zurrieq Res	Sewage network
C		B3 Xaghra Gozo Res	Sewage network
D		MT 1 Bulebel South	Sewage network
E		MT 2 Hal Far PS	Sewage network
F		MT 3 Mriehel	Sewage network
G		MT 4 Attard	Sewage network
H		MT 5 Wied Il-Ghasel	Sewage network
I		MT 6 Marsa GSD	Sewage network
J		MT 7 Marsa Garibaldi	Sewage network
K		MT 8 Mosta Tech'park	Sewage network
L		MT 9 Handaq	Sewage network
M		MT 10 Pwales PS	Sewage network
N		MT 11 Ċumnija STW	Sewage network
O		MT 12 Corradino PS	Sewage network
P		MT 13 Ta' Barkat	Sewage network
Q		MT 14 Gzira PS	Sewage network
R		MT 15 Marsa PS	Sewage network
S		GZ 1 Ras Il-Hobz	Sewage network
T		GZ 2 Xewkija West	Sewage network
U		GZ 3 Xewkija East	Sewage network
V		GZ 4 Xewkija Old DP	Sewage network

Through stakeholder discussions and screening monitoring results it was decided that water of 13 sampling stations from a range of water categories and aquifers would be sampled twice between May 2025 and January 2026 (see Table 1 and 2); reflecting summer and winter seasonality.

Table 2 Sampling programme for each water category.

Water category	Monitoring Stations	Replicates	Frequency per year ¹	Total number of samples
Coastal	1	2	2	4
Transitional	1	2	2	4
Inland Surface Waters	5	2	2	20
Groundwater	4	2	2	16
Stormwater	1	2	2	4
New water	1	2	2	4

¹Samples taken once in May-June and once in November-December to reflect summer and winter seasonality

Table 3 Location of sampling sites for focused monitoring

Map point ‡	Station Name, Location	Type of water	Latitude*	Longitude*
1	Fontana, Gozo	Groundwater	36.040055	14.233248
2	Iklin (II), Malta		35.909750	14.455753
3	Dingli, Malta		35.873063	14.393868
4	Għattuq, Gozo		36.04691	14.24957
5	Wied il Luq, Malta	Inland Surface water	35.858699	14.400677
6	Wied il-Lunzjata, Gozo		36.0407635	14.2330211
7	Marsa Drain, Malta		35.877210	14.495686
8	Burmarrad (Għasel Catchment)		35.928749	14.429094
9	Wied tal- Baħrija, Malta		35.8945897	14.3389224
10	Off Ta' Barkat STP, Xgħajra	Coastal	35.88578	14.55368
11	Il-Magħluq ta' Marsaskala	Transitional	35.861905	14.562427
12	Ta' Xbiex, Malta	Stormwater	35.899487	14.500738
13	Ċumnija Sewage Treatment Plant	New water	35.968138	14.338567

‡See Figure 2 for Map; * latitude/longitude values use WGS 84 datum

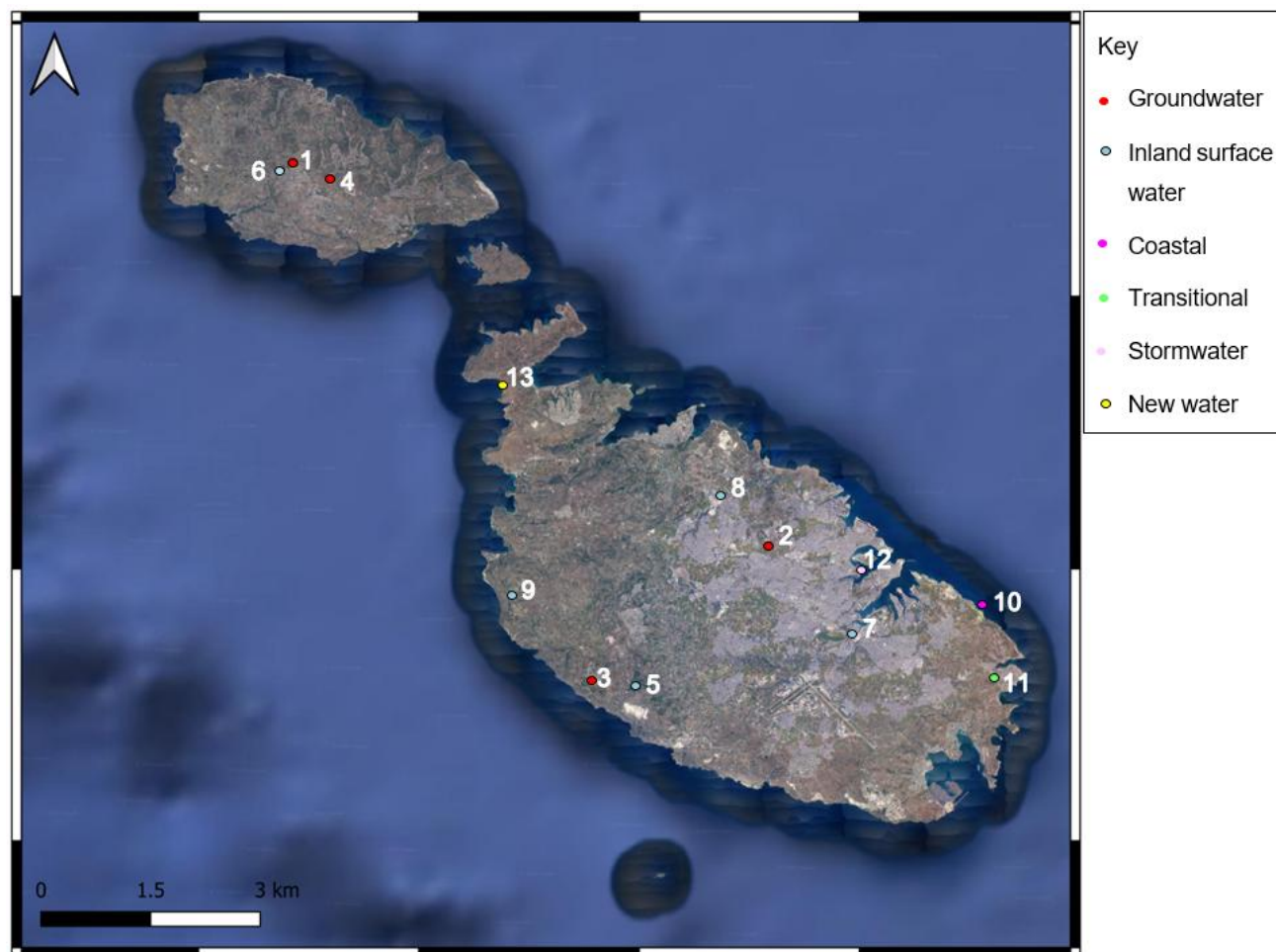


Figure 2 Location of sample sites for focused monitoring (refer to table 3 for details)

2.2 Sample parameters

Several criteria were used in the selection of contaminants for focussed monitoring. This ensured that the analysis of water samples would be relevant to the Maltese context, informative to assess the quality of the water categories, and useful in directing future sampling and policy.

To identify potential contaminants for focused monitoring a matrix was developed which evaluated four different criteria (table 4).

Table 4 Criteria used for evaluation of candidate contaminants

Criteria	Sub-criteria	Score
1. Regular monitoring processes	1a. Pollutant constitutes a priority substance for surface water or is listed in the Groundwater Directive and thus already subject to regular monitoring in WFD water bodies	0
	1b. Pollutant is a Chemical of Emerging Concern that is not subject to regular monitoring in WFD water bodies	3
2. Screening Process	2a. Pollutant not detected in screening exercise	0
	2b. Pollutant detected through screening exercise once across water types	1
	2c. Pollutant detected through screening exercise at a frequency of 1-5	2
	2d. Pollutant detected through screening exercise at a frequency of >5	3
3. Use in Malta	3a. Use of pollutant in Malta not verified through presence in sewerage network (LIFE IP Action C.10)	0
	3b. Use of pollutant in Malta verified through presence in sewerage network (LIFE IP Action C.10)	1
4. Watchlist	4a. Pollutant not listed in surface and/or groundwater watch list	0
	4b. Pollutant listed in surface and/or groundwater watch list	2

Criteria 1 deprioritizes contaminants that are already subject to regular monitoring (due to their inclusion in statutory lists such as Priority Substances⁴) and prioritizes compounds of emerging

⁴ https://environment.ec.europa.eu/topics/water/surface-water_en

concern (investigated by ERA 12). Criteria 2 evaluates the number of times the compound was detected through ERA12 - emphasising contaminants with greater prevalence. Similarly, criteria 3 evaluates whether the contaminants have been detected in the sewerage network through the LIFE IP Action C10. Finally, criteria 4 prioritises pollutants listed in surface water or groundwater Watchlists⁵.

Given the different sub-criteria, it was appropriate to draw up two shortlists: one for groundwater and another for all other 'surface' water sources (inland surface, transitional, new water, stormwater and coastal). In total, 200 compounds were evaluated for surface waters, and 162 for groundwater (Annex 1). The resulting full lists of analytes according to water source that were subject to the focused monitoring exercise are provided in tables 5 and 6.

⁵ Directive 2008/105/EC identified 33 priority substances and some other notable pollutants and their threshold limits (Environmental Quality Standards or EQSs); Directive 2013/39/EU updated the EQS values for seven of the priority substances - in line with the latest scientific and technical knowledge – as well as adding 12 newly identified priority substances. It also required the European Commission to establish 'Watch Lists' of substances for which EU-wide monitoring data are to be gathered to inform future prioritisation. Member States must monitor controlled waters for the substances on the list at least once per year and the chemicals can remain on the list for a maximum of two successive editions. The first watch list was established in 2015, updated in 2018, 2020, 2022 and 2024. A groundwater watch list was first endorsed in 2019 and successive iterations are still ongoing

Table 5 Compounds for analysis in focused monitoring of surface waters¹

Compound	Analysis ²	Use	LOD ³ (µg/L)	Surface water LOQ ⁴ (µg/L)	Seawater LOQ ⁴ (µg/L)
1,2,4-trimethyl benzene	GC/MS	solvent	0.3	1	5
1,3,5-Trimethylbenzene	GC/MS	solvent	0.3	1	5
1-Ethyl-2-pyrrolidone	TIC	manufacture	0.1	-	-
1,6-Hexanediol diacrylate	TIC	manufacture	0.1	-	-
2-Ethyl-1,3-hexanediol	TIC	solvent	0.1	-	-
2,4,7,9-Tetramethyl-5-decyne-4,7-diol	TIC	PPP	0.1	-	-
2-Ethylhexanoic acid	TIC	manufacture	0.1	-	-
2-Methylnaphthalene	TIC	manufacture	0.1	-	-
Acesulfame K	GC/MS	food	0.02	0.04	0.1
Acetophenone	TIC	manufacture	0.1	-	-
Amoxicillin	GC/MS	pharmaceutical	0.5	1	1
Aniline	GC/MS	dyes and pigments	0.006	0.02	0.02
Arsenic	GC/MS	manufacture	0.05	1	3
Atenolol	GC/MS	pharmaceutical	0.02	0.04	0.4
Azobenzene	TIC	dyes and pigments	0.1	-	-
Benzenesulfonanilide	TIC	manufacture	0.1	-	-
Benzenesulfonamide, N-butyl	TIC	pharmaceutical	0.1	-	-
Benzophenone	TIC	manufacture	0.1	-	-
Benzotriazole	GC/MS	corrosion inhibitor	0.02	0.05	0.5
Beta-estradiol	GC/MS	manufacture	0.02	0.05	0.5
Bis(2-ethylhexyl) adipate	TIC	plastics	0.1	-	-
Bisphenol A	GC/MS	manufacture	100	300	300
Carbamazepine	GC/MS	pharmaceutical	0.01	0.02	0.15
Chloroxylenol	TIC	pharmaceutical	0.1	-	-
Diclofenac	GC/MS	pharmaceutical	0.025	0.05	0.05
Dicyclohexyl phthalate	TIC	plastics	0.1	-	-
Diethyl phthalate	GC/MS	plastics	0.03	0.1	0.1
Dimethyl phthalate	GC/MS	pharmaceutical	0.03	0.1	0.1
di-n-butyl phthalate	GC/MS	plastics	0.03	0.1	0.1
Diphenyl sulfone	TIC	solvent	0.1	-	-
d-Limonene	GC/MS	manufacture	0.03	0.1	0.1
EDTA	GC/MS	chelating agent	500	1500	1500
(EthylenDiaminoTetracetyc Acid)					
Epoxiconazole	TIC	PPP	0.1	-	-
Ethylbenzene	GC/MS	manufacture	0.001	0.02	0.1
Etoxazole	TIC	PPP	0.1	-	-
Fenpiclonil	TIC	PPP	0.1	-	-
Fipronil	GC/MS	PPP	0.03	0.1	0.1
Fluoxetine	TIC	pharmaceutical	0.1	-	-

<i>Flurenol-methylester</i>	TIC	pharmaceutical	0.1	-	-
<i>Glyphosate</i>	GC/MS	PPP	0.1	-	-
<i>Imidacloprid</i>	GC/MS	PPP	0.1	0.05	0.5
<i>Indane</i>	TIC	Fuels	0.1	-	-
<i>Isopropilbenzene</i>	GC/MS	manufacture	0.001	0.02	0.1
<i>Methylbenzotriazole</i>	GC/MS	corrosion inhibitor	0.02	0.05	0.5
<i>N,N-Diethyl-m-toluamide</i>	TIC	pharmaceutical	0.1	-	-
<i>Neodecanoic acid-ethenyl ester</i>	TIC	dyes and pigments	0.1	-	-
<i>n-Propylbenzene</i>	GC/MS	dyes and pigments	0.001	0.02	0.1
<i>Octocrylene</i>	TIC	cosmetic	0.1	-	-
<i>Oxacyclohexadecan-2-one</i>	TIC	pharmaceutical	0.1	-	-
<i>Phenanthrene</i>	GC/MS	dyes and pigments	0.1	0.05	0.3
<i>Phenol</i>	GC/MS	manufacture	0.01	0.05	0.5
<i>Propiconazole</i>	TIC	PPP	0.1	-	-
<i>Squalane</i>	TIC	cosmetic	0.1	-	-
<i>Styrene</i>	GC/MS	plastics	0.1	1	10
<i>Sulfamethoxazole</i>	GC/MS	pharmaceutical	0.004	0.02	0.03
<i>Toluene</i>	GC/MS	solvent	0.1	0.05	0.3
<i>Tributyl acetylcitrate</i>	TIC	manufacture	0.1	-	-
<i>Tributyl phosphate</i>	TIC	plastics	0.1	-	-
<i>Triisobutylphosphate</i>	GC/MS	manufacture	0.01	0.025	0.025
<i>Tris-(1,3-dichloroisopropyl) phosphate</i>	TIC	plastics	0.1	-	-

1. Surface waters in this context refer to Inland Surface, Stormwater, Transitional, New waters and Coastal waters. 2 Method of analysis: GC/MS – specific analysis, TIC Water screening. 3. LOD = Limit of Detection (the typical LOD of the screening process is 0.1µg/L) 4. LOQ = Limit of Quantification

Table 6 Compounds for analysis in focused monitoring of groundwater

Compound	Analysis ¹	Use	LOD ² (µg/L)	LOQ ³ (µg/L)
<i>1,1,1-Trichloroethane</i>	TIC	solvent	0.1	-
<i>1,1,2-Trichloroethane</i>	TIC	solvent	0.1	-
<i>1,1-Dichloroethene</i>	GC/MS	solvent	0.03	0.1
<i>1,2,3-Trichlorobenzene</i>	GC/MS	solvent	0.3	1
<i>1,2,4-Trichlorobenzene</i>	GC/MS	solvent	0.3	1
<i>1,2-Dichlorobenzene</i>	GC/MS	solvent	0.3	1
<i>1,2-dichloropropane</i>	GC/MS	solvent	0.3	1
<i>1,4-Dioxane</i>	TIC	solvent	0.1	-
<i>1-Decanol</i>	TIC	solvent	0.1	-
<i>1-Ethyl-2-pyrrolidone</i>	TIC	manufacture	0.1	-
<i>2,4-Di-tert-butylphenol</i>	TIC	manufacture	0.1	-
<i>2-Ethyl-1,3-hexanediol</i>	TIC	solvent	0.1	-
<i>2-Ethylhexanoic acid</i>	TIC	manufacture	0.1	-
<i>2-Ethylhexyl diphenyl phosphate</i>	TIC	plastics	0.1	-
<i>2-Ethylhexyl salicylate</i>	TIC	cosmetic	0.1	-
<i>3-Chlorophenol</i>	TIC	manufacture	0.1	-
<i>4,4'-Methylenebis (phenyl isocyanate)</i>	TIC	manufacture	0.1	-
<i>4-chloro-3-methylphenol</i>	GC/MS	pharmaceutical	0.3	1
<i>4-Chlorophenol</i>	TIC	dyes and pigments	0.1	-

<i>4-Methylanisole</i>	TIC	manufacture	0.1	-
<i>Acesulfame K</i>	GC/MS	food	0.02	0.04
<i>Acetone</i>	GC/MS	solvent	10	25
<i>Amoxicillin</i>	GC/MS	pharmaceutical	0.3	1
<i>Aniline</i>	GC/MS	dyes and pigments	0.006	0.02
<i>Atenolol</i>	TIC	pharmaceutical	0.02	0.04
<i>Benzenesulfonanilide</i>	TIC	manufacture	0.1	-
<i>Benzophenone</i>	TIC	manufacture	0.1	-
<i>Benzotriazole</i>	GC/MS	corrosion inhibitor	0.02	0.05
<i>Benzyl alcohol</i>	TIC	solvent	0.1	-
<i>Bis(2-ethylhexyl) adipate</i>	TIC	plastics	0.1	-
<i>Bis(2-ethylhexyl) phthalate (DEHP)</i>	GC/MS	plastics	0.03	0.1
<i>Butylated hydroxytoluene</i>	TIC	fuels	0.1	-
<i>Caffeine</i>	TIC	food	0.1	-
<i>Cedrol</i>	TIC	pharmaceutical	0.1	-
<i>Chlorobenzene</i>	TIC	solvent	0.1	-
<i>Chloroethane</i>	GC/MS	fuels	0.1	-
<i>Chloroneb</i>	TIC	PPP	0.1	-
<i>Cholesterol</i>	TIC	food	0.1	-
<i>cis-1,2-Dichloroethene</i>	GC/MS	solvent	0.03	0.1
<i>Coumarin</i>	TIC	pharmaceutical	0.1	-
<i>Crotamiton</i>	TIC	pharmaceutical	0.1	-
<i>Diclofenac</i>	GC/MS	pharmaceutical	0.025	0.05
<i>Diethyl phthalate</i>	GC/MS	plastics	0.03	0.1
<i>Diethylene glycol dimethyl ether</i>	TIC	solvent	0.1	-
<i>Diisobutyl phthalate</i>	TIC	plastics	0.1	-
<i>Dimethyl phthalate</i>	GC/MS	pharmaceutical	0.03	0.1
<i>Diphenyl sulfone</i>	TIC	solvent	0.1	-
<i>d-Limonene</i>	TIC	manufacture	0.1	-
<i>EDTA</i>	GC/MS	chelating agent	500	1500
<i>Erythromycin</i>	TIC	pharmaceutical	0.1	-
<i>Ethylbenzene</i>	GC/MS	manufacture	0.3	1
<i>Ethylparaben</i>	TIC	food	0.1	-
<i>Flurenol-methylester</i>	TIC	pharmaceutical	0.1	-
<i>Formaldehyde</i>	GC/MS	manufacture	0.1	-
<i>Hexadecane</i>	TIC	pharmaceutical	0.1	-
<i>Isopropyl myristate</i>	TIC	pharmaceutical	0.1	-
<i>Isopropylbenzene</i>	GC/MS	fuels	0.1	-
<i>Linalool</i>	TIC	manufacture	0.1	-
<i>m-Cresol (3-methylphenol)</i>	TIC	manufacture	0.1	-
<i>Methylbenzotriazole</i>	GC/MS	corrosion inhibitor	0.02	0.05
<i>Methylparaben</i>	TIC	cosmetic	0.1	-
<i>m-Xylene</i>	GC/MS	solvent	0.1	1
<i>N,N-Diethyl-m-toluamide</i>	TIC	pharmaceutical	0.1	-
<i>N-nitrosopiperidine (1-nitrosopiperidin)</i>	TIC	PPP	0.1	-
<i>n-Propylbenzene</i>	GC/MS	dyes and pigments	0.001	0.02
<i>o-Cresol (2-methylphenol)</i>	GC/MS	PPP	0.006	0.02
<i>Octocrylene</i>	TIC	cosmetic	0.1	-
<i>o-Toluidine</i>	TIC	PPP	0.1	-
<i>Oxacyclohexadecan-2-one</i>	TIC	pharmaceutical	0.1	-
<i>o-Xylene</i>	GC/MS	solvent	0.1	1

<i>p</i> -Cresol (4-methylphenol)	GC/MS	PPP	0.006	0.02
Phenol	GC/MS	manufacture	0.01	0.05
Primidone	TIC	pharmaceutical	-	-
Promecarb	TIC	PPP	-	-
Propylparaben	TIC	pharmaceutical	-	-
<i>p</i> -Xylene	GC/MS	solvent	0.1	1
Styrene	GC/MS	plastics	2	1
<i>tert</i> -butyl methyl ether; methoxy-2-methylpropane	GC/MS	fuels	0.1	1
Tetrachloroethylene	GC/MS	detergent	0.03	0.1
Toluene	GC/MS	solvent	0.1	0.05
Tribromomethane	GC/MS	solvent	0.003	0.01
Tributyl acetylacrylate	TIC	manufacture	-	-
Tributyl phosphate	TIC	plastics	-	-
Trichloromethane	GC/MS	solvent	0.003	0.01
Tridiphan	TIC	PPP	-	-
Trimethoprim	TIC	pharmaceutical	-	-
Tris (2,3-epoxypropyl) isocyanate	TIC	plastics	-	-

1. Method of analysis: GC/MS – specific analysis, TIC Water screening. 2. LOD = Limit of Detection (the typical LOD of the screening process is 0.1µg/L) 3. LOQ = Limit of Quantification

3.0 Sample Collection, Laboratory Analysis and Reporting

The collection of samples was co-ordinated with ERA and EWA and the relevant stakeholders (e.g. WSC) notified where necessary. Monitoring sites were grouped geographically to minimize sample time in transit. Samples were collected following ISO 5667-1:2020 into clean, new vessels depending on the volume and material of container required by the type of analysis (Table 7).

Table 7 Container type for different parameters

Compound Class	Volume	Container Type	Acid Volume
PFOA/S + Alkylphenols + Pesticide (LC amenable) + Glyphosate + Un-ionized ammonia (NH ₃) + Anions,	500mL	PP PFOA/S free	
POPs + Pesticide (GC amenable), PAH + SVOC Dioxins and dioxin-like compounds (HRMS). TIC screening	6 x 1 L	Dark Glass	
VOC	2 x 40 mL	Glass	2 drops HCl
Metal	50mL	Falcon or PP	2 drops HNO ₃

For samples taken from a tap (e.g. groundwater), to ensure a representative sample was taken (rather than standing water in the pipework), the water was purged by running the tap for

approximately 5 minutes while measuring both pH and conductivity - only taking samples once these parameters are stable. Once collected and prepared, samples were boxed in specialized secure boxes, and ice blocks added. Samples were then couriered to the analysing laboratory as soon as possible.

All analyses were carried out by Biochemie Lab SRL (Accredited by Accredia No. 0195, see Annex 2) using the methods listed in Appx 1. This laboratory is accredited to UNI CEI EN ISO IEC 17025:2017 to analyze the required parameters in accordance with MSA EN ISO/IEC-17025:2005 (see Appx 1). Results were collated and sorted into sample type (coastal, new water etc) and sent to stakeholders at ERA and EWA when available. This final report summarises the findings, noting any compounds that were found in excess of EQS (or of concern according to current research when EQS were not available).

4.0 Results

Results are organized by water type. At each sampling site, duplicate samples—labelled A and B—were collected, and the findings for both replicates are provided. To maintain clarity and conciseness, only results exceeding the limit of detection (LOD) are included. The discussion is structured according to water type, focusing solely on parameters from Tables 5 and 6 that were detected at concentrations surpassing their Environmental Quality Standards (EQS) or other relevant directives and guidelines. The complete analytical results of the TIC screening for 1200 compounds is presented in Annex 6.

4.1 Groundwater

Table 8 Results of summer sampling of groundwater sites

COMPOUND	LOD	GHATTUQ (A)	GHATTUQ (B)	FONTANA (A)	FONTANA (B)	DINGLI (A)	DINGLI (B)	IKLIN (A)	IKLIN (B)
1-Ethyl-2-Pyrrolidone (mg/L)	0.0001	0.2572	-	0.1667	0.2011	0.2531	0.3498	0.3419	0.3057
2-Ethyl-1,3-Hexanediol (mg/L)	0.0001	0.708	-	0.7824	0.525	0.8268	1.0569	-	-
2-Ethylhexyl Diphenyl phosphate (mg/L)	0.0001	0.0161	-	-	-	-	-	-	-
4-Methylanisole (mg/L)	0.0001	0.0012	-	-	-	0.002	-	-	0.0017
Acetone	5	7.94	6.54	-	-	6.46	7.74	5.73	-
Benzyl alcohol (mg/L)	0.0001	-	-	-	-	0.0435	-	-	-
Caffeine (mg/L)	0.0001	-	-	0.0161	0.0201	-	-	-	-
d-Limonene (mg/L)	0.0001	0.2762	0.1574	0.3266	0.2924	0.3355	0.3741	0.3977	0.2655
EDTA (EthylenDiaminoTetracetyc Acid)	1500	-	-	-	-	4640	8210	-	-
Isopropyl myristate (mg/L)	0.0001	0.0293	0.0272	-	-	-	-	-	-
Linalool (mg/L)	0.0001	-	-	-	-	-	-	0.018	-
m-Cresol (3-methylphenol) (mg/L)	0.0001	-	0.0253	0.0162	0.019	-	-	-	-
Octocrylene (mg/L)	0.0001	0.0344	-	-	-	-	-	-	-
Tetrachloroethylene	0.1	-	-	-	-	-	-	0.38	0.309
Tribromomethane (Bromoform)	0.01	-	-	-	-	0.0465	0.0435	46	36.9
Tributyl phosphate (mg/L)	0.0001	0.0199	-	-	0.0362	-	-	-	-
Trichloromethane (Chloroform)	0.01	-	-	0.0239	0.0185	-	-	0.0172	0.0131
Tridiphan (mg/L)	0.0001	0.069	0.0895	0.0757	0.0568	2.3191	0.0926	0.0931	0.0853

All values are in µg/l unless otherwise indicated

Only compounds detected above LOD are shown. The full range of TIC detected are given in Annex 6

Table 9 Results of winter sampling of groundwater sites

COMPOUND	LOD	GHATTUQ (A)	GHATTUQ (B)	FONTANA (A)	FONTANA (B)	DINGLI (A)	DINGLI (B)	IKLIN (A)	IKLIN (B)
1-Ethyl-2-pyrrolidone (mg/L)	0.0001	0.0822	0.0867	-	-	-	0.0816	0.1007	0.1002
2,4-Di-tert-butylphenol (mg/L)	0.0001	-	-	3.0557	-	-	-	-	-
2-Ethyl-1,3-hexanediol (mg/L)	0.0001	0.3385	0.4301	-	0.3419	0.3805	0.3029	0.4504	0.3484
4,4'-Methylenebis (phenyl isocyanate) (mg/L)	0.0001	-	-	2.5773	0.3308	0.4181	0.0694	-	0.2062
4-Chlorophenol (mg/L)	0.0001	-	-	-	-	-	0.0938	-	-
Acetone	5	12.1	9.83	13.8	12.5	< 5.00	11.9	9.66	< 5.00
Benzophenone (mg/L)	0.0001	-	0.0157	0.1039	0.0804	0.0279	0.0328	0.0284	0.0334
Bis(2-ethylhexyl) adipate (mg/L)	0.0001	-	-	5.9099	-	-	-	-	-
Chloroneb (mg/L)	0.0001	-	-	10.9439	-	-	-	-	-
EDTA (EthylenDiamino-Tetracetyc Acid)	1500	3600	4190	4510	5110	21800	25200	< 1500	< 1500
o-Xylene (mg/L)	0.0001	-	0.0186	0.0265	0.0326	0.0174	0.026	-	0.0225
Promecarb (mg/L)	0.0001	-	-	-	0.0346	-	-	-	-
Trichloromethane (Chloroform)	0.01	0.0149	0.0144	-	-	0.0221	0.0201	0.0406	0.0402
Tribromomethane (Bromoform)	0.01	-	-	-	-	-	-	0.0135	0.0143
Isopropyl myristate (mg/L)	0.0001	-	-	0.6839	-	-	-	-	-
Tributyl phosphate (mg/L)	0.0001	-	-	-	0.0122	-	-	-	-
Tridiphan (mg/L)	0.0001	0.0237	0.0282	-	0.0391	0.0271	0.0246	0.0289	0.0361

Units are in µg/l unless otherwise indicated. Only compounds detected above LOD are shown

Groundwater sites showed a similar range of contaminants across sites. There were two compounds found at notable concentrations in the summer sampling: Ethylenediaminetetraacetic Acid (EDTA) and tribromomethane.

EDTA is employed extensively as a chelating agent, notably in the formulation of complex plant micronutrient fertilizers and as a stabiliser for soaps and bleaching agents in detergent products. The potential environmental impacts of EDTA are primarily attributable to the mobilization and persistence of chelated metal ions, rather than to direct intrinsic toxicity of the compound itself. No Environmental Quality Standard (EQS) has been established for EDTA within the European Union, although its Scientific Committee⁶ agreed that a PNEC_{water}⁷ of 2.2mg/l was appropriate, which has therefore been adopted as the Maximum Permissible Concentration (MPC) in the water compartment by member states⁸. The 'Negligible Concentration' (NC) – a value causing negligible effects to ecosystems – is 22 µg/l. The World Health Organization (WHO) has recommended a maximum concentration of 600 µg/l in drinking water⁹.

An average value of 6425 µg/l was found in Dingli in the summer sampling, increasing to 23,500 µg/l in the winter sampling. At almost 10 times the MPC, this may be of concern. However, the effects of EDTA and chelated compounds are hardness dependent and usually EDTA toxicity is lower in hard water (which is characteristic of Maltese aquifers¹⁰); except the toxicity of Zn-EDTA which increases in hard water. There were some isolated occurrences of EDTA in the 2022-2024 campaign (1860 µg/L was detected at Sellun borehole and 2870 µg/L was detected at Victoria) though detection did not show consistent patterns. Due to the wide use of EDTA in domestic, industrial and agricultural applications it is not possible to attribute any contamination to a single source, though given the irregularity of occurrence the contamination is likely to be sporadic.

Whilst there is no EQS for tribromomethane (also known as bromoform) in EU surface waters under the Water Framework Directive or similar legislation, under the EU drinking water regulation

⁶ Scientific Committee on Toxicity, Ecotoxicity and the Environment (CSTEE) Opinion on the results of the Risk Assessment of: ETHYLENEDIAMINE TETRAACETATE (EDTA) 2003.

https://ec.europa.eu/health/ph_risk/committees/sct/documents/out194_en.pdf

⁷ Predicted No Effect Concentration

⁸ Kalf et al. (2003) Environmental Risk Limits for EDTA. RIVM report 601501010/2003.

<https://rivm.openrepository.com/server/api/core/bitstreams/9e5f3717-b289-4f71-a6da-8a5b2e8efe4a/content>

⁹ Selected water quality standards. Environment Agency Hydrogeological Risk Assessment for Landfills.

<https://support.esdat.net/Environmental%20Standards/uk/landfill%20directive%20appendix%208%20select%20water%20quality%20standards.pdf>

¹⁰ Choi, H., Lee, E., Park, D., Park, C., Schembri, M., Schembri, D., ... & Kim, Y. (2024). Assessment of spatio-temporal variations in groundwater quality for the groundwater-dependent Maltese islands. *Journal of Hydrology: Regional Studies*, 54, 101875.

(Directive (EU) 2020/2184), there is a parametric limit¹¹ of 100 µg/L for total trihalomethanes (which includes bromoform/tribromomethane) in drinking water. The WHO specifically provides guideline limits for individual THMs and for bromoform this is 100 µg/L in drinking water. Although the average value found at Iklin (summer) is slightly less than half this limit, it is notably high compared to other sample sources; moreover, a concentration of 98.8 µg/L was found in the SCAN GC-MS screening method. The most likely source of bromoform is from the chlorination (disinfection) of water. When chlorine is added to water with organic matter by-products can form; THMs are the most common type of by-product and Bromoform is among the most common of these. While the groundwater at Iklin and elsewhere was not chlorinated before sampling, it is possible that the aquifer has become 'contaminated' with chlorinated water such as mains supply. Although present in the winter sampling, levels of bromoform were several orders of magnitude lower than in the summer.

1-Ethyl-2-Pyrrolidone and 2-Ethyl-1,3-Hexanediol were frequently detected across all groundwater sites (and other water sources) but at concentrations an order of magnitude lower than No Observable Effect Concentration (NOEC) of aquatic animals¹². (and neither have an EQS). These compounds are examples of solvents with a very wide range of applications such as catalysts, cationic surfactants and as intermediates in chemical processing making their origin difficult to establish.

¹¹ A parametric limit is the maximum allowed concentration of a substance in drinking water, written into law, and equivalent of an EQS written into environmental law

¹² Semenova, M. N., Kuptsova, T. S., & Semenov, V. V. (2024). Toxicity of organic solvents and surfactants to the sea urchin embryos. *Chemosphere*, 353, 141589.

4.2 Inland surface waters

Table 10 Results of summer sampling of inland surface water sites

Compound	LoD	Il-Luq (A)	Il Luq (B)	Lunzjata (A)	Lunzjata (B)	Marsa (A)	Marsa (B)	Għasel (A)	Għasel (B)	Baħrija (A)	Baħrija (B)
1-Ethyl-2-pyrrolidone (mg/l)	0.0001	0.2505	0.2184	0.2468	0.2462	0.1831	0.2574	0.251	0.2009	0.2589	0.2696
2-Ethyl-1,3-hexanediol (mg/l)	0.0001	1.0444	0.9979	0.9076	0.979	1.4573	-	0.481	-	-	-
Aniline	0.02	-	-	-	-	0.0758	0.0858	0.145	0.148	-	-
Arsenic (mg/l)	0.001	-	-	-	-	0.0011	0.00137	-	-	-	-
Azobenzene(mg/l)	0.001	-	0.0055	0.0079	0.0073	0.0047	0.0105	-	-	0.0116	0.0172
Benzenesulfonamide, N-butyl	0.1	-	-	42.4612	-	-	-	-	-	-	-
Benzenesulfonanilide (mg/l)	0.1	-	-	-	-	-	-	0.3911	0.3398	-	-
Chloroxylenol	0.001	-	-	-	-	0.0268	0.0355	-	-	-	-
EDTA (EthylenDiamino-Tetracetyc Acid)	1500	2450	3560	2350	15300	-	-	-	-	6210	5850
Fenpiclonil (mg/l)	0.1	-	-	2.3447	0.3033	-	-	-	-	-	-
Glyphosate	0.05	-	-	-	-	-	-	0.63	0.676	0.386	0.424
Indane (mg/l)	0.001	0.0041	-	0.0047	-	-	-	-	-	-	-
N,N-Diethyl-m-toluamide	0.001	-	-	0.013	-	-	-	-	-	-	-
Phenol	0.02	0.0456	-	0.145	-	0.0635	0.0352	0.0367	-	-	0.0395
Squalane (mg/l)	0.0001	6.6527	5.3121	3.143	3.551	5.3071	5.9734	-	-	-	-
Tributyl phosphate(mg/l)	0.0001	-	-	-	-	-	-	0.1066	-	-	-
Triisobutylphosphate	0.0025	-	-	-	-	-	-	0.00484	0.00512	0.00567	-
Tris-(1,3-dichloroisopropyl) phosphate (mg/l)	0.0001	-	-	-	-	-	-	1.4675	1.3135	-	-

Units are in µg/l unless otherwise indicated. Only compounds detected above LOD are shown

Table 11 Results of winter sampling of inland surface water sites

Compound	LOD	Il-Luq (A)	Il Luq (B)	Lunzjata (A)	Lunzjata (B)	Marsa (A)	Marsa (B)	Ghasel (A)	Ghasel (B)	Bahrija (A)	Bahrija (B)
1,6-hexanediol diacrylate (mg/l)	0.0001	-	-	-	-	0.6189	0.5667	15.8187	20.8943	0.1025	0.1563
1-ethyl-2-pyrrolidone (mg/l)	0.0001	0.1109	-	-	-	-	0.0973	-	-	-	-
2-ethyl-1,3-hexanediol (mg/l)	0.0001	-	-	0.2804	0.3241	0.3985	-	-	-	0.2793	0.2267
2-methylnaphthalene (mg/l)	0.0001	-	0.0085	0.0123	-	0.0071	0.0034	0.0041	0.0036	0.0023	0.0023
Acetophenone (mg/l)	0.0001	-	-	-	-	-	-	0.1044	0.0998	0.0351	0.0403
Aniline	0.02	-	-	-	0.0404	0.896	1.1	0.62	1.44	-	-
Arsenic (mg/l)	0.001	-	-	-	-	0.00259	0.00268	-	0.00102	-	-
Azobenzene (mg/l)	0.0001	-	-	-	-	0.0151	0.0049	0.0076	0.0066	-	-
Benzophenone (mg/l)	0.0001	0.0345	0.0496	-	-	0.0937	0.0278	-	-	0.0186	0.019
Bis(2-ethylhexyl) adipate (mg/l)	0.0001	-	-	-	-	0.6168	0.383	0.5426	0.6375	0.5284	2.085
Chloroxylonol (mg/l)	0.0001	-	-	-	-	-	0.3304	-	-	-	-
Dibutyl phthalate (dbp)	0.1	-	-	-	-	0.13	0.16	-	-	-	-
Di-ethylphthalate (dep)	0.1	-	-	-	-	1.1	1.4	-	-	-	-
EDTA (Ethylendiamino-tetracetyc acid)	1500	3800	3720	8380	8660	-	-	-	-	2230	3930
Fipronil	0.0025	-	-	-	-	-	-	0.0076	0.00501	-	-
Glyphosate	0.05	-	-	-	-	-	-	0.464	0.542	-	-
Imidacloprid	0.05	-	-	-	-	-	-	0.6	0.634	-	-
N,N-diethyl-m-toluamide (mg/l)	0.0001	-	-	-	-	0.0899	0.0739	0.0635	0.0633	-	-
Neodecanoic acid-ethenyl ester (mg/l)	0.1	-	-	-	-	22.6702	15.5712	15.1207	23.2781	15.6567	12.89
Phenol	0.02	-	-	-	-	1.15	1.42	1.63	1.6	1.28	0.445
Tributyl acetylcitrate (mg/l)	0.0001	-	-	-	-	0.1217	0.0896	0.0775	0.0637	0.043	-
Tri-(1,3-dichloroisopropyl) phosphate (mg/l)	0.0001	-	-	-	-	-	-	0.0627	0.0479	-	-

Units are in µg/l unless otherwise indicated. Only compounds detected above LOD are shown.

The only contaminant found at high levels in inland surface water was EDTA, which was recorded at concentrations exceeding the MPC in 3 sites in both summer and winter sample periods. Levels at il-Luq were similar to levels found in the groundwater of this aquifer (MT002), sampled at Dingli – though this is not in itself evidence of the movement of contaminants; elevated levels at il-Lunzjata, for example, were not reflected in concentrations in the groundwater of the aquifer it is located in (MT013). EDTA is widely used across multiple industries, which makes pinpointing its exact source of contamination in groundwater challenging. However, its presence at sites with extensive agricultural activity—and absence at the industrial site in Marsa—suggests that agriculture could be the origin.

Imidacloprid, a widely used neonicotinoid insecticide, has been on Watch lists (2015 and 2018) to facilitate monitoring and set environmental standards. This led to the Scientific Committee on Health, Environmental and Emerging Risks (SCHEER) to suggest maximum acceptable concentration-quality standards (MAC-QS) for freshwater based of 0.057 - 0.065 µg/L (depending on the determination method¹³). This has led to proposed AA and MAC-EQS of 0.0068 and 0.057µg/L respectively for inland surface waters. Concentrations recorded at Għasel in the winter sampling are over 10 times the MAC-EQS.

While the EU's EQS list does not include phenol itself as a priority substance, some national and international guidance sets recommended limits for phenol in water for ecological or human health protection (e.g., total phenols limit ~0.5 µg/L)¹⁴. This is exceeded at Marsa, Għasel and Baħrija in the winter sampling, but not in the summer, which may be due to increased run-off from rainfall (there was also 22% more contaminants found in winter versus summer, though this was not a pattern in all water types).

The EU has not established an official EQS for glyphosate in surface waters though recently there has been suggestions to revise the legislation. Proposal 2022/0344 (COD), for example, seeks to amend directives 2000/60/EC, 2006/118/EC and 2008/105/EC, to better reflect scientific and technical progress since their publication, strengthening pollution controls, and ensuring better integration of water protection measures across the EU. Likewise, in 2022, the European Commission published a legal proposal for the revision of the List of Groundwater and Surface Water Pollutants, thereby also setting surface water threshold values for glyphosate¹⁵ of i) 0.1 µg/L “for freshwater used for the abstraction and preparation of drinking water” and ii) 86.7 µg/L “for

¹³ https://health.ec.europa.eu/document/download/84ede41f-41b8-42ad-a31e-3f5db52ab62c_en?filename=scheer_o_021.pdf

¹⁴ Mhlongo NL, Akharamo MO, Pereao O, Human IS, Opeolu BO. Phenolic compounds occurrence and human health risk assessment in potable and treated waters in Western Cape, South Africa. *Front Toxicol.* 2024 Jan 4;5:1269601. doi: 10.3389/ftox.2023.1269601

¹⁵ <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52022PC0540>

freshwater not used for the abstraction and preparation of drinking water". Drinking water in Malta is entirely sourced from the desalination of seawater so for all freshwater sources in Malta the second limit applies, therefore no inland surface waters exceed the EC's proposed threshold values. Glyphosate was not detected at Wied il-Lunzjata during the current project - unlike in the 2022-2024 sampling when it was found at an average concentration of 0.5615 µg/L – suggesting sporadic contamination linked to local application. Conversely, acesulfame K, which was extensively detected in inland surface waters in the ERA12 campaign, was not detected at the same sites – or indeed any waters – in the current monitoring program. As a common food sweetener, it is unlikely that this is due to a sudden decline in usage so it is not clear why the compound has not been detected.

4.3 Stormwater

Table 12 Stormwater site results

COMPOUND	LOD	TA XBIEX (A)	TA XBIEX (B)	TA XBIEX (A)	TA XBIEX (B)
SEASON	Summer		Winter		
1-Ethyl-2-pyrrolidone (mg/L)	0.0001	0.2664	0.208	-	-
1,6-Hexanediol diacrylate (mg/L)	0.0001	-	-	-	3.7229
2,4,7,9-Tetramethyl-5-decyne-4,7-diol (mg/L)	0.0001	-	-	0.0112	-
Aniline	0.02	0.111	0.0877	0.162	0.183
Benzenesulfonamide (mg/L)	0.0001	0.4686	0.4393	0.0293	-
Bis(2-ethylhexyl) adipate (mg/L)	0.0001	-	-	0.5217	-
Chloroxylenol (mg/L)	0.0001	0.1483	0.172	0.5385	-
Diphenyl sulfone (mg/L)	0.0001	-	-	0.0258	-
Glyphosate	0.05	0.676	0.59	0.855	0.907
N,N-Diethyl-m-toluamide (mg/L)	0.0001	-	-	0.0942	-
Neodecanoic acid-ethenyl ester (mg/L)	0.0001	-	-	19.7597	13.2773
Phenol	0.02	0.0984	0.127	0.662	0.686
Tributyl acetylcitrate (mg/L)	0.0001	-	-	-	0.0742

Tributyl phosphate (mg/L)	0.0001	0.1793	-	-	-
Triisobutylphosphate	0.0025	-	-	< 0.00250	0.00446
Tris-(1,3-dichloroisopropyl) phosphate (mg/L)	0.0001	0.3929	0.2938	-	-

Units are in µg/l unless otherwise indicated. Only compounds detected above LOD are shown.

In the 2022-2024 sampling campaign, glyphosate was found at concentrations of 0.6145 and 0.405 µg/L in year 2 and 1 respectively. This is consistent with an average concentration of 0.633 and 0.881g/L respectively in the summer and winter sampling of stormwater (table 12). Nevertheless, since this is not a water used for drinking water supply these levels are below proposed environmental limits.

Phenol concentrations in the winter sampling may exceed some national guidelines as mentioned previously, but are not higher than an EQS which currently does not exist.

As it is taken from a single site, the TIC screening results from the previous campaign can be compared with the current results. In the earlier campaign, 79 compounds were detected, compared to 40 in the current study; of these, 68% are common to both, suggesting a consistency in the sources of contamination (annex 6). Overwhelmingly, the use of contaminants is industrial, indicating this is the primary source of contamination.

4.4 New water

Table 13 New water site results

COMPOUND SEASON	LOD	ČUMNIJA(A)	ČUMNIJA(B)	ČUMNIJA(A)	ČUMNIJA(B)
		Summer		Winter	
1-Ethyl-2-pyrrolidone (mg/L)	0.0001	-	-	0.0943	-
1,6-Hexanediol diacrylate (mg/L)	0.0001	-	-	2.5994	2.5814
2-Methylnaphthalene (mg/L)	0.0001	-	-	0.0024	0.0028
Acetophenone (mg/L)	0.0001	-	-	0.4764	0.4285
Aniline	0.02	-	-	0.0289	0.0226
Azobenzene (mg/L)	0.0001	0.0237	0.0186	-	-
Benzenesulfonanilide (mg/L)	0.0001	0.0186	0.0215	-	-
Benzophenone (mg/L)	0.0001	-	-	0.0436	0.0434
Bis(2-ethylhexyl) adipate (mg/L)	0.0001	-	-	-	0.7174
Fenpiclonil (mg/L)	0.0001	-	2.2358	2.0691	2.1165
Indane (mg/L)	0.0001	0.0064	0.0066	-	-
Neodecanoic acid-ethenyl ester (mg/L)	0.0001	-	-	8.7841	8.5768
Phenol	0.02	0.0244	-	1.00	0.486

Tributyl acetylcitrate (mg/L)	0.0001	-	-	0.0413	-
Tributyl phosphate (mg/L)	0.0001	0.0567	-	-	-

Units are in µg/l. Only compounds detected above LOD are shown.

New water is produced by highly processing urban wastewater; therefore, it is subject to any contamination in the latter. To mitigate this, following standard secondary treatment the new water is further treated using ultrafiltration, reverse osmosis and advanced oxidation processes which are specifically designed to remove almost all contamination¹⁶. Thus, the level of contamination in table 13 – the lowest of any water category – is not surprising. No compounds were detected at levels exceeding EQS in the specific analyses or screening process (Annex 6). However, the winter measurements of phenol may exceed some national standards as previously discussed. Similarly, some European country's water quality criteria¹⁷ have an upper threshold value of 0.75 µg/L for the pesticide Fenpiclonil which was exceeded in summer and winter sampling of New water. When the 2022-2024 TIC screening results are compared to the current study's, only 38% of compounds are found in both (annex 6). Of these, 79% are from industrial applications, suggesting that this is the primary source of contamination.

The majority (67%) of compounds detected in new water were also found in inland water, and 60% were also found in stormwater. While not specifically proving a movement of contaminants; it is noteworthy that some of the compounds detected in new water (fenpiclonil and indane) were only detected in inland surface waters and new water.

¹⁶ WSC. New water. Information. <https://www.wsc.com.mt/information/new-water/>

¹⁷ https://beta.sepa.scot/media/jyjjosg3/wat-g-073_list_of_groundwater_hazardous_substances_and_groundwater_standards.docx

4.5 Coastal and transitional water

Table 14 Results of summer sampling of transitional and coastal site

Compound	LOD	II-Magħluq (a)	II-Magħluq (b)	II-Magħluq (a)	II-Magħluq (b)	Ix-Xgħajra (a)	Ix-Xgħajra (b)	Ix-Xgħajra (a)	Ix-Xgħajra (b)
SEASON		Summer		Winter		Summer		Winter	
WATER TYPE		Transitional		Transitional		Coastal		Coastal	
1-Ethyl-2-pyrrolidone (mg/L)	0.0001	0.2907	0.6548	0.1272	0.2189	0.2235	0.2475	0.079	0.1041
2-Ethyl-1,3-hexanediol (mg/L)	0.0001	-	-	-	-	2.1844	2.5026	-	-
1,6-Hexanediol diacrylate (mg/L)	0.0001	-	-	-	-	-	-	8.6417	15.0702
2,4,7,9-Tetramethyl-5-decyne-4,7-diol (mg/L)	0.0001	-	-	-	0.0765	-	-	-	-
2-Methylnaphthalene (mg/L)	0.0001	-	-	0.0035	0.0041	0.0066	-	0.0034	0.0025
Acetophenone (mg/L)	0.0001	-	-	0.0539	0.2129	-	-	0.1186	0.1005
Azobenzene (mg/L)	0.0001	-	-	-	-	0.0092	-	0.0069	0.0064
Aniline	0.02	-	-	0.331	0.418	-	-	0.471	< 0.02
Arsenic (mg/l)	0.001	0.0173	0.0182	0.0022	0.00195	0.00226	0.00212	0.00276	0.00225
Benzophenone (mg/L)	0.0001	-	-	-	0.1022	-	-	0.036	0.0303
Bis(2-ethylhexyl) adipate (mg/L)	0.0001	-	-	0.5864	0.5056	-	-	0.4517	0.3324
Chloroxyleneol (mg/L)	0.0001	-	-	-	0.02	-	-	-	-
Di-ethylphthalate (DEP)	0.1	-	-	0.22	0.20	-	-	-	-
Diphenyl sulfone (mg/L)	0.0001	-	-	0.1641	0.1469	-	-	-	0.0096
N,N-Diethyl-m-toluamide (mg/L)	0.0001	-	-	0.07	0.1587	-	-	-	-
Neodecanoic acid-ethenyl ester (mg/L)	0.0001	-	-	25.7879	23.7253	-	-	24.2308	11.3416
Oxacyclohexadecan-2-one (mg/L)	0.0001	-	-	0.0855	-	-	-	-	-
Phenol	0.02	0.0866	0.0765	0.394	1.08	0.306	0.797	0.273	0.263
Squalane (mg/L)	0.0001	-	-	-	-	7.7166	7.0464	-	-
Tributyl acetyl citrate (mg/L)	0.0001	-	-	0.0753	0.7021	-	-	0.0567	0.0717
Tributyl phosphate (mg/L)	0.0001	-	-	0.0199	-	-	-	-	-
Tris-(1,3-dichloroisopropyl) phosphate (mg/L)	0.0001	-	-	0.0618	-	-	-	-	-

Units are in µg/l unless otherwise indicated. Only compounds detected above LOD are shown. T = Transitional, C= Coastal

Consistent with the 2022-2024 sampling campaign, no parameters above EQS were detected in coastal or transitional waters.

Neodecanoic acid-ethenyl ester, which was detected with the highest concentrations for these water categories, is on the OSPAR list of priority substances¹⁸ - a convention which aims to protect the marine environment from pollution – because of its acute toxicity to fish, zooplankton and algae. However, it is very poorly water soluble and is not considered to be a substance of concern under the current EU regulations.

Squalene occurs naturally in seawater, but at levels several orders of magnitude lower than those recorded at Xghajra¹⁹ thus, the levels found here are likely from anthropogenic sources such as cosmetics and personal care products, pharmaceuticals, industry and petroleum products. Concentration of only 1 µg/l have been recorded at severely impacted sites²⁰, therefore the levels recorded in the summer are exceptionally high and might be from an acute event large spilling or discharge event from a land-based source. Nevertheless, as a natural hydrocarbon it does not represent a threat to the marine ecosystem.

Of the 14 contaminants found in coastal waters, 10 (71%) were found in transitional waters; while not in itself direct evidence of the movement of compounds, this does demonstrate similar pressures. Similarly, 25%, 50% and 87.5% of contaminants found in seawater were also detected in groundwater, stormwater, and inland surface waters respectively.

¹⁸ https://www.coastalwiki.org/wiki/OSPAR_List_of_priority_substances

¹⁹ Role of sea surface microlayer processes in the biogeochemistry of the Mediterranean Sea. *Paris (France), December 1999, 76 p., 216. CIESM Workshop Series, n°9:*

²⁰ Al-Akhaly, I. A., Al-Matari, B. Y., Al-Shwafi, N. A., & Siam, E. I. (2018). Concentrations of petroleum hydrocarbons residual in seawater of Aden coasts, Yemen. *J Mar Sci: Res Dev, 8*.

5.0 Summary

Where appropriate, this study has identified instances where specific compounds were detected historically (ERA12) and compared these with results from the current campaign. However, caution is required when drawing broader comparisons, as the analytes assessed and the sampling locations are not directly comparable between the two studies (ERA12 analysed 144 compounds, whereas the current study analysed 87 compounds in groundwater and 60 in other waters; see Annex 5). Accordingly, the findings of this study should be interpreted within their own context.

Due to the different number of compounds tested in ground and surface waters it is unproductive to compare the level of contamination between these water categories. Nevertheless, some compounds were tested across all water types and, of these, the most frequently detected compounds were the solvent 1-ethyl-2-pyrrolidone and the plasticiser bis(2-ethylhexyl) adipate, detected in all categories, and the manufacturing chemical phenol, found in all categories except groundwater. Indeed, manufacturing and solvents were the dominant source of contaminants, together contributing 49% of all contaminants detected (Table 15). The third highest class of contaminating compounds was plant protection products (13.6%). This corroborates with other studies that have identified industry and agriculture as the primary source of contaminants within Europe²¹. EDTA was sporadically found in groundwater and inland surface waters, sometimes at elevated concentrations, but it was not detected in other water types. EDTA is recalcitrant and can persist in waters for months, so it is a good indicator of cross contamination between water types²², but no evidence of this was shown in the data. There were no major outliers in water quality samples that could indicate a large point source of pollutants. A more regular testing regime would give greater resolution of the actual picture, particularly given the sporadic occurrence of many compounds.

Table 15 Source of contaminants detected across all water types

Source/use of contaminant	Frequency of detection	% frequency of detection
Manufacturing	26	32.1
Solvent	14	17.3
Pharmaceuticals	8	9.9
Plant protection products	11	13.6
Dyes and Pigments	5	6.2

²¹ Houtman, C. J. (2010). Emerging contaminants in surface waters and their relevance for the production of drinking water in Europe. *Journal of Integrative Environmental Sciences*, 7(4), 271-295.

²² Ducci, L., Rizzo, P., Pinardi, R., & Celico, F. (2024). An interdisciplinary assessment of the impact of emerging contaminants on groundwater from wastewater containing disodium EDTA. *Sustainability*, 16(19), 8624.

Plastics	8	9.9
Chelating Agent	2	2.5
Cosmetic	3	3.7
Detergent	2	2.5
Food	2	2.5
Fuels	2	2.5

A total of 421 TIC were detected in the summer samples. The most frequently detected were the industrial chemicals ethyl-2-pyrrolidone and d-limonene, and the pharmaceutical dimethyl phthalate - all found at 13, or 100% of sites sampled, the solvent 1,2,4-trimethylbenzene was found at 12 sites (92%), and the selective herbicide synergist tridiphane at 11 (85%) sites), (n=13). There was an increase in the total number of TIC detected in the winter – 521 across all samples – which may be attributed to an increase in precipitation and runoff²³, or an increase in use. Several compounds were ubiquitous across all sample sites: dimethyl phthalate (again), the solvent ethylbenzene, and tridiphane. No TIC were recorded at concentrations greater than their EQS. The different categories of TIC detected are given in table 16.

Table 16 Categories of TIC detected across all water types

CATEGORY	SUMMER		WINTER		INCLUDED WITHIN THE SCREENING PROTOCOL
	N	%	N	%	%
PHARMACEUTICAL	11	7.3	15.0	9.9	8.2
MANUFACTURING CHEMICAL	44	29.1	49.0	32.2	17.7
SOLVENT	27	17.9	29.0	19.1	7.2
PIGMENT AND DYES	0	0.0	0.0	0.0	1.3
AGRICULTURAL	22	14.6	27.0	17.8	49.6
PLASTICIZER	15	9.9	7.0	4.6	3.8
COSMETIC	18	11.9	18.0	11.8	6.5
DETERGENT	4	2.6	1.0	0.7	1.4
FOOD	2	1.3	1.0	0.7	0.7
FUEL	8	5.3	5.0	3.3	3.5

²³ Valtanen, M., Sillanpää, N., & Setälä, H. (2014). The effects of urbanization on runoff pollutant concentrations, loadings and their seasonal patterns under cold climate. *Water, Air, & Soil Pollution*, 225(6)

Included in table 16 is the categorisation of all compounds included in the screening assay (Annex 4), this removes some of the testing bias: for instance, manufacturing chemicals were the most detected categories even though they were not the most tested category. Thus, the high frequency of manufacturing compounds could legitimately reflect their abundance in Malta's water resources. Agricultural contaminants (herbicides, fungicides etc) are another major source of contaminants. Specifically, imidacloprid (an insecticide) was found at levels ten times the suggested quality standard in winter samples at Għasel. Glyphosate was also consistently detected in stormwater and previous campaigns, further reflecting agricultural inputs. In conclusion, while agricultural pollution causes severe seasonal spikes in surface water bodies, urban/industrial sources present a more persistent and geographically widespread risk to the groundwater resources.

Overall, the TIC detection followed very similar patterns to the specific analysis results, with manufacturing chemicals and solvents dominating, followed by agricultural products - confirming a pattern seen in other European studies. The most contaminated water bodies, based on number of contaminants (rather than concentration or contaminants exceeding guidelines) was inland surface water which overall contained 29 detected compounds (tables 10 and 11). However, this should be weighted against the number of sites in this category – 5 – compared to new water and storm water, for example, which only contained one site in their category and contained the fewest number of detected compounds (both 15). New water (highly treated wastewater) showed the lowest overall contamination levels. However, its overlap with contaminants found in inland and storm waters (approx. 60-67%) highlights a common base of urban/industrial pollution. In conclusion, the data may support several potential theories:

Diffuse Pollution Sources: The frequent detection of manufacturing-related compounds (such as solvents and plasticizers) across multiple water types suggests they are diffuse sources of pollution located throughout the islands originating from both domestic and commercial use.

Connectivity and Movement: Groundwater and Inland Surface Water: High levels of EDTA were found in both groundwater (notably at Dingli) and inland surface waters (such as Wied il-Luq), often exceeding the Maximum Permissible Concentration (MPC). While similar levels at certain sites suggest potential connectivity, other locations (like il-Lunzjata) showed elevated levels in surface water that were not reflected in the corresponding aquifer, indicating localized or sporadic contamination (point source pollution). As EDTA is stable and persistent in the environment, it would be expected to be detected more widely if connectivity between water types was extensive. More sample points, and a higher frequency of testing may help in gaining a better understanding of the connectivity of the water sources and the pollution sources they derive from. However, specific tools such as hydrogeochemistry and stable and radiogenic isotope hydrology would need to be used to conclusively prove connectivity.

Coastal Waters: Land-based vs. Sea-based Influence: Many contaminants found in coastal waters, such as phenol and 1-Ethyl-2-pyrrolidone, were also detected in transitional and inland waters, suggesting they originate from land-based activities and reach the coast via run-off or discharge. In contrast, only one compound - oxacyclohexadecan-2-one (commonly used as an intermediate in organic synthesis) – was found uniquely in coastal waters. Thus, the data does not suggest a source of pollution exclusive to this environment.

Urban Run-off: Stormwater analysis showed consistent levels of glyphosate, which aligns with its widespread use. The presence of various compounds in both stormwater and inland surface waters suggests surface run-off from urban areas is a significant transport mechanism for these contaminants.

Contamination sources linked with land use: Malta is a mosaic of land uses with agriculture often occurring within urban areas. Likewise, the data does not support a clear demarcation of contamination sources. In the case of inland surface water, for example, a site associated predominantly²⁴ with agriculture – Għasel – contained three agricultural compounds, only one more than an industry associated site – Marsa.

Overall, the study did not detect any contaminants, or potential sources of pollution, that consistently represent a point of concern or warrant specific ongoing monitoring. On the contrary, the study underscores the need for sustained and more frequent monitoring of a broad range of compounds to better capture temporal variability and improve source attribution. Integrating advanced investigative tools, such as isotopic and hydrogeochemical analyses, would further enhance understanding of pollutant pathways and connectivity between water bodies. Continued refinement of monitoring strategies, alongside targeted policy measures addressing both agricultural and urban sources, will be essential to safeguard Malta's water resources in the long term.

²⁴ Jorgen Balzan -September 10, 2024. Farmers and architects unite to sound alarm on Malta's vanishing farmland. <https://newsbook.com.mt/en/farmers-and-architects-unite-to-sound-alarm-on-maltas-vanishing-farmland/>

Annex 1 Selection of analytes

Evaluation of candidate compounds for focused monitoring of surface waters

<i>Compound</i>	<i>1. Regular monitoring process¹</i>	<i>2. Screening process²</i>	<i>3. Use in Malta³</i>	<i>4. Watch list⁴</i>	<i>Score</i>
<i>1,2,4-trimethyl benzene</i>	3	2	1	0	6
<i>1,2-dichloroethane</i>	0	0	0	0	0
<i>1,3,5-Trimethylbenzene</i>	3	2	0	0	5
<i>1,6-Hexanediol diacrylate</i>	3	2	0	0	5
<i>1-Ethyl-2-pyrrolidone</i>	3	2	0	0	5
<i>2(3H)-Benzothiazolone</i>	3	1	0	0	4
<i>2,4,6-Triallyloxy-1,3,5-triazine</i>	3	1	0	0	4
<i>2,4,7,9-Tetramethyl-5-decyne-4,7-diol</i>	3	2	0	0	5
<i>2,4-Di-tert-butylphenol</i>	3	1	0	0	4
<i>2,6-Difluorobenzamide</i>	3	1	0	0	4
<i>2-Ethyl-1,3-hexanediol</i>	3	2	0	0	5
<i>2-Ethyl-4-methyl-1,3-dioxolane</i>	3	1	0	0	4
<i>2-Ethylhexanoic acid</i>	3	2	0	0	5
<i>2-Ethylhexyl salicylate</i>	3	1	0	0	4
<i>2-Methoxynaphthalene</i>	3	1	0	0	4
<i>2-Methylnaphthalene</i>	3	2	0	0	5
<i>2-tert-Butylcyclohexanone</i>	3	1	0	0	4
<i>4-chloro-3-methylphenol</i>	3	0	1	0	4
<i>6PPD (quinone)</i>	3	0	0	2	5
<i>Acesulfame K</i>	3	3	1	0	7
<i>Acetone*</i>	0	0	1	2	3
<i>Acetophenone</i>	3	2	0	0	5
<i>Aclonifen</i>	0	0	0	0	0
<i>Alachlor</i>	0	0	0	0	0
<i>Ammonium nitrogen*</i>	0	3	1	0	4
<i>Amoxicillin</i>	3	0	1	2	6
<i>Aniline</i>	3	2	1	0	6
<i>Anthracene</i>	0	2	0	0	2
<i>Arsenic</i>	3	3	1	0	7
<i>Atenolol</i>	3	2	1	0	6
<i>Atrazine</i>	0	0	0	0	0
<i>Avermectin B1a</i>	3	0	0	2	5
<i>Avermectin B1b</i>	3	0	0	2	5
<i>Azobenzene</i>	3	2	0	0	5
<i>Benzene</i>	0	0	1	0	1
<i>Benzenesulfonamide, N-butyl</i>	3	2	0	0	5
<i>Benzenesulfonanilide</i>	3	2	0	0	5
<i>Benzo(a)pyrene</i>	0	1	0	0	1
<i>Benzo(b)fluoranthene</i>	0	1	0	0	1
<i>Benzo(ghi)perylene</i>	0	1	0	0	1
<i>Benzo(ghi)perylene</i>	0	1	0	0	1
<i>Benzo(k)fluoranthene</i>	0	1	0	0	1
<i>Benzophenone</i>	3	3	0	2	8
<i>Benzotriazole</i>	3	3	1	0	7

<i>Benzyl alcohol</i>	3	1	0	0	4
<i>Beta-estradiol</i>	3	0	0	2	5
<i>Bifenox</i>	0	0	0	0	0
<i>Biphenyl</i>	3	1	0	0	4
<i>Bis(2-ethylhexyl) adipate</i>	3	3	0	0	6
<i>bis(2-ethylhexyl) phthalate (DEHP)</i>	0	1	0	0	1
<i>Bisphenol A</i>	3	2	1	0	6
<i>Brominated diphenylethers</i>	0	0	0	0	0
<i>Bromuconazole</i>	3	0	0	2	5
<i>Butyl methoxydibenzoyl-methane</i>	3	0	0	2	5
<i>Butylated hydroxyanisole</i>	3	1	0	0	4
<i>Butylated hydroxytoluene</i>	3	1	0	0	4
<i>Cadmium*</i>	0	1	0	0	1
<i>Caffeine*</i>	0	2	0	0	2
<i>Caprolactam</i>	3	1	0	0	4
<i>Carbamazepine</i>	3	2	1	0	6
<i>Carbofuran-3-keto</i>	3	1	0	0	4
<i>Chlorfenvinphos</i>	0	0	0	0	0
<i>Chloroalkanes, C₁₀₋₁₃</i>	0	0	0	0	0
<i>Chloroneb</i>	3	1	0	0	4
<i>Chlorophene (2-Benzyl-4-chlorophenol)</i>	3	1	0	0	4
<i>Chloroxilenol</i>	3	2	0	0	5
<i>Chlorpyrifos (Chlorpyrifos-ethyl)</i>	0	0	0	0	0
<i>Cholesterol*</i>	0	1	0	0	1
<i>Cinnamal</i>	3	1	0	0	4
<i>Citronellol</i>	3	1	0	0	4
<i>Climbazole</i>	3	0	0	2	5
<i>Clindamycin</i>	3	0	0	2	5
<i>Cyazofamid</i>	3	0	0	2	5
<i>Cybutryne</i>	0	0	0	0	0
<i>cyclohexanone</i>	3	0	0	0	3
<i>Cypermethrin</i>	0	0	0	0	0
<i>Deltamethrin</i>	3	0	0	0	3
<i>Decahydronaphthalene (trans)</i>	3	1	0	0	4
<i>Dichloromethane</i>	0	3	0	0	3
<i>Dichlorvos</i>	0	0	0	0	0
<i>Diclofenac</i>	3	0	1	2	6
<i>Dicofol</i>	0	0	0	0	0
<i>Dicyclohexyl phthalate</i>	3	2	0	0	5
<i>Diethyl phthalate</i>	3	2	1	0	6
<i>Difenoconazole</i>	3	0	0	2	5
<i>Diisobutyl phthalate</i>	3	1	0	0	4
<i>Dimethomorph</i>	3	1	0	0	4
<i>Dimethyl phthalate</i>	3	2	0	0	5
<i>di-n-butyl phthalate</i>	3	2	0	0	5
<i>Dioxins and dioxin-like compounds</i>	0	0	0	0	0
<i>Diphenyl ether</i>	3	1	0	0	4
<i>Diphenyl sulfone</i>	3	2	0	0	5
<i>Diuron</i>	0	2	0	0	2
<i>d-Limonene</i>	3	2	0	0	5
<i>EDTA (EthylenDiaminoTetracetyc Acid)</i>	3	2	0	0	5
<i>Endosulfan</i>	0	0	0	0	0
<i>Epoxiconazole</i>	3	0	0	2	5
<i>Ethylbenzene</i>	3	2	1	0	6

<i>Etoxazole</i>	3	0	0	2	5
<i>Fenpiclonil</i>	3	2	0	0	5
<i>Fipronil</i>	3	0	0	2	5
<i>Fluoranthene</i>	0	2	0	0	2
<i>Fluoxetine</i>	3	0	0	2	5
<i>Flurenol-methylester</i>	3	2	0	0	5
<i>Formaldehyde</i>	3	0	1	0	4
<i>Furfuryl alcohol</i>	3	1	0	0	4
<i>Glutaraldehyde</i>	3	1	0	0	4
<i>Glyphosate</i>	3	3	1	0	7
<i>Guanylurea</i>	3	0	0	2	5
<i>Heptachlor</i>	0	0	0	0	0
<i>heptachlor epoxide</i>	0	0	0	0	0
<i>Hexabromocyclododecanes (HBCDD)</i>	0	0	0	0	0
<i>Hexachlorobenzene</i>	0	0	0	0	0
<i>Hexachlorobutadiene</i>	0	1	0	0	1
<i>Hexachlorobutadiene</i>	0	0	0	0	0
<i>Hexachlorocyclohexane</i>	0	0	0	0	0
<i>Hexadecane</i>	3	1	0	0	4
<i>Homosalate</i>	3	1	0	0	4
<i>Imidacloprid</i>	3	0	0	2	5
<i>Indane</i>	3	2	0	0	5
<i>Indeno(1,2,3-c,d)pyrene</i>	0	0	0	0	0
<i>Isobornyl thiocynoacetate</i>	3	1	0	0	4
<i>Isopropylbenzene</i>	3	1	0	0	4
<i>Isoproturon</i>	0	0	0	0	0
<i>Isopropyl palmitate</i>	3	1	0	0	4
<i>Itraconazole</i>	3	0	0	2	5
<i>Ketoconazole</i>	3	0	0	2	5
<i>Lead*</i>	0	3	1	0	4
<i>Mefentrifluconazole</i>	3	0	0	2	5
<i>Mercury and its compounds*</i>	0	0	0	0	0
<i>Metformin</i>	3	0	0	2	5
<i>Methomyl</i>	3	1	0	0	4
<i>Methyl tert-butyl ether (MTBE)</i>	3	1	0	0	4
<i>Methylbenzotriazole</i>	3	3	1	0	7
<i>Methylparaben</i>	3	1	0	0	4
<i>n-Butylbenzene</i>	3	1	0	0	4
<i>N,N-Diethyl-m-toluamide</i>	3	2	0	0	5
<i>N-1,3-Dimethylbutyl-N'-phenyl-p-phenylenediamine (6PPD)</i>	3	0	0	2	5
<i>Naphthalene</i>	0	1	0	0	1
<i>Naproxen</i>	3	1	0	0	4
<i>Neodecanoic acid-ethenyl ester</i>	3	2	0	0	5
<i>Nickel*</i>	0	3	1	0	4
<i>N-methyl-2-pyrrolidone</i>	3	0	1	0	4
<i>Nonylphenols</i>	0	0	0	0	0
<i>n-Propylbenzene</i>	3	2	0	0	5
<i>Octisalate (2-ethylhexyl salicylate)</i>	3	0	0	2	5
<i>Octocrylene</i>	3	2	0	2	7
<i>Octyl-methoxycinnamate</i>	3	1	0	0	4
<i>Octylphenols</i>	0	0	0	0	0

<i>Ofloxacin</i>	3	0	0	2	5
<i>o</i> -Phenylphenol	3	1	0	0	4
<i>o</i> -Toluidine	3	1	0	0	4
<i>Oxacyclohexadecan-2-one</i>	3	2	0	0	5
<i>o</i> -Xylene	3	1	0	0	4
<i>Oxytetracycline</i>	3	0	0	2	5
<i>P</i> - Chloro- <i>M</i> -Cresol	3	0	0	0	3
<i>Paracetamol</i>	3	0	1	0	4
<i>Pentachlorobenzene</i>	0	0	0	0	0
<i>Pentachlorophenol</i>	0	0	0	0	0
<i>Perfluorooctanesulfonic acid</i> (PFOS)	0	2	1	0	3
<i>Perfluorooctanoic acid</i> (PFOA)	0	3	1	0	4
<i>Phenanthrene</i>	3	2	0	0	5
<i>Phenol</i>	3	2	0	0	5
<i>Polyaromatic hydrocarbons</i> (PAH)	0	0	0	0	0
<i>Promecarb</i>	3	1	0	0	4
<i>Propamocarb</i>	3	0	0	0	3
<i>propan-1,2-diol</i>	3	0	0	0	3
<i>Propiconazole</i>	3	0	0	2	5
<i>Propranolol</i>	3	0	0	2	5
<i>Propylparaben</i>	3	1	0	0	4
<i>Pyrene</i>	3	1	0	0	4
<i>Quinoxifen</i>	0	0	0	0	0
<i>Simazine</i>	0	0	0	0	0
<i>Squalane</i>	3	2	0	0	5
<i>Styrene</i>	3	2	0	0	5
<i>Sulfamethoxazole</i>	3	3	1	0	7
<i>Sulfolane</i>	3	2	0	0	5
<i>Sulphate*</i>	3	3	0	0	6
<i>Terbucarb</i>	3	1	0	0	4
<i>Terbutryn</i>	0	0	0	0	0
<i>Terpineol</i>	3	1	0	0	4
<i>tert-butyl methyl ether; methoxy-2-methylpropane</i>	3	0	0	0	3
<i>Tetrachloroethylene</i>	0	1	0	0	1
<i>Tetracycline</i>	3	0	0	2	5
<i>Toluene</i>	3	0	1	0	4
<i>Tri-(2-chloroethyl) phosphate</i>	3	1	0	0	4
<i>Tributyl acetylcitrate</i>	3	2	0	0	5
<i>Tributyl phosphate</i>	3	2	0	0	5
<i>Tributyltin compounds</i>	0	0	0	0	0
<i>Trichlorobenzenes</i>	0	0	0	0	0
<i>Trichloromethane*</i>	0	3	1	0	4
<i>Tridiphane</i>	3	1	0	0	4
<i>Trifluralin</i>	0	0	0	0	0
<i>Triisobutylphosphate</i>	3	3	0	0	6
<i>Trimethoprim</i>	3	0	1	0	4
<i>Triphenyl phosphate</i>	3	0	0	0	3

<i>Tris-(1,3-dichloroisopropyl) phosphate</i>	3	2	0	0	5
<i>Triticonazole</i>	3	0	0	2	5
<i>Vanillin*</i>	3	1	0	0	4
<i>Xylenes</i>	3	0	1	0	4

Key:

1 Pollutant constitutes a priority substance for surface water or is listed in the Groundwater Directive and thus already subject to regular monitoring in WFD water bodies:

0 OR Pollutant is a Chemical of Emerging Concern that is not subject to regular monitoring in WFD water bodies: 3

2 Pollutant not detected in screening exercise: 0 OR Pollutant detected through screening exercise once across water types: 1 OR Pollutant detected through screening exercise at a frequency of 1-5: 2 OR Pollutant detected through screening exercise at a frequency of >5: 3

3 Use of pollutant in Malta not verified through presence in sewerage network (Action C.10): 0 OR Use of pollutant in Malta verified through presence in sewerage network (Action C.10): 2

4 Pollutant not listed in surface and/or groundwater watchlist: 0 OR Pollutant listed in surface and/or groundwater watchlist: 1

* Compound already monitored through other ERA/EWA projects

Evaluation of candidate compounds for focused monitoring of groundwater

<i>Compound</i>	<i>1. Regular monitoring process¹</i>	<i>2. Screening process²</i>	<i>3. Use in Malta³</i>	<i>4. Watch list⁴</i>	<i>Score</i>
<i>1,1,1-Trichloroethane</i>	3	0	0	2	5
<i>1,1,2-Trichloroethane</i>	3	0	0	2	5
<i>1,1-Dichloroethane</i>	3	0	0	2	5
<i>1,1-Dichloroethene</i>	3	0	0	2	5
<i>1,2,3-Trichlorobenzene</i>	3	0	0	2	5
<i>1,2,4-Trichlorobenzene</i>	3	0	0	2	5
<i>1,2,4-trimethyl benzene</i>	3	0	0	0	3
<i>1,2-Dichlorobenzene</i>	3	0	0	2	5
<i>1,2-Dichloroethane*</i>	0	0	0	2	2
<i>1,2-dichloropropane</i>	3	0	0	2	5
<i>1,4-Dioxane</i>	3	0	0	2	5
<i>1-Decanol</i>	3	1	0	0	4
<i>1-Ethyl-2-pyrrolidone</i>	3	1	0	0	4
<i>2,4-Di-tert-butylphenol</i>	3	1	0	0	4
<i>2-Ethoxy-2-methylpropane</i>	3	0	0	2	5
<i>2-Ethyl-1,3-hexanediol</i>	3	1	0	0	4
<i>2-Ethylhexanoic acid</i>	3	2	0	0	5
<i>2-Ethylhexyl diphenyl phosphate</i>	3	1	0	0	4
<i>2-Ethylhexyl salicylate</i>	3	1	0	0	4
<i>3-Chlorophenol</i>	3	1	0	0	4
<i>4,4'-Methylenebis (phenyl isocyanate)</i>	3	1	0	0	4
<i>4-chloro-3-methylphenol</i>	3	0	1	0	4
<i>4-Chlorophenol</i>	3	1	0	0	4
<i>4-Methylanisole</i>	3	1	0	0	4
<i>Acesulfame K</i>	3	2	1	0	6
<i>Acetone</i>	3	0	1	0	4
<i>Amidotrizoic Acid</i>	3	0	0	2	5
<i>Ammonium *</i>	0	0	0	0	0
<i>Amoxicillin</i>	3	0	1	0	4
<i>Aniline</i>	3	0	1	0	4
<i>Arsenic *</i>	0	0	0	0	0
<i>Atenolol</i>	3	0	1	0	4
<i>Azoxystrobin</i>	3	0	0	0	3
<i>Benzene</i>	0	0	0	2	2
<i>Benzenesulfonanilide</i>	3	2	0	0	5
<i>Benzophenone</i>	3	3	0	0	6
<i>Benzotriazole</i>	3	2	1	0	6

<i>Benzyl alcohol</i>	3	1	0	0	4
<i>Beta-estradiol</i>	3	0	0	0	3
<i>Bis(2-ethylhexyl) adipate</i>	3	1	0	0	4
<i>Bisphenol A *</i>	0	0	1	0	1
<i>Bromdichloromethane</i>	0	0	0	2	2
<i>Bromoform</i>	3	1	0	0	4
<i>Butylated hydroxytoluene</i>	3	3	0	0	6
<i>Cadmium *</i>	0	0	0	0	0
<i>Caffeine</i>	3	3	0	0	6
<i>Carbamazepine*</i>	0	2	0	2	4
<i>Cedrol</i>	3	1	0	0	4
<i>Chloride *</i>	0	0	0	0	0
<i>Chlorobenzene</i>	3	0	0	2	5
<i>Chloroethane</i>	3	0	0	2	5
<i>Chloromethane/chloroform</i>	0	0	0	2	2
<i>Chloroneb</i>	3	1	0	0	4
<i>Chlorpyrifos-methyl *</i>	0	0	0	0	0
<i>Cholesterol</i>	3	1	0	0	4
<i>cis-1,2-Dichloroethene</i>	3	0	0	2	5
<i>Clarithromycin</i>	3	0	0	2	5
<i>Clopidol</i>	3	0	0	2	5
<i>Coumarin</i>	3	1	0	0	4
<i>Crotamiton</i>	3	0	0	2	5
<i>cyclohexanone</i>	3	0	0	0	3
<i>Bis(2-ethylhexyl) phthalate (DEHP)</i>	3	0	1	0	4
<i>Deltamethrin</i>	3	0	0	0	3
<i>Dibromochloromethane *</i>	0	0	0	2	2
<i>Dichloromethane *</i>	0	0	0	2	2
<i>Diclofenac</i>	3	0	1	0	4
<i>Diethyl phthalate</i>	3	0	1	0	4
<i>Diethylene glycol dimethyl ether</i>	3	0	0	2	5
<i>Diisobutyl phthalate</i>	3	1	0	0	4
<i>Diisopropylether</i>	3	0	0	2	5
<i>Dimethomorph</i>	3	0	0	0	3
<i>Dimethyl phthalate</i>	3	2	0	0	5
<i>Diphenyl ether</i>	3	1	0	0	4
<i>Diphenyl sulfone</i>	3	2	0	0	5
<i>d-Limonene</i>	3	2	0	0	5
<i>EDTA</i>	3	0	0	2	5
<i>Erythromycin</i>	3	0	0	2	5
<i>Ethylbenzene</i>	3	1	0	2	6
<i>Ethylparaben</i>	3	1	0	0	4
<i>Fipronil</i>	3	0	0	0	3
<i>Flurenol-methylester</i>	3	1	0	0	4
<i>Formaldehyde</i>	3	0	1	0	4
<i>Glyphosate *</i>	0	0	1	0	1
<i>Hexadecane</i>	3	1	0	0	4
<i>Ibuprofen *</i>	0	0	0	2	2
<i>Imidacloprid</i>	3	0	0	0	3
<i>Isopropyl myristate</i>	3	1	0	0	4
<i>Isopropylbenzene</i>	3	2	0	2	7
<i>Lead *</i>	0	3	0	0	3
<i>Linalool</i>	3	1	0	0	4
<i>m-Cresol (3-methylphenol)</i>	3	1	0	0	4
<i>Mercury *</i>	0	0	0	0	0
<i>Methylbenzotriazole</i>	3	2	1	0	6

Methylparaben	3	2	0	0	5
Methyltertbutylether (MTBE) *	0	0	1	0	1
m-Xylene	3	1	0	0	4
N,N-Diethyl-m-toluamide	3	2	0	0	5
Naphthalene	0	2	0	0	2
Nitrilotriacetic Acid (NTA)	3	0	0	2	5
N-methyl-2-pyrrolidone	3	0	0	0	3
N-nitrosopiperidine (1-nitrosopiperidin)	3	1	0	0	4
n-Propylbenzene	3	2	0	0	5
o-Cresol (2-methylphenol)	3	1	0	0	4
Octocrylene	3	2	0	0	5
o-Toluidine	3	2	0	0	5
Oxacyclohexadecan-2-one	3	1	0	0	4
o-Xylene	3	1	0	0	4
P- Chloro-M-Cresol	3	0	0	0	3
Paracetamol	3	0	1	0	4
p-Cresol (4-methylphenol)	3	1	0	0	4
Perfluorobutane Sulfonate PFBS *	0	0	0	2	2
Perfluorobutanoic Acid PFBA *	0	0	0	2	2
Perfluorodecanoic Acid PFDA *	0	0	0	2	2
Perfluorododecanoic Acid *	0	0	0	2	2
Perfluoroheptanoic Acid PFHpA *	0	0	0	2	2
Perfluorohexane Sulfonate PFHxS *	0	0	0	2	2
Perfluorohexanoic Acid PFHxA	0	0	0	2	2
Perfluorononanoic Acid PFNA *	0	0	0	2	2
Perfluorooctane Sulfonate PFOS *	0	0	0	2	2
Perfluorooctanoic Acid PFOA *	0	0	0	2	2
Perfluoropentanoic Acid PFPeA *	0	0	0	2	2
Perfluoroundecanoic Acid *	0	0	0	2	2
Phenol	3	2	0	0	5
Primidone	3	0	0	2	5
Promecarb	3	1	0	0	4
Propamocarb	3	0	0	0	3
propan-1,2-diol	3	0	0	0	3
Propylparaben	3	1	0	0	4
p-Xylene	3	1	0	0	4
Sotalol *	0	0	0	2	2
Styrene	3	2	0	0	5
Sulfadiazine	0	0	0	2	2
Sulfamethoxazole *	0	1	1	2	4
Sulfolane	3	2	0	0	5
Sulphate *	0	3	1	0	4
Tert-butanol	3	0	0	2	5
tert-butyl methyl ether; methoxy-2-methylpropane	3	0	0	2	5
Tetrachloroethene	0	0	0	0	0
Tetrachloroethylene	3	1	0	0	4
Tetrachloromethane / Carbon tetrachloride	3	0	0	2	5
Tetraglyme	3	0	0	2	5
Tetrahydrofuran *	0	0	0	2	2
Toluene	3	0	1	2	6
trans-1,2-Dichloroethene	3	0	0	2	5
Tribromomethane	3	0	0	2	5

<i>Tributyl acetylcitrate</i>	3	2	0	0	5
<i>Tributyl phosphate</i>	3	2	0	0	5
<i>Trichloroethylene</i>	0	0	0	2	2
<i>Trichloromethane</i>	3	0	1	0	4
<i>Tridiphane</i>	3	1	0	0	4
<i>Trifluoroacetic Acid</i>	3	0	0	2	5
<i>Triisobutylphosphate</i>	3	0	0	0	3
<i>Trimethoprim</i>	3	0	1	0	4
<i>Triphenyl phosphate</i>	3	0	0	0	3
<i>Tris (2,3-epoxypropyl) isocyanate</i>	3	1	0	0	4

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* Compound already monitored through other ERA/EWA projects

Annex 2 Accreditation certificate



DLD195L/006

CERTIFICATO DI ACCREDITAMENTO Accreditation Certificate

ACCREDITAMENTO N.
ACCREDITATION N. **0195L REV. 06**

EMISSO DA
ISSUED BY **DIPARTIMENTO LABORATORI DI PROVA**

SI DICHIARA CHE
WE DECLARE THAT **BIOCHEMIE LAB S.r.l.**
Sede/Headquarters:
- Via di Limite 27/G - 50013 Campi Bisenzio FI

MD-CA-01 rev. 06

È CONFORME AI REQUISITI
DELLA NORMA **UNI CEI EN ISO/IEC 17025:2018**

MEETS THE REQUIREMENTS
OF THE STANDARD **ISO/IEC 17025:2017**

QUALE **Laboratorio di Prova**
AS **Testing Laboratory**

Data di 1^a emissione
1st issue date
29-10-1998

Data di revisione
Review date
15-11-2022

Data di scadenza
Expiring date
10-12-2026

L'accertamento attesta la competenza tecnica, l'imparzialità e il costante e coerente funzionamento del Laboratorio relativamente al campo di accreditamento riportato nell'elenco Prove allegato al presente certificato di accreditamento.
Il presente certificato non è da ritenersi valido se non accompagnato dagli Elenchi Prove, che possono variare nel tempo e può essere sospeso o revocato o ridotto in qualsiasi momento nel caso di inadempienza accertata da parte di ACCREDIA.

La validità dell'accertamento può essere verificata sul sito web (www.accredia.it) o richiesta al Dipartimento di competenza.
I requisiti di sistema della ISO/IEC 17025 sono scritti in un linguaggio attinente alle attività di laboratorio e sono generalmente in accordo con i principi della norma ISO 9001 (si veda comunicato congiunto ISO-ILAC-IAF dell'Aprile 2017).
The accreditation attests competence, impartiality and consistent operation in performing laboratory activities, limited to the scope detailed in the attached Enclosure.

The present certificate is valid only if associated to the annexed Lists and can be suspended, withdrawn or reduced at any time in the event of non fulfilment as ascertained by ACCREDIA.

Confirmation of the validity of accreditation can be verified on the website (www.accredia.it) or by contacting the relevant Department.
The management system requirements in ISO/IEC 17025 are written in language relevant to laboratories operations and generally operate in accordance with the principles of ISO 9001 (refer joint ISO-ILAC-IAF Communiqué dated April 2017).

Il QrCode consente di accedere direttamente al sito www.accredia.it per verificare la validità del certificato di accreditamento rilasciato al CAB.
La data di revisione riportata sul certificato corrisponde alla data di aggiornamento / di delibera del pertinente Comitato Settoriale di Accreditamento. L'atto di delibera, firmato dal Presidente di ACCREDIA, è scaricabile dal sito www.accredia.it, sezione "Documenti".

The QrCode links directly to the website www.accredia.it to check the validity of the accreditation certificate issued to the CAB.
The revision date shown on the certificate refers to the update / resolution date of the Sector Accreditation Committee. The Resolution, signed by the President of ACCREDIA, can be downloaded from the website www.accredia.it, "Documents" section.

ACCREDIA è l'Ente Unico nazionale di accreditamento designato dal governo italiano, in applicazione del Regolamento Europeo 765/2008.
ACCREDIA is the sole national Accreditation Body, appointed by the Italian government in compliance with the application of REGULATION (EC) No 765/2008.

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ACCREDIA - Dipartimento Laboratori di prova

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Tel. +39 06 8440991 | Fax +39 06 8841199
info@accredia.it | www.accredia.it | Partita IVA - Codice Fiscale 10566361001

Annex 3 Methods of analysis:

Some compounds were tested for directly and specifically using standard analytical techniques such as gas chromatography–mass spectrometry (GC–MS) and liquid chromatography–mass spectrometry (LC–MS). For other chemicals – named Tentatively Identified Compounds (TIC) – current technology is unable to detect many of them specifically; instead, they were screened using SCAN GC-MS; where their presence was assumed if it was a close (>50%) match to known/standard emittance outputs. The SCAN GC-MS method was used to screen for 1020 compounds (listed in Annex 4), but of specific interest were the compounds meeting criteria a-d of section 2.2.

Methods of analysis

COMPOUND	METHOD
1,1,1-Tricloroethanol	EPA 5030C 2003 + EPA 8260D 2018
1,1-Dicloroethanol	EPA 5030C 2003 + EPA 8260D 2018
1,1-Dicloroethylene	EPA 5030C 2003 + EPA 8260D 2018
1,2,3-Triclorobenzene	EPA 3510C 1996 + EPA 8270E 2018
1,2,4-Triclorobenzene	EPA 3510C 1996 + EPA 8270E 2018
1,2,4-Trimethylbenzene	EPA 5030C 2003 + EPA 8260D 2018
1,2-Diclorobenzene	EPA 3510C 1996 + EPA 8270E 2018
1,2-dicloroethanol	EPA 5030C 2003 + EPA 8260D 2018
1,2-Dicloropropanol	EPA 5030C 2003 + EPA 8260D 2018
1,3,5 Trimethylbenzene	EPA 5030C 2003 + EPA 8260D 2018
17-beta-estradiol (E2)	MP 436 rev 2 2023
4-Cloro-3-Metilfenolo	EPA 3510C 1996 + EPA 8270E 2018
5-Methyl-benzotriazole	MP 401 rev 3 2024
Acesulfame K	MP 401 rev 3 2024
Acetone	EPA 5030C 2003 + EPA 8260D 2018
Amoxicillin	MP 401 rev 3 2024
Aniline	EPA 3510C 1996 + EPA 8270E 2018
Arsenic	UNI EN ISO 17294-2:2023
Atenolol	MP 401 rev 3 2024
Benzotriazole	MP 401 rev 3 2024
Benzotriazolo	MP 401 rev 3 2024
bis-(2-etilesile)ftalato (DEHP)	EPA 3510C 1996 + EPA 8270E 2018
Bisphenol A	MP 402 rev 0 2022
Carbamazepine	MP 401 rev 3 2024
Clorobenzene	EPA 5030C 2003 + EPA 8260D 2018
Cloroethanol	EPA 5030C 2003 + EPA 8260D 2018
Dibutyl phthalate (DBP)	EPA 3510C 1996 + EPA 8270E 2018
Diclofenac	MP 401 rev 3 2024
Di-ethylphthalate (DEP)	EPA 3510C 1996 + EPA 8270E 2018
Dimethyl phthalate	EPA 3510C 1996 + EPA 8270E 2018
EDTA	UNI EN ISO 16588:2006
Ethylbenzene	EPA 5030C 2003 + EPA 8260D 2018
Fenantrene	EPA 3510C 1996 + EPA 8270E 2018
Fipronil	EPA 3510C 1996 + EPA 8270E 2018

Formaldehyde	EPA 8315 A 1996
Glyphosate	MP 298 rev 0 2019
Imidacloprid	MP 351 rev 1 2024
Isopropylbenzene	EPA 5030C 2003 + EPA 8260D 2018
Limonene (Dipentene)	EPA 5030C 2003 + EPA 8260D 2018
n-Propylbenzene	EPA 5030C 2003 + EPA 8015C 2007
o-cresole	EPA 3510C 1996 + EPA 8270E 2018
p,m-cresole	EPA 3510C 1996 + EPA 8270E 2018
Phenanthrene	EPA 3510C 1996 + EPA 8270E 2018
Phenol	EPA 3510C 1996 + EPA 8270E 2018
Phenol	EPA 3510C 1996 + EPA 8270E 2018
Styrene	EPA 5030C 2003 + EPA 8260D 2018
Sulfamethoxazole	MP 401 rev 3 2024
Tetrahydrofuran	EPA 5021A 2014 +EPA 8260D 2018
Toluene	EPA 5030C 2003 + EPA 8260D 2018
Tribromomethane (Bromoform)	EPA 5030C 2003 + EPA 8260D 2018
Tricloro methanol (Cloroform)	EPA 5030C 2003 + EPA 8260D 2018
Triisobutyl phosphate	EPA 3510C 1996 + EPA 8270E 2018
Xylene (m, p, o)	EPA 5030C 2003 + EPA 8260D 2018
Screening GCMS	EPA 3510C 1996 + EPA 8270E 2018

Annex 4 Chemicals tested for within ‘Tentatively Identified Compounds’ Screening Assay

UnTarget Compound List	
Name	CAS#
1(3H)-Isobenzofuranone	87-41-2
1,1,1,2-Tetrachloroethane	630-20-6
1,1,2,2-Tetrachloroethane	79-34-5
1,1,2-Trichloroethane	79-00-5
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4
1,2,3,4,6,7,8-Heptachlorodibenzo-p-diox	35822-46-9
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4
1,2,3-Trichlorobenzene	87-61-6

Name	CAS#
Epichlorhydrin	106-89-8
EPN	2104-64-5
Epoxiconazole	133855-98-8
Epsilon-HCH	6108-10-7
EPTC	759-94-4
Erbon	136-25-4
Esfenvalerate	66230-04-4
Esprocarb	85785-20-2
Estazolam	29975-16-4
Etaconazole	71245-23-3
Ethalfuralin	55283-68-6
Ethiofencarb	29973-13-5

1,2,3-Trichloropropane	96-18-4
1,2,4,5-Tetrachlorobenzene	95-94-3
1,2,4-Trichlorobenzene	120-82-1
1,2,4-Trimethylbenzene	95-63-6
1,2-Dibromoethane	106-93-4
1,2-Dichlorobenzene	95-50-1
1,2-Dichloropropane	78-87-5
1,3,5-Triallyl-1,3,5-triazine-2,4,6	1025-15-6
1,3,5-Trichlorobenzene	108-70-3
1,3,5-Trimethylbenzene	108-67-8
1,3,5-Trinitrobenzene	99-35-4
1,3-Dichlorobenzene	541-73-1
1,3-Dichloropropane	142-28-9
1,4-Dichlorobenzene	106-46-7
1,4-Dioxane	123-91-1
1,4-Naphthoquinone	130-15-4
1,6-Hexanediol diacrylate	13048-33-4
17a-Ethynylestradiol	57-63-6
1-Decanol	112-30-1
1-Ethyl-2-pyrrolidone	2687-91-4
1H-Benzotriazole	95-14-7
1H-Benzotriazole-5-methyl	136-85-6
1-Isocyanato-3-methyl-Benzene	621-29-4
1-Naphthylamine	134-32-7
2-(1-naphthyl)acetamide	86-86-2
2-(2-Butoxyethoxy)ethyl thiocyanate	112-56-1
2(3H)-Benzothiazolone	934-34-9
2-(Octylthio)ethanol	3547-33-9
2,2',3,3',4,4',5,5',6-nonachlorobiphenyl ^⑨	40186-72-9
2,2',3,3',4,4',5-Heptachlorobiphenyl	35065-30-6
2,2',3,4,4',5,5'-Heptachlorobiphenyl	35065-29-3

Ethiolate	2941-55-1
Ethion	563-12-2
Ethofumesate	26225-79-6
Ethoprophos	13194-48-4
Ethoxyquin	91-53-2
Ethyl methanesulfonate	62-50-0
Ethylbenzene	100-41-4
Ethylene thiourea	96-45-7
Ethylparaben	120-47-8
Etoxazole	153233-91-1
Etridiazole	2593-15-9
Etrimfos	38260-54-7
Eugenol	97-53-0
Famoxadone	131807-57-3
Famphur	52-85-7
Farnesol	4602-84-0
Fenarimol	60168-88-9
Fenazaflor	14255-88-0
Fenazaquin	120928-09-8
Fenbuconazole	11961-10-0
Fenchlorphos	299-84-3
Fenfuram	24691-80-3
Fenhexamide	126833-17-8
Fenitrothion	122-14-5
Fenobucarb	3766-81-2
Fenoprop	93-72-1
Fenoprop methyl ester	4841-20-7
Fenoxaprop-ethyl	82110-72-3
Fenoxycarb	79127-80-3
Fenpiclonil	74738-17-3
Fenpropathrin	64257-84-7

2,2',3,4,4',5',6-Heptachlorobiphenyl	52663-69-1	Fenpropidin	67306-00-7
2,2',3,4,4',5'-Hexachlorobiphenyl	35065-28-2	Fenpropimorph	67306-03-0
2,2',3,4',5,5',6-Heptachlorobiphenyl	52663-68-0	Fenson	80-38-6
2,2',3,4,5,5'-Hexachlorobiphenyl	52712-04-6	Fensulfothion	115-90-2
2,2',3,4,5'-Pentachlorobiphenyl	38380-02-8	Fenthion	55-38-9
2,2',3,5,5',6-Hexachlorobiphenyl	52663-63-5	Fenthion sulfoxide	000000-00-4
2,2',3,5'-Tetrachlorobiphenyl	41464-39-5	Fenuron	101-42-8
2,2',4,4',5,5'-Hexabromodiphenyl	68631-49-2	Fenvalerate I	51630-58-1
2,2',4,4',5,5'-Hexachlorobiphenyl	35065-27-1	Fenvalerate II	51630-58-1
2,2',4,4',5,6'-Hexabromodiphenyl ether	207122-15-4	Fipronil	120068-37-3
2,2',4,4',5-Pentabromodiphenyl ether	60348-60-9	Flamprop-isopropyl	52756-22-6
2,2',4,4',6-Pentabromodiphenyl ether	189084-64-8	Flamprop-methyl	52756-25-9
2,2',4,5,5'-Pentachlorobiphenyl	37680-73-2	Flonicamid	158062-67-0
2,2',5,5'-Tetrachlorobiphenyl	35693-99-3	Florfenicol	73231-34-2
2,2',5-Trichlorobiphenyl	37680-65-2	Fluazifop-P-butyl	79241-46-6
2,3,3',4',6-Pentachlorobiphenyl	38380-03-9	Fluazinam	79622-59-6
2,3',4,4'-Tetrachlorobiphenyl	32598-10-0	Flubenzimine	37893-02-0
2,3,4,5-Tetrachlorophenol	4901-51-3	Fluchloralin	33245-39-5
2,3,4,6-Tetrachlorophenol	58-90-2	Flucythrinate I	70124-77-5
2,3,4-Trichloroanisole	54135-80-7	Flucythrinate II	70124-77-5
2,3,5,6-Tetrachloroaniline	3481-20-7	Fludioxonil	131341-86-1
2,3,5,6-Tetrachlorophenol	935-95-5	Flufenacet	142459-58-3
2,3,5,6-Tetrachlorothioanisole	68671-90-9	Flumetralin	62924-70-3
2,3,5-Trichlorophenol	933-78-8	Flumioxazin	103361-09-7
2,3,5-Trimethacarb	2655-15-4	Fluometuron	2164-17-2
2,3,5-Trimethylphenyl carbamate	2655-15-4	Fluopicolide	239110-15-7
2,3,6-TBA	50-31-7	Fluoranthene	206-44-0

2,3,7,8-Tetrachlorodibenzofuran	51207-31-9
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6
2,3-Dichlorobiphenyl	16605-91-7
2,3-Dimethylphenol	526-75-0
2,4,4'-Tribromodiphenyl ether	41318-75-6
2,4,5-T methyl ester	1928-37-6
2,4',5-Trichlorobiphenyl	16606-02-3
2,4,5-Trichlorophenol	95-95-4
2,4,6-Triallyloxyl-1,3,5-triazine	101-37-1
2,4,6-Tribromoanisole	607-99-8
2,4,6-Tribromophenol	118-79-6
2,4,6-Trichloroanisole	87-40-1
2,4,6-trichlorophenol	88-06-2
2,4,7,9-Tetramethyl-5-decyne-4,7-diol	126-86-3
2,4-D	94-75-7
2,4-D methyl ester	1928-38-7
2,4-D sec-butyl ester	000000-00-3
2,4-DB methyl ester	18625-12-2
2,4-Dichlorobenzamide	2447-79-2
2,4-Dichlorophenol	120-83-2
2,4-Dichlorophenyl benzenesulfonate	97-16-5
2,4-Dimethylaniline	95-68-1
2,4-Dimethylphenol	105-67-9
2,4-Dinitrophenol	51-28-5
2,4-Dinitrotoluene	121-14-2
2,4-Di-tert-butylphenol	96-76-4
2,6-Dichlorobenzamide	2008-58-4
2,6-Dichlorobenzonitrile	1194-65-6

Fluorene	86-73-7
Fluorodifen	15457-05-3
Fluotrimazole	31251-03-3
Fluoxastrobin	361377-29-9
Fluoxetine (Prozac)	54910-89-3
Fluquinconazole	136426-54-5
Flurbiprofen	5104-49-4
Flurenol-butyl ester	2314-09-2
Flurenol-methylester	1216-44-0
Fluridone	59756-60-4
Flurochloridone I	61213-25-0
Flurochloridone II	61213-25-0
Fluroxypyr-1-methylheptyl ester	81406-37-3
Flurtamone	96525-23-4
Flusilazole	85509-19-9
Flutolanil	66332-96-5
Flutriafol	76674-21-0
Fluvalinate-tau-I	10285-10-6
Fluvalinate-tau-II	10285-10-6
Folione	111-12-6
Folpet	133-07-3
Fonofos	944-22-9
Formothion	2540-82-1
Fosthiazate	98886-44-3
Fuberidazole	3878-19-1
Furalaxyl	57646-30-7
Furathiocarb	65907-30-4
Furfural	98-01-1

2,6-Dichlorophenol	87-65-0
2,6-Difluorobenzamide	18063-03-1
2,6-Dimethylaniline	87-62-7
2,6-Dimethylphenol	576-26-1
2,6-Dinitrotoluene	606-20-2
2,6-Di-tert-butylphenol	128-39-2
2-[3-Chlorophenoxy]propionamide	5825-87-6
2-Acetylaminofluorene	53-96-3
2-Chloro-4-nitrotoluene	121-86-8
2-Chloro-5-nitrotoluene	13290-74-9
2-Chloro-6-nitrotoluene	83-42-1
2-Chlorobiphenyl	2051-60-7
2-Chloronaphthalene	91-58-7
2-Chlorophenol	95-57-8
2-Chlorophenyl isocyanate	3320-83-0
2-Chlorotoluene	95-49-8
2-Ethyl-1,3-hexanediol	94-96-2
2-Ethyl-4-methyl-1,3-dioxolane	4359-46-0
2-Ethyl-5,5-dimethyl-1,3-dioxane	768-58-1
2-Ethylhexanoic acid	149-57-5
2-Ethylhexyl diphenyl phosphate	1241-94-7
2-Ethylhexyl salicylate	118-60-5
2H-Indol-2-one, 1,3-dihydro	59-48-3
2-Hydroxyestradiol	362-05-0
2-Methoxynaphthalene	93-04-9
2-Methyl-4,6-dinitrophenol	534-52-1
2-Methylnaphthalene	91-57-6
2-Naphthylamine	91-59-8
2-Nitroaniline	88-74-4
2-Nitrophenol	88-75-5
2-Octyl-4-isothiazolin-3-one	26530-20-1
2-Phenoxypropionic acid	940-31-8
2-Picoline	109-06-8
2-tert-Butylcyclohexanone	1728-46-7
3,3'-Dichlorobenzidine	91-94-1

Furfuryl alcohol	98-00-0
Furmecyclox	60568-05-0
Gabapentin	60142-96-3
gamma-BHC (lindane)	58-89-9
Gemfibrozil	25812-30-0
Geraniol	106-24-1
Glutaraldehyde	111-30-8
Griseofulvin	126-07-8
Heptachlor	76-44-8
Heptachlor epoxide -isomer B	1024-57-3
Heptachlor exo-epoxide isomer B	28044-83-9
Heptenophos	23560-59-0
Heroin Hydrochloride	1502-95-0
Hexabromobenzene	87-82-1
Hexachlorobenzene	118-74-1
Hexachlorobutadiene	87-68-3
Hexachlorocyclopentadiene	77-47-4
Hexachloroethane	67-72-1
Hexachlorophene	70-30-4
Hexachloropropene	1888-71-7
Hexaconazole	79983-71-4
Hexadecane	544-76-3
Hexametapol	680-31-9
Hexazinone	51235-04-2
Hexestrol	84-16-2
Hexyl Cinnamaldehyde	101-86-0
Hexyl salicyclate	6259-76-3
Homosalate	118-56-9
Hydroxy Citronellal	107-75-5
Ibuprofen	15687-27-1
Imazalil	35554-44-0
Imazapyr	81334-34-1
Imidacloprid	138261-41-3
Indane	496-11-7
Indene	95-13-6

3,3'-Dimethylbenzidine	119-93-7
3,4,5-Trimethacarb	2686-99-9
3,4-Dichloroaniline	95-76-1
3,5-Dichloroaniline	626-43-7
3,5-Dimethylphenol	108-68-9
3-Chloro-1,2-dibromopropane	96-12-8
3-Chloroaniline	108-42-9
3-Chlorophenol	108-43-0
3-Hydroxycarbofuran	16655-82-6
3-Iodo-2-propynyl butylcarbamate	55406-53-6
3-Methylcholanthrene	56-49-5
3-nitroaniline	99-09-2
4,4'-DDD	72-54-8
4,4'-DDE	72-55-9
4,4'-DDT	50-29-3
4,4'-Dichlorobenzophenone	90-98-2
4,4'-Methylenebis (phenyl isocyanate)	101-68-8
4-Aminobiphenyl	92-67-1
4-Bromophenyl phenyl ether	101-55-3
4-Chloro-2-methylphenol	1570-64-5
4-Chloro-2-nitrotoluene	89-59-8
4-Chloro-3-methylphenol	59-50-7
4-Chloro-3-nitrotoluene	89-60-1
4-Chloroaniline	106-47-8
4-Chlorophenol	106-48-9
4-Chlorophenyl phenyl ether	7005-72-3
4-Chlorotoluene	106-43-4
4-Methylanisole	104-93-8
4-Methyl-benzylidene camphor	36861-47-9
4-Nitroaniline	100-01-6

Indeno[1,2,3-cd]pyrene	193-39-5
Indosulfuron methyl Na (breakdown product)	144550-36-7
Indoxacarb	173584-44-6
Ioxynil	1689-83-4
Ipconazole	125225-28-7
Iprobenfos	26087-47-8
Iprodione	36734-19-7
Irgarol	28159-98-0
Isazophos	42509-80-8
Isobenzan	297-78-9
Isobornyl thiocynoacetate	115-31-1
Isocarbamide	30979-48-7
Isodecyl diphenyl phosphate	29761-21-5
Isodrin	465-73-6
Isoeugenol	97-54-1
Isofenphos	25311-71-1
Isomethiozin	57052-04-7
Isophorone	78-59-1
Isoprocab	2631-40-5
Isopropalin	33820-53-0
Isopropyl myristate	110-27-0
Isopropyl palmitate	142-91-6
Isopropylbenzene	98-82-8
Isoprothiolane	50512-35-1
Isoproturon	34123-59-6
Isopyrazam	881685-58-1
Isosafrole	120-58-1
Isoxaben	82558-50-7
Isoxaflutole	141112-29-0
Isoxathion	18854-01-8

4-Nitrophenol	100-02-7
4-Nitroquinoline-1-oxide	56-57-5
4-Nonylphenol	104-40-5
4-Octyne	1942-45-6
4-tert-Butyltoluene	98-51-1
4-tert-Octylphenol	140-66-9
5,7-Dihydroxy-4'-methoxyisoflavone	491-80-5
5-Nitro-o-toluidine	99-55-8
7,12-Dimethylbenz[a]anthracene	57-97-6
9,10-Anthraquinone	84-65-1
a,a-Dimethylphenethylamine	122-09-8
acenaphthene	83-32-9
Acenaphthylene	208-96-8
Acephate	30560-19-1
Acetamiprid	160430-64-8
Acetochlor	34256-82-1
Acetophenone	98-86-2
Acifluorfen methyl ester	050594-67-7
Aclonifen	74070-46-5
Alachlor	15972-60-8
Aldrin	309-00-2
Allidochlor	93-71-0
alpha Isomethyl Ionone	127-51-5
alpha-BHC (alpha-HCH)	319-84-6
Alprazolam	28981-97-7
Ambroxol	18683-91-5
Ametryn	834-12-8
Amidithion	919-76-6
Aminocarb	2032-59-9
Aminopyralid	150114-71-9

Jodfenphos	18181-70-9
Kepone	143-50-0
Ketoprofen	22071-15-4
Kinoprene	43588-37-4
Kresoxim-methyl	143390-89-0
Lenacil	2164-08-1
Leptophos	21609-90-5
Leptophos oxon	25006-32-0
Lidocaine	137-58-6
Lilial	80-54-6
Linalool	78-70-6
Linuron	330-55-2
Malathion	121-75-5
Malathion-o-analog	1634-78-2
MCPA	94-74-6
MCPA methyl ester	2436-73-9
MCPB	94-81-5
MCPB methyl ester	57153-18-1
m-Cresol (3-methylphenol)	108-39-4
m-Dinitrobenzene	99-65-0
Mecarbam	2595-54-2
Mecoprop	93-65-2
Mecoprop methyl ester	23844-56-6
Mefenacet	73250-68-7
Mefluidide	53780-34-0
Menazon	78-57-9
Mephosfolan	950-10-7
Mepronil	55814-41-0
Mesosulfuron methyl (breakdown product)	208465-21-8
Metalaxyl	57837-19-1

Amitraz	33089-61-1
Amitrole	61-82-5
Amyl Cinnamal	122-40-7
Amylcinnamyl Alcohol	101-85-9
Ancymidol	12771-68-5
Androstadienedione	897-06-3
Anilazine	101-05-3
Aniline	62-53-3
Anisyl Alcohol	105-13-5
Anthracene	120-12-7
Aramite	140-57-8
Atraton	1610-17-9
Atrazine	1912-24-9
Atrazine desethyl	6190-65-4
Atrazine desisopropyl	1007-28-9
Azaconazole	60207-31-0
Azamethiphos	35575-96-3
Azinphos-ethyl	2642-71-9
Azinphos-methyl	86-50-0
Aziprotryne	4658-28-0
Azobenzene	103-33-3
Azoxystrobin	131860-33-8
Barban	101-27-9
Benalaxyl	71626-11-4
Benazolin-ethyl	25059-80-7
Bendiocarb	22781-23-2
Benfluralin	1861-40-1
Benfuracarb	82560-54-1
Benfuresate	68505-69-1
Benodanil	15310-01-7
Bentazone	25057-89-0

Metaldehyde	108-62-3
Metamitron	41394-05-2
Metasystox thiol	919-86-8
Metazachlor	67129-08-2
Methabenzthiazuron	18691-97-9
Methacrifos	62610-77-9
Methamidophos	10265-92-6
Methapyrilene	91-80-5
Methaqualone	72-44-6
Methfuroxam	2873-17-8
Methidathion	950-37-8
Methiocarb	2032-65-7
Methiocarb sulfone	2179-25-1
Methiocarb sulfoxide	2635-10-1
Methomyl	16752-77-5
Methoprene I	40596-69-8
Methoprene II	40596-69-8
Methoprotryne	841-06-5
Methoxychlor	72-43-5
Methyl Methacrylate	80-62-6
Methyl methanesulfonate	66-27-3
Methyl paraoxon	950-35-6
methyl Parathion	298-00-0
Methyl-1-naphthalene acetate	2876-78-0
Methylcyclohexanone	108-87-2
Methyldymron	42609-73-4
Methylparaben	99-76-3
Metobromuron	3060-89-7
Metolachlor	51218-45-2
Metolcarb	1129-41-5
Metribuzin	21087-64-9

Bentazone methyl derivative	61592-45-8
Benthiocarb	28249-77-6
Benz[a]anthracene	56-55-3
Benzenepropanoic acid	501-52-0
Benzenesulfonamide	98-10-2
Benzenesulfonamide, 4-methyl-	70-55-3
Benzenesulfonamide, N-butyl	3622-84-2
Benzenesulfonanilide	1678-25-7
Benzo[a]pyrene	50-32-8
Benzo[b]fluoranthene	205-99-2
Benzo[ghi]perylene	191-24-2
Benzo[k]fluoranthene	207-08-9
Benzonitrile	100-47-0
Benzophenone	119-61-9
Benzophenone-3	131-57-7
Benzoylprop ethyl	22212-55-1
Benzyl alcohol	100-51-6
Benzyl Benzoate	120-51-4
Benzyl Cinnamate	103-41-3
Benzyl laurate	140-25-0
Benzyl Salicylate	118-58-1
b-Estradiol	50-28-2
beta-BHC (beta-HCH)	319-85-7
Bifenazate	149877-41-8
Bifenox	42576-02-3
Bifenthrin	82657-04-3
Binapacryl	485-31-4
Bioallethrin	584-79-2
Bioallethrin S-cyclopentenyl isomer	28434-00-6
Bioresmethrin	10453-86-8
Biphenyl	92-52-4

Metronidazole	443-48-1
Mevinphos	7786-34-7
Midazolam	59467-70-8
Mirex	2385-85-5
Molinate	2212-67-1
Monalide	7287-36-7
Monocrotophos	6923-22-4
Monolinuron	1746-81-2
Monuron	150-68-5
Musk Xylene	81-15-2
m-Xylene	108-38-3
Myclobutanil	88671-89-0
N,N,N',N'-Tetraacetylenediamine	10543-57-4
N,N-Diethyl-m-toluamide	134-62-3
N,N-Dimethylaniline	121-69-7
N-1-Naphthylacetamide	000575-36-0
Nalorphine	62-67-9
Naphthalene	91-20-3
Naphthalic anhydride	81-84-5
Napropamide	15299-99-7
Naproxen	22204-53-1
n-Butylbenzene	104-51-8
Neodecanoic acid-ethenyl ester	51000-52-3
Nerolidol	7212-44-4
Nicotine	54-11-5
Nitralin	4726-14-1
Nitrapyrin	1929-82-4
Nitrazepam	146-22-5
Nitrobenzene	98-95-3
Nitrofen	1836-75-5
Nitrothal-isopropyl	10552-74-6

Bis (4-chlorophenyl) sulfone	80-07-9
bis(2-chloroethoxy)methane	111-91-1
bis(2-chloroethyl) ether	111-44-4
bis(2-chloroisopropyl) ether	108-60-1
Bis(2-ethylhexyl) adipate	103-23-1
bis(2-ethylhexyl)phthalate (DEHP)	117-81-7
Bisphenol A	80-05-7
Bitertanol I	55179-31-2
Bitertanol II	55179-31-2
Bixafen	581809-46-3
Boscalid	188425-85-6
Bromacil	314-40-9
Bromazepam	1812-30-2
Bromobenzene	108-86-1
Bromobutide	74712-19-9
Bromocyclen	1715-40-8
Bromodichloromethane	75-27-4
Bromoform	75-25-2
Bromophos	2104-96-3
Bromophos-ethyl	4824-78-6
Bromopropylate	18181-80-1
Bromoxynil	1689-84-5
Bromoxynil octanoic acid ester	1689-99-2
Bupirimate	41483-43-6
Buprofezin	69327-76-0
Butabarbital	125-40-6
Butachlor	23184-66-9
Butamifos	36335-67-8
Butanedioic acid, dimethyl ester	106-65-0
Butoxycarboxim	34681-23-7
Butralin	33629-47-9

Nitroxynil	1689-89-0
N-Methyl-N-1-naphthyl acetamide	000000-00-2
N-nitrosodiethylamine	55-18-5
N-nitrosodimethylamine	62-75-9
N-nitrosodi-n-butylamine	924-16-3
N-nitrosodi-n-propylamine	621-64-7
N-nitrosodiphenylamine	86-30-6
N-nitrosomethylethylamine	10595-95-6
N-nitrosomorpholine (4-nitrosomorpholin	59-89-2
N-nitrosopiperidine (1-nitrosopiperidin	100-75-4
N-nitrosopyrrolidine (1-nitrosopyrrolid	930-55-2
Norflurazon	27314-13-2
N-Phenyl-1-naphthylamine	90-30-2
n-Propylbenzene	103-65-1
Nuarimol	63284-71-9
O,O,O-Triethyl phosphorothioate	126-68-1
o,p'-DDD	53-19-0
o,p'-DDE	3424-82-6
o,p'-DDT	789-02-6
o-Cresol (2-methylphenol)	95-48-7
Octachlorodibenzofuran	39001-02-0
Octachlorodibenzo-p-dioxin	3268-87-9
Octachlorostyrene	29082-74-4
Octocrylene	6197-30-4
Octyl-methoxycinnamate	5466-77-3
Ofurace	58810-48-3
Omethoate	1113-02-6
o-Phenylphenol	90-43-7
Oryzalin	19044-88-3
o-Terphenyl	84-15-1
o-Toluidine	95-53-4

butyl benzyl phthalate	85-68-7
Butylate	2008-41-5
Butylated hydroxyanisole	25013-16-5
Butylated hydroxytoluene	128-37-0
Butylparaben	94-26-8
Caffeine	58-08-2
Caprolactam	105-60-2
Captafol	2425-06-1
Captan	133-06-2
Carbamazepine	298-46-4
Carbaryl	63-25-2
Carbazole	86-74-8
Carbetamide	16118-49-3
Carbofuran	1563-66-2
Carbofuran-3-keto	016709-30-1
Carbophenothion	786-19-6
Carbosulfan	55285-14-8
Carboxin	5234-68-4
Carfentrazone-ethyl	128639-02-1
Caryophyllene	87-44-5
Cedrol	77-53-2
Cedryl acetate	77-54-3
Chinomethionat	2439-01-2
Chloramben methyl ester	7286-84-2
Chloranocryl	2164-09-2
Chlorbenside	103-17-3
Chlorbromuron	13360-45-7
Chlorbufam	1967-16-4
Chlordimeform	6164-98-3
Chlorfenapyr	122453-73-0
Chlorfenethol	80-06-8

Oxabetrinil	74782-23-3
Oxacyclohexadecan-2-one	106-02-5
Oxadiazon	19666-30-9
Oxadixyl	77732-09-3
Oxamyl	23135-22-0
Oxazepam	604-75-1
Oxycarboxin	5259-88-1
Oxychlorthane	27304-13-8
Oxydemeton-methyl	301-12-2
Oxyfluorfen	42874-03-3
o-Xylene	95-47-6
p-(dimethylamino)azobenzene	60-11-7
Paclobutrazol	76738-62-0
Padimate O	21245-02-3
Paraldehyde	123-63-7
Paraoxon	311-45-5
Parathion (ethyl)	56-38-2
p-Benzoquinone	106-51-4
p-Cresol (4-methylphenol)	106-44-5
Pebulate	1114-71-2
Penconazole	66246-88-6
Pencycuron (breakdown product)	66063-05-6
Pendimethalin	40487-42-1
Pentachloroaniline	527-20-8
Pentachloroanisole	1825-21-4
Pentachlorobenzene	608-93-5
Pentachloroethane	76-01-7
Pentachloronitrobenzene	82-68-8
Pentachlorophenol	87-86-5
Pentanochlor	2307-68-8
Pentobarbital	76-74-4

Chlorfenprop-methyl	14437-17-3
Chlorfenson	80-33-1
Chlorfenvinphos	470-90-6
Chlorflurecol-methyl ester	2536-31-4
Chlormefos	24934-91-6
Chlornitrofen	1836-77-7
Chlorobenzene	108-90-7
Chlorobenzilate	510-15-6
Chlorodibromomethane	124-48-1
Chloroneb	2675-77-6
Chlorophacinone	3691-35-8
Chlorophene (2-Benzyl-4-chlorophenol)	120-32-1
Chloropropylate	5836-10-2
Chlorothalonil	1897-45-6
Chlorotoluron	15545-48-9
Chloroxylonol	88-04-0
Chlorpropham	101-21-3
Chlorpyrifos	2921-88-2
Chlorpyrifos Methyl	5598-13-0
Chlorthal-dimethyl	1861-32-1
Chlorthiamid	1918-13-4
Chlorthion	500-28-7
Chlorthiophos	60238-56-4
Chlorthiophos sulfone	025900-20-3
Chlorthiophos sulfoxide	029-21-5
Chlozolate	84332-86-5
Cholesterol	57-88-5
Chrysene	218-01-9
Cinnamal	104-55-2
Cinnamyl Alcohol	104-54-1
cis-1,3-Dichloropropylene	10061-01-5

Permethrin I	52645-53-1
Permethrin II	52645-53-1
Perthane	72-56-0
Pethidine	57-42-1
phenacetin	62-44-2
Phenamiphos	22224-92-6
Phenanthrene	85-01-8
Phenkapton	2275-14-1
Phenmedipham	13684-63-4
Phenol	108-95-2
Phenoxyacetic acid	122-59-8
Phenthoate	2597-03-7
Phenylbutazone	50-33-9
phorate	298-02-2
Phosalone	2310-17-0
Phosfolan	947-02-4
Phosmet	732-11-6
Phosphamidon I	13171-21-6
Phosphamidon II	13171-21-6
Phthalide	27355-22-2
Picloram methyl ester	14143-55-6
Picolinafen	137641-05-5
Pindone	83-26-1
Pinoxaden	243973-20-8
Piperalin	3478-94-2
Piperonyl butoxide	51-03-6
Piperonylbutoxide	51-03-6
Piperophos	24151-93-7
Pirimicarb	23103-98-2
Pirimiphos-ethyl	23505-41-1
Pirimiphos-methyl	29232-93-7

cis-Chlordane	5103-71-9
Citral	5392-40-5
Citronellol	106-22-9
Clofibrate	637-07-0
Clomazone	81777-89-1
Clomipramine	303-49-1
Clonazepam	1622-61-3
Clopyralid	1702-17-6
Cloquintocet-mexyl	99607-70-2
Clothianidin	210880-92-5
Cocaine	50-36-2
Codeine	76-57-3
Cotinine	486-56-6
Coumaphos	56-72-4
Coumarin	91-64-5
CPA	122-88-3
Cresyl diphenyl phosphate	26444-49-5
Crimidine	535-89-7
Crotamiton	483-63-6
Crotoxyphos	7700-17-6
Crufomate	299-86-5
Cyanazine	21725-46-2
Cyanofenphos	13067-93-1
Cyanophos	2636-26-2
Cycloate	1134-23-2
Cyclohexanone	108-94-1
Cycluron	2163-69-1
Cyfluthrin I	68359-37-5
Cyfluthrin II	68359-37-5
Cyfluthrin III	68359-37-5

p-Isopropyltoluene	99-87-6
Plifenat	21757-82-4
p-Nitrotoluene	99-99-0
p-Phenylenediamine	106-50-3
Prazepam	2955-38-6
Pretilachlor	51218-49-6
Primidone	125-33-7
Probenazole	27605-76-1
Prochloraz	67747-09-5
Procymidone	32809-16-8
Profenofos	41198-08-7
Profluralin	26399-36-0
Promecarb	2631-37-0
Prometon	1610-18-0
Prometryn	7287-19-6
Propachlor	1918-16-7
Propamocarb	24579-73-5
Propanil	709-98-8
Propargite	2312-35-8
Propazine	139-40-2
Propetamphos	31218-83-4
Propham	122-42-9
Propiconazole-I	60207-90-1
Propiconazole-II	60207-90-1
Propofol	2078-54-8
Propoxur	114-26-1
Propylparaben	94-13-3
Propyzamide	23950-58-5
Prosulfocarb	52888-80-9
Prothioconazole (breakdown product)	178928-70-6

Cyfluthrin IV	68359-37-5
Cyhalothrin I (lambda)	68085-85-8
Cymoxanil	57966-95-7
Cypermethrin I	52315-07-8
Cypermethrin II	52315-07-8
Cypermethrin III	52315-07-8
Cypermethrin IV	52315-07-8
Cyprazine	22936-86-3
Cyproconazole	113096-99-4
Cyprodinil	121552-61-2
Cyprofuram	69581-33-5
Cyromazine	66215-27-8
d-(cis-trans)-Phenothrin-I	26002-80-2
d-(cis-trans)-Phenothrin-II	26002-80-2
Dapson	80-08-0
Dazomet	533-74-4
Decachlorobiphenyl	2051-24-3
Decahydronaphthalene (cis)	493-01-6
Decahydronaphthalene (trans)	493-02-7
delta-BHC (delta-HCH)	319-86-8
Deltamethrin	52918-63-5
Demephion	8065-62-1
Demeton-S	126-75-0
Demeton-S-methylsulfon	17040-19-6
Desbromo-bromobutide	000000-00-1
Desimpramine	50-47-5
Desmedipham	13684-56-5

Prothiofos	34643-46-4
Prothoate	2275-18-5
p-Xylene	106-42-3
Pymetrozin	123312-89-0
Pyracarbolid	24691-76-7
Pyrazine	290-37-9
Pyrazon	1698-60-8
Pyrazophos	13457-18-6
Pyrazoxyfen	71561-11-0
Pyrene	129-00-0
Pyributicarb	88678-67-5
Pyridaben	96489-71-3
Pyridaphenthion	119-12-0
Pyridate	55512-33-9
Pyridine	110-86-1
Pyridinitril	1086-02-8
Pyrifenox I	731-27-1
Pyrifenox II	88283-41-4
Pyrimethanil	53112-28-0
Pyroquilon	57369-32-1
Quinalphos	13593-03-8
Quinmerac (breakdown product)	90717-03-6
Quinoclamine	2797-51-5
Quinoxifen	124495-18-7
Quizalofop-ethyl	76578-14-8
Resmethrin	28434-01-7
Rotenone	83-79-4

Desmetryn	1014-69-3
Dialifos	10311-84-9
Diallate	2303-16-4
Di-allate II	2303-16-4
Diallyl phthalate	131-17-9
Diamyl phthalate	131-18-0
Diazepam	439-14-5
Diazinon	333-41-5
Dibenz[a,h]anthracene	53-70-3
Dibenzofuran	132-64-9
Dibrom (naled)	300-76-5
Dibromomethane	74-95-3
Dibromophenyl ether	5436-43-1
Dicamba	1918-00-9
Dicamba methyl ester	6597-78-0
Dicapthon	2463-84-5
Dichlofenthion	97-17-6
Dichlofluanid	1085-98-9
Dichlone	117-80-6
Dichlormid	37764-25-3
Dichlorophen	97-23-4
Dichlorprop	120-36-5
Dichlorprop methyl ester	57153-17-0
Dichlorvos	62-73-7
Diclobutrazol	75736-33-3
Diclofenac artifact	15362-40-0
Diclofenac-methyl ester	15307-78-5
Diclofop methyl	51338-27-3
Dicloran	99-30-9
Dicofol	115-32-2
Dicrotophos	141-66-2

S,S,S-Tributylphosphorotrithioate	78-48-8
Safrrole	94-59-7
Sebuthylazine	7286-69-3
Secbumeton	26259-45-0
sec-Butylbenzene	135-98-8
Silthiofam	175217-20-6
Simazine	122-34-9
Simetryn	1014-70-6
Spirodiclofen	148477-71-8
Squalane	111-01-3
Styrene	100-42-5
Suflolane	126-33-0
Sulfadiazine	68-35-9
Sulfamethoxazole	723-46-6
Sulfotepp	3689-24-5
Sulfur (S8)	10544-50-0
Sulprofos	35400-43-2
Swep	1918-18-9
Tamoxifen	10540-29-1
TCMTB	21564-17-0
Tebuconazole	107534-96-3
Tebufenpyrad	119168-77-3
Tebutam	35256-85-0
Tecnazene	117-18-0
Tefluthrin	79538-32-2
Temephos	3383-96-8
Tepraloxydim	149979-41-9
Terbacil	5902-51-2
Terbucarb	191-81-1
Terbufos	13071-79-9
Terbumeton	33693-04-8

Dicyclanil	112636-83-6
Dicyclohexyl phthalate	84-61-7
Dicyclopentadiene	77-73-6
Dieldrin	60-57-1
Dienochlor	2227-17-0
Diethatyl ethyl	38727-55-8
Diethofencarb	87130-20-9
Diethyl dithiobis(thionoformate) (EXD)	502-55-6
Diethyl phthalate	84-66-2
Diethylene glycol	111-46-6
Diethylstilbestrol	56-53-1
Difenoconazol I	119446-68-3
Difenoconazol II	119446-68-3
Diflufenican	83164-33-4
Diisobutyl phthalate	84-69-5
Dimefox	115-26-4
Dimethachlor	50563-36-5
Dimethametryn	22936-75-0
Dimethenamid	87674-68-8
Dimethipin	55290-64-7
Dimethoate	60-51-5
Dimethomorph	110488-70-5
Dimethyl adipate	627-93-0
Dimethyl fumarate	624-49-7
Dimethyl phosphite	868-85-9
Dimethyl phthalate	131-11-3
Dimethylvinphos(z)	2274-67-1
Dimetilan	644-64-4
Dimetridazole	551-92-8
Dimoxystrobin	149961-52-4
di-n-butyl phthalate	84-74-2

Terbuthylazine	5915-41-3
Terbutryne	886-50-0
Terpineol	98-55-5
Terpinyl acetate	80-26-2
tert-Butylbenzene	98-06-6
Tetrachloroethylene	127-18-4
Tetrachlorvinphos	961-11-5
Tetraconazole	112281-77-3
Tetradifon	116-29-0
Tetraethylpyrophosphate (TEPP)	107-49-3
Tetramethrin I	7696-12-0
Tetramethrin II	7696-12-0
Tetrapropyl thiodiphosphate	3244-90-4
Tetrasul	2227-13-6
Thenylchlor	96491-05-3
Thiabendazole	148-79-8
Thiacloprid	111988-49-9
Thiamethoxam	153719-23-4
Thiofanox	39196-18-4
Thiometon	640-15-3
Thionazin	297-97-2
Ti carbazil I	36756-79-3
Ti carbazil II	36756-79-3
Tolclofos-methyl	57018-04-9
Toltrazuril	69004-03-1
Toltrazuril Sulfone	69004-04-2
Toluene	108-88-3
Tolyfluanid	88283-41-4
Totarol	511-15-9
Tralkoxydim	87820-88-0
trans-1,3-Dichloropropylene	10061-02-6

Diniconazole	83657-24-3
Dinitramine	29091-05-2
Dinobuton	973-21-7
Dinocap I	39300-45-3
Dinocap II	39300-45-3
Dinocap III	39300-45-3
Dinocap IV	39300-45-3
di-n-octyl phthalate	117-84-0
Dinoseb	88-85-7
Dinoseb acetate	2813-95-8
Dinoseb methyl ether	6099-79-2
Dinoterb	1420-07-1
Dinoterb acetate	3204-27-1
Di-n-propyl phthalate	131-16-8
Dioxacarb	6988-21-2
Dioxathion	78-34-2
Dioxydemeton-S-methyl	17040-19-6
Diphacinone	82-66-6
Diphenamid	957-51-7
Diphenyl ether	101-84-8
Diphenyl sulfone	127-63-9
Diphenylamine	122-39-4
Dipropetryn	4147-51-7
Disulfoton	298-04-4
Ditalimfos	5131-24-8
Dithiopyr	97886-45-8
Diuron	330-54-1
d-Limonene	5989-27-5
Dodemorph I	1593-77-7
Dodemorph II	1593-77-7

trans-Chlordane	5103-74-2
trans-Nonachlor	39765-80-5
Tri-(2-chloroethyl) phosphate	115-96-8
Triacetin	102-76-1
Triadimefon	43121-43-3
Triadimenol	55219-65-3
Tri-allate	2303-17-5
Triamiphos	1031-47-6
Triazophos	24017-47-8
Triazoxide	72459-58-6
Tribenuron-methyl (breakdown product)	101200-48-0
Tributyl acetylcitrate	77-90-7
Tributyl phosphate	126-73-8
Tributyl phosphorotrithioite	150-50-5
Tributylamine	102-82-9
Trichlopyr	55335-06-3
Trichlorfon	52-68-6
Trichloroethylene	79-01-6
Trichloronate	327-98-0
Triclopyr methyl ester	060825-26-5
Triclosan	3380-34-5
Triclosan-methyl	4640-01-1
Tricresyl phosphate	78-30-8
Tricyclazole	41814-78-2
Tridiphane	58138-08-2
Trietazine	1912-26-1
Trifloxystrobin	141517-21-7
Triflumizole	68694-11-1
Trifluralin	1582-09-8
Trimethoprim	738-70-5

Doxepin	1668-19-5
Drazoxolon	5707-69-7
Drometrizole	2440-22-4
Edifenphos	17109-49-8
Endosulfan ether	3369-52-6
Endosulfan I	959-98-8
Endosulfan II	33213-65-9
Endosulfan lactone	3868-61-9
Endosulfan sulfate	1031-07-8
Endrin	72-20-8
Endrin aldehyde	7421-93-4
Endrin ketone	53494-70-5

Trinexapac-ethyl	95266-40-3
Triphenyl phosphate	115-86-6
Triphenylphosphine	603-35-0
Triphenylphosphine oxide	791-28-6
Tris (2,3-epoxypropyl) isocyanate	2451-62-9
Tris-(1,3-dichloroisopropyl) phosphate	13674-87-8
Trixylenyl phosphate	25155-23-1
Tryclopyrbutoxyethyl	64470-88-8
Tycor (SMY 1500)	64529-56-2
Uniconizole-P	83657-17-4
Vamidothion	2265-23-2
Vanillin	121-33-5
Vernolate	1929-77-7
Vinclozolin	50471-44-8
Zoxamide	156052-68-5

Annex 5 Comparison of analytes of ERA12 and current study

Parameter tested in ERA12	Parameter tested in current campaign (ground waters)	Parameter tested in current campaign (other waters)
1,2- Dichloroethane	1,1,1-Trichloroethane	1,2,4-Trimethylbenzene
1,2,4-Trichlorobenzene	1,1,2-Trichloroethane	1,3,5Trimethylbenzene
1,2,4-trimethyl benzene	1,1-Dichloroethylene	1,6-Hexanediol diacrylate
4-(1,1',3,3'-TetraMethylButhyl)Phenol	1,2,3-Trichlorobenzene	17-beta-estradiol (E2)
PFAS/PFOS	1,2,4-Trichlorobenzene	1-Ethyl-2-pyrrolidone
4-nonylphenol (CAS: 104-40-5)	1,2-cis-Dichloroethylene	2,4,7,9-Tetramethyl-5-decyne-4,7-diol
Acesulpham k	1,2-Dichlorobenzene	2-Ethyl-1,3-hexanediol
Aclonifen	1,2-Dichloropropane	2-Ethylhexanoic acid
Alachlor	1,4-Dioxane	2-Methylnaphthalene
Aldrin	1-Decanol	5-Methyl-benzotriazole
<i>Alpha-endosulfan (endosulphan I)</i>	1-Ethyl-2-pyrrolidone	Acesulfame K
<i>Alpha-hexachlorocyclohexane (alfa-HCH)</i>	2,4-Di-tert-butylphenol	Acetophenone
Ametryn	2-Ethyl-1,3-hexanediol	Amoxicillin
Ammonium (Un-ionized ammonia (NH3))	2-Ethylhexanoic acid	Aniline
Amoxicillin	2-Ethylhexyl diphenyl phosphate	Arsenic

Aniline	2-Ethylhexyl salicylate	Atenolol
Anthracene	3-Chlorophenol	Azobenzene
Arsenic	4,4'-Methylenebis (phenyl isocyanate)	Benzenesulfonamide, N-butyl
Atenolol	4-chloro-3-methylphenol (PCMC)	Benzenesulfonanilide
Atrazine	4-Chlorophenol	Benzophenone
Azinphos-ethyl	4-Methylanisole	Benzotriazole
Azinphos-methyl	5-Methyl-benzotriazole	Bis(2-ethylhexyl) adipate
Azoxystrobin	Acesulfame K	Bisphenol A
Benzene	Acetone	Carbamazepine
Benzo(a)pyrene	Amoxicillin	Chloroxylenol
Benzo(b)fluoranthene	Aniline	Dibutyl phthalate (DBP)
<i>Benzo(b)fluoranthene + Benzo(k)fluoranthene + Benzo(a)pyrene + Benzo(g,h,i)perylene + Indeno(1,2,3-cd)pyrene</i>	Atenolol	Diclofenac
Benzo(ghi)perylene	Benzenesulfonanilide	Dicyclohexyl phthalate
Benzo(k)fluoranthene	Benzophenone	Di-ethylphthalate (DEP)
Benzotriazole	Benzotriazole	Dimethyl phthalate
<i>Beta-endosulfan (endosulphan II)</i>	Benzyl alcohol	Diphenyl sulfone
Beta-estradiol (50-28-2)	Bis(2-ethylhexyl) adipate	EDTA (EthylenDiaminoTetracetyc Acid)
<i>Beta-hexachlorocyclohexane(beta-HCH)</i>	Butylated hydroxytoluene	Epoxiconazole
BifenoX	Caffeine	Ethylbenzene
Bisphenol A	Cedrol	Etiozole
Brominated diphenylethers	Chlorobenzene	Fenpiclonil
Cadmium	Chloroethane	Fipronil
Carbamazepine	Chloroneb	Fluoxetine
Carbon tetrachloride	Cholesterol	Flurenol-methylester
Chlordane	Coumarin	Glyphosate
Chlordecone	Crotamiton	Imidacloprid
Chlorfenvinphos	Di (2-ethylhexil) phthalate (DEHP)	Indane
Chloride	Diclofenac	Isopropylbenzene
Chloroalkanes, C10-13	Diethylene glycol dimethyl ether	Limonene (Dipentene)
Chlorpyrifos	Di-ethylphthalate (DEP)	N,N-Diethyl-m-toluamide
Chlorpyrifos-methyl	Diisobutyl phthalate	Neodecanoic acid-ethenyl ester
Cis-chlordane	Dimethyl phthalate	n-propylbenzene
Coumafos	Diphenyl sulfone	Octocrylene
Crotoxyfos	d-Limonene	Oxacyclohexadecan-2-one
Cyanazine	EDTA (EthylenDiaminoTetracetyc Acid)	Phenanthrene
Cybutryne	Erythromycin	Phenol
Cyclohexanone	Ethylbenzene	Propiconazole
Cypermethrine	Ethylparaben	Squalane
DDT Total	Flurenol-methylester	Styrene
DEHP	Formaldehyde	Sulfamethoxazole

<i>Delta hexachlorocyclohexane (delta-HCH)</i>	Hexadecane	Toluene
Deltamethrin	Isopropyl myristate	Tributyl acetylcitrate
Desmetryn	Isopropylbenzene	Tributyl phosphate
Di(2-ethylhexyl)phthalate	Linalool	Triisobutylphosphate
Diazinone	m-Cresol (3-methylphenol)	Tris-(1,3-dichloroisopropyl) phosphate
Dichloromethane	Methyl tert-butyl ether (MTBE)	
Dichlorvos	Methylparaben	
Dicofol	N,N-Diethyl-m-toluamide	
Dieldrin	N-nitrosopiperidine (1-nitrosopiperidin)	
Diethyl phthalate (DEP)	n-propylbenzene	
Dimethoate	o-cresol	
Dimethomorph	Octocrylene	
Dioxins and dioxin-like compounds HRMS	o-Toluidine	
Diuron	Oxacyclohexadecan-2-one	
EDTA	o-Xylene	
Endosulfan	p,m-cresol	
Endosulfan sulfate	Phenols	
Endrin	Primidone	
Famphur	Promecarb	
Fenitrothion	Propylparaben	
Fensulfothion	p-Xylene	
Fenthion	Styrene	
Fipronil	Tetrachloroethylene	
Fluoranthene (PHC)	Toluene	
<i>Gamma-hexachlorocyclohexane (Lindane)</i>	Tribromomethane (Bromoform)	
Glyphosate	Tributyl acetylcitrate	
Heptachlor epoxide*	Tributyl phosphate	
Heptachlor*	Trichloromethane (Chloroform)	
HexabromocycLOQodecane	Tridiphan	
Hexachlorobenzene	Trimethoprim	
Hexachlorobutadiene	Tris (2,3-expoxypropyl) isocyanate	
Hexachlorocyclohexanes	Xylenes	
Imidacloprid		
include Perfluorooctane sulfonic acid and its derivatives (PFOS)		
Indeno(1,2,3-cd)pyrene		
Isodrin		
Isoproturon		
Lead		
leptofos		
Malathion		
Mercury		
Methidation		
Methoxychlor		
Methylbenzotriazole		
Metolachlor		

Mevinfos		
Mirex		
Molinate		
MonoButhilTin (MBT) + DiButhilTin (DBT) + TriButhilTin (TBT) = Sum Organotin Compounds		
Naphthalene		
Nickel		
N-methyl-2-pyrrolidone		
Nonylphenol, 4- (branched) (CAS: 84852-15-3)		
Nonylphenols		
o,p'-DDD		
o,p'-DDE		
o,p'-DDT		
o,p-methoxychlor		
Polychlorinated dibenzodioxins (PCDDs)		
Octylphenol, 4-tert- (CAS: 140-66-9) or Octylphenols		
or Di(2-ethylhexyl)phthalate or Bis(2-ethylhexyl)phthalate (BEHP)		
P- Chloro-M-Cresol		
p,p'-DDD		
p,p'-DDE		
p,p'-DDT		
p,p-methoxychlor		
Parathion-ethyl		
Parathion-methyl		
PCB 105 + PCB 114 + PCB 118 + PCB 123 + PCB 126 + PCB 156 + PCB 157 + PCB 167 + PCB 169 + PCB 189 + PCB 77 + PCB 81 = Total PCB (Conversion WHO-TEF)		
Pendimethalin		
Pentachlorobenzene		
Pentachlorophenol		
PFOA and its compounds		
Phorate		
<i>Polyaromatic hydrocarbons</i>		
Prometryn		
Propamocarb		
Propan-1,2-diol		
Propazine		
Quinoxifen		
Short Chain Chloro Paraffins (SCCP)		
Simazine		
Styrene		
Sulfamethoxazole		
Sulphate		
Terbutryn		
Terbutylazine		
Tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane		

Tetrachloroethylene		
Tetrachlorvinphos		
Trans-chlordane		
Triazophos		
Tributyltin compounds		
Trichlorobenzenes		
Trichloroethylene		
Trichloromethane		
Trifluralin		
Triisobutyl phosphate		
Triphenyl phosphate		

Annex 6 TIC Results

A SCAN GCMS was used to screen for the presence of 1020 compounds that were screened for using SCAN GCMS (Annex 4); listed below are the positive results. Screening method detects presence/absence of organic pollutants in water with typical Limit of Detection (LOD) 0.1µg/l. The results indicate the compounds absent in the method blanks and with a signal to noise ratio (S/N) < 10. The Amount/Conc is in mg/l. GC-MS separates chemical mixtures (via gas chromatography) and then identifies the components based on their mass spectra. The mass spectrum is a unique "fingerprint" of a compound, showing the mass-to-charge ratio (m/z) and intensity of ionized fragments. To identify an unknown compound, the acquired spectrum is compared with known spectra stored in a library. The library match score (LMS) is a numerical value that quantifies how well the unknown sample's spectrum matches a reference spectrum from the library. It is generated by an algorithm that compares the intensities and positions of peaks in the sample spectrum versus the library spectrum. The score typically ranges from 0 to 100%, where a higher score indicates a better match. Confirmation of compounds identity was considered acceptable when the LMS >= 40%, a value closer to 100% indicates more probability that the compound is the one present in the library. Low LMS values may be due to a low estimated concentration of the compound in the sample - close to LOD or, noise from the Matrix. Peak Purity was considered acceptable when LMS >=50%. A value closer to 100%, indicates a low probability that another Component is present under the same spectral peak of the compound

Groundwater

Ghattuq, summer sampling, replicate 1

Compound Name	Amount/Conc	LMS	R.T. Diff(sec)	Purity
1,2,4-Trichlorobenzene	0.0034	51	2.6	100
1,2,4-Trimethylbenzene	0.0317	74	-0.5	100
1-Ethyl-2-pyrrolidone	0.2572	46	1	99.3
2,4,6-Triallyloxyl-1,3,5-triazine	0.5073	40	5.5	95.4
2-Ethyl-1,3-hexanediol	0.708	48	-7.7	100
2-Ethylhexyl diphenyl phosphate	0.0161	48	6.2	100
4-Methylanisole	0.0012	46	9.3	100
Azobenzene	0.0108	70	9.3	100
Biphenyl	0.0004	43	2.7	100
Bis (4-chlorophenyl) sulfone	0.0076	50	6.1	100
Boscalid	0.6926	49	8.6	100
Dimethomorph	0.157	43	13.3	100
Dimethyl phthalate	0.0577	85	4.3	100
d-Limonene	0.2762	93	-0.3	98.7
Drometrizole	0.6522	83	6.7	100
Indane	0.0035	47	-0.7	100
Isobornyl thiocynoacetate	0.0066	48	-0.9	100
Isopropyl myristate	0.0293	47	3	100
m-Xylene	0.0323	58	-14.2	100
Naphthalene	0.0085	66	3.7	100
Naproxen	0.0509	42	-0.8	100
Octocrylene	0.0344	65	9.1	100
Propyzamide	0.1144	50	-16.1	100
Sulfur (S8)	0.1306	74	4.1	100
Tributyl phosphate	0.0199	58	4.7	100
Tridiphan	0.069	42	2.1	100

Vanillin	0.0694	54	2.5	100
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Ghattuq, summer sampling, replicate 2

Compound Name	Amount/Conc	LMS	R.T. Diff(sec)	Purity
2-Ethylhexyl diphenyl phosphate	0.0212	41	5.6	77.3
Azobenzene	0.0077	65	9.5	100
Bis (4-chlorophenyl) sulfone	0.0104	55	6.3	100
Boscalid	0.8954	46	8.5	100
Dimethyl phthalate	0.0175	42	4.1	100
d-Limonene	0.1574	75	3.7	100
Fenpiclonil	3.2834	41	15.7	100
Ipconazole	0.2593	42	-15.1	100
Isopropyl myristate	0.0272	42	3.1	100
m-Cresol (3-methylphenol)	0.0253	52	4.4	100
Methoprene II	0.0412	46	-9.4	96.8
p-Cresol (4-methylphenol)	0.0247	52	5	100
Sulfur (S8)	0.044	56	3.9	99.9
Tridipane	0.0895	42	2.2	100

Ghattuq, winter sampling, replicate 1

Compound Name	Amount/Conc	LMS	R.T. Diff(sec)	Purity
Ethylbenzene	0.0424	89	-4.3	100
o-Xylene	0.0186	79	-11.5	100
1,2,4-Trimethylbenzene	0.0213	81	-7	100
1-Ethyl-2-pyrrolidone	0.0867	43	-4.6	100
2-Ethyl-1,3-hexanediol	0.4301	47	-13	100
Dimethyl phthalate	0.0394	76	-1.1	100
Benzophenone	0.0157	65	-2.5	100
Atraton	0.0506	43	6.5	100
2,4,6-Triallyloxyl-1,3,5-triazine	0.2854	59	0.6	99.1
Tridipane	0.0282	42	-3.2	100

Ghattuq, winter sampling, replicate 2

Compound Name	Amount/Conc	LMS	R.T. Diff(sec)	Purity
Ethylbenzene	0.0424	89	-4.3	100
o-Xylene	0.0186	79	-11.5	100
1,2,4-Trimethylbenzene	0.0213	81	-7	100
1-Ethyl-2-pyrrolidone	0.0867	43	-4.6	100
2-Ethyl-1,3-hexanediol	0.4301	47	-13	100
Dimethyl phthalate	0.0394	76	-1.1	100
Benzophenone	0.0157	65	-2.5	100
Atraton	0.0506	43	6.5	100
2,4,6-Triallyloxyl-1,3,5-triazine	0.2854	59	0.6	99.1
Tridipane	0.0282	42	-3.2	100

Fontana, Summer sampling, replicate 1

Compound Name	Amount/Conc	LMS	R.T. Diff(sec)	Purity
1,2,4-Trichlorobenzene	0.0043	49	2.7	100
1,2,4-Trimethylbenzene	0.0342	81	-0.7	100
1-Ethyl-2-pyrrolidone	0.1667	46	0.8	99.4

1-Naphthylamine	0.0021	56	-5.3	100
2-Ethyl-1,3-hexanediol	0.7824	49	-7.7	100
alpha Isomethyl Ionone	0.0186	44	-5.1	100
Azobenzene	0.0079	66	9.4	100
Caffeine	0.0161	53	4.8	100
Carbamazepine	0.2248	89	3.2	99.9
Diclofenac artifact	0.1088	71	5.4	94.9
Dimethyl phthalate	0.0476	76	4.2	100
d-Limonene	0.3266	94	-0.2	100
Gabapentin	0.0101	40	11.6	100
Kinoprene	0.0307	46	-0.1	99.8
Lidocaine	0.0279	40	4.1	100
m-Cresol (3-methylphenol)	0.0162	43	4.6	100
Methoprene II	0.0254	45	-9.5	100
m-Xylene	0.0784	93	-6.2	100
Naphthalene	0.0095	85	3.5	100
p-Cresol (4-methylphenol)	0.0162	43	5.1	100
p-Isopropyltoluene	0.0076	48	1.4	97
Sulfur (S8)	0.1843	81	3.9	100
Tridiphan	0.0757	42	2.2	100

Fontana, summer sampling, replicate 2

Compound Name	Amount/Conc	LMS	R.T. Diff(sec)	Purity
1,2,4-Trichlorobenzene	0.0038	46	2.5	100
1,2,4-Trimethylbenzene	0.0335	72	-0.9	100
1-Ethyl-2-pyrrolidone	0.2011	45	0.9	99.1
2-Ethyl-1,3-hexanediol	0.525	49	-7.8	100
2-Octyl-4-isothiazolin-3-one	0.055	43	11.1	100
Azobenzene	0.0099	68	9.3	99.7
Caffeine	0.0201	52	4.7	100
Carbamazepine	0.2811	90	3.3	100
Dimethomorph	0.1324	43	13.3	100
Dimethyl phthalate	0.0413	74	4.3	100
d-Limonene	0.2924	95	-0.4	100
Drometrizole	1.9273	90	6.5	100
Kinoprene	0.0337	46	0.1	100
m-Cresol (3-methylphenol)	0.019	45	4.4	100
Methoprene II	0.0259	45	-9.4	100
m-Xylene	0.0718	90	-6.8	100
Naphthalene	0.0097	69	3.4	100
p-Cresol (4-methylphenol)	0.0188	45	5	100
Sulfur (S8)	0.0498	51	3.9	100
Tributyl phosphate	0.0362	50	4.6	100
Tridiphan	0.0568	41	2.1	100
Vanillin	0.0593	44	2.8	99

Fontana, Winter sampling, replicate 1

Compound Name	Amount/Conc	LMS	R.T. Diff(sec)	Purity
Ethylbenzene	0.0891	87	-4.1	100
o-Xylene	0.0265	62	-11.3	100
Indane	0.0034	47	-6.7	100

Biphenyl	0.001	51	-2.7	100
Vanillin	0.7888	73	-2.9	100
Chloroneb	10.9439	49	0	100
2,4-Di-tert-butylphenol	3.0557	98	-0.1	100
1-Naphthylamine	0.0033	49	-10.3	100
Ibuprofen	0.0458	59	-0.6	100
Benzophenone	0.1039	91	-2.4	100
Farnesol	0.7067	41	-6.4	74.6
Diallyl phthalate	0.0306	56	-1.6	99.7
2,4,6-Triallyloxy-1,3,5-triazine	0.752	55	0.8	100
Isopropyl myristate	0.6839	67	-1.7	99.8
Benzyl Salicylate	0.255	57	3.4	93.1
Flurenol-methylester	0.3065	44	11.4	98.9
Fenpropidin	0.4196	45	-2.1	96.8
Sulfur (S8)	17.5016	85	0.3	100
4,4'-Methylenebis (phenyl isocyanate)	2.5773	81	1	100
Diclofenac artifact	0.7217	67	0.4	100
Carbamazepine	0.3606	80	-1.5	99.7
Bis(2-ethylhexyl) adipate	5.9099	83	3.1	100
Triphenyl phosphate	0.2049	67	0.1	99.4
bis(2-ethylhexyl)phthalate (DEHP)	7.3347	89	-3.6	100

Fontana, Winter sampling, replicate 2

Compound Name	Amount/Conc	LMS	R.T. Diff(sec)	Purity
Ethylbenzene	0.0986	94	-4.5	100
o-Xylene	0.0326	85	-11.6	100
2-tert-Butylcyclohexanone	0.0071	63	-4.9	100
2-Ethyl-1,3-hexanediol	0.3419	47	-13	99.9
Biphenyl	0.0007	70	-2.8	100
2-Methoxynaphthalene	0.0056	41	-1.3	100
acenaphthene	0.0094	41	-13.5	100
Dibenzofuran	0.0013	53	-1.1	79.8
1-Naphthylamine	0.0033	60	-10.2	99
Benzophenone	0.0804	94	-2.4	100
Tributyl phosphate	0.0122	45	-0.5	100
Promecarb	0.0346	46	1.1	100
2,4,6-Triallyloxy-1,3,5-triazine	0.2793	55	0.7	99
Carbazole	0.0061	42	7.7	100
Lidocaine	0.0646	48	-0.7	100
Tridiphan	0.0391	42	-3	100
Sulfur (S8)	0.4727	91	-1.7	100
Thiabendazole	0.0517	44	-6.9	100
4,4'-Methylenebis (phenyl isocyanate)	0.3308	66	0.8	100
Diclofenac artifact	0.6031	84	0.1	100
Carbamazepine	0.2811	84	-2.3	100

Dingli, summer sampling, replicate 1

Compound Name	Amount/Conc	LMS	R.T. Diff(sec)	Purity
1,2,4-Trimethylbenzene	0.0355	75	-0.8	100
1-Ethyl-2-pyrrolidone	0.2531	47	0.7	99.8

2-Ethyl-1,3-hexanediol	0.8268	49	-7.8	100
4-Methylanisole	0.002	43	-11.1	100
alpha Isomethyl Ionone	0.0239	42	-5.1	100
Atraton	0.0487	40	11.9	100
Azobenzene	0.0048	63	9.3	97.9
Benzyl alcohol	0.0435	41	-4.9	100
Bromoform	0.0375	65	-5.3	100
Carbamazepine	0.0332	70	3.4	100
Dimethomorph	0.1515	42	13.4	100
Dimethyl phthalate	0.0424	73	4.3	100
d-Limonene	0.3355	94	-0.6	100
Methoprene II	0.0367	45	-9.4	100
m-Xylene	0.0802	91	-6.8	100
Naphthalene	0.0099	72	3.4	100
Naproxen	0.0763	41	-0.9	100
Squalane	2.3191	43	9.4	100
Tridiphan	0.0831	42	2.2	100

Dingli, summer sampling, replicate 2

Compound Name	Amount/Conc	LMS	R.T. Diff(sec)	Purity
1,1,2,2-Tetrachloroethane	0.3172	87	-0.1	100
1,2,4-Trimethylbenzene	0.0672	75	-0.8	98.5
1-Ethyl-2-pyrrolidone	0.3498	46	1	99.8
2,4,6-Triallyloxyl-1,3,5-triazine	0.7249	52	5.6	98.8
2-Ethyl-1,3-hexanediol	1.0569	48	-7.7	100
2-Octyl-4-isothiazolin-3-one	0.1551	45	11	100
Azobenzene	0.0299	75	9.1	100
Biphenyl	0.0012	64	2.5	100
Bromoform	0.0386	69	-5.3	100
Carbamazepine	0.033	64	3.5	100
Dimethyl phthalate	0.0512	70	4.1	100
d-Limonene	0.3741	82	-0.3	100
Drometrizole	0.2666	57	6.7	100
Indane	0.0489	77	-10.5	100
Isopropyl myristate	0.027	49	2.9	100
Isopropylbenzene	0.9914	92	-2.2	100
m-Cresol (3-methylphenol)	0.0202	52	3.9	97.8
Methoprene II	0.0354	46	-9.7	100
m-Xylene	0.4533	98	-6.8	100
N,N-Dimethylaniline	0.0043	52	-0.1	100
Naphthalene	0.0152	79	3.7	100
n-Propylbenzene	1.5726	97	-1	100
p-Cresol (4-methylphenol)	0.0205	52	4.5	97.8
p-Isopropyltoluene	0.0105	42	1.5	100
sec-Butylbenzene	0.0403	61	1.1	100
Sulfur (S8)	0.0534	41	4.1	100
Tridiphan	0.0926	41	2.3	100
Vanillin	0.2047	66	2.4	100

Dingli, winter sampling, replicate 1

Compound Name	Amount/Conc	LMS	R.T. Diff(sec)	Purity
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Ethylbenzene	0.0512	93	-4.1	100
o-Xylene	0.0174	85	-11.6	100
1,2,4-Trimethylbenzene	0.0245	93	-6.8	100
Indane	0.0029	56	-6.7	100
2-Ethyl-1,3-hexanediol	0.3805	47	-13	100
Biphenyl	0.0004	72	-2.8	100
Dimethyl phthalate	0.0384	84	-0.9	100
Dibenzofuran	0.0009	42	-1.6	100
Gabapentin	0.007	40	6.7	100
Benzophenone	0.0279	87	-2.3	100
2,4,6-Triallyloxyl-1,3,5-triazine	0.288	58	0.4	99.4
Tridiphan	0.0271	41	-3.3	100
Fenpropidin	0.0391	41	-3.4	97.3
Sulfur (S8)	1.9967	89	-1.6	100
4,4'-Methylenebis (phenyl isocyanate)	0.4181	73	0.7	100
Carbamazepine	0.0378	41	-2.3	92.6

Dingli, winter sampling, replicate 2

Compound Name	Amount/Conc	LMS	R.T. Diff(sec)	Purity
Ethylbenzene	0.0681	91	-4.3	100
o-Xylene	0.026	86	-11.5	100
1,2,4-Trimethylbenzene	0.0333	87	-7.2	100
1-Ethyl-2-pyrrolidone	0.0816	44	-4.8	97.1
4-Chlorophenol	0.0938	43	-13.9	100
2-Ethyl-1,3-hexanediol	0.3029	48	-13.2	99.6
Biphenyl	0.0005	78	-2.9	100
Dimethyl phthalate	0.0377	84	-1	100
Fluorene	0.0017	58	-1.8	100
Benzophenone	0.0328	90	-2.6	99.8
Atraton	0.0516	44	6.6	100
2,4,6-Triallyloxyl-1,3,5-triazine	0.2183	56	0.3	98.5
Tridiphan	0.0246	42	-3.3	100
4,4'-Methylenebis (phenyl isocyanate)	0.0694	52	0.7	100
Diclofenac artifact	0.0786	56	0	100
Carbamazepine	0.032	59	-2.4	99.7

Iklin, summer sampling, replicate 1

Compound Name	Amount/Conc	LMS	R.T. Diff(sec)	Purity
1,2,4-Trichlorobenzene	0.0057	47	3.1	100
1-Ethyl-2-pyrrolidone	0.3419	42	0.8	100
2,4,6-Tribromophenol	5.3542	95	2.4	100
2-Ethyl-4-methyl-1,3-dioxolane	0.1595	49	0.2	100
2-Octyl-4-isothiazolin-3-one	0.0801	42	10.8	100
alpha Isomethyl Ionone	0.0561	49	-5.4	100
Atraton	0.0509	40	11.7	100
Benzonitrile	0.0038	43	1.3	100
Bromoform	101.7147	98	-4.7	100
Chlorodibromomethane	1.4672	97	-7.9	100
d-Limonene	0.3977	85	2.8	100
Drometrizole	0.3219	75	6.7	100

Linalool	0.018	42	8.3	100
Methoprene II	0.0404	46	-9.3	94.4
Naphthalene	0.0093	63	3.7	100
Pentachlorophenol	2.0041	40	-2.2	100
Propyzamide	0.1303	49	-16.3	100
Sulfur (S8)	0.1246	69	4.1	100
Tridiphan	0.0931	42	2.2	100
Triphenyl phosphate	0.041	46	5.1	100

Iklin, summer sampling, replicate 2

Compound Name	Amount/Conc	LMS	R.T. Diff(sec)	Purity
1-Decanol	0.4718	43	-3.4	100
1-Ethyl-2-pyrrolidone	0.3057	47	0.9	100
2,4,6-Triallyloxyl-1,3,5-triazine	0.5909	49	5.6	97.9
2,4,6-Tribromophenol	3.0932	95	2.3	100
2-Ethyl-1,3-hexanediol	0.8683	49	-7.8	100
2-Octyl-4-isothiazolin-3-one	0.0402	40	10.6	100
4-Methylanisole	0.0017	44	9	100
Azobenzene	0.0086	71	9.4	100
Bromoform	95.9727	99	-4.5	100
Chlorodibromomethane	1.3571	97	-7.9	100
Dimethyl phthalate	0.0636	79	4.4	100
d-Limonene	0.2655	76	-0.4	100
Fenpiclonil	2.3367	41	15.8	99.9
Indane	0.0043	43	-0.2	100
Naphthalene	0.0091	62	3.4	100
Nerolidol	0.1689	45	-5.9	81.3
n-Propylbenzene	0.0167	52	-0.4	100
Pentachlorophenol	0.8269	41	-1.9	100
Sulfur (S8)	0.0471	57	4	100
Tridiphan	0.0853	42	2.1	100
Triphenyl phosphate	0.0374	58	5	100

Iklin, winter sampling, replicate 1

Compound Name	Amount/Conc	LMS	R.T. Diff(sec)	Purity
Ethylbenzene	0.058	91	-4.4	100
Bromoform	0.018	44	-11.5	100
1,3,5-Trimethylbenzene	0.0283	68	-13.6	100
1,2,4-Trimethylbenzene	0.0274	86	-6.8	100
Indane	0.0042	71	-6.7	100
1-Ethyl-2-pyrrolidone	0.1007	48	-4.7	100
2-Ethyl-1,3-hexanediol	0.4504	47	-13.1	100
2-Methoxynaphthalene	0.0036	43	-1.6	100
Dimethyl phthalate	0.0336	77	-1.1	100
Benzophenone	0.0284	84	-2.5	100
2,4,6-Triallyloxyl-1,3,5-triazine	0.2585	55	0.2	98.8
Phenanthrene	0.0073	84	-2.3	99.4
Anthracene	0.0094	84	-9.1	99.4
Tridiphan	0.0289	42	-3.4	99.9
Imidacloprid	1.0832	44	-1.9	100

Carbamazepine	0.1533	84	-2.4	100
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Iklin, winter sampling, replicate 2

Compound Name	Amount/Conc	LMS	R.T. Diff(sec)	Purity
Ethylbenzene	0.0561	89	-4.4	100
Bromoform	0.0185	54	-11.5	100
o-Xylene	0.0225	76	-11.6	100
tert-Butylbenzene	0.0044	42	-5	100
1,2,4-Trimethylbenzene	0.0275	86	-6.8	100
1-Ethyl-2-pyrrolidone	0.1002	55	-4.9	98.5
2-Ethyl-1,3-hexanediol	0.3484	48	-13.1	99.9
Biphenyl	0.0004	53	-3	100
2-Methoxynaphthalene	0.0039	44	-1.3	100
Dimethyl phthalate	0.0394	83	-1.1	100
Dibenzofuran	0.0015	51	-1.6	100
Benzophenone	0.0334	86	-2.6	100
Atraton	0.0478	42	6.6	100
2,4,6-Triallyloxyl-1,3,5-triazine	0.2658	58	0.5	99
Tridiphan	0.0361	42	-3.1	100
Sulfur (S8)	0.5427	89	-1.9	100
4,4'-Methylenebis (phenyl isocyanate)	0.2062	66	0.6	100
Imidacloprid	1.2732	45	-2.1	98.4
Carbamazepine	0.1652	86	-2.5	100

Inland surface water

Il-Luq, summer sampling, replicate 1

Compound Name	Amount/Conc	LMS	R.T. Diff(sec)	Purity
1,2,4-Trichlorobenzene	0.0044	64	2.8	100
1,2,4-Trimethylbenzene	0.0356	80	-0.9	99.5
1-Ethyl-2-pyrrolidone	0.2505	45	0.7	99.2
2,4,6-Triallyloxyl-1,3,5-triazine	0.6056	46	5.3	97.9
2,4,6-Tribromophenol	0.1206	71	2.6	100
2-Ethyl-1,3-hexanediol	1.0444	49	-7.7	100
4-Methylanisole	0.0024	44	9.2	100
Atraton	0.0839	40	11.6	100
Benzyl alcohol	0.0924	40	-4.7	100
Bromoform	0.0382	69	-5.5	100
Caffeine	0.033	68	4.6	100
Carbazole	0.0133	52	12.8	100
Diethyl phthalate	0.1276	56	3.4	100
Dimethyl phthalate	0.042	71	4.3	100
d-Limonene	0.6363	96	-0.4	100
Indane	0.0041	45	-0.7	100
Isopropyl myristate	0.0268	44	2.8	100
Kinoprene	0.787	41	-15.4	99.9
m-Cresol (3-methylphenol)	0.02	48	4.2	100
Methoprene II	0.026	46	-9.5	100
m-Xylene	0.0864	91	-6.9	100

Naphthalene	0.0101	66	3.6	100
n-Propylbenzene	0.0396	59	7.9	100
p-Cresol (4-methylphenol)	0.02	48	4.8	100
Squalane	6.6527	59	8.7	100
Sulfur (S8)	0.2164	86	4.1	100

II-Luq, summer sampling, replicate 2

Compound Name	Amount/Conc	LMS	R.T. Diff(sec)	Purity
m-Xylene	0.0867	91	-5.9	100
Bromoform	0.0349	58	-4.7	100
1,2,4-Trimethylbenzene	0.0316	78	-0.7	100
d-Limonene	0.4127	93	-0.4	100
p-Cresol (4-methylphenol)	0.0181	41	4.4	100
m-Cresol (3-methylphenol)	0.0181	41	3.8	100
1-Ethyl-2-pyrrolidone	0.2184	45	0.7	98.5
Naphthalene	0.009	69	3.6	100
2-Ethyl-1,3-hexanediol	0.9979	48	-7.8	99.9
1-Decanol	0.5448	43	-3.2	100
Biphenyl	0.0006	43	2.6	100
Dimethyl phthalate	0.039	76	4.3	100
alpha Isomethyl Ionone	0.0297	44	-5.4	100
Fluorene	0.0015	48	3.7	100
Azobenzene	0.0055	54	9.4	99.6
2,4,6-Tribromophenol	0.1172	79	2.5	99.9
Isopropyl myristate	0.0282	46	2.8	100
Caffeine	0.0276	64	4.6	100
Tridiphan	0.0323	40	2	100
Sulfur (S8)	0.689	91	3.8	100
Squalane	5.3121	65	8.3	99.5

II-Luq, winter sampling, replicate 1

Compound Name	Amount/Conc	LMS	R.T. Diff(sec)	Purity
1,2,4-Trimethylbenzene	0.0317	89	-6.9	100
1-Ethyl-2-pyrrolidone	0.1109	47	-4.6	98.3
2,4,6-Triallyloxy-1,3,5-triazine	0.2165	54	0.5	98.7
2,4,6-Tribromophenol	0.322	85	-2.9	99.9
2-Ethyl-1,3-hexanediol	0.356	47	-12.9	100
4,4'-Methylenebis (phenyl isocyanate)	0.1225	51	1.1	100
4-Chlorophenol	0.093	40	-13.7	100
Benzophenone	0.0345	82	-2.5	100
Biphenyl	0.0006	48	-2.9	100
Bisphenol A	0.0273	43	-4.1	99.2
Bromoform	3.2183	97	-11.9	100
Dimethyl phthalate	0.0396	73	-0.5	100
Ethylbenzene	0.0503	90	-12.8	100
Isopropyl myristate	0.1778	83	-1.9	100
o-Xylene	0.0265	67	-12	100
Tridiphan	0.0345	42	-2.8	100

II-Luq, winter sampling, replicate 2

Compound Name	Amount/Conc	LMS	R.T. Diff(sec)	Purity
1,2,4-Trimethylbenzene	0.0316	70	-7.4	100
1,3,5-Trimethylbenzene	0.0086	45	5.5	100
2,4,6-Triallyloxyl-1,3,5-triazine	0.2003	55	0.5	98.9
2,4,6-Tribromophenol	0.3259	88	-2.8	100
2,4-Di-tert-butylphenol	3.5681	98	-1.9	100
2-Methoxynaphthalene	0.0085	50	-1.3	100
4,4'-Methylenebis (phenyl isocyanate)	0.2097	48	1	100
4-tert-Octylphenol	0.014	49	-0.8	98.4
Benzophenone	0.0496	84	-2.4	100
Benzyl alcohol	0.0499	73	-2.1	100
bis(2-ethylhexyl)phthalate (DEHP)	2.1364	83	-3.6	100
Bromoform	3.2781	97	-12.6	100
Chloroneb	12.7785	49	-1.8	100
Cloquintocet-mexyl	0.0624	42	1.3	100
Diallyl phthalate	0.0272	61	-1.6	100
Diclofenac artifact	0.1701	44	0.2	99.9
Dimethyl phthalate	0.0541	66	-0.9	100
Drometrizole	0.2862	63	1.4	100
Ethylbenzene	0.0724	91	-5.4	100
Farnesol	1.2636	43	-6.1	100
Fluoranthene	0.0017	41	-2.9	100
Isopropyl myristate	0.6421	88	-1.8	100
Octyl-methoxycinnamate	0.0262	46	2.3	99.8
o-Xylene	0.0285	72	-12.4	100
Padimate O	0.0527	53	2.3	99.5
Sulfur (S8)	0.1293	88	-1.7	100
Triphenyl phosphate	0.1011	63	-0.1	100
Vanillin	0.359	74	-2.7	99.9

Il-lunzjata, summer sampling, replicate 1

Compound Name	Amount/Conc	LMS	R.T. Diff(sec)	Purity
1,2,4-Trimethylbenzene	0.0476	90	-0.7	100
1-Ethyl-2-pyrrolidone	0.2468	46	0.6	99.8
2,4,6-Tribromophenol	0.0212	55	2.2	100
2,4-Di-tert-butylphenol	1.2608	99	2.9	100
2-Ethyl-1,3-hexanediol	0.9076	49	-7.8	99.9
2-Octyl-4-isothiazolin-3-one	0.0305	41	10.5	100
3-Chlorophenol	0.0316	41	-7	100
4-Methylanisole	0.0014	46	9.4	100
Azobenzene	0.0079	78	9.5	100
Benzenesulfonamide, N-butyl	42.4612	95	4	100
Bromoform	0.4193	96	-5.1	100
Carbamazepine	0.2846	89	3.2	100
Diisobutyl phthalate	0.244	96	5	100
Dimethyl phthalate	0.0558	82	4.1	100
d-Limonene	0.483	91	-0.2	100
Fenpiclonil	2.3447	41	15.7	100
Hexadecane	15.1895	99	4.3	100
Indane	0.0047	64	-0.9	100

Isopropyl myristate	0.0215	42	3	100
m-Xylene	0.1116	96	-6.4	100
N,N-Diethyl-m-toluamide	0.013	45	5.2	100
N,N-Dimethylaniline	0.0015	42	-1.9	100
Naphthalene	0.0111	77	3.5	100
n-Propylbenzene	0.0108	44	-0.9	100
Propylamide	0.0525	48	-16.2	100
Squalane	3.143	42	8.7	100
Sulfur (S8)	0.0844	79	4	100
Tetrachloroethylene	0.0668	91	-7.4	100
Tridipane	0.0822	42	2.1	100

Il-Lunzjata, summer sampling, replicate 2

Compound Name	Amount/Conc	LMS	R.T. Diff(sec)	Purity
Bromoform	0.2822	95	-5.3	100
1,2,4-Trimethylbenzene	0.0411	79	-0.9	100
d-Limonene	0.3033	94	-0.4	100
1-Ethyl-2-pyrrolidone	0.2462	47	0.9	99.8
Naphthalene	0.0108	74	3.6	100
2-Ethyl-1,3-hexanediol	0.979	49	-7.8	100
Biphenyl	0.0004	51	2.7	100
Dimethyl phthalate	0.057	84	4.3	100
Azobenzene	0.0073	68	9.3	100
Propylamide	0.0716	44	-16.1	100
Plifenat	0.1183	43	16.3	100
Tridipane	0.0842	42	2.1	100
Sulfur (S8)	0.0225	59	4.1	100
Tris (2,3-epoxypropyl) isocyanate	0.2107	41	0.6	97.7
Carbamazepine	0.2791	89	3.2	100
Fenpiclonil	2.2678	41	15.9	100
Squalane	3.551	42	8.5	100

Il-lunzjata, winter sampling, replicate 1

Compound Name	Amount/Conc	LMS	R.T. Diff(sec)	Purity
1,2,4-Trimethylbenzene	0.0296	90	-6.9	100
1,3,5-Trimethylbenzene	0.0096	61	-5.7	100
1-Ethyl-2-pyrrolidone	0.07	44	-4.7	92.5
2,4,6-Triallyloxyl-1,3,5- triazine	0.2339	56	0.8	99.3
2-Ethyl-1,3-hexanediol	0.2804	47	-13	100
2-Methoxynaphthalene	0.0123	75	-1.6	100
4,4'-Methylenebis (phenyl isocyanate)	13.614	95	0.8	100
Atraton	0.051	43	6.8	100
Biphenyl	0.0005	72	-2.5	100
Bromoform	0.0269	75	-10.8	100
Dibenzofuran	0.0011	41	-1.2	98
Dimethyl phthalate	0.0339	85	-0.7	100
Drometrizole	0.2874	72	1.9	100
Ethylbenzene	0.0637	92	-3.2	100
Fenpropidin	0.048	43	-3.5	95.9
Fluorene	0.0018	62	-1.7	100

o-Xylene	0.0243	84	-10.8	100
p-Isopropyltoluene	0.004	64	-4.8	93.3
Sulfur (S8)	0.2586	90	-1.7	100
Tridiphan	0.0357	42	-3.2	100
Trifluralin	0.0255	54	-1.1	100

Il-lunzjata, winter sampling, replicate 2

Compound Name	Amount/Conc	LMS	R.T. Diff(sec)	Purity
1,2,4-Trimethylbenzene	0.0324	87	-6.9	100
1-Ethyl-2-pyrrolidone	0.0652	43	-4.7	98.1
2,4,6-Triallyloxy-1,3,5-triazine	0.2165	57	0.8	98.1
2-Ethyl-1,3-hexanediol	0.3241	48	-13.1	100
4,4'-Methylenebis (phenyl isocyanate)	0.2683	72	0.8	100
acenaphthene	0.0081	44	-13.6	100
Atraton	0.0528	45	6.8	100
Benzophenone	0.0291	87	-2.5	99.6
Bromoform	0.0277	64	-11.6	100
Cedrol	0.1119	42	16.6	100
Dibenzofuran	0.0016	66	-1.6	100
Diclofenac artifact	0.0608	49	-0.2	100
Dimethyl phthalate	0.0459	80	-1.1	100
Ethylbenzene	0.0737	92	-4.3	100
o-Xylene	0.0243	84	-11.5	100
p-Isopropyltoluene	0.0051	47	-4.6	96.4
Tridiphan	0.0349	43	-3.1	100
Trifluralin	0.0186	50	-1.3	100

Marsa, summer sampling, replicate 1

Compound Name	Amount/Conc	LMS	R.T. Diff(sec)	Purity
1,2,4-Trimethylbenzene	0.0287	77	-0.6	100
1-Decanol	0.5704	44	-3.5	100
1-Ethyl-2-pyrrolidone	0.1831	46	0.8	99.3
2-Ethyl-1,3-hexanediol	1.4573	49	-7.9	100
Aniline	0.0082	65	0.9	100
Atraton	0.0848	41	11.5	100
Azobenzene	0.0047	63	9	100
Benzyl alcohol	0.0588	40	-4.6	100
Bromoform	0.0305	55	-4.7	100
Caffeine	0.0173	50	4.6	100
Carbamazepine	0.0216	44	3	100
Chloroxlenol	0.0268	57	1.6	100
Diethyl phthalate	0.1865	66	3.5	100
Dimethyl phthalate	0.0659	62	4.2	100
d-Limonene	0.3947	93	-0.3	100
Isopropyl myristate	0.0248	41	3.2	100
Kinoprene	0.8564	41	-15.4	100
Methoprene II	0.0253	46	-9.5	100
m-Xylene	0.0741	89	-5.9	100
Naphthalene	0.0095	76	3.5	100
Squalane	5.3071	68	8.6	100

Sulfur (S8)	0.3381	88	3.8	100
Tridiphan	0.0333	41	2	100

Marsa, summer sampling, replicate 2

Compound Name	Amount/Conc	LMS	R.T. Diff(sec)	Purity
Bromoform	0.0448	57	-10.1	100
n-Propylbenzene	0.027	60	3.7	100
4-Methylanisole	0.0025	46	5.1	100
d-Limonene	0.5123	93	-4.5	100
Benzyl alcohol	0.0454	40	-8.6	100
1-Ethyl-2-pyrrolidone	0.2574	46	-2.7	99.9
1,2,4-Trichlorobenzene	0.0047	58	-1	100
Naphthalene	0.0109	71	0	100
Suflolane	0.1025	42	-1.7	100
1-Decanol	0.445	42	-6	97.1
Chloroxylenol	0.0355	46	-1.3	100
Vanillin	0.0941	60	-0.7	99.9
Dimethyl phthalate	0.0872	65	1.1	100
alpha Isomethyl Ionone	0.0356	48	-8.2	100
Dibenzofuran	0.0016	43	0.6	100
Fluorene	0.0032	41	0.4	100
Diethyl phthalate	0.718	69	0.4	100
Azobenzene	0.0105	69	6	83.6
Atraton	0.0919	41	8.8	99.9
2-Octyl-4-isothiazolin-3-one	0.1308	43	7.8	100
Caffeine	0.0259	52	1.6	100
Cyprodinil	0.016	52	15.6	100
Sulfur (S8)	0.0212	68	0.2	100
Drometrizole	0.4125	80	3.4	100
Naproxen	0.1762	42	-3.7	100
Methoprene II	0.2324	49	7.6	100
Squalane	5.9734	57	6	100

Marsa, winter sampling, replicate 1

Compound Name	Amount/Conc	LMS	R.T. Diff(sec)	Purity
1(3H)-Isobenzofuranone	0.0456	46	-0.8	100
1,2,4-Trimethylbenzene	0.0227	66	-5.7	100
1,6-Hexanediol diacrylate	0.6189	60	4.9	95.1
2,4,6-Triallyloxyl-1,3,5-triazine	0.3294	49	2.1	99.2
2-Ethyl-1,3-hexanediol	0.3985	49	-11.7	100
2-Methoxynaphthalene	0.0071	56	-0.1	100
3-Chlorophenol	0.0921	40	-11.1	100
Azobenzene	0.0151	68	5.7	100
Benzophenone	0.0937	89	-0.8	100
Biphenyl	0.0017	53	-1.1	99.5
Bis(2-ethylhexyl) adipate	0.6168	64	4.8	90.6
Caffeine	0.084	87	1.2	100
Coumarin	0.0308	48	1.8	100
Dimethomorph	0.1424	42	9.1	100
Dimethyl phthalate	0.0732	75	0.4	100
di-n-octyl phthalate	0.1703	50	2.4	99.4

d-Limonene	0.0631	58	-5.2	100
Ethylbenzene	0.0514	90	-3.1	100
Hexadecane	4.7832	93	0.6	100
Hexyl salicylate	0.0163	49	0.5	100
Isopropyl myristate	0.0331	42	-0.2	100
N,N-Diethyl-m-tolamide	0.0899	85	1.6	100
Naphthalene	0.0314	76	-0.6	100
Neodecanoic acid-ethenyl ester	22.6702	69	-1.8	100
Nicotine	0.0166	47	0.3	92.2
o-Xylene	0.0268	69	-10.6	100
p-Xylene	0.0623	93	-11.5	100
Terbucarb	0.896	56	11.7	100
Terpineol	0.0557	66	-0.9	100
Tetrachloroethylene	0.1865	94	-12.8	99.1
Tributyl acetylcitrate	0.1217	68	2.4	100
Tridiphan	0.0572	41	-1.2	100

Marsa, winter sampling, replicate 2

Compound Name	Amount/Conc	LMS	R.T. Diff(sec)	Purity
1(3H)-Isobenzofuranone	0.047	53	-1	100
1,2,4-Trichlorobenzene	0.0036	58	-2	100
1,2,4-Trimethylbenzene	0.0213	77	-5.9	100
1,6-Hexanediol diacrylate	0.5667	75	0.6	99.5
1-Ethyl-2-pyrrolidone	0.0973	40	-3.5	99.9
2,4,6-Triallyloxyl-1,3,5-triazine	0.519	54	2	99.2
2-Ethyl-1,3-hexanediol	0.2641	47	-11.8	100
2-Methylnaphthalene	0.0034	55	0.7	100
3,5-Dimethylphenol	0.0205	46	0.2	100
Aniline	0.008	70	-4.7	100
Azobenzene	0.0049	66	5.5	100
Benzophenone	0.0278	77	-0.7	97.3
Bis(2-ethylhexyl) adipate	0.383	58	4.7	75.1
Bisphenol A	0.1179	76	-3.6	100
Caffeine	0.0845	83	1.2	100
Chloroxylenol	0.3304	87	-1.8	100
Coumarin	0.0274	42	1.7	100
Dimethyl phthalate	0.0464	67	0.4	100
di-n-octyl phthalate	0.145	48	2.4	100
Diphenyl ether	0.0071	58	-1.1	100
d-Limonene	0.0553	62	-5.1	100
Ethylbenzene	0.0495	89	-3.7	100
Hexadecane	4.3344	96	0.5	100
Hexyl salicylate	0.0132	50	0.6	100
Isoeugenol	0.1697	45	16.7	100
Kinoprene	0.0287	41	-5.9	100
N,N-Diethyl-m-tolamide	0.0739	86	1.6	100
Naphthalene	0.0235	74	-0.8	100
Neodecanoic acid-ethenyl ester	15.5712	68	-1.9	100
o-Xylene	0.0253	75	-10.8	100
p-Xylene	0.0602	93	-12.1	100
Sulfur (S8)	0.014	62	0	100

Terbucarb	0.9348	57	11.9	100
Terpineol	0.0511	58	-1.1	100
Tetrachloroethylene	0.2151	96	-13.7	100
Triacetin	0.0324	66	-1.4	97.8
Tributyl acetylcitrate	0.0896	55	2.2	100
Tributylamine	0.5836	40	2.8	81
Tridiphan	0.0588	41	-1.3	100

Burmarrad, summer sampling, replicate 1

Compound Name	Amount/Conc	LMS	R.T. Diff(sec)	Purity
1(3H)-Isobenzofuranone	0.021	48	16.2	100
1,2,4-Trimethylbenzene	0.0294	63	-0.6	100
1-Ethyl-2-pyrrolidone	0.251	45	0.7	99.4
1H-Benzotriazole	1.0752	52	5.7	99.8
2-Ethyl-1,3-hexanediol	0.481	48	-7.8	100
2H-Indol-2-one, 1,3-dihydro	0.1249	46	-10.4	100
2-Methoxynaphthalene	0.0325	49	-1.3	100
2-Octyl-4-isothiazolin-3-one	0.2253	43	11.2	100
4-Methylanisole	0.0016	43	9.1	100
Benzenesulfonamide, 4-methyl-	3.7666	45	-3.1	100
Benzenesulfonanilide	0.3911	88	6.5	100
Cholesterol	52.8746	91	13.4	100
Dimethomorph	0.2973	44	13.4	99.7
Dimethyl phthalate	0.0986	60	4.2	100
d-Limonene	0.2982	91	-0.3	100
Methoprene II	0.4245	50	10.7	100
m-Xylene	0.0845	83	-6.6	100
Naphthalene	0.0081	64	3.6	100
Plifenat	0.1086	41	16.5	100
Sulfur (S8)	0.0851	43	4	100
Tri-(2-chloroethyl) phosphate	0.1652	76	4.1	100
Tributyl phosphate	0.1066	45	5	100
Tridiphan	0.0861	41	2.3	100
Tris-(1,3-dichloroisopropyl) phosphate	1.4675	83	5.4	100

Burmarrad, summer sampling, replicate 2

Compound Name	Amount/Conc	LMS	R.T. Diff(sec)	Purity
m-Xylene	0.0769	86	-6.7	100
Bromoform	0.0476	42	-5.3	100
n-Propylbenzene	0.0525	61	7.9	100
Aniline	0.0287	67	2.6	100
1,2,4-Trimethylbenzene	0.0285	79	-0.7	100
d-Limonene	0.3885	93	-0.4	100
p-Cresol (4-methylphenol)	0.0503	42	4.8	100
m-Cresol (3-methylphenol)	0.0503	42	4.2	100
1-Ethyl-2-pyrrolidone	0.2009	49	1.1	98.4
Naphthalene	0.0078	64	3.4	100
1(3H)-Isobenzofuranone	0.0181	55	16.2	100
2-Methoxynaphthalene	0.0306	48	-1	100
Dimethyl phthalate	0.0895	60	4.2	100

1H-Benzotriazole	1.1231	54	5.9	99.9
2-[3-Chlorophenoxy]propionamide	0.2449	49	5.6	99.9
Benzenesulfonamide, 4-methyl-	3.4553	47	-3	99.9
Tri-(2-chloroethyl) phosphate	0.1475	75	3.9	100
Caffeine	0.1082	67	4.8	100
Plifenat	0.1067	42	16.6	100
Lidocaine	0.108	41	5.8	100
Tridiphan	0.0924	42	2.4	100
Benzenesulfonanilide	0.3398	87	6.4	100
Tris-(1,3-dichloroisopropyl) phosphate	1.3135	83	5.6	100

Burmarrad, winter sampling, replicate 1

Compound Name	Amount/Conc	LMS	R.T. Diff(sec)	Purity
1(3H)-Isobenzofuranone	0.0442	50	-1.1	100
1,2,4-Trimethylbenzene	0.0209	74	-5.7	100
1,6-Hexanediol diacrylate	15.8187	15.8187	0.5	99.9
1-Ethyl-2-pyrrolidone	0.0976	51	-3.4	100
2(3H)-Benzothiazolone	1.9833	73	-1	100
2,4,6-Triallyloxyl-1,3,5-triazine	0.4926	53	2.1	99.1
2,4-Di-tert-butylphenol	0.194	95	-0.7	100
2-Methoxynaphthalene	0.0041	46	0.3	99.7
2-Methylnaphthalene	0.0031	69	0.8	100
3,5-Dimethylphenol	0.0162	42	0.1	100
4-Chlorophenol	0.1374	47	-12.5	100
Acetophenone	0.1044	91	-3.7	100
Azobenzene	0.0076	66	5.6	100
Benzonitrile	0.0006	46	-5.6	100
Benzophenone	0.038	77	-0.8	80.9
Benzyl alcohol	0.0467	80	-3.1	99.7
Bis(2-ethylhexyl) adipate	0.5426	57	4.6	100
Bisphenol A	0.0689	63	-3.6	100
Bromoform	0.1203	93	-10.3	100
Caffeine	0.0836	83	1	100
Chlorodibromomethane	1.0201	95	-13.4	100
Dimethyl phthalate	0.0536	57	0.3	100
di-n-butyl phthalate	0.2767	89	-1	99.6
di-n-octyl phthalate	0.1734	50	2.1	99.9
Diphenyl ether	0.0079	52	-1	100
d-Limonene	0.052	58	-4.9	100
Ethylbenzene	0.0497	90	-3	100
Glutaraldehyde	1.1521	40	5.9	100
Hexadecane	4.2203	98	0.3	100
Hexyl salicylate	0.0113	46	0.5	99.9
m-Xylene	0.06	93	-11.7	100
N,N-Diethyl-m-tolamide	0.0635	78	1.5	100
Naphthalene	0.0207	81	-0.9	100
Neodecanoic acid-ethenyl ester	15.1207	68	-1.9	99.7
Phenol	0.1449	88	-3.1	100
p-Xylene	0.06	92	-11.5	100

Terbucarb	0.8164	57	11.8	100
Tetrachloroethylene	0.2635	95	-12.6	100
Tributyl acetylcitrate	0.0775	42	2	100
Tridiphan	0.0514	42	-1.4	100
Tris-(1,3-dichloroisopropyl) phosphate	0.0627	53	1.8	100

Burmarrad, winter sampling, replicate 2

Compound Name	Amount/Conc	LMS	R.T. Diff(sec)	Purity
1(3H)-Isobenzofuranone	0.0508	57	-1.1	100
1,6-Hexanediol diacrylate	20.8943	95	0.8	99.9
1-Ethyl-2-pyrrolidone	0.1045	46	-3.4	99.9
2(3H)-Benzothiazolone	2.3779	71	-0.9	99.8
2,4,6-Triallyloxyl-1,3,5-triazine	0.2964	49	2	99.4
2,4-Di-tert-butylphenol	0.1388	91	-0.7	100
2-Methylnaphthalene	0.0036	80	0.6	100
2-Nitrophenol	0.026	48	-0.3	100
Acetophenone	0.0998	90	-3.9	100
Azobenzene	0.0066	69	5.4	100
Benzophenone	0.0308	82	-1	95
Benzyl alcohol	0.0425	78	-3.3	100
Bis(2-ethylhexyl) adipate	0.6375	51	4.5	98.3
bis(2-ethylhexyl)phthalate (DEHP)	1.7645	93	-1.9	100
Bisphenol A	0.0186	44	-3.7	100
Bromoform	0.1157	89	-10.7	100
Caffeine	0.0792	86	1.1	100
Chlorodibromomethane	1.0578	95	-14.2	100
Dibenzofuran	0.0023	50	-0.1	100
Diethyl phthalate	0.2193	63	-0.2	100
Dimethyl phthalate	0.0461	68	0.6	100
di-n-butyl phthalate	0.2694	84	-1.1	99.5
di-n-octyl phthalate	0.5272	50	2.1	100
Diphenyl ether	0.0072	71	-1.2	99.9
d-Limonene	0.0617	65	-5.3	100
Ethylbenzene	0.052	88	-3.4	100
Glutaraldehyde	1.5025	42	5.3	100
Hexadecane	4.3496	98	0.4	100
Hexyl salicylate	0.0125	58	0.6	99.3
Isophorone	0.0123	43	-0.7	100
Isopropyl myristate	0.0649	54	-0.3	100
Kinoprene	0.0201	44	-6	96.4
m-Xylene	0.0636	93	-12.1	100
N,N-Diethyl-m-tolamide	0.0633	81	1.6	100
Naphthalene	0.0217	78	-0.7	100
Neodecanoic acid-ethenyl ester	23.2781	69	-1.9	100
o-Xylene	0.029	70	-10.8	100
Phenol	0.1507	86	-3.3	100
p-Xylene	0.0636	93	-11.9	100
Terbucarb	0.7247	57	11.6	100
Tetrachloroethylene	0.258	96	-13.4	100
Tributyl acetylcitrate	0.0637	52	2.1	100
Tributylamine	0.581	40	2.8	98.8

Tridiphan	0.0478	40	-1.4	100
Tris-(1,3-dichloroisopropyl) phosphate	0.0479	44	1.7	100

Bahrija, summer sampling, replicate 1

Compound Name	Amount/Conc	LMS	R.T. Diff(sec)	Purity
1,2,4-Trimethylbenzene	0.0355	70	-4.7	100
1-Ethyl-2-pyrrolidone	0.2589	46	-2.6	98
2-Octyl-4-isothiazolin-3-one	0.0801	44	7.5	100
Azobenzene	0.0116	71	6.1	100
Caffeine	0.0259	57	1.5	100
Dimethomorph	0.1273	40	8.9	100
Dimethyl phthalate	0.0676	87	1.1	100
d-Limonene	0.442	94	-4.2	100
Methoprene II	0.1478	48	7.1	100
m-Xylene	0.0867	90	-11.1	100
Naphthalene	0.012	79	0	100
Naproxen	0.1065	41	-3.8	100
n-Propylbenzene	0.0313	64	3.8	100
Plifenat	0.1024	42	12.9	100
Suflolane	0.0954	43	-1.6	98.1
Tridiphan	0.0571	42	-0.9	100
Vanillin	0.1032	48	-0.5	100

Bahrija, summer sampling, replicate 2

Compound Name	Amount/Conc	LMS	R.T. Diff(sec)	Purity
m-Xylene	0.0911	93	-10	100
Bromoform	0.0368	48	-8.7	100
1,2,4-Trimethylbenzene	0.039	87	-4.4	100
sec-Butylbenzene	0.0074	41	1.4	99.8
4-Methylanisole	0.002	47	5.4	100
p-Isopropyltoluene	0.0281	49	-2	100
d-Limonene	0.4289	94	-4	100
Benzyl alcohol	0.058	42	-8.4	100
Indane	0.0056	42	-4.2	100
1-Ethyl-2-pyrrolidone	0.2696	47	-2.5	99.2
Naphthalene	0.0125	77	-0.1	100
Suflolane	0.102	46	-1.5	98.6
Vanillin	0.0732	56	-0.4	100
Dimethyl phthalate	0.0922	89	1.1	100
Azobenzene	0.0172	76	5.9	100
2,4,6-Triallyloxyl-1,3,5-triazine	0.6068	41	2.3	96.7
Caffeine	0.0185	64	1.6	98.7
Tridiphan	0.0484	43	-1.3	100
4,4'-Methylenebis (phenyl isocyanate)	0.459	72	2.7	100
Triphenyl phosphate	0.0499	41	1.6	100

Bahrija, winter sampling, replicate 1

Compound Name	Amount/Conc	LMS	R.T. Diff(sec)	Purity
1,2,4-Trimethylbenzene	0.0141	73	-5.5	100
1,6-Hexanediol diacrylate	0.1025	64	0.7	99.5

2,4,6-Triallyloxyl-1,3,5-triazine	0.4619	61	2	98.4
2,4-Di-tert-butylphenol	0.1654	96	-0.7	100
2-Ethyl-1,3-hexanediol	0.2793	48	-11.9	100
2-Methylnaphthalene	0.0023	78	0.6	100
4,4'-Methylenebis (phenyl isocyanate)	0.0651	46	2.4	100
Acetophenone	0.0351	75	-3.3	100
Atraton	0.033	43	8.1	99.9
Benzophenone	0.0186	77	-0.8	100
Bis(2-ethylhexyl) adipate	0.5284	41	4.6	100
bis(2-ethylhexyl)phthalate (DEHP)	1.5188	93	-1.9	100
Dimethyl phthalate	0.0209	66	0.6	100
di-n-butyl phthalate	0.1888	88	-1.1	100
di-n-octyl phthalate	0.1163	50	2.1	100
Diphenyl ether	0.0045	74	-1.1	99.8
Ethylbenzene	0.0348	83	-2.4	100
Fluoranthene	0.0053	86	-1.3	100
Hexadecane	3.7245	99	0.2	100
m-Xylene	0.0403	88	-11.1	100
Naphthalene	0.0124	85	-0.6	100
Neodecanoic acid-ethenyl ester	15.6567	68	-2	100
o-Xylene	0.0105	61	-9.9	100
p-Xylene	0.0423	87	-10.8	100
Pyrene	0.0044	40	1.3	100
Terbucarb	0.2995	56	11.7	100
Tetrachloroethylene	0.1985	95	-11.9	100
Tributyl acetylcitrate	0.043	50	2.1	100
Tridiphan	0.0209	41	-1.7	100

Bahrija, winter sampling, replicate 2

Compound Name	Amount/Conc	LMS	R.T. Diff(sec)	Purity
1,2,4-Trimethylbenzene	0.0158	76	-5.6	100
1,6-Hexanediol diacrylate	0.1563	65	0.5	99.7
2,4,6-Triallyloxyl-1,3,5-triazine	0.371	57	1.9	98.8
2,4-Di-tert-butylphenol	0.1593	97	-0.8	100
2-Ethyl-1,3-hexanediol	0.2267	48	-11.8	100
2-Methylnaphthalene	0.0023	60	0.9	100
4,4'-Methylenebis (phenyl isocyanate)	0.2206	71	2.7	100
Acetophenone	0.0403	79	-3.2	100
Anthracene	0.0032	63	-0.6	100
Atraton	0.0329	42	8.2	99.8
Benz[a]anthracene	0.0353	81	1.8	98.7
Benzo[ghi]perylene	0.0226	48	6.3	100
Benzophenone	0.019	63	-0.7	97.1
Biphenyl	0.0005	44	-1.1	100
bis(2-ethylhexyl)phthalate (DEHP)	2.085	93	-1.8	100
Butylated hydroxytoluene	0.0059	51	-0.1	99.8
Carbazole	0.0034	66	2.4	100
Chrysene	0.0197	84	-2.7	99
Cypermethrin II	0.0345	57	1.5	97.5
Cypermethrin III	0.0303	57	-2	98.4

Dimethyl phthalate	0.0276	74	0.5	100
di-n-butyl phthalate	0.2929	88	-1.1	100
di-n-octyl phthalate	0.1882	53	2	100
Diphenyl ether	0.0051	66	-1	99.9
Ethylbenzene	0.0339	87	-2.4	100
Fenpropidin	0.0239	44	-1.8	99.9
Fluoranthene	0.0389	93	-1.2	100
Hexadecane	3.2795	99	0.3	100
Isopropyl myristate	0.0985	70	-0.4	100
m-Xylene	0.0421	90	-11.1	100
Naphthalene	0.0109	86	-0.7	100
Neodecanoic acid-ethenyl ester	12.89	68	-1.9	100
Phenanthrene	0.0172	89	-0.6	100
p-Xylene	0.0421	91	-10.9	100
Pyrene	0.0276	96	1.4	100
Terbucarb	0.3237	55	11.7	100
Tetrachloroethylene	0.245	95	-12.1	100
Thiabendazole	0.0331	42	4.6	100
Tridiphan	0.0232	41	-1.5	100

New water

Cumnija, summer sampling, replicate 1

Compound Name	Amount/Conc	LMS	R.T. Diff(sec)	Purity
1,2,4-Trimethylbenzene	0.0619	88	-0.9	100
1-Decanol	0.3138	41	-3.2	100
1-Ethyl-2-pyrrolidone	0.2862	48	0.7	99.5
1-Naphthylamine	0.0021	49	-5.2	100
Azobenzene	0.0237	81	9.3	100
Benzenesulfonilide	0.0186	67	5.8	100
Biphenyl	0.0007	61	2.4	100
Bromoform	0.021	47	-5.3	100
Caffeine	0.0192	62	4.7	100
Carbamazepine	0.0503	69	3.3	100
Carbazole	0.0078	54	12.9	100
Coumarin	0.0085	50	5.5	100
Dimethyl phthalate	0.0946	54	4.3	100
d-Limonene	0.5934	90	-0.4	100
Drometrizole	0.495	79	6.8	100
Indane	0.0064	50	-0.7	100
Kinoprene	0.058	56	-0.1	99.5
Methoprene II	0.0223	45	-9.6	93.6
m-Xylene	0.1232	96	-6.8	100
N,N-Dimethylaniline	0.0047	49	-0.6	100
Naphthalene	0.0147	86	3.4	100
n-Propylbenzene	0.0119	55	-0.5	100
Suflolane	0.0652	41	1.1	99
Sulfur (S8)	0.083	79	3.9	100
Tributyl phosphate	0.0567	51	4.5	100
Tridiphan	0.082	42	2.3	100
Vanillin	0.1108	57	2.6	100

Cumnija, summer sampling, replicate 2

Compound Name	Amount/Conc	LMS	R.T. Diff(sec)	Purity
m-Xylene	0.1364	95	-6.6	100
Bromoform	0.1195	88	-5.1	100
Cyclohexanone	0.1505	57	-1.2	100
n-Propylbenzene	0.025	59	7.9	100
Benzonitrile	0.0009	41	-0.7	100
1,2,4-Trimethylbenzene	0.0589	89	-0.8	100
d-Limonene	0.5309	91	-0.5	100
Indane	0.0066	45	-0.3	100
1-Ethyl-2-pyrrolidone	0.253	45	0.6	99.7
1,2,4-Trichlorobenzene	0.0051	44	2.9	100
Naphthalene	0.0139	82	3.6	100
Biphenyl	0.0006	55	2.6	100
Vanillin	0.0618	44	2.5	100
Dimethyl phthalate	0.1037	50	4.2	100
1-Naphthylamine	0.0022	46	-5	100
2-Naphthylamine	0.0145	45	-16.5	100
Azobenzene	0.0186	80	9.3	98.7
2,4,6-Tribromophenol	0.0366	56	2.6	100
Carbazole	0.0079	54	13	100
Tridiphenyl	0.0789	42	2.2	100
Kinoprene	0.0568	56	0	99.3
Benzenesulfonamide	0.0215	62	5.9	100
Sulfur (S8)	0.0217	55	4	100
Naproxen	0.0386	41	-0.8	97.3
Diclofenac artifact	0.1151	65	5.5	93.3
Carbamazepine	0.0492	70	3.2	100
Fenpiclonil	2.2358	40	15.9	100

Cumnija, winter sampling, replicate 1

Compound Name	Amount/Conc	LMS	R.T. Diff(sec)	Purity
1,6-Hexanediol diacrylate	2.5994	62	4.8	100
1-Ethyl-2-pyrrolidone	0.0943	43	-3.4	99.6
2,4,6-Triallyloxy-1,3,5-triazine	1.7792	61	2	99.7
2,4-Di-tert-butylphenol	0.1233	95	-0.7	100
2-Methoxynaphthalene	0.0041	42	0.1	100
2-Methylnaphthalene	0.0024	58	0.5	100
4-Chlorophenol	0.107	41	-12.4	100
Acetophenone	0.4764	96	-3.9	100
Benzophenone	0.0436	82	-0.9	100
Butylated hydroxytoluene	0.006	45	0	100
Caffeine	0.0215	72	1.1	99.9
Citronellol	0.199	51	-13.9	100
di-n-butyl phthalate	0.2407	88	-1.1	100
di-n-octyl phthalate	0.0921	45	2	100
Diphenyl ether	0.0058	74	-1.4	99.8
Ethylbenzene	0.0961	95	-11.3	100

Fenpiclonil	2.0691	41	12.2	100
Gabapentin	0.0423	41	8.1	100
Hexadecane	8.7282	99	0.5	100
Kinoprene	0.0224	41	-3.9	99.9
m-Xylene	0.0689	93	-11.7	100
Naphthalene	0.0152	82	-0.8	100
Neodecanoic acid-ethenyl ester	8.7841	69	-1.9	100
n-Propylbenzene	0.0223	78	-5.6	100
o-Toluidine	0.0085	40	4.8	100
o-Xylene	0.0236	62	-10.3	100
p-Xylene	0.0692	95	-11.5	100
Suflolane	0.0647	47	-2.6	99.3
Tetrachloroethylene	0.2646	95	-12.6	98.6
Tributyl acetylcitrate	0.0413	52	2	96.4
Tridiphan	0.0279	42	-1.5	100

Cumnija, winter sampling, replicate 2

Compound Name	Amount/Conc	LMS	R.T. Diff(sec)	Purity
1,2,4-Trichlorobenzene	0.0038	52	-1.5	100
1,2,4-Trimethylbenzene	0.0248	84	-5.8	100
1,6-Hexanediol diacrylate	2.5814	62	4.7	100
2,4,6-Triallyloxyl-1,3,5-triazine	1.7732	62	2	99.5
2,4-Di-tert-butylphenol	0.1076	96	-0.8	100
2-Methoxynaphthalene	0.0043	54	0.1	100
2-Methylnaphthalene	0.0028	56	0.7	100
3-Chlorophenol	0.0405	42	-11.2	100
4-Chlorophenol	0.0908	42	-12.4	100
Acetophenone	0.4285	96	-4.1	100
Aniline	0.0012	47	-4.7	78.3
Atraton	0.0525	43	8.1	100
Azobenzene	0.0069	67	5.4	100
Benzophenone	0.0434	83	-1	100
Benzyl alcohol	0.0107	46	-3	96.7
Biphenyl	0.0008	56	-1.1	99.5
Bis(2-ethylhexyl) adipate	0.7174	49	4.5	100
Butylated hydroxytoluene	0.0057	47	-0.1	100
Caffeine	0.02	71	0.9	100
Cyclohexanone	0.0673	41	-7.1	100
Dimethyl phthalate	0.0143	42	0.5	100
di-n-butyl phthalate	0.1841	88	-1.3	100
di-n-octyl phthalate	0.0695	50	2	100
Diphenyl ether	0.0047	66	-1.2	99.9
Ethylbenzene	0.0932	97	-11.6	100
Fenpiclonil	2.1165	40	12	100
Gabapentin	0.0351	41	8	100
Hexadecane	8.5318	99	0.4	100
Isopropylbenzene	0.0056	44	-7	100
Kinoprene	0.022	42	-3.7	100
m-Xylene	0.0643	96	-12	100
N,N-Dimethylaniline	0.0009	43	-6.3	100

Naphthalene	0.0137	78	-0.7	100
Neodecanoic acid-ethenyl ester	8.5768	69	-1.9	100
n-Propylbenzene	0.0251	84	-5.7	100
o-Xylene	0.0239	61	-10.4	100
p-Xylene	0.0643	96	-11.7	100
Suflolane	0.0418	45	-2.8	99.8
Terbucarb	0.3506	56	11.7	100
Tetrachloroethylene	0.2494	96	-13	100
Tridiphan	0.024	42	-1.5	100

Comparison of screening results of ERA12 and current study

Compound	In 14 and 12	Primary use category	Rationale
1,2,4-Trichlorobenzene		Industrial	Solvent, intermediate
1,2,4-Trimethylbenzene		Industrial	Solvent, fuel component
1,6-Hexanediol diacrylate	y	Industrial	Reactive monomer (coatings, resins)
1-Decanol		Industrial	Surfactant intermediate, solvent
1-Ethyl-2-pyrrolidone	y	Industrial	Industrial solvent
1-Naphthylamine		Industrial	Dye/rubber intermediate
2,4,6-Triallyloxyl-1,3,5-triazine		Industrial	Polymer crosslinker
2,4,6-Tribromophenol		Industrial	Flame retardant / intermediate
2,4-Di-tert-butylphenol		Industrial	Antioxidant intermediate
2-Methoxynaphthalene	y	Industrial	Fragrance / chemical intermediate
2-Methylnaphthalene		Industrial	PAH-related industrial hydrocarbon
2-Naphthylamine	y	Industrial	Dye intermediate
3-Chlorophenol		Industrial	Intermediate (resins, pesticides)
4-Chlorophenol		Industrial	Intermediate
Acetophenone		Industrial	Solvent, fragrance intermediate
Aniline	y	Industrial	Major chemical intermediate
Atraton		Agricultural	Herbicide
Azobenzene		Industrial	Dye intermediate
Benzenesulfonanilide		Industrial	Chemical intermediate
Benzonitrile		Industrial	Solvent / intermediate
Benzophenone		Industrial	UV stabiliser, intermediate
Benzyl alcohol		Industrial	Solvent / preservative
Biphenyl	y	Industrial	Heat-transfer, fungistatic uses
Bis(2-ethylhexyl) adipate	y	Industrial	Plasticiser
Bromoform	y	Industrial	Industrial by-product / reagent
Butylated hydroxytoluene		Industrial	Antioxidant additive
Caffeine	y	Pharmaceutical	Active stimulant substance
Carbamazepine	y	Pharmaceutical	Antiepileptic drug
Carbazole		Industrial	Dye, electronics intermediate
Citronellol		Industrial	Fragrance ingredient
Coumarin		Industrial	Fragrance/flavour compound
Cyclohexanone		Industrial	Solvent / nylon intermediate
Diclofenac artifact	y	Pharmaceutical	Human medicinal product
Dimethyl phthalate		Industrial	Plasticiser
di-n-butyl phthalate		Industrial	Plasticiser
di-n-octyl phthalate	y	Industrial	Plasticiser
Diphenyl ether		Industrial	Intermediate / heat-transfer
d-Limonene		Industrial	Solvent / fragrance

Drometrizole	y	Industrial	UV stabiliser
Ethylbenzene		Industrial	Petrochemical intermediate
Fenpiclonil	y	Agricultural	Fungicide
Gabapentin		Pharmaceutical	Anticonvulsant drug
Hexadecane		Industrial	Fuel component
Indane		Industrial	Petrochemical intermediate
Isopropylbenzene	y	Industrial	Phenol/acetone precursor
Kinoprene	y	Agricultural	Insect growth regulator
Methoprene II		Agricultural	Insect growth regulator
m-Xylene	y	Industrial	Solvent / intermediate
N,N-Dimethylaniline	y	Industrial	Dye intermediate
Naphthalene		Industrial	PAH, moth repellent, intermediate
Naproxen	y	Pharmaceutical	Anti-inflammatory drug
Neodecanoic acid-ethenyl ester		Industrial	Polymer monomer
n-Propylbenzene	y	Industrial	Solvent
o-Toluidine	y	Industrial	Dye intermediate
o-Xylene		Industrial	Phthalic anhydride precursor
p-Xylene	y	Industrial	Terephthalic acid precursor
Suflolane		Industrial	Extraction solvent
Sulfur (S8)		Industrial	Chemical/feedstock material
Terbucarb	y	Agricultural	Herbicide
Tetrachloroethylene		Industrial	Dry-cleaning / degreasing solvent
Tributyl phosphate	y	Industrial	Plasticiser / flame retardant
Tridiphane		Agricultural	Herbicide safener
Vanillin		Industrial	Flavour/fragrance compound

Storm water

Ta-Xbiex, summer sampling, replicate 1

Compound Name	Amount/Conc	LMS	R.T. Diff(sec)	Purity
1,2,4-Trimethylbenzene	0.028	62	-0.8	100
1-Decanol	0.8053	44	-2.7	100
1-Ethyl-2-pyrrolidone	0.2664	45	0.8	99.1
1H-Benzotriazole-5-methyl	0.8326	63	0.8	100
3,3'-Dimethylbenzidine	0.1254	40	15.6	100
4-tert-Octylphenol	0.1119	54	4	100
Aniline	0.0303	54	2.1	100
Benzenesulfonamide, 4-methyl-	1.0687	72	3.1	99.9
Benzenesulfonanilide	0.4686	91	6.1	100
Benzonitrile	0.0014	42	-0.7	66.9
Benzophenone-3	0.0805	72	5.1	100
Biphenyl	0.0006	45	2.5	100
Chloroxylenol	0.1483	80	1.6	100
Cholesterol	37.9401	86	13.8	100
Dimethomorph	0.1701	42	13.6	100
d-Limonene	0.527	90	-0.3	100
Ibuprofen	0.0686	67	4.2	85.5
Imidacloprid	3.0479	41	3.4	100
Metalddehyde	0.2183	47	0.9	100
m-Xylene	0.0872	87	-6.3	100

N,N,N',N'- Tetraacetythylenediamine	0.2025	50	1	100
Naphthalene	0.0104	49	3.7	100
Piperonyl butoxide	0.5899	84	3.6	100
Piperonylbutoxide	0.9216	84	7.8	100
Promecarb	0.0806	53	6.7	100
Sulfur (S8)	0.3707	85	4	100
Terbutryne	0.117	57	6.8	99.4
Tri-(2-chloroethyl) phosphate	0.1588	70	3.9	100
Tributyl phosphate	0.1793	69	5	100
Tributylamine	0.5346	53	12.9	98
Triphenyl phosphate	0.2919	78	5.1	100
Tris-(1,3-dichloroisopropyl) phosphate	0.3929	70	5.4	100
Vanillin	0.1295	56	2.1	99.7

Ta'Xbiex, summer sampling, replicate 2

Compound Name	Amount/Conc	LMS	R.T. Diff(sec)	Purity
Bromoform	0.0548	72	-5.7	100
n-Propylbenzene	0.0484	63	7.7	100
Aniline	0.0285	55	2.4	100
1,2,4-Trimethylbenzene	0.0321	61	-0.9	100
4-Methylanisole	0.0013	47	9	100
d-Limonene	0.3163	91	-0.6	100
Metaldehyde	0.2036	45	0.7	100
o-Toluidine	0.0238	44	4.2	98.3
1-Ethyl-2-pyrrolidone	0.208	44	0.7	98.5
Naphthalene	0.0096	49	3.4	100
2-Ethyl-1,3-hexanediol	1.0463	48	-8	99.9
Cinnamyl Alcohol	0.2018	41	1.7	100
Chloroxlenol	0.172	83	1.7	100
Coumarin	0.0062	47	5.8	100
2-Methoxynaphthalene	0.0446	51	-1.1	100
Dimethyl phthalate	0.0284	40	4.1	100
1H-Benzotriazole-5-methyl	0.7498	75	0.8	100
4-tert-Octylphenol	0.0943	49	4.2	100
Ibuprofen	0.0345	48	3.9	100
Benzenesulfonamide, 4- methyl-	1.0424	75	2.9	99.6
Tri-(2-chloroethyl) phosphate	0.1542	63	3.9	100
Pyrimethanil	0.033	73	3.9	98.7
Terbutryne	0.1103	63	6.8	99.4
Kinoprene	0.0481	41	0.2	100
Benzenesulfonanilide	0.4393	90	6.1	100
Sulfur (S8)	3.1708	91	4.2	100
Methoprene II	0.0516	44	-9.3	100
Tris-(1,3-dichloroisopropyl) phosphate	0.2938	59	5.4	100
Carbamazepine	0.0607	62	4.1	100
Piperonylbutoxide	0.8231	81	7.8	100
Triphenyl phosphate	0.2849	77	5	100
Piperonyl butoxide	0.5282	81	3.6	100
Dimethomorph	0.2807	44	13.5	100

Cholesterol	53.9293	91	13.5	99.8
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Ta-Xbiex, winter sampling, replicate 1

Compound Name	Amount/Conc	LMS	R.T. Diff(sec)	Purity
1(3H)-Isobenzofuranone	0.0591	49	-0.7	100
1,2,4-Trichlorobenzene	0.0038	49	-1.4	100
1,2,4-Trimethylbenzene	0.0301	82	-5.8	100
1,6-Hexanediol diacrylate	2.8126	90	0.7	99.6
2(3H)-Benzothiazolone	1.1188	50	-0.6	100
2,4,7,9-Tetramethyl-5-decyne-4,7-diol	0.112	72	0	100
alpha Isomethyl Ionone	0.1178	47	-8.8	100
Benzenesulfonamide	0.0293	70	2.7	100
Benzyl alcohol	0.0376	78	-3	97.6
Bis(2-ethylhexyl) adipate	0.5127	59	5	99.9
bis(2-ethylhexyl)phthalate (DEHP)	1.0283	92	-1.4	100
Bisphenol A	0.0448	54	-3.4	100
Caffeine	0.109	87	1.4	100
Chloroxyleneol	0.5385	90	-1.6	100
Cyclohexanone	0.1506	70	-7.7	100
Dimethyl phthalate	0.0881	78	0.7	100
di-n-octyl phthalate	0.1662	51	2.7	100
Diphenyl ether	0.0085	64	-0.9	100
Diphenyl sulfone	0.0258	71	1.7	100
d-Limonene	0.0803	77	-5	100
Ethylbenzene	0.069	93	-3.2	99.5
Hexadecane	4.3304	96	0.7	100
Kinoprene	0.0345	47	-5.6	97.8
m-Xylene	0.0841	96	-11.9	99.5
N,N-Diethyl-m-toluamide	0.0942	79	1.9	100
Neodecanoic acid-ethenyl ester	19.7597	69	-1.8	100
N-nitrosopiperidine (1-nitrosopiperidin	0.0057	40	-4.5	100
n-Propylbenzene	0.0089	48	2.7	100
Octyl-methoxycinnamate	0.0193	50	4.2	100
o-Xylene	0.0383	74	-10.3	100
Phenol	0.1128	84	-3	100
p-Xylene	0.0842	98	-11.7	99.5
Terbucarb	0.8215	57	12.2	100
Tri-allate	0.021	54	-0.7	100
Tributyl acetylcitrate	0.2005	74	2.6	100
Tridiphan	0.0526	40	-1.3	100

Ta-Xbiex, winter sampling, replicate 2

Compound Name	Amount/Conc	LMS	R.T. Diff(sec)	Purity
1,3,5-Trimethylbenzene	0.1421	59	-12.2	100
1,6-Hexanediol diacrylate	3.7229	90	0.7	99.6
alpha Isomethyl Ionone	0.099	47	-8.9	100
Benzyl alcohol	0.1584	84	-3.1	100
bis(2-ethylhexyl)phthalate (DEHP)	1.2306	88	-1.6	100
Caffeine	0.0921	76	1.4	100

Chloroxylenol	0.5654	87	-1.7	100
Coumarin	0.0212	45	2.5	100
Cyclohexanone	0.1376	49	-7.1	100
Diethyl phthalate	0.3466	56	-0.1	99
di-n-octyl phthalate	0.1348	43	2.7	100
Ethylbenzene	0.0651	73	-3.5	100
Hexadecane	4.1318	97	0.5	100
m-Cresol (3-methylphenol)	0.0476	42	-1.4	100
m-Xylene	0.0329	43	12.4	100
Neodecanoic acid-ethenyl ester	13.2773	68	-1.9	100
Octyl-methoxycinnamate	0.0284	54	4.1	100
o-Xylene	0.0315	46	-10.8	100
p-Cresol (4-methylphenol)	0.0472	42	-0.9	100
p-Xylene	0.0784	79	-11.9	100
Terbucarb	0.5	55	11.8	99.9
Tributyl acetylcitrate	0.0742	40	2.2	100
Tridiphan	0.0373	40	-1.1	100

Comparison of screening results of Storm water for ERA12 and current study

Compound Name	Found ERA12 and 14	Category of use	Details
1(3H)-Isobenzofuranone	y	Industrial	Used mainly as a chemical intermediate (e.g. dyes, pigments, fragrances, pharmaceuticals as intermediates), not applied directly as a drug or pesticide
1,2,4-Trichlorobenzene	y	Industrial	Widely used as an industrial solvent and intermediate (dyes, herbicides, heat-transfer fluids); environmental presence typically industrial
1,3,5-Trimethylbenzene	y	Industrial	Used as an industrial solvent, fuel component, and chemical intermediate
1,6-Hexanediol diacrylate	y	Industrial	Reactive monomer in UV-curable coatings, inks, adhesives, resins
2(3H)-Benzothiazolone	y	Industrial	Primarily a chemical intermediate (rubber chemicals, dyes, corrosion inhibitors); not a medicinal product
2,4,7,9-Tetramethyl-5-decyne-4,7-diol	y	Industrial	Industrial surfactant / wetting agent (coatings, inks, agrochemical formulations as an additive, but not an active ingredient)
alpha Isomethyl Ionone			
Benzenesulfonanilide	y	Industrial	Chemical intermediate (dyes, pigments, rubber additives)
Benzyl alcohol	y	Industrial	Widely used solvent/preservative; pharma use is secondary
Bis(2-ethylhexyl) adipate	y	Industrial	Plasticiser for PVC and polymers
bis(2-ethylhexyl)phthalate (DEHP)	y	Industrial	Major industrial plasticiser
Bisphenol A	y	Industrial	Polycarbonate and epoxy resin production
Caffeine	y	Pharmaceutical	CNS stimulant; also dietary, but regulated as an active substance
Chloroxylenol	y	Pharmaceutical	Antiseptic/disinfectant active ingredient

Coumarin	y	Industrial	Fragrance/flavour ingredient (parent compound, not drug derivatives)
Cyclohexanone			
Diethyl phthalate			
Dimethyl phthalate			
di-n-octyl phthalate			
Diphenyl ether	y	Industrial	Heat-transfer fluids, intermediates, flame retardant precursors
Diphenyl sulfone	y	Industrial	High-performance polymers and intermediates
d-Limonene	y	Industrial	Solvent, fragrance, cleaner (agricultural use is secondary)
Ethylbenzene	y	Industrial	Petrochemical intermediate (styrene production)
Hexadecane	y	Industrial	Fuel component, reference hydrocarbon
Kinoprene			
m-Cresol (3-methylphenol)			
m-Xylene	y	Industrial	Solvent and chemical intermediate
N,N-Diethyl-m-toluamide	y	Agricultural	Insect repellent (biocidal active substance)
Neodecanoic acid-ethenyl ester	y	Industrial	Polymer and coating monomer
N-nitrosopiperidine (1-nitrosopiperidin	y	Industrial	Unintentional by-product/impurity (industrial & combustion sources)
n-Propylbenzene	y	Industrial	Solvent and hydrocarbon intermediate
Octyl-methoxycinnamate			
o-Xylene	y	Industrial	Chemical intermediate (phthalic anhydride)
p-Cresol (4-methylphenol)			
Phenol			
p-Xylene	y	Industrial	Chemical intermediate (terephthalic acid)
Terbucarb			
Tri-allate			
Tributyl acetylcitrate	y	Industrial	Plasticiser (often for food-contact plastics)
Tridiphane			

Transitional water

Il-Magħluq ta' Marsaskala, summer sampling, replicate 1

Compound Name	Amount/Conc	LMS	R.T. Diff(sec)	Purity
1(3H)-Isobenzofuranone	0.0272	45	-0.9	98.5
1,2,4-Trichlorobenzene	0.0056	45	-0.7	100
1-Ethyl-2-pyrrolidone	0.2907	53	-2.6	98.7
2,4,6-Triallyloxy-1,3,5-triazine	1.8661	63	2	73.8
2-Octyl-4-isothiazolin-3-one	0.292	43	8.2	100
Aziprotryne	0.2192	42	0.7	99.3
Benzyl alcohol	0.0256	43	-2.7	98.9
Caffeine	0.0356	44	1.8	100
Cholesterol	79.9248	94	8.8	100
Coumarin	0.0436	52	2.2	100
Diethyl phthalate	0.908	75	0.3	100
Dimethomorph	0.4457	45	8.8	100

Dimethyl phthalate	0.1824	69	0.9	100
d-Limonene	0.2896	85	-4.3	100
Methoprene II	0.2713	49	7.7	94.3
m-Xylene	0.148	90	-11.5	100
Naphthalene	0.016	44	0.1	100
n-Propylbenzene	0.0263	56	3.7	100
p-Benzoquinone	0.3864	74	-8.3	100
p-Isopropyltoluene	0.0354	41	-2.7	100
Sulfur (S8)	0.4291	86	0.2	100
Vanillin	0.1206	44	-0.9	100

Il-Magħluq ta' Marsaskala, summer sampling, replicate 2

Compound Name	Amount/Conc	LMS	R.T. Diff(sec)	Purity
m-Xylene	0.3205	87	-10.8	100
p-Benzoquinone	0.4036	62	-8.2	100
Isopropylbenzene	0.0122	50	-5.8	100
n-Propylbenzene	0.0243	57	4	100
Benzyl alcohol	0.0357	51	-2.3	95.2
o-Cresol (2-methylphenol)	0.0924	60	-0.1	100
p-Cresol (4-methylphenol)	0.0551	55	0.4	100
m-Cresol (3-methylphenol)	0.0549	55	-0.2	100
1-Ethyl-2-pyrrolidone	0.6548	46	-2.6	99.7
Biphenyl	0.0013	47	-1	100
Vanillin	0.2629	52	-1	100
Coumarin	0.0457	47	3	100
2-Methoxynaphthalene	0.0102	41	0.3	99.7
Dimethyl phthalate	0.2108	69	1.1	100
Diethyl phthalate	0.9192	80	0.4	100
Cedrol	0.2204	41	-8	100
Propoxur	0.1086	46	-7.8	100
Azobenzene	0.0148	60	5.8	100
Di-n-propyl phthalate	0.2461	45	-10.9	93.6
2,4,6-Triallyloxyl-1,3,5-triazine	2.1081	65	2.1	70.3
Aziprotryne	0.3573	42	0.8	99.7
Sulfur (S8)	0.1809	82	0.2	100
Drometrizole	0.1988	44	3.4	100
Methoprene II	0.4501	50	7.9	96.2
Dimethomorph	0.7851	46	8.9	100
Cholesterol	145.1288	94	8.9	100

Il-Magħluq ta' Marsaskala, winter sampling, replicate 1

Compound Name	Amount/Conc	LMS	R.T. Diff(sec)	Purity
1,2,4-Trimethylbenzene	0.0228	79	-5.6	100
1,6-Hexanediol diacrylate	0.5728	62	5.1	100
1-Ethyl-2-pyrrolidone	0.1272	45	-3.3	98.7
2(3H)-Benzothiazolone	1.1677	68	-0.8	98.9
2,4-Di-tert-butylphenol	0.1858	94	-0.3	100
2-Ethylhexyl diphenyl phosphate	0.0193	49	2.9	100
2-Ethylhexyl salicylate	0.9416	96	1.1	100

2-Methylnaphthalene	0.0035	69	0.6	100
Acetophenone	0.0539	85	-3.4	100
Benzyl alcohol	0.0142	44	-2.8	86.7
Biphenyl	0.0012	42	-1.1	100
Bis (4-chlorophenyl) sulfone	0.0112	44	3.1	100
Bis(2-ethylhexyl) adipate	0.5864	80	5.2	100
Bisphenol A	0.0904	60	-3.4	100
Bromoform	0.0225	57	-10.7	100
Butylated hydroxytoluene	0.0045	42	0.4	98.2
Dibenzofuran	0.0015	40	0.3	100
Diethyl phthalate	0.6502	73	0.2	100
Diisobutyl phthalate	0.0403	84	1.9	100
Dimethyl phthalate	0.0274	79	0.8	100
di-n-butyl phthalate	0.2806	88	-0.6	98.9
di-n-octyl phthalate	0.3271	51	2.9	100
Diphenyl ether	0.0075	64	-0.8	99.9
Diphenyl sulfone	0.1641	81	2.1	100
d-Limonene	0.0391	78	-5	100
Ethylbenzene	0.0709	62	1.8	98.8
Fenpropidin	0.1107	41	-0.7	99.2
Gabapentin	0.0234	40	8.3	100
Hexadecane	4.5303	98	0.7	100
Methoprene II	0.0403	41	7.7	100
m-Xylene	0.0915	58	-6.9	98.8
N,N-Diethyl-m-toluamide	0.07	94	1.9	100
Naphthalene	0.0267	89	-0.6	100
Neodecanoic acid-ethenyl ester	25.7879	69	-1.6	100
n-Propylbenzene	0.0133	56	2.5	100
Octyl-methoxycinnamate	0.0571	66	4.5	100
o-Toluidine	0.014	56	-0.9	100
Oxacyclohexadecan-2-one	0.0855	64	-3.3	100
o-Xylene	0.0183	61	-10.7	100
p-Xylene	0.0915	59	-6.6	98.8
Terbucarb	0.29	57	12.1	100
Tetrachloroethylene	0.2489	95	-13.7	100
Tri-(2-chloroethyl) phosphate	0.1961	78	0.6	100
Triacetin	0.0135	64	-0.2	96.7
Tributyl acetylcitrate	0.0753	57	2.7	100
Tributyl phosphate	0.0199	56	1.8	100
Tridipane	0.0222	40	-1.1	100
Tris-(1,3-dichloroisopropyl) phosphate	0.0618	47	2.3	100

Il-Magħluq ta' Marsaskala, winter sampling, replicate 2

Compound Name	Amount/Conc	LMS	R.T. Diff(sec)	Purity
1(3H)-Isobenzofuranone	0.0572	49	-0.8	100
1,2,4-Trimethylbenzene	0.0262	83	-5.5	100
1,6-Hexanediol diacrylate	15.3464	94	0.9	99.9
1-Ethyl-2-pyrrolidone	0.2189	42	-3.4	99.9
2,4,6-Triallyloxyl-1,3,5-triazine	0.2757	50	2.4	98.9

2,4,6-Tribromophenol	0.0114	41	-0.9	100
2,4,7,9-Tetramethyl-5-decyne-4,7-diol	0.0765	65	0.2	100
2-Methylnaphthalene	0.0041	70	0.9	100
Acetophenone	0.2129	90	-3.5	100
Benzophenone	0.1022	90	-0.7	100
Benzyl alcohol	0.0598	85	-3.2	99
Bis(2-ethylhexyl) adipate	0.5056	65	5.1	99.9
Bisphenol A	0.0918	59	-3.1	100
Caffeine	0.0592	79	1.5	100
Chloroxylonol	0.02	43	-1.4	100
Coumarin	0.0257	43	1.9	100
Cyclohexanone	0.1111	58	-7.2	100
Diethyl phthalate	0.723	71	0.2	100
Dimethyl phthalate	0.0814	64	0.7	100
di-n-butyl phthalate	1.1705	90	-0.6	99.7
di-n-octyl phthalate	0.189	49	2.6	100
Diphenyl ether	0.0122	55	-0.9	100
Diphenyl sulfone	0.1469	87	2	99.8
d-Limonene	0.0871	67	-4.9	100
Ethylbenzene	0.0671	91	-2.7	100
Flufenacet	0.7571	40	-10.6	100
Gabapentin	0.0247	40	4.1	99.8
Hexadecane	4.2948	97	0.7	100
Hexyl salicylate	0.0151	59	1.2	99.8
Imidacloprid	1.2929	41	0.1	99.5
Kinoprene	0.4602	54	-5	100
m-Xylene	0.0812	95	-11.4	100
N,N-Diethyl-m-toluamide	0.1587	72	1.9	100
Naphthalene	0.0318	72	-0.7	100
Neodecanoic acid-ethenyl ester	23.7253	68	-1.6	100
N-nitrosopiperidine (1-nitrosopiperidin	0.0079	42	-4.1	100
Octyl-methoxycinnamate	0.0285	54	4.3	100
o-Phenylphenol	0.0183	57	-0.6	100
o-Xylene	0.0328	70	-10.3	100
Phenol	0.1696	86	-3.2	100
p-Xylene	0.0812	96	-11.2	100
Styrene	0.934	88	-3.7	94.2
Sulfur (S8)	0.0233	75	0.2	100
Tetrachloroethylene	0.2483	94	-12.3	100
Tributyl acetylcitrate	0.7021	88	2.7	100
Tridipane	0.1963	42	-0.7	100

Coastal water

Xgħajra, summer sampling, replicate 1

Compound Name	Amount/Conc	LMS	R.T. Diff(sec)	Purity
1-Ethyl-2-pyrrolidone	0.2235	44	-2.6	98.7
2,4,6-Triallyloxy-1,3,5-triazine	0.8175	56	2.4	98.7
2-Ethyl-1,3-hexanediol	2.1844	49	-11	100
2-Methoxynaphthalene	0.0066	49	0.4	99.1

Azobenzene	0.0092	72	6.1	100
Bromoform	0.022	42	-9.8	100
Caffeine	0.0141	41	1.6	100
Dimethyl phthalate	0.0721	90	1	100
d-Limonene	0.0636	80	-4.2	100
Drometrizole	0.2577	75	3.3	100
Isoeugenol	0.051	42	17.3	100
Isopropyl myristate	0.0285	49	-0.4	100
m-Xylene	0.0847	92	-11.3	100
Naphthalene	0.0105	65	0.1	100
Squalane	7.7166	75	5.2	100
Tridiphan	0.0323	42	-1.2	100
Vanillin	0.0833	52	-0.6	100

Xghajra, summer sampling, replicate 2

Compound Name	Amount/Conc	LMS	R.T. Diff(sec)	Purity
d-Limonene	0.1624	78	-4.3	100
1-Ethyl-2-pyrrolidone	0.2475	45	-2.5	99.2
1,2,4-Trichlorobenzene	0.0051	64	-1	100
Naphthalene	0.0101	57	0.1	100
2-Ethyl-1,3-hexanediol	2.5026	49	-11	100
Biphenyl	0.0008	50	-0.7	100
Vanillin	0.0582	54	-0.5	100
Isoeugenol	0.0588	41	17.3	100
Dimethyl phthalate	0.0633	82	0.9	100
Dibenzofuran	0.0017	45	0.1	100
Gabapentin	0.0317	40	8.5	98.2
Isopropyl myristate	0.0271	40	-0.1	100
2-Octyl-4-isothiazolin-3-one	0.0428	41	7.3	100
Caffeine	0.0189	49	1.5	100
Tridiphan	0.0354	42	-1.3	100
Sulfur (S8)	0.0419	76	0	100
Pyrene	0.0017	40	1.6	100
Squalane	7.0464	73	5.4	100

Xghajra, winter sampling, replicate 1

Compound Name	Amount/Conc	LMS	R.T. Diff(sec)	Purity
1(3H)-Isobenzofuranone	0.04	41	-0.7	100
1,2,4-Trimethylbenzene	0.0244	84	-5.8	100
1,6-Hexanediol diacrylate	8.6417	93	0.7	99.8
1-Ethyl-2-pyrrolidone	0.079	42	-3.4	100
2,4,6-Triallyloxy-1,3,5-triazine	0.2551	50	2.2	99
2-Methylnaphthalene	0.0034	74	0.8	100
2-tert-Butylcyclohexanone	0.0106	41	4	100
4-Chlorophenol	0.1716	43	-12.3	100
Acetophenone	0.1186	85	-3.6	100
Azobenzene	0.0069	68	5.5	100
Benzophenone	0.036	90	-0.7	100
Benzyl alcohol	0.0611	81	-3.2	99.5
Bis(2-ethylhexyl) adipate	0.4517	65	5.1	100

Caffeine	0.0182	61	1.8	100
Dimethyl fumarate	0.0191	46	-11.8	100
Dimethyl phthalate	0.0453	69	0.5	100
di-n-octyl phthalate	0.0976	47	2.5	100
Diphenyl ether	0.0073	64	-1	99.5
d-Limonene	0.0862	66	-5.2	100
Ethylbenzene	0.0555	92	-3.3	100
Gabapentin	0.0098	41	3.9	100
Hexadecane	4.1825	97	0.7	100
Isoeugenol	0.1124	42	17	100
Kinoprene	0.0351	49	-5.8	100
m-Xylene	0.0668	96	-12	100
Naphthalene	0.0257	85	-0.7	100
Neodecanoic acid-ethenyl ester	24.2308	69	-1.8	100
Octyl-methoxycinnamate	0.0107	43	4.1	100
o-Xylene	0.0327	73	-10.4	100
Phenol	0.0882	70	-3	97.9
p-Xylene	0.0667	96	-11.7	100
Terbucarb	0.6615	56	11.8	100
Tetrachloroethylene	0.2318	95	-13	100
Tributyl acetylcitrate	0.0567	49	2.3	100
Tributylamine	0.3104	40	3.1	99.4
Tridipane	0.0438	42	-1.4	100
Vanillin	0.048	41	-1.4	100

Xgħajra, winter sampling, replicate 2

Compound Name	Amount/Conc	LMS	R.T. Diff(sec)	Purity
1(3H)-Isobenzofuranone	0.0555	54	-0.8	100
1,2,4-Trichlorobenzene	0.0043	55	-1.4	100
1,2,4-Trimethylbenzene	0.0225	82	-5.6	100
1,6-Hexanediol diacrylate	15.0702	94	1	99.8
1-Ethyl-2-pyrrolidone	0.1041	40	-3.4	99.9
2,4,6-Triallyloxyl-1,3,5-triazine	0.4367	54	2.1	99.2
2-Methoxynaphthalene	0.005	46	0.3	96.5
2-Methylnaphthalene	0.0025	76	0.6	100
Acetophenone	0.1005	90	-3.6	100
Azobenzene	0.0064	65	5.9	100
Benzophenone	0.0303	85	-0.6	100
Benzyl alcohol	0.0238	65	-3	99.4
Bis(2-ethylhexyl) adipate	0.3324	57	4.7	100
Bromoform	0.1188	96	-9.9	100
Caffeine	0.0155	62	1.3	100
Chlorodibromomethane	1.0889	96	-13	100
Dibenzofuran	0.0014	41	0.1	100
Diethyl phthalate	0.1985	73	0	100
Dimethyl phthalate	0.0301	56	0.6	100
di-n-octyl phthalate	0.1574	47	2.3	100
Diphenyl ether	0.0065	49	-1	100
Diphenyl sulfone	0.0096	41	1.7	99.5
d-Limonene	0.0713	72	-5	100

Ethylbenzene	0.0555	92	-2.6	100
Fluorene	0.0023	42	0.2	100
Glutaraldehyde	0.4089	49	-15.7	100
Hexadecane	3.2743	97	0.6	100
Kinoprene	0.0259	46	-5.8	98.2
m-Xylene	0.0674	94	-11.3	100
Naphthalene	0.0186	72	-0.7	100
Neodecanoic acid-ethenyl ester	11.3416	68	-1.8	100
n-Propylbenzene	0.0052	61	3.2	100
Octyl-methoxycinnamate	0.0085	44	4.2	98.3
o-Xylene	0.0331	73	-10	100
p-Xylene	0.0674	95	-11.1	100
Suflolane	0.0622	42	-2.5	99.8
Tetrachloroethylene	0.2623	95	-12.2	100
Tributyl acetylcitrate	0.0717	44	2.2	100
Tridipane	0.0563	42	-1.2	100