Overview Fingerprint results organics in wastewater biomonitor

intertek
Total Quality. Assured.

Sample description Steekmonster Biomonitor		LIMS nr.			Q3-2021 23216532 biomonitor	Q3-2021 23214357 opbouwmonster 18/10	Q3-2021 23214669 opbouwmonster 19/10	Q1-2022 23242776
Component Organics Concentration	**Cas. No**	**method**	**unit**	**LOQ**	**Q3-2021**	**Q3-2021**	**Q3-2021**	**Q1-2022**
D3 componenten		13	µg/L	10	20	35	31	120
Methanol	67-56-1	14	mg/l	1	<1	<1	<1	<1
Mineral oil C10 -C40		15	mg/l	0.05	<0.05	<0.05	<0.05	<0.05

Remarks

Component Inorganics Concentration	**Cas. No**	**method**	**unit**	**LOQ**	**Q3-2021**	**Q3-2021**	**Q3-2021**	**Q1-2022**
Arsenic (As)	7440-38-2	3	mg/l	0.01	<0.01	<0.01	<0.01	<0.01
Iron (Fe)	7439-89-6	1	mg/l	0.1	0.1	<0.1	<0.1	<0.1
Mercury (Hg)	7439-97-6	2	mg/l	0.001	<0.001	<0.001	<0.001	<0.001
Aluminium (Al)	7429-90-5	1	mg/l	0.1	<0.1	<0.1	<0.1	<0.1
Titanium (Ti)	7440-32-6	1	mg/l	0.1	<0.1	<0.1	<0.1	<0.1
Chromium (Cr)	7440-47-3	1	mg/l	0.02	<0.02	<0.02	<0.02	<0.02
Cobalt (Co)	7440-48-4	1	mg/l	0.002	<0.002	<0.002	<0.002	<0.002
Nickel (Ni)	7440-02-0	1	mg/l	0.02	<0.02	<0.02	<0.02	<0.02
Copper (Cu)	7440-50-8	1	mg/l	0.01	<0.01	<0.01	<0.01	<0.01
Zinc (Zn)	7440-66-6	1	mg/l	0.02	0.03	<0.02	0.04	<0.02
Molybdenum (Mo)	7439-98-7	1	mg/l	0.001	0.020	0.002	0.019	0.013
Cadmium (Cd)	7440-43-9	1	mg/l	0.005	<0.005	<0.005	<0.005	<0.005
Tellurium (Te)	13494-80-9	1	mg/l	0.02	<0.02	<0.02	<0.02	<0.02
Lead (Pb)	7439-92-1	1	mg/l	0.005	<0.005	<0.005	<0.005	<0.005
Vanadium (V)	7440-62-2	1	mg/l	0.05	n.a.	n.a.	n.a.	<0.05
Hafnium (Hf)	7440-58-6	1	mg/l	0.001	n.a.	n.a.	n.a.	0.001
Germanium (Ge)	7440-56-4	1	mg/l	0.001	n.a.	n.a.	n.a.	<0.001
Cesium (Cs)	7440-46-2	1	mg/l	0.001	n.a.	n.a.	n.a.	<0.001
Benzene sulfonic acid	98-11-3	11	mg/l	1	<1	<1	<1	<1
Chloride	16887-00-6	11	mg/l	1	89	92	90	80
Phosphate	14265-44-2	11	mg/l	1	<1	<1	<1	**5**
Nitrate	14797-55-8	11	mg/l	1	180	82	117	74
Nitrite	14797-65-0	11	mg/l	1	<1	<1	<1	<1
Sulphate	14808-79-8	11	mg/l	1	240	230	224	255
Undissolved components > 1.6 µm		12	mg/l	1	13	2.4	5.7	6
Chemical Oxygen Demand (COD)		10	mg O2/l	10	25	24	20	25
Biological Oxygen Demand (BOD-5)		9	mg O2/l	0.5	0.9	0.8	1.0	0.9
Total Organic Carbon (TOC)		19	mg/l	1	15	12	13	14
Kjeldahl-N		5	mg N/l	0.5	2.0	2.9	1.9	5.7
Ammonium-N		6	mg N/l	0.1	0.2	0.4	0.4	0.3
pH		4			8.0	8.2	8.1	8.1

Cyanide-total		7	mg/l	0.002	0.021	0.025	0.020	0.014
Cyanide-free		8	mg/l	0.002	0.012	0.020	0.016	0.008

Remarks

Component POLYCYCLIC AROMATIC HYDROCARBONS Concentration	Cas. No	method	unit	LOQ	Q3-2021	Q3-2021	Q3-2021	Q1-2022
SUM PAH's (EPA)		18	µg/L	0.01	0.13	0.01	0.01	0.03
Acenaphtene	83-32-9	18	µg/L	0.01	<0.01	<0.01	<0.01	<0.01
Acenaphtylene	208-96-8	18	µg/L	0.01	<0.05	<0.05	<0.05	<0.05
Anthracene	120-12-7	18	µg/L	0.01	<0.01	<0.01	<0.01	<0.01
Benzo(a)anthracene	56-553	18	µg/L	0.01	<0.01	<0.01	<0.01	<0.01
Benzo-(a)-Pyrene	50-32-8	18	µg/L	0.01	0.01	<0.01	<0.01	<0.01
Benzo(b)fluoranthene	205-99-2	18	µg/L	0.01	0.02	<0.01	<0.01	<0.01
Benzo(ghi)perylene	191-24-2	18	µg/L	0.01	<0.01	<0.01	<0.01	<0.01
Benzo(k)fluoranthene	207-08-9	18	µg/L	0.01	<0.01	<0.01	<0.01	<0.01
Chrysene	218-01-9	18	µg/L	0.01	0.03	<0.01	<0.01	0.02
Dibenzo(ah)anthracene	53-70-3	18	µg/L	0.01	<0.01	<0.01	<0.01	<0.01
Phenanthrene	85-01-8	18	µg/L	0.01	<0.01	<0.01	<0.01	<0.01
Fluoranthene	206-44-0	18	µg/L	0.01	0.04	0.012	0.012	<0.01
Fluorene	86-73-7	18	µg/L	0.01	<0.01	<0.01	<0.01	<0.01
Indeno-(1,2,3-c,d)pyrene	193-39-5	18	µg/L	0.01	<0.01	<0.01	<0.01	<0.01
Naphthalene	91-20-3	18	µg/L	0.01	<0.02	<0.02	<0.02	<0.01
Pyrene	129-00-0	18	µg/L	0.01	0.04	<0.01	<0.01	0.01

Remarks

x = Concentrations below LoQ are not included.

hb = Due to high concentration of one or more components the sample had to be diluted. This causes a higher LoQ.

Component VOCs Concentration	Cas. No	method	unit	LOQ	Q3-2021	Q3-2021	Q3-2021	Q1-2022
MTBE	1634-04-4	16	µg/L	1	1	<1	<1	<1
Oxazole	288-42-6		µg/L	1	1	4	2	<1
Unknowns (total)		16	µg/L	1	<10	<10	<10	<10
Total		16	µg/L	1	<10	<10	<10	<10

Remarks

hb) Due to high concentration of one or more components the sample had to be diluted. This causes a higher LOQ.

Component Semi/Non VOCs Concentration	Cas. No	method	unit	LOQ	Q3-2021	Q3-2021	Q3-2021	Q1-2022
1-(2-Pyridyl)imidazole	25700-14-5	17	µg/L	1	1	1	<1	<1
Tetradecanoic acid	544-63-8	17	µg/L	1	1	<1	2	<1
Bis(2-ethylhexyl) phthalate	117-81-7	17	µg/L	1	4	7	20	<1
Squalene	111-02-4	17	µg/L	1	10	9	<1	<1
Benzenamine, 4-octyl-N-(4-octylphenyl)-	101-67-7	17	µg/L	1	<1	2	<1	<1
Pentadecanoic acid	1002-84-2	17	µg/L	1	<1	<1	2	<1
n-Hexadecanoic acid	57-10-3	17	µg/L	1	<1	<1	12	<1
Octadecanoic acid	57-11-4	17	µg/L	1	<1	<1	2	<1
Unknowns (total)		17	µg/L	1	2	1	4	<10
Total		17	µg/L	1	18	20	41	<10

Remarks

hb) Due to high concentration of one or more components the sample had to be diluted. This causes a higher LOQ.