FINAL REPORT

STACK EMISSION TEST IN PYROTEK AT KANT TIRE PROCESSING PLANT, CHUI REGION, ISSYK-ATA DISTRICT, KYRGYZSTAN

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Prepared for
UNDP

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Revision Records

REV	DATE	PREPARED	REVIEWED
00	17/10/2022	Hafiz Zain	Dr. Mahboob Ali
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Contents

ACRONYM LIST

USEPA – United State Environment Protection Agency

NOx – Oxides of Nitrogen

SO2 – Sulphur Dioxide

Ppm – Parts per Million

% - Percentage

Mg/Nm3 – Milligram per normal cubic meter

1. INTRODUCTION

UNDP contracted SGS to conduct Stack Emission Test in Pyrotek at Kant Tire Processing Plant, Chui Region, Issyk-Ata District, Kyrgyzstan. This report documents the results of field monitoring conducted from September 11th to 14th, 2022 at the monitoring points advised by client. This report has been prepared by SGS for UNDP and is based on the field data collected during Stack Emission Test in Pyrotek at Kant Tire Processing Plant, Chui Region, Issyk-Ata District, Kyrgyzstan during pyrolysis of a polymorphic composition of class B medical waste containing a significant amount of plastic medical products. Stack emission test has been conducted using USEPA Standard Methods for all the pollutants. The objective of the test is to demonstrate compliance with stack emissions limits.

2. SCOPE OF WORK

Stack Emission Test was carried out for one stack in Pyrotek at Kant Tire Processing Plant, Chui Region, Issyk-Ata District, Kyrgyzstan in accordance with scope of works provided by the client. The following parameters were monitored from the stack for emissions estimation.

- Oxides of Nitrogen (NO_x)
- Sulphur Dioxide (SO2)
- Particulate Matter (2.5)
- Dioxins and Furans

Summary of scope of work for Stack Emission Test is as follows.

Sr. No	Parameters	Reference Methods
1	Oxides of Nitrogen (NO_x)	US EPA Method 7E
2	Sulphur Dioxide (SO2)	US EPA Method 6C
3	Particulate Matter (2.5)	US EPA Method 201A
4	Dioxins and Furans	US EPA Method 23

3. SCHEDULE

The monitoring schedule was discussed and finalized with UNDP prior to commencement of emission monitoring. To cover the above scope of work, the following schedule was followed.

Sr. No	Sampling Location	Work Activity	Date of Emission Monitoring	Tests
1	Pyrotek Stack	Stack Emission Monitoring	11-09-2022	Sample 1
2		Stack Emission Monitoring	13-09-2022	Sample 2
3		Stack Emission Monitoring	14-09-2022	Sample 3

4. METHODOLOGY

SGS carried out Stack Emission Test in Pyrotek at Kant Tire Processing Plant, Chui Region, Issyk-Ata District, Kyrgyzstan. Flue Gas Analyzer along with sampling conditioning system and leak free sampling system was used to measure the concentration of Oxides of Nitrogen (NOx) and Sulphur Dioxide (SO2) using USEPA Standard Methods for monitoring. Isokinetic Source Sampler along with sampling train and sampling probe system was used to measure the concentration of Particulate Matter (2.5) and Dioxins and Furans based on US EPA Methods.

Prior to perform the emission measurements, following procedures were adopted as per standard procedures.

4.1 INSTALLATION

Start-up of emission analysers and wait for warming up.

Installation of sampling line and sampling probe.

Stabilization of conditioning system.

4.2 MEASUREMENT SYSTEM PREPARATION

The system was prepared according to standard procedures.

4.3 ZERO CALIBRATION

Nitrogen gas was introduced to all analysers for zero calibration followed by recording of zero readings.

4.4 INITIAL SYSTEM ON-SITE CALIBRATION CHECKS

Upscale gas (calibration gas) was introduced at the probe upstream keeping all sample conditioning components in system calibration mode. Time was recorded for measuring the measured concentration to increase to a value that is within 95 percent or 0.5 ppm (whichever is less restrictive) of the certified gas concentration. Continue to observe the gas concentration reading until it has reached a final, stable value.

Then, low-level gas was introduced in system calibration mode and time was recorded which is required for concentration response to decrease to a value that is within 5.0 percent or 0.5 ppm (whichever is less restrictive) of the certified low-range gas concentration. Continue to observe the low-level gas reading until it has reached a final, stable value and record the result. Operate the measurement system at the normal sampling rate during all system bias checks. From these data, calculate the measurement system response time and then calculate the calibration error using the following equation:

Calibration Error (%) = (A-B)/A * 100

Where,

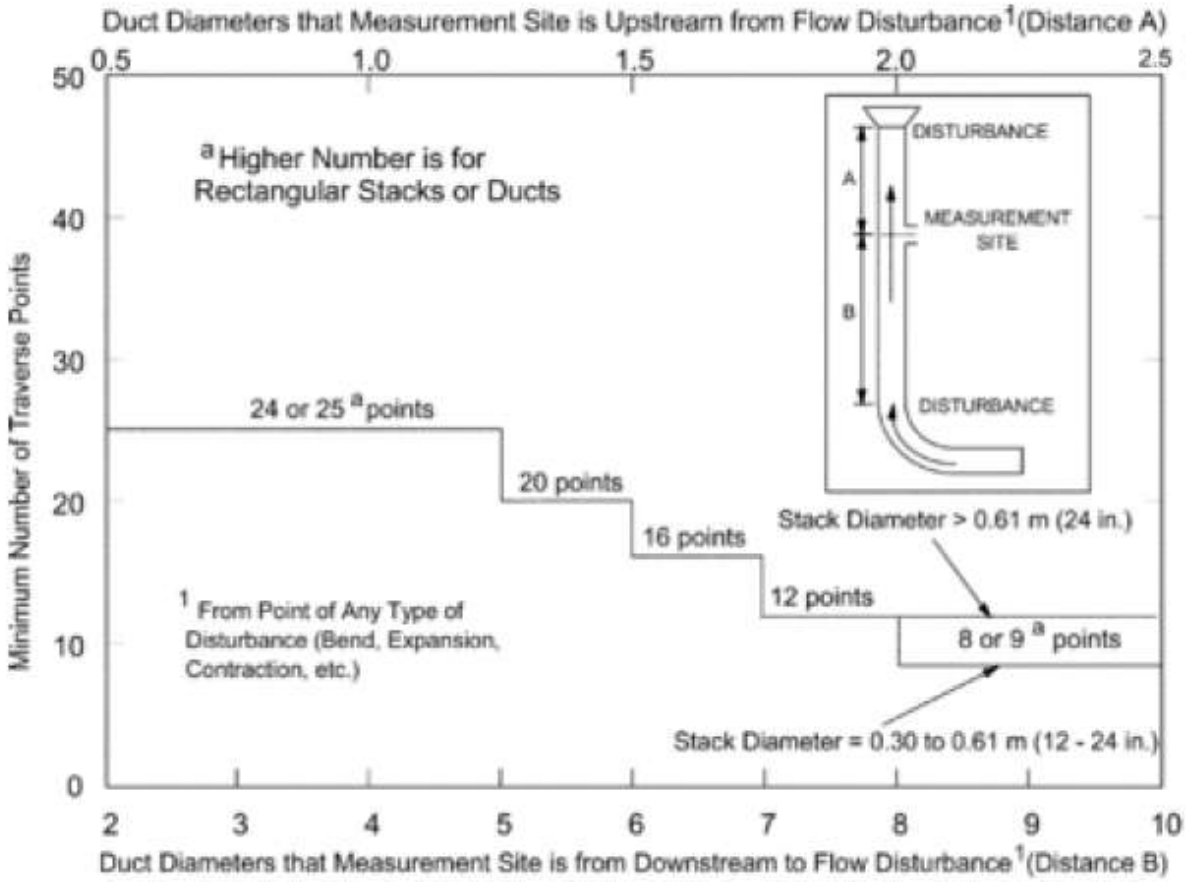
A = Known Concentration of Calibration Gas (low, mid, or high)

B = Measured Concentration of a Calibration Gas through analyzer

4.5 US EPA METHOD 1

A measurement site where the effluent stream is flowing in a known direction is selected, and the cross-section of the stack is divided into a number of equal areas. Traverse points are then located within each of these equal areas. Sampling and/or velocity measurements are performed at a site located at least eight stack or duct diameters downstream and two diameters upstream from any flow disturbance such as a bend, expansion, or contraction in the stack, or from a visible flame. If necessary, an alternative location may be selected, at a position at least two stack or duct diameters downstream and a half diameter upstream from any flow disturbance. When the eight- and two-diameter criterion can be met, the minimum number of traverse points shall be: (1) twelve, for circular or rectangular stacks with diameters (or equivalent diameters) greater than 0.61 meter; (2) eight, for circular stacks with diameters between 0.30 and 0.61 meter; and (3) nine, for rectangular stacks with equivalent diameters between 0.30 and 0.61 meter.

When the eight- and two-diameter criterion cannot be met, the minimum number of traverse points is determined from below Figure. Before referring to the figure, however, determine the distances from the measurement site to the nearest upstream and downstream disturbances, and divide each distance by the stack diameter or equivalent diameter, to determine the distance in terms of the number of duct diameters. Then, determine from Figure the minimum number of traverse points that corresponds: (1) to the number of duct diameters upstream; and (2) to the number of diameters downstream. Select the higher of the two minimum numbers of traverse points, or a greater value, so that for circular stacks the number is a multiple of 4, and for rectangular stacks.



4.6 US EPA METHOD 2

The average gas velocity in a stack is determined from the gas density and from measurement of the average velocity head with a Type S pitot tube. External tubing diameter of pitot tube is between 0.48 and 0.95 cm (3⁄16 and 3⁄8 inch). There is an equal distance from the base of each leg of the pitot tube to its face-opening plane; it is recommended that this distance is between 1.05 and 1.50 times the external tubing diameter. The face openings of the pitot tube should be aligned. An identification number is assigned to the pitot tube; this number is permanently marked or engraved on the body of the tube. An inclined manometer is used to measure the differential pressure. Average stack gas velocity is calculated by using below equation.

$$V_s = K_p \, C_p \left[\frac{\sum_{i=1}^{n} \sqrt{\Delta p_i}}{n} \right] \sqrt{\frac{T_{s(abavg)}}{P_s \, M_s}}$$

4.7 US EPA METHOD 3A

In this method, the effluent gas is sampled continuously or intermittently and conveyed to the analyzer that measures the concentration of O2 & CO2. Measurement System is assembled, prepared, and preconditioned according to standard operating procedure based on US EPA Method to achieve the correct sampling rate or dilution ratio. After assembling your sampling system and analyzer, 3 - point analyzer calibration will be performed before and after each run. Before starting the measurement, stratification test is performed to determine the appropriate number of samples traverse points. The following system will be required for sampling of CO_2 and O_2.

- **A measurement system** for Carbon Dioxide and Oxygen that meets the specifications will be used.
- **The Sample Probe** will be of sufficient length to traverse the sample points.
- **The sampling probe** shall be heated to prevent condensation.
- **The Sample Line** will transport the sample gas to the moisture removal system.
- **The Moisture Removal System** will be a flue gas samples conditioner to continuously remove condensate from the sample gas while maintaining minimal contact between the condensate and the sample gas.
- **The Sample Transport Lines** will transport the sample from the moisture removal system to the sample pump, sample flow rate control, and sample gas manifold.
- **A Calibration Valve** for introducing calibration gases either directly to the analyzer in direct calibration mode.
- **A Leak-free Pump**, to pull the sample gas through the system at a flow rate sufficient to minimize the response time of the measurement system will be used. The pump will be constructed of any material that is nonreactive to the gas being sampled.
- **A Digital Recorder** for recording measurement data.

4.8 US EPA METHOD 4

A gas sample is extracted at a constant rate from the source; moisture is removed from the sample stream and determined volumetrically. The following procedure is intended for volumetric analysis to measure the condensed moisture, and silica gel and gravimetric analysis to measure the moisture leaving the condenser.

A minimum of eight traverse points shall be used for circular stacks having diameters less than 0.61 m, a minimum of nine points shall be used for rectangular stacks having equivalent diameters less than 0.61 m, and minimum of twelve traverse points shall be used in all other cases. The traverse points shall be located according to Method 1. A suitable probe and probe length is selected such that all traverse points can be sampled.

A total sampling time is selected such that a minimum total gas volume of 0.60 scm will be collected, at a rate no greater than 0.021 m3/min.

A known volumes of water is placed in the first two impingers and record the weight of each impinger (plus water). Weigh and record the weight of the silica gel and transfer the silica gel to the fourth impinger; alternatively, the silica gel may first be transferred to the impinger, and the weight of the silica gel plus impinger recorded.

Turn on the probe heater and (if applicable) the filter heating system to temperatures of approximately 120°C (248°F), to prevent water condensation ahead of the condenser. Allow time for the temperatures to stabilize. Place crushed ice and water in the ice bath container.

During the sampling run, maintain a sampling rate within 10 percent of constant rate. Be sure to record the dry gas meter reading at the beginning and end of each sampling time increment and whenever sampling is halted. Take other appropriate readings at each sample point at least once during each time increment.

8.1.4.1 To begin sampling, position the probe tip at the first traverse point. Immediately start the pump, and adjust the flow to the desired rate. Traverse the cross section, sampling at each traverse point for an equal length of time. Add more ice and, if necessary, salt to maintain a temperature of less than 20°C (68°F) at the silica gel outlet. After collecting the sample, disconnect the probe from the first impinger and record the weight of impingers and silica gel. The following equation will be used to measure the moisture content.

$$B_{ws} = \frac{V_{wc(std)} + V_{wsg(std)}}{V_{wc(std)} + V_{wsg(std)} + V_{m(std)}}$$

Bsw = Moisture Content

Vwc(std) = Volume of water vapor condensed, corrected to standard conditions

Vwsg(std) = Volume of water vapor collected in silica gel, corrected to standard conditions

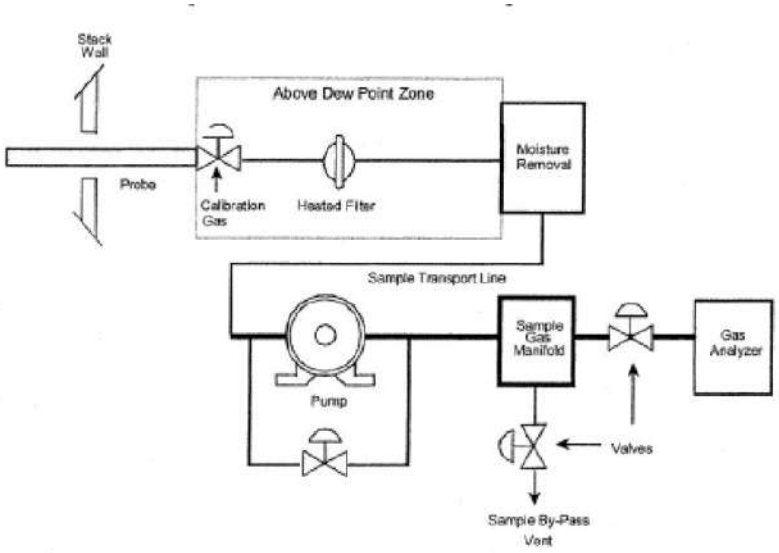
Vm(std) = Dry gas volume measured by the dry gas meter, corrected to standard conditions

4.9 US EPA METHOD 7E

In this method, a sample of the effluent gas is continuously sampled and conveyed to the analyzer for measuring the concentration of NO_X. But for the purposes of this method, NO_X is the sum of NO and NO_2. Method 7E is designed to provide high-quality data for determining compliance with Federal and State emission standards and for relative accuracy testing of CEMS. In these and other applications, the principal objective is to ensure the accuracy of the data at the actual emission levels encountered. The following system will be required for sampling of NO_x.

- **A measurement system** for Oxides of Nitrogen (NO_x) that meets the specifications will be used.
- **The Sample Probe** will be of sufficient length to traverse the sample points.
- **The sampling probe** shall be heated to prevent condensation.
- **The Sample Line** will transport the sample gas to the moisture removal system.

- **The Moisture Removal System** will be a flue gas sample conditioner to continuously remove condensate from the sample gas while maintaining minimal contact between the condensate and the sample gas.
- **The Sample Transport Lines** will transport the sample from the moisture removal system to the sample pump, sample flow rate control, and sample gas manifold.
- **A Calibration Valve** for introducing calibration gases either directly to the analyzer in direct calibration mode.
- **A Leak-free Pump**, to pull the sample gas through the system at a flow rate sufficient to minimize the response time of the measurement system will be used. The pump will be constructed of any material that is nonreactive to the gas being sampled.
- **A Digital Recorder** for recording measurement data.



4.10 US EPA METHOD 6C

A gas sample is continuously extracted from a stack, and a portion of the sample is conveyed to an instrumental analyzer for determination of SO2 gas concentration using nondispersive infrared (NDIR) analyzer. Performance specifications and test procedures are provided to ensure reliable data. Method 6C is a procedure for measuring sulfur dioxide (SO2) in stationary source emissions using a continuous instrumental analyzer. Quality assurance and quality control requirements are included to assure that you, the tester, collect data of known quality. The following system will be required for sampling of SO_2.

- **A measurement system** for Sulphur Dioxide (SO_2) that meets the specifications will be used.
- **The Sample Probe** will be of sufficient length to traverse the sample points.
- **The sampling probe** shall be heated to prevent condensation.
- **The Sample Line** will transport the sample gas to the moisture removal system.

- **The Moisture Removal System** will be a flue gas sample conditioner to continuously remove condensate from the sample gas while maintaining minimal contact between the condensate and the sample gas.
- **The Sample Transport Lines** will transport the sample from the moisture removal system to the sample pump, sample flow rate control, and sample gas manifold.
- **A Calibration Valve** for introducing calibration gases either directly to the analyzer in direct calibration mode.
- **A Leak-free Pump**, to pull the sample gas through the system at a flow rate sufficient to minimize the response time of the measurement system will be used. The pump will be constructed of any material that is nonreactive to the gas being sampled.

A Digital Recorder for recording measurement data.

4.11 US EPA METHOD 201A

Particulate matter (2.5) is withdrawn Iso-kinetically from the source and collected on a glass fiber filter maintained at a specified temperature. The PM mass, which includes any material that condenses at or above the filtration temperature, is determined gravimetrically.

4.12 US EPA METHOD 23

A sample is withdrawn from the gas stream iso-kinetically and collected in the sample probe, on a glass fiber filter, and on a packed column of adsorbent material. The sample cannot be separated into a particle vapor fraction. The PCDD's and PCDF's are extracted from the sample, separated by high resolution gas chromatography, and measured by high resolution mass spectrometry.

5. RESULTS

5.1 SAMPLE 1

Parameters	Results (mg/m3)	US	EU	China	Canada	German	Denmark	Netherlands	France	UK	Italy
NOx	8.19	191	400	250	380	500	N/A	98	N/A	N/A	N/A
SO2	4.49	N/A	50	80	180	50	420	56	37	420	420
PM2.5	1.72	30	10	20	20	20	57	57	14	70	120
Dioxins and Furans	$<1.56x10^{-8}$	0.054	0.1	0.5	0.14	N/A	N/A	N/A	N/A	N/A	N/A

5.2 SAMPLE 2

Parameters	Results (mg/m3)	US	EU	China	Canada	German	Denmark	Netherlands	France	UK	Italy
NOx	15.41	191	400	250	380	500	N/A	98	N/A	N/A	N/A
SO2	9.35	N/A	50	80	180	50	420	56	37	420	420
PM2.5	1.95	30	10	20	20	20	57	57	14	70	120
Dioxins and Furans	$<1.17x10^{-8}$	0.054	0.1	0.5	0.14	N/A	N/A	N/A	N/A	N/A	N/A

5.3 SAMPLE 3

Parameters	Results (mg/m3)	US	EU	China	Canada	German	Denmark	Netherlands	France	UK	Italy
NOx	9.25	191	400	250	380	500	N/A	98	N/A	N/A	N/A
SO2	4.1	N/A	50	80	180	50	420	56	37	420	420
PM2.5	1.88	30	10	20	20	20	57	57	14	70	120
Dioxins and Furans	$<1.27x10^{-8}$	0.054	0.1	0.5	0.14	N/A	N/A	N/A	N/A	N/A	N/A

6. DISCUSSION

The Stack Emission Testing was carried out at different waste for Oxides of Nitrogen (NOx), Sulphur Dioxide (SO2), Particulate Matter (2.5) and Dioxins and Furans and results were compared against US, EU, China, Canada, German, Demark, Netherland, France, UK and Italy Emission Standards. It was observed that all the results were below the allowable limit of US, EU, China, Canada, German, Demark, Netherland, France, UK and Italy Emission Standards for NOx, SO2, PM2.5 and Dioxins and Furans. However, there is no available allowable limit for these parameters in Kyrgyzstan Standards.

7. CONCLUSION

Based on the analysis reports and above findings for available data, it is concluded that the monitored parameters are within the permissible guidance and reference standards were applicable.

8. EMISSION DATA

8.1 SAMPLE 1

Date	NOx[ppm]	SO2[ppm]
9/11/2022	3.28	1.46
9/11/2022	3.09	1.64
9/11/2022	1.94	1.58
9/11/2022	1.36	1.90
9/11/2022	1.55	1.82
9/11/2022	1.74	1.63
9/11/2022	1.75	1.71
9/11/2022	1.75	1.80
9/11/2022	1.94	1.54
9/11/2022	2.33	1.74
9/11/2022	2.33	1.61
9/11/2022	2.14	1.79
9/11/2022	3.70	1.88
9/11/2022	7.19	1.95
9/11/2022	7.78	1.87
9/11/2022	7.39	1.75
9/11/2022	6.61	1.96
9/11/2022	7.20	1.84
9/11/2022	7.39	1.77
9/11/2022	7.58	1.67
9/11/2022	7.38	1.62
9/11/2022	7.38	1.66
9/11/2022	6.79	1.86
9/11/2022	6.79	1.75
9/11/2022	7.56	1.66
9/11/2022	6.98	1.59
9/11/2022	6.97	1.66
9/11/2022	3.28	1.46
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9/11/2022	6.97	1.66
9/11/2022	6.39	1.76
9/11/2022	6.39	1.78
9/11/2022	7.17	1.51
9/11/2022	6.20	1.76
9/11/2022	6.58	1.38
9/11/2022	6.97	1.66
9/11/2022	7.19	1.95
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9/11/2022	6.39	1.76
9/11/2022	6.39	1.78
9/11/2022	7.17	1.51
9/11/2022	6.20	1.76
9/11/2022	6.58	1.38
9/11/2022	6.97	1.66
9/11/2022	5.97	1.65
9/11/2022	5.78	1.50
9/11/2022	5.00	1.38
9/11/2022	4.81	1.59
9/11/2022	5.58	1.65

9/11/2022	5.39	1.60
9/11/2022	5.01	1.52
9/11/2022	3.28	1.46
9/11/2022	3.09	1.64
9/11/2022	1.94	1.58
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9/11/2022	1.75	1.71
9/11/2022	1.75	1.80
9/11/2022	1.94	1.54
9/11/2022	2.33	1.74
9/11/2022	2.33	1.61
9/11/2022	2.14	1.79
9/11/2022	3.70	1.88
9/11/2022	7.19	1.95
9/11/2022	7.78	1.87
9/11/2022	7.39	1.75
9/11/2022	6.61	1.96
9/11/2022	7.20	1.84
9/11/2022	7.39	1.77
9/11/2022	7.58	1.67
9/11/2022	7.38	1.62
9/11/2022	7.38	1.66
9/11/2022	6.79	1.86
9/11/2022	6.79	1.75
9/11/2022	7.56	1.66
9/11/2022	6.98	1.59
9/11/2022	6.97	1.66
9/11/2022	3.28	1.46
9/11/2022	3.09	1.64
9/11/2022	1.94	1.58
9/11/2022	1.36	1.90
9/11/2022	1.55	1.82
9/11/2022	1.74	1.63
9/11/2022	1.75	1.71

9/11/2022	1.75	1.80
9/11/2022	1.94	1.54
9/11/2022	2.33	1.74
9/11/2022	2.33	1.61
9/11/2022	2.14	1.79
9/11/2022	3.70	1.88
9/11/2022	3.28	1.46
9/11/2022	3.09	1.64
9/11/2022	1.94	1.58
9/11/2022	1.36	1.90
9/11/2022	1.55	1.82
9/11/2022	1.74	1.63
9/11/2022	1.75	1.71
9/11/2022	1.75	1.80
9/11/2022	1.94	1.54
9/11/2022	2.33	1.74
9/11/2022	2.33	1.61
9/11/2022	2.14	1.79
9/11/2022	3.70	1.88
9/11/2022	7.19	1.95
9/11/2022	7.78	1.87
9/11/2022	7.39	1.75
9/11/2022	6.61	1.96
9/11/2022	7.20	1.84

8.2 SAMPLE 2

Date	NOx[ppm]	SO2[ppm]
9/13/2022	6.57	2.24
9/13/2022	6.69	1.81
9/13/2022	6.83	1.57
9/13/2022	6.98	1.59
9/13/2022	7.13	1.55
9/13/2022	7.29	1.32
9/13/2022	7.44	1.43
9/13/2022	7.60	1.55
9/13/2022	7.76	1.76
9/13/2022	7.92	1.57
9/13/2022	8.07	1.30
9/13/2022	8.19	1.42
9/13/2022	8.32	1.63
9/13/2022	8.46	1.26
9/13/2022	8.61	1.50
9/13/2022	8.76	1.57
9/13/2022	8.91	1.41
9/13/2022	9.06	1.69
9/13/2022	9.21	1.45
9/13/2022	9.36	1.63
9/13/2022	9.51	1.78
9/13/2022	9.61	1.96
9/13/2022	9.72	2.11
9/13/2022	9.84	1.51
9/13/2022	10.00	1.27
9/13/2022	10.13	1.81
9/13/2022	10.15	2.32
9/13/2022	10.25	2.48
9/13/2022	10.28	3.30
9/13/2022	10.33	3.74
9/13/2022	10.39	3.84
9/13/2022	10.45	4.13
9/13/2022	10.55	3.26
9/13/2022	10.69	3.29
9/13/2022	10.85	2.81
9/13/2022	11.01	3.13
9/13/2022	11.18	3.37
9/13/2022	11.39	2.43
9/13/2022	11.64	2.03
9/13/2022	11.92	2.11
9/13/2022	12.13	2.87
9/13/2022	12.29	4.44

9/13/2022	12.42	4.96
9/13/2022	12.54	4.40
9/13/2022	12.62	5.31
9/13/2022	12.65	4.74
9/13/2022	12.65	4.78
9/13/2022	12.69	3.14
9/13/2022	12.74	2.74
9/13/2022	12.79	2.64
9/13/2022	12.82	2.78
9/13/2022	12.87	2.66
9/13/2022	12.91	2.42
9/13/2022	12.95	2.58
9/13/2022	12.98	2.22
9/13/2022	13.00	2.46
9/13/2022	13.00	2.51
9/13/2022	13.03	2.44
9/13/2022	13.04	2.32
9/13/2022	13.07	2.68
9/13/2022	12.65	4.74
9/13/2022	12.65	4.78
9/13/2022	12.69	3.14
9/13/2022	12.74	2.74
9/13/2022	12.79	2.64
9/13/2022	12.82	2.78
9/13/2022	12.87	2.66
9/13/2022	12.91	2.42
9/13/2022	12.95	2.58
9/13/2022	12.98	2.22
9/13/2022	13.00	2.46
9/13/2022	13.00	2.51
9/13/2022	13.03	2.44
9/13/2022	13.04	2.32
9/13/2022	13.07	2.68
9/13/2022	6.39	5.30
9/13/2022	7.17	4.29
9/13/2022	6.20	5.20
9/13/2022	6.58	4.15
9/13/2022	6.97	4.81
9/13/2022	5.97	1.54
9/13/2022	5.78	1.42
9/13/2022	5.00	1.27
9/13/2022	4.81	1.47
9/13/2022	5.58	1.51
9/13/2022	5.39	1.48
9/13/2022	5.01	1.59

9/13/2022	10.13	1.81
9/13/2022	10.15	2.32
9/13/2022	10.25	2.48
9/13/2022	10.28	3.30
9/13/2022	10.33	3.74
9/13/2022	10.39	3.84
9/13/2022	10.45	4.13
9/13/2022	10.55	3.26
9/13/2022	10.69	3.29
9/13/2022	10.85	2.81
9/13/2022	11.01	3.13
9/13/2022	11.18	3.37
9/13/2022	11.39	2.43
9/13/2022	11.64	2.03
9/13/2022	11.92	2.11
9/13/2022	12.13	2.87
9/13/2022	12.29	4.44
9/13/2022	12.42	4.96
9/13/2022	12.54	4.40
9/13/2022	12.62	5.31
9/13/2022	10.25	2.48
9/13/2022	10.28	3.30
9/13/2022	10.33	3.74
9/13/2022	10.39	3.84
9/13/2022	10.45	4.13
9/13/2022	10.55	3.26
9/13/2022	10.69	3.29
9/13/2022	10.85	2.81
9/13/2022	11.01	3.13
9/13/2022	11.18	3.37
9/13/2022	11.39	2.43
9/13/2022	11.64	2.03
9/13/2022	11.92	2.11
9/13/2022	12.13	2.87
9/13/2022	12.29	4.44
9/13/2022	12.42	4.96
9/13/2022	12.54	4.40
9/13/2022	12.62	5.31
9/13/2022	12.65	4.74
9/13/2022	12.65	4.78
9/13/2022	3.28	1.81
9/13/2022	3.09	2.70
9/13/2022	10.25	2.48
9/13/2022	10.28	3.30
9/13/2022	10.33	3.74

9/13/2022	10.39	3.84
9/13/2022	10.45	4.13
9/13/2022	10.55	3.26
9/13/2022	10.69	3.29
9/13/2022	10.85	2.81
9/13/2022	11.01	3.13
9/13/2022	11.18	3.37
9/13/2022	11.39	2.43
9/13/2022	11.64	2.03
9/13/2022	11.92	2.11
9/13/2022	12.13	2.87
9/13/2022	12.29	4.44
9/13/2022	12.42	4.96
9/13/2022	12.54	4.40
9/13/2022	12.62	5.31
9/13/2022	10.25	2.48
9/13/2022	10.28	3.30
9/13/2022	6.98	1.59
9/13/2022	7.13	1.55
9/13/2022	7.29	1.32
9/13/2022	7.44	1.43
9/13/2022	7.60	1.55
9/13/2022	7.76	1.76
9/13/2022	7.92	1.57
9/13/2022	8.07	1.30
9/13/2022	8.19	1.42
9/13/2022	8.32	1.63
9/13/2022	8.46	1.26
9/13/2022	8.61	1.50
9/13/2022	8.76	1.57
9/13/2022	8.91	1.41
9/13/2022	9.06	1.69
9/13/2022	9.21	1.45
9/13/2022	9.36	1.63
9/13/2022	9.51	1.78
9/13/2022	9.61	1.96
9/13/2022	9.72	2.11
9/13/2022	1.36	5.02
9/13/2022	1.55	5.80
9/13/2022	1.74	4.73
9/13/2022	5.01	1.59
9/13/2022	3.28	1.81
9/13/2022	3.09	2.70
9/13/2022	1.94	3.37
9/13/2022	1.36	5.02

9/13/2022	1.55	5.80
9/13/2022	1.74	4.73
9/13/2022	1.75	5.36
9/13/2022	1.75	6.62
9/13/2022	1.94	6.60
9/13/2022	2.33	8.01
9/13/2022	2.33	7.78
9/13/2022	2.14	8.45
9/13/2022	3.70	7.34
9/13/2022	3.28	1.81
9/13/2022	3.09	2.70
9/13/2022	1.94	3.37
9/13/2022	1.36	5.02
9/13/2022	1.55	5.80
9/13/2022	1.74	4.73
9/13/2022	1.75	5.36
9/13/2022	1.75	6.62
9/13/2022	1.94	6.60
9/13/2022	2.33	8.01
9/13/2022	2.33	7.78
9/13/2022	2.14	8.45
9/13/2022	3.70	7.34
9/13/2022	7.19	5.61
9/13/2022	7.78	4.95
9/13/2022	7.39	4.75
9/13/2022	6.61	5.58
9/13/2022	7.20	4.99
9/13/2022	7.39	4.78
9/13/2022	7.58	4.51
9/13/2022	7.38	4.37
9/13/2022	7.38	4.70
9/13/2022	6.79	5.24
9/13/2022	6.79	4.73
9/13/2022	7.56	4.38
9/13/2022	6.98	4.55
9/13/2022	6.97	4.63
9/13/2022	3.28	1.81
9/13/2022	3.09	2.70
9/13/2022	1.94	3.37
9/13/2022	1.36	5.02
9/13/2022	1.55	5.80
9/13/2022	1.74	4.73
9/13/2022	1.75	5.36
9/13/2022	1.75	6.62
9/13/2022	1.94	6.60

9/13/2022	2.33	8.01
9/13/2022	2.33	7.78
9/13/2022	2.14	8.45
9/13/2022	3.70	7.34
9/13/2022	3.28	1.81
9/13/2022	3.09	2.70
9/13/2022	1.94	3.37
9/13/2022	1.36	5.02
9/13/2022	1.55	5.80
9/13/2022	1.74	4.73
9/13/2022	1.75	5.36
9/13/2022	1.75	6.62
9/13/2022	1.94	6.60
9/13/2022	2.33	8.01
9/13/2022	2.33	7.78
9/13/2022	2.14	8.45
9/13/2022	3.70	7.34
9/13/2022	7.19	5.61
9/13/2022	7.78	4.95
9/13/2022	7.39	4.75
9/13/2022	6.61	5.58
9/13/2022	7.20	4.99

8.3 SAMPLE 3

Date	NOx[ppm]	SO2[ppm]
9/14/2022	5.98	2.23
9/14/2022	5.61	2.57
9/14/2022	5.24	2.90
9/14/2022	5.24	2.83
9/14/2022	5.99	2.98
9/14/2022	5.43	1.79
9/14/2022	5.61	1.12
9/14/2022	5.24	1.64
9/14/2022	5.24	1.56
9/14/2022	5.80	1.57
9/14/2022	5.99	1.59
9/14/2022	5.05	3.28
9/14/2022	5.62	2.62
9/14/2022	5.25	1.87
9/14/2022	4.32	1.71
9/14/2022	4.70	1.36
9/14/2022	4.89	1.00
9/14/2022	4.51	1.15
9/14/2022	5.83	1.40
9/14/2022	5.08	1.94
9/14/2022	5.27	1.52
9/14/2022	5.45	1.35
9/14/2022	5.08	1.65
9/14/2022	4.70	1.42
9/14/2022	4.89	1.55
9/14/2022	4.52	1.85
9/14/2022	4.52	2.15
9/14/2022	5.08	1.94
9/14/2022	4.52	1.62
9/14/2022	5.28	1.35
9/14/2022	4.34	1.27
9/14/2022	4.72	1.45
9/14/2022	4.72	1.51
9/14/2022	5.66	1.95
9/14/2022	5.48	1.76
9/14/2022	5.30	1.85
9/14/2022	5.11	1.46
9/14/2022	5.87	1.93
9/14/2022	4.74	1.59
9/14/2022	5.12	1.16
9/14/2022	4.55	1.58
9/14/2022	4.75	1.52

9/14/2022	4.56	1.70
9/14/2022	4.38	1.50
9/14/2022	4.19	1.42
9/14/2022	4.19	1.38
9/14/2022	4.38	1.51
9/14/2022	4.38	1.31
9/14/2022	4.76	1.38
9/14/2022	4.76	1.22
9/14/2022	4.18	1.13
9/14/2022	4.38	1.33
9/14/2022	4.00	1.18
9/14/2022	4.38	1.33
9/14/2022	4.57	1.04
9/14/2022	5.15	1.40
9/14/2022	4.96	1.18
9/14/2022	4.78	1.33
9/14/2022	4.78	0.96
9/14/2022	4.78	1.00
9/14/2022	5.99	1.59
9/14/2022	5.05	3.28
9/14/2022	5.62	2.62
9/14/2022	5.25	1.87
9/14/2022	4.32	1.71
9/14/2022	4.70	1.36
9/14/2022	4.89	1.00
9/14/2022	4.51	1.15
9/14/2022	5.83	1.40
9/14/2022	5.08	1.94
9/14/2022	5.27	1.52
9/14/2022	5.45	1.35
9/14/2022	5.08	1.65
9/14/2022	4.70	1.42
9/14/2022	4.89	1.55
9/14/2022	4.52	1.85
9/14/2022	4.52	2.15
9/14/2022	5.08	1.94
9/14/2022	4.52	1.62
9/14/2022	5.28	1.35
9/14/2022	4.55	1.58
9/14/2022	4.75	1.52
9/14/2022	4.56	1.70
9/14/2022	4.38	1.50
9/14/2022	4.19	1.42
9/14/2022	4.19	1.38
9/14/2022	4.38	1.51

9/14/2022	4.38	1.31
9/14/2022	4.76	1.38
9/14/2022	4.76	1.22
9/14/2022	4.18	1.13
9/14/2022	4.38	1.33
9/14/2022	4.00	1.18
9/14/2022	4.38	1.33
9/14/2022	4.57	1.04
9/14/2022	5.15	1.40
9/14/2022	4.96	1.18
9/14/2022	4.78	1.33
9/14/2022	4.78	0.96
9/14/2022	4.78	1.00
9/14/2022	5.27	1.52
9/14/2022	5.45	1.35
9/14/2022	5.08	1.65
9/14/2022	4.70	1.42
9/14/2022	4.89	1.55
9/14/2022	4.52	1.85
9/14/2022	4.52	2.15
9/14/2022	5.08	1.94
9/14/2022	4.52	1.62
9/14/2022	5.28	1.35
9/14/2022	4.34	1.27
9/14/2022	4.72	1.45
9/14/2022	4.72	1.51
9/14/2022	5.66	1.95
9/14/2022	5.48	1.76
9/14/2022	5.30	1.85
9/14/2022	5.11	1.46
9/14/2022	5.87	1.93
9/14/2022	4.74	1.59
9/14/2022	5.12	1.16
9/14/2022	4.19	1.38
9/14/2022	4.38	1.51
9/14/2022	4.38	1.31
9/14/2022	4.76	1.38
9/14/2022	4.76	1.22
9/14/2022	4.18	1.13
9/14/2022	4.38	1.33
9/14/2022	4.00	1.18
9/14/2022	4.38	1.33
9/14/2022	4.57	1.04
9/14/2022	5.15	1.40
9/14/2022	4.96	1.18

9/14/2022	4.78	1.33
9/14/2022	4.78	0.96
9/14/2022	4.78	1.00
9/14/2022	5.27	1.52
9/14/2022	5.45	1.35
9/14/2022	5.08	1.65
9/14/2022	4.70	1.42
9/14/2022	4.89	1.55
9/14/2022	5.62	2.62
9/14/2022	5.25	1.87
9/14/2022	4.32	1.71
9/14/2022	4.70	1.36
9/14/2022	4.89	1.00
9/14/2022	4.51	1.15
9/14/2022	5.83	1.40
9/14/2022	5.08	1.94
9/14/2022	5.27	1.52
9/14/2022	5.45	1.35
9/14/2022	5.08	1.65
9/14/2022	4.70	1.42
9/14/2022	4.89	1.55
9/14/2022	4.52	1.85
9/14/2022	4.52	2.15
9/14/2022	5.08	1.94
9/14/2022	4.52	1.62
9/14/2022	5.28	1.35
9/14/2022	4.55	1.58
9/14/2022	4.75	1.52
9/14/2022	4.00	1.18
9/14/2022	4.38	1.33
9/14/2022	4.57	1.04
9/14/2022	5.15	1.40
9/14/2022	4.96	1.18
9/14/2022	4.78	1.33
9/14/2022	4.78	0.96
9/14/2022	4.78	1.00
9/14/2022	5.27	1.52
9/14/2022	5.45	1.35
9/14/2022	5.08	1.65
9/14/2022	4.70	1.42
9/14/2022	4.89	1.55
9/14/2022	5.62	2.62
9/14/2022	5.25	1.87
9/14/2022	4.32	1.71
9/14/2022	4.70	1.36

9/14/2022	4.89	1.00
9/14/2022	4.51	1.15
9/14/2022	5.83	1.40
9/14/2022	4.52	2.15
9/14/2022	5.08	1.94
9/14/2022	4.52	1.62
9/14/2022	5.28	1.35
9/14/2022	4.34	1.27
9/14/2022	4.72	1.45
9/14/2022	4.72	1.51
9/14/2022	5.66	1.95
9/14/2022	5.48	1.76
9/14/2022	5.30	1.85
9/14/2022	5.11	1.46
9/14/2022	5.87	1.93
9/14/2022	4.74	1.59
9/14/2022	5.12	1.16
9/14/2022	4.19	1.38
9/14/2022	4.38	1.51
9/14/2022	4.38	1.31
9/14/2022	4.76	1.38
9/14/2022	4.76	1.22
9/14/2022	4.18	1.13
9/14/2022	4.70	1.42
9/14/2022	4.89	1.55
9/14/2022	5.62	2.62
9/14/2022	5.25	1.87
9/14/2022	4.32	1.71
9/14/2022	4.70	1.36
9/14/2022	4.89	1.00
9/14/2022	4.51	1.15
9/14/2022	5.83	1.40
9/14/2022	4.52	2.15
9/14/2022	5.08	1.94
9/14/2022	4.52	1.62
9/14/2022	5.28	1.35
9/14/2022	4.34	1.27
9/14/2022	4.72	1.45
9/14/2022	4.72	1.51
9/14/2022	5.66	1.95
9/14/2022	5.48	1.76
9/14/2022	5.30	1.85
9/14/2022	5.11	1.46
9/14/2022	5.99	2.98
9/14/2022	5.43	1.79

9/14/2022	5.61	1.12
9/14/2022	5.24	1.64
9/14/2022	5.24	1.56
9/14/2022	5.80	1.57
9/14/2022	5.99	1.59
9/14/2022	5.05	3.28
9/14/2022	5.62	2.62
9/14/2022	5.25	1.87
9/14/2022	4.32	1.71
9/14/2022	4.70	1.36
9/14/2022	4.89	1.00
9/14/2022	4.51	1.15
9/14/2022	5.83	1.40
9/14/2022	5.08	1.94
9/14/2022	5.27	1.52
9/14/2022	5.45	1.35
9/14/2022	5.08	1.65
9/14/2022	4.70	1.42
9/14/2022	5.08	1.65
9/14/2022	4.70	1.42
9/14/2022	4.89	1.55
9/14/2022	4.52	1.85
9/14/2022	4.52	2.15
9/14/2022	5.08	1.94
9/14/2022	4.52	1.62

SGS GULF UAE
Attn: Hafiz Muhammad Zain Ul Abid Din
P.O. BOX 18556
JEBEL ALI FREE ZONE
DUBAI
UNITED ARAB EMIRATES

ANALYTICAL REPORT : IAC22-10840

Your reference: *PO? UNDP - Hafiz*
Number of samples: 3
Date of receipt: 28/09/2022
Identification of the samples:

IAC22-10840.001 - *Sample 1* (Emission)
IAC22-10840.002 - *Sample 2* (Emission)
IAC22-10840.003 - *Sample 3* (Emission)

Analytical results:

B Determination of 2,3,7,8 substituted PCDF's and PCDD's
(ECO/AV/IAC/020)

The analyses marked with B are Belac ISO17025 accredited (N.005-TEST)

I.A.C., a division of SGS Belgium NV ANTWERP, 27/10/2022

ISO17025 (N.005-TEST)

Sven Herremans
Lab Operations Manager

SGS Belgium NV | Institute for Applied Chromatography Haven 407 Polderdijkweg 16 B-2030 Antwerpen
t +32 (0)3 545 85 90 **e** be.iac.admin@sgs.com **url** www.sgs.be

ANALYTICAL REPORT : IAC22-10840

Determination of 2,3,7,8 substituted PCDF's and PCDD's

Sample identification : IAC22-10840.001

Date of analysis: 27-10-2022

Your reference: *Sample 1*

Date of sampling: *unknown*
Sampled by: *Third party*

Component	Concentration (ng)	I-TEF	I-TEQ (ng)
2,3,7,8-TCDF	<0.0050	0.1	< 0.00050
2,3,7,8-TCDD	<0.0025	1	< 0.0025
1,2,3,7,8-PeCDF	<0.0050	0.05	< 0.00025
2,3,4,7,8-PeCDF	<0.0050	0.5	< 0.0025
1,2,3,7,8-PeCDD	<0.0050	0.5	< 0.0025
1,2,3,4,7,8-HxCDF	0.0074	0.1	0.00074
1,2,3,6,7,8-HxCDF	<0.0063	0.1	< 0.00063
2,3,4,6,7,8-HxCDF	<0.0063	0.1	< 0.00063
1,2,3,7,8,9-HxCDF	<0.0063	0.1	< 0.00063
1,2,3,4,7,8-HxCDD	<0.0063	0.1	< 0.00063
1,2,3,6,7,8-HxCDD	<0.0063	0.1	< 0.00063
1,2,3,7,8,9-HxCDD	<0.0063	0.1	< 0.00063
1,2,3,4,6,7,8-HpCDF	<0.025	0.01	< 0.00025
1,2,3,4,7,8,9-HpCDF	<0.025	0.01	< 0.00025
1,2,3,4,6,7,8-HpCDD	<0.025	0.01	< 0.00025
OCDF	<0.13	0.001	< 0.00013
OCDD	<0.13	0.001	< 0.00013
Total			0.00074 - 0.014

The TEQ values have been calculated using the toxicity equivalence factors according to J .A. van Zorge et al. (Chemosphere 19 (1989), 1881-1895).

The measurement uncertainty has been determined and is available in the laboratory. On request, the data will be transmitted.
The RSD of the control sample is less than 10%.

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ANALYTICAL REPORT : IAC22-10840

Determination of 2,3,7,8 substituted PCDF's and PCDD's

Sample identification : IAC22-10840.002 — Date of analysis: 27-10-2022

Your reference: *Sample 2* — Date of sampling: *unknown*

Sampled by: *Third party*

Component	Concentration (ng)	I-TEF	I-TEQ (ng)
2,3,7,8-TCDF	0.0058	0.1	0.00058
2,3,7,8-TCDD	<0.0025	1	< 0.0025
1,2,3,7,8-PeCDF	<0.0050	0.05	< 0.00025
2,3,4,7,8-PeCDF	<0.0050	0.5	< 0.0025
1,2,3,7,8-PeCDD	<0.0050	0.5	< 0.0025
1,2,3,4,7,8-HxCDF	<0.0063	0.1	< 0.00063
1,2,3,6,7,8-HxCDF	<0.0063	0.1	< 0.00063
2,3,4,6,7,8-HxCDF	<0.0063	0.1	< 0.00063
1,2,3,7,8,9-HxCDF	<0.0063	0.1	< 0.00063
1,2,3,4,7,8-HxCDD	<0.0063	0.1	< 0.00063
1,2,3,6,7,8-HxCDD	<0.0063	0.1	< 0.00063
1,2,3,7,8,9-HxCDD	<0.0063	0.1	< 0.00063
1,2,3,4,6,7,8-HpCDF	<0.025	0.01	< 0.00025
1,2,3,4,7,8,9-HpCDF	<0.025	0.01	< 0.00025
1,2,3,4,6,7,8-HpCDD	<0.025	0.01	< 0.00025
OCDF	<0.13	0.001	< 0.00013
OCDD	<0.13	0.001	< 0.00013
Total			0.00058 - 0.014

The TEQ values have been calculated using the toxicity equivalence factors according to J .A. van Zorge et al. (Chemosphere 19 (1989), 1881-1895).

The measurement uncertainty has been determined and is available in the laboratory. On request, the data will be transmitted.
The RSD of the control sample is less than 10%.

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ANALYTICAL REPORT : IAC22-10840

Determination of 2,3,7,8 substituted PCDF's and PCDD's

Sample identification : IAC22-10840.003

Your reference: *Sample 3*

Date of analysis: 27-10-2022

Date of sampling: *unknown*
Sampled by: *Third party*

Component	Concentration (ng)	I-TEF	I-TEQ (ng)
2,3,7,8-TCDF	0.0074	0.1	0.00074
2,3,7,8-TCDD	<0.0025	1	< 0.0025
1,2,3,7,8-PeCDF	<0.0050	0.05	< 0.00025
2,3,4,7,8-PeCDF	<0.0050	0.5	< 0.0025
1,2,3,7,8-PeCDD	<0.0050	0.5	< 0.0025
1,2,3,4,7,8-HxCDF	<0.0063	0.1	< 0.00063
1,2,3,6,7,8-HxCDF	<0.0063	0.1	< 0.00063
2,3,4,6,7,8-HxCDF	<0.0063	0.1	< 0.00063
1,2,3,7,8,9-HxCDF	<0.0063	0.1	< 0.00063
1,2,3,4,7,8-HxCDD	<0.0063	0.1	< 0.00063
1,2,3,6,7,8-HxCDD	<0.0063	0.1	< 0.00063
1,2,3,7,8,9-HxCDD	<0.0063	0.1	< 0.00063
1,2,3,4,6,7,8-HpCDF	<0.025	0.01	< 0.00025
1,2,3,4,7,8,9-HpCDF	<0.025	0.01	< 0.00025
1,2,3,4,6,7,8-HpCDD	<0.025	0.01	< 0.00025
OCDF	<0.13	0.001	< 0.00013
OCDD	<0.13	0.001	< 0.00013
Total			0.00074 - 0.014

The TEQ values have been calculated using the toxicity equivalence factors according to J .A. van Zorge et al. (Chemosphere 19 (1989), 1881-1895).

The measurement uncertainty has been determined and is available in the laboratory. On request, the data will be transmitted.
The RSD of the control sample is less than 10%.

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ANALYTICAL REPORT : IAC22-10840

Recovery standards - 2,3,7,8 substituted PCDF's and PCDD's	
Sample identification : IAC22-10840.001 Your reference: *Sample 1*	
Recovery sampling standards	
Component	Recovery 13C-sampling standards (%)
13C-2,3,4,7,8-PeCDF	-
13C-1,2,3,4,7,8-HxCDF	-
13C-1,2,3,4,7,8,9-HpCDF	-
37Cl-2,3,7,8-TCDD	-
13C-1,2,3,4,7,8-HxCDD	-
Recovery extraction standards	
Component	Recovery 13C-extraction standards (%)
13C-2,3,7,8-TCDF	67.9
13C-1,2,3,7,8-PeCDF	53.1
13C-1,2,3,6,7,8-HxCDF	99.7
13C-1,2,3,4,6,7,8-HpCDF	97.5
13C-2,3,7,8-TCDD	79.1
13C-1,2,3,7,8-PeCDD	55.3
13C-1,2,3,6,7,8-HxCDD	90.5
13C-1,2,3,4,6,7,8-HpCDD	86.9
13C-OCDD	60.1

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ANALYTICAL REPORT : IAC22-10840

Recovery standards - 2,3,7,8 substituted PCDF's and PCDD's	
Sample identification : IAC22-10840.002 Your reference: *Sample 2*	
Recovery sampling standards	
Component	Recovery 13C-sampling standards (%)
13C-2,3,4,7,8-PeCDF	-
13C-1,2,3,4,7,8-HxCDF	-
13C-1,2,3,4,7,8,9-HpCDF	-
37Cl-2,3,7,8-TCDD	-
13C-1,2,3,4,7,8-HxCDD	-
Recovery extraction standards	
Component	Recovery 13C-extraction standards (%)
13C-2,3,7,8-TCDF	66.5
13C-1,2,3,7,8-PeCDF	51.2
13C-1,2,3,6,7,8-HxCDF	97.4
13C-1,2,3,4,6,7,8-HpCDF	83.5
13C-2,3,7,8-TCDD	76.8
13C-1,2,3,7,8-PeCDD	52.4
13C-1,2,3,6,7,8-HxCDD	87.0
13C-1,2,3,4,6,7,8-HpCDD	75.1
13C-OCDD	52.4

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ANALYTICAL REPORT : IAC22-10840

Recovery standards - 2,3,7,8 substituted PCDF's and PCDD's	
Sample identification : IAC22-10840.003 Your reference: *Sample 3*	
Recovery sampling standards	
Component	Recovery 13C-sampling standards (%)
13C-2,3,4,7,8-PeCDF	-
13C-1,2,3,4,7,8-HxCDF	-
13C-1,2,3,4,7,8,9-HpCDF	-
37Cl-2,3,7,8-TCDD	-
13C-1,2,3,4,7,8-HxCDD	-
Recovery extraction standards	
Component	Recovery 13C-extraction standards (%)
13C-2,3,7,8-TCDF	73.5
13C-1,2,3,7,8-PeCDF	58.1
13C-1,2,3,6,7,8-HxCDF	105
13C-1,2,3,4,6,7,8-HpCDF	87.0
13C-2,3,7,8-TCDD	85.3
13C-1,2,3,7,8-PeCDD	57.4
13C-1,2,3,6,7,8-HxCDD	95.3
13C-1,2,3,4,6,7,8-HpCDD	78.7
13C-OCDD	54.5

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ANALYTICAL REPORT : IAC22-10840

ADDENDUM ANALYTICAL REPORT PCDF's and PCDD's : IAC22-10840

- **Precision of the method :**

  The precision of the method is expressed in the intra-laboratory reproducibility and the repeatability, based on the results of the control sample and the results of the validation of the method.

  Intra-laboratory reproducibility :
  Control sample: RSD = 5,6 % (amount sum 17 toxic congeners = 5000 ng TEQ / kg ; n = 33)
  (RSD = Relative Standard Deviation)

  Repeatability :
  Emission: RSD = 3,3 % (amount sum 17 toxic congeners = 0,02 ng TEQ ; n = 7)
  Emission: RSD = 1,0 % (amount sum 17 toxic congeners = 0,5 ng TEQ ; n = 7)
  (RSD = Relative Standard Deviation)

  Measurement uncertainty :
  The measurement uncertainty has been determined and is available in the laboratory. On request, the data will be transmitted.

- **Sample storage :**

  Temperature of the sample storage: in the dark in a refrigerator.
  Date and time that the sample was stored in the sample storage, see column 2.

- **Extraction :**

  The part of the sample (filter, condensate or XAD-2) to which the extraction standard was added: XAD-2
  The part of the extraction standard which was added to the XAD-2: 100 %
  Date and time that the extraction standard was added to the XAD-2, see column 3.
  Weight condensate, see column 6 (whenever applicable).

- **Evaporation :**

  Volume of the extract after evaporation: 0,25 ml.

- **Addition to the injection standard :**

  Date and time that the injection standard was added, see column 4.
  Date and time of the injection, see column 5.

  Volume of the extract at injection: 25 µl.

Sample number	Storage date - time	Extraction std date - time	Injection std date - time	Injection date - time
IAC22-10840.001	28/9/2022 - 10:38	3/10/2022 - 11:30	6/10/2022 - 10:00	21/10/2022 - 03:54
IAC22-10840.002	28/9/2022 - 10:38	3/10/2022 - 11:30	6/10/2022 - 10:00	21/10/2022 - 04:42
IAC22-10840.003	28/9/2022 - 10:38	3/10/2022 - 11:15	6/10/2022 - 10:00	21/10/2022 - 05:30

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Organisme belge d'Accréditation
Belgische Accreditatieinstelling
Belgische Akkreditierungsstelle
Belgian Accreditation Body

EA MLA Signatory

Certificat d'Accréditation n° 005-TEST

En application des dispositions de l'arrêté royal du 31 janvier 2006 créant BELAC, le Bureau d'Accréditation atteste avoir délivré une accréditation conformément aux exigences de la norme EN ISO/IEC 17025:2017 à:

SGS Belgium nv
Noorderlaan 87
2030 Antwerpen

L'organisme a démontré posséder la compétence pour effectuer les activités réalisées dans les sites d'activités mentionnés dans la portée d'accréditation 005-TEST qui fait partie intégrante du présent certificat.

La version en vigueur de la portée d'accréditation est disponible via www.belac.be.

Ce certificat reste valable à condition que l'organisme continue de répondre aux conditions d'accréditation.

La Présidente du Bureau d'Accréditation BELAC,

Maureen LOGGHE

Version : **9**

Période de validité : **2021-09-02 - 2026-05-09**

La version originale de ce certificat est en néerlandais.

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BELAC 6-319 R0-2020

Organisme belge d'Accréditation
Belgische Accreditatieinstelling
Belgische Akkreditierungsstelle
Belgian Accreditation Body

EA MLA Signatory

Accreditatiecertificaat nr. 005-TEST

In uitvoering van de beschikkingen van het koninklijk besluit van 31 januari 2006 tot oprichting van BELAC, verklaart het Accreditatiebureau accreditatie conform de eisen van de norm EN ISO/IEC 17025:2017 te hebben verleend aan:

SGS Belgium nv
Noorderlaan 87
2030 Antwerpen

De instelling heeft aangetoond bekwaamheid te bezitten voor de activiteiten uitgevoerd in de activiteitencentra zoals gespecificeerd in de accreditatiescope 005-TEST die integraal deel uitmaakt van dit certificaat.

De huidige versie van de accreditatiescope is beschikbaar op www.belac.be.

Dit certificaat blijft geldig onder voorwaarde dat de instelling blijft voldoen aan de accreditatievoorwaarden.

De Voorzitster van het Accreditatiebureau BELAC,

Maureen LOGGHE

Versie : **9**

Geldigheidsduur : **2021-09-02 - 2026-05-09**

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BELAC 6-319 R0-2020

Organisme belge d'Accréditation
Belgische Accreditatieinstelling
Belgische Akkreditierungsstelle
Belgian Accreditation Body

EA MLA Signatory

Accreditation Certificate No. 005-TEST

In compliance with the provisions of the Royal Decree of 31 January 2006 setting up BELAC, the Accreditation Board hereby declares to have granted accreditation conform the requirements of the standard EN ISO/IEC 17025:2017 to:

SGS Belgium nv

Noorderlaan 87

2030 Antwerpen

The body demonstrated the competence to perform the activities in the activity sites, as described in the scope of accreditation 005-TEST which is an integral part of the present certificate.

The current version of the scope of accreditation is available at www.belac.be.

This certificate remains valid as long as the body continues to meet the accreditation conditions.

The Chair of the Accreditation Board BELAC,

Maureen LOGGHE

Version : **9**

Validity period : **2021-09-02 - 2026-05-09**

Original version of this certificate is in Dutch.

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BELAC 6-319 R0-2020

Organisme belge d'Accréditation
Belgische Accreditatieinstelling
Belgische Akkreditierungsstelle
Belgian Accreditation Body

EA MLA Signatory

Akkreditierungszertifikat Nr. 005-TEST

Aufgrund der Bestimmungen des königlichen Erlasses vom 31. Januar 2006 zur Gründung von BELAC, bestätigt das Akkreditierungsbüro, gemäß den Vorschriften der Norm EN ISO/IEC 17025:2017, die folgende Stelle akkreditiert zu haben:

SGS Belgium nv

Noorderlaan 87

2030 Antwerpen

Die Stelle hat ihre Kompetenz für die in den Aktivitätszentren durchgeführten Aktivitäten gemäß dem Geltungsbereich der Akkreditierung 005-TEST, der ein integraler Bestandteil des vorliegenden Zertifikats ist, nachgewiesen.

Die aktuelle Version des Geltungsbereichs der Akkreditierung ist unter www.belac.be verfügbar.

Dieses Zertifikat bleibt unter der Bedingung gültig, dass die Stelle die Akkreditierungsanforderungen weiterhin erfüllt.

Die Vorsitzende des Akkreditierungsbüros BELAC,

Maureen LOGGHE

Fassung : **9**

Gültigkeitsdauer : **2021-09-02 - 2026-05-09**

Die Originalfassung dieses Zertifikats ist in niederländischer Sprache.

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BELAC 6-319 R0-2020

Organisme belge d'Accréditation
Belgische Accreditatieinstelling
Belgische Akkreditierungsstelle
Belgian Accreditation Body

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Bijlage bij accreditatiecertificaat
Annexe au certificat d'accréditation
Annex to the accreditation certificate
Beilage zur Akkreditierungszertifikat

005-TEST

EN ISO/IEC 17025:2017

Versie / Version / Version / Fassung	39
Geldigheidsperiode / Validité / Validity / Gültigkeitsdauer	2021-09-02 - 2026-05-09

Maureen Logghe
Voorzitster van het Accreditatiebureau
La Présidente du Bureau d'Accréditation
Chair of the Accreditation Board
Vorsitzende des Akkreditierungsbüro

De accreditatie werd uitgereikt aan / L'accréditation est délivrée à / The accreditation is granted to / Die akkreditierung wurde erteilt für:

SGS Belgium nv
Noorderlaan 87
2030 Antwerpen

BELAC BELAC BELAC

Activiteitencentra / Sites d'activités / Sites of activities / Standorte mit aktivitäten:

1. Business Line Natural Resources – Business Unit Laboratory Testing OGC	Polderdijkweg 16 2030 Antwerpen
2. Business Line Industry & Environment - Business Unit Field Services & Inspection Air monitoring Flanders	Keetberglaan 4 9120 Melsele
3. Business Line Industry & Environment - Business Unit Field Services & Inspection Air monitoring Wallonie	Parc Créalys Les Isnes (Gembloux)
4. Business Line Industry & Environment – Business Unit Technical assessment & Advisory Environment – Department Experts Vlaanderen – Noise and Vibrations	Noorderlaan 87 2030 Antwerpen
5. Business Line Industry & Environment - Business Unit Field Services & Inspection Geotechniek	Tervuursesteenweg 200 3060 Bertem
6. Business Line Industry & Environment - Business Unit Environmental & Industrial Hygiene testing IAC	Polderdijkweg 16 2030 Antwerpen
7.Business Line Health & Nutrition - Business Unit Food Laboratory Testing	Polderdijkweg 16 2030 Antwerpen
8. Business Line Natural Resources – Business Unit Laboratory Testing Minerals	Europaweg Zuid Haven 9890 4389 PD Vlissingen (Nederland)
9. Business Line Industry & Environment - Business Unit Environmental & Industrial Hygiene testing Laboratory 's-Gravenpolder	Spoorstraat 12 4430 NK 's-Gravenpolder (Nederland)
10. Business Line Industry & Environment - Business Unit Field Services & Inspection Geotechniek	Oude Waalstraat 294 9870 Zulte
11. Business Line Industry & Environment - Business Unit Special services OGC, Department Oil Condition Monitoring (OCM)	Technologiepark Zwijnaarde 2 9000 Gent
12. Business Line Health & Nutrition - Business Unit Food Laboratory Testing - Oleotest	Lageweg 427 2660 Antwerpen

Gebruikte afkortingen /abbreviations used

AFNOR:	Association française de Normalisation
AM/MB:	Arrêté Ministeriël / Ministerieel besluit
AOAC:	Association of Official Analytical Chemists
AOCS	American Oil Chemists Society
ARAB:	Algemeen reglement voor de arbeidsbescherming (Federale overheidsdienst WASO)
ASTM:	American Society for Testing and Materials
CARB:	California Air resources board
CMA:	compendium voor monsterneming en analyse (in uitvoering van het afvalstoffendecreet en het bodemsaneringsdecreet - Vlaams gewest)
CEN:	European Committee for Standardization
De ware(n)-chemicus :	Nederlands tijdschrift voor algemeen levensmiddelenonderzoek
DIN:	Deutsches Institut für Normung
EG	Europese Gemeenschap
EN:	Europese Norm (Opmerking: in uitzonderlijke gevallen en enkel voor een overgangsfase is gebruik van prEN mogelijk)
EPA:	Envrionment Protection agency (US)
FOSFA:	Federation of Oils, Seeds and Fats Associations
HPLC	High Performance Liquid Chromatography
ICC:	International Association for Cereal Science and Technology
IDF – FIL:	International dairy federation – Fédération internationale de laiterie
IGB:	Inspectie gezondheidsbescherming (Nederland)
IFFJP:	International Federation of Fruit Juice Producers
IP:	Institute of Petroleum
ISO:	International Standard Organisation
IOCC:	International Office of Cocoa and Chocolate
IUPAC	International Union of Pure and Applied Chemistry
JIS:	Japanese industrial standard
MVI:	ministerie van verkeer en Infrastructuur
NBN:	Norme Belge – Belgische Norm
NF:	Norme française
NTA:	Netherlands technical agreement
NVN:	Nederlandse Voornorm
SM:	Standard Methods for the Examination of Water and Waste Water. (20th edition, , 1998)
TS:	Technical Standard
VDI:	Verein Deutscher Ingenieure
WAC:	Compendium voor analyse van water – Vlaams gewest

Verwijzingen / References

Verordening (EG) 2003/2003 *Regulation (EC) 2003/2003*	Verordening (EG) Nr. 2003/2003 van het Europees Parlement en de Raad van 13 oktober 2003 inzake meststoffen *Regulation (EC) No 2003/2003 of the European Parliament and of the Council of 13 October 2003 relating to fertilisers*
Verordening (EG) 2009/152 *Regulation (EC) 2009/152*	Verordening (EG) nr. 152/2009 van de Commissie van 27 januari 2009 tot vaststelling van de bemonsterings- en analysemethoden voor de officiële controle van diervoeders *Commission Regulation (EC) No 152/2009 of 27 January 2009 laying down the methods of sampling and analysis for the official control of feed*

Nr. Test	Code	Matrix / Products tested	Gemeten eigenschappen / Characteristics measured	Methode-Techniek / Method specification-Techniques used	Uit-voering	Site
PHYSICAL AND CHEMICAL ANALYSIS OF PETROLEUM PRODUCTS						
1.01	LP/ANA/A/001	Gasoline	Lead content	ASTM D 3237 EN 237	lab	1
1.02	LP/ANA/A/002	Gas oil	Ash content	ISO 6245 ASTM D 482	lab	1
1.03	LP/ANA/C/001	Gas oil, biodiesel	Cold Filter Plugging Point	EN 116 IP 309	lab	1
1.04	LP/ANA/C/002	Gas oil	Amount of carbon residue on a 10% distillation residue	ASTM D 4530 ISO 10370	lab	1
1.05	LP/ANA/C/003	Gasoline, gas oil, lamp oil, jet fuel and biodiesel	Copper corrosion test	ISO 2160 ASTM D 130	lab	1
1.06	LP/ANA/C/004	Gas oil	Cetane index (calculated)	ISO 4264 ASTM D 976 ASTM D 4737 Method B Based on results obtained with. LP/ANA/D/001 and LP/ANA/D/002	lab	1
1.07	LP/ANA/C/005	Gasoline	Volatility index	Calculation according to EN 228, based on results obtained with LP/ANA/D/002 and LP/ANA/V/003	lab	1
1.08	LP/ANA/C/007	Gas oil, biodiesel	Cloud point	ASTM D 2500 ISO 3015	lab	1
1.09	LP/ANA/C/008	Heating gas oil	Calorific value	Calculation according to the formula in ASTM D 4868 using results obtained with LP/ANA/A/002; LP/ANA/D/001; LP/ANA/K/002; LP/ANA/S/004 and/or LP/ANA/S/005	lab	1
1.10	LP/ANA/C/009	Liquid Hydrocarbon Fuels	Heat of combustion	ASTM D 240	lab	1
1.11	LP/ANA/D/001	Gasoline, gas oil, lamp oil, jet fuel and biodiesel	Density at 15°C	ASTM D 4052 ISO 12185	lab	1
1.12	LP/ANA/D/002	Gasoline, gas oil, lamp oil and jet fuel	Distillation characteristics	ASTM D 86 ISO 3405	lab	1
1.13	LP/ANA/E/001	Gasoline	Solvent washed gum	ASTM D 381 ISO 6246	lab	1
1.14	LP/ANA/E/002	Liquid Hydrocarbons and Additives	Carbon, Hydrogen and Nitrogen	ASTM D 5291, method C	lab	1
1.15	LP/ANA/G/304	Gasoline	Hydrocarbon types, bezenes and oxygenates	ISO 22854	lab	1
1.17	LP/ANA/H/002	Gas oil	Lubricity (HFRR)	ISO 12156-1	lab	1
1.18	LP/ANA/H/003	Gas oil	Polycyclic aromatic hydrocarbons	IP 391 EN 12916	lab	1
1.19	LP/ANA/H/006	Gas oil	Euromarker	EC Report EUR 21195 Annex F	lab	1
1.20	LP/ANA/I/003	Gas oil	Fatty acid methyl esters	EN 14078	lab	1
1.21	LP/ANA/K/002	Gas oil, biodiesel	Water content	EN ISO 12937	lab	1

Nr. Test	Code	Matrix / Products tested	Gemeten eigenschappen / Characteristics measured	Methode-Techniek / Method specification-Techniques used	Uit-voering	Site
1.22	LP/ANA/M/001	Gasoline	Octane number "Research"	ISO 5164 ASTM D 2699	lab	1
1.23	LP/ANA/M/002	Gasoline	Octane number "Motor"	ISO 5163 ASTM D 2700	lab	1
1.24	LP/ANA/M/003	Gas oil, biodiesel	Cetane number	ISO 5165 ASTM D 613	lab	1
1.25	LP/ANA/I/004	Gasoline	Manganese	EN 16136 Procedure B	lab	1
1.26	LP/ANA/O/001	Gas oil	Oxidation stability	ASTM D 2274 ISO 12205	lab	1
1.27	LP/ANA/O/002	Gasoline	Oxidation stability	ISO 7536 ASTM D 525	lab	1
1.28	LP/ANA/O/003	Gas oil, biodiesel	Oxidation stability	EN 15751	lab	1
1.29		Biodiesel		EN 14112	lab	1
1.30	LP/ANA/P/001	Gas oil, lamp oil and jet fuel	Flash point - closed cup	ISO 2719 ASTM D 93	lab	1
1.31	LP/ANA/S/002	Gas oil, biodiesel	Sediments	EN 12662	lab	1
1.32	LP/ANA/S/004	Unleaded gasoline, gas oil	Sulphur content	ASTM D 2622 ISO 14596 NBN EN ISO 20884	lab	1
1.33	LP/ANA/S/005	Unleaded gasoline, gas oil	Sulphur content	EN ISO 20846	lab	1
1.34	LP/ANA/V/001	Gasoline, gas oil, lamp oil, jet fuel and biodiesel	Appearance	in house method / visual evaluation	lab	1
1.35	LP/ANA/V/002	Gas oil, biodiesel	Kinematic viscosity at 20°C and 40°C, mm^2/s	ISO 3104 ASTM D 445	lab	1
1.36	LP/ANA/V/004	Unleaded gasoline	Dry Vapour Pressure (Mini Method)	ASTM D 5191 EN 13016-1	lab	1
1.37	LP/ANA/V/005	Gas oil	Appearance	ASTM D 4176 procedure 2	lab	1

Nr. Test	Code	Matrix / Products tested	Gemeten eigenschappen / Characteristics measured	Methode-Techniek / Method specification-Techniques used	Uit-voering	Site
11.01	BA LO79.0001 - LP/ANA/X/001	Unused oils	Elements (Na, Mg, Si, P, S, Cl, K, Ca, Fe, Cu, Zn, Br, Mo, Ba en Pb)	WDXRF In house method	lab	11
11.02	BA LO79.0002 - LP/ANA/A/003	Lubricating oils & additives	Sulfated Ash	ASTM D 874	lab	11
11.03	BA LO79.0003 - LP/ANA/C/009	Engine oils & base stocks	Apparent Viscosity	ASTM D 5293 (Cold-Cranking Simulator)	lab	11
11.04	BA LO79.0004 - LP/ANA/B/001	Used and unused oils	Base Number	ASTM D 2896 : procedure B	lab	11
11.05	BA LO79.0005 - LP/ANA/V/006	Lubricants	Low-Temperature Viscosity	ASTM D 2983 - procedure C (Brookfield viscometer)	lab	11
11.06	BA LO79.0006 - LP/ANA/V/007	Transparent and opaque liquids	Kinematic Viscosity	ASTM D 445	lab	11
11.07	BA LO79.0007 - LP/ANA/F/004	Lubricating fluids	Extreme-pressure properties	ASTM D 2783 (Four-Ball method)	lab	11
11.08	BA LO79.0008 - LP/ANA/F/005	Lubricating fluids	Wear preventive characteristics	ASTM D 4172 (Four-Ball method)	lab	11
11.09	BA LO79.0009 - LP/ANA/F/003	Lubricating oils	Foaming Characteristics	ASTM D 892	lab	11
11.10	BA LO79.0010 - LP/ANA/E/002	Lubricating oils	Evaporation Loss	CEC L-40-A-93 (Noack Evaporative Tester)	lab	11

*ISO normen voor methoden kunnen worden overgenomen als EN norm en/of als NBN norm. In het toepassingsgebied worden de ISO methoden vermeld daar waar het laboratorium deze beheerst. Het laboratorium beheerst dan ook de overeenstemmende EN, NBN of NBN EN. Indien tijdens een overgangsperiode de nieuwe versie van ISO nog niet is overgenomen door EN of/en NBN kan nog volgens de oude NBN, EN of NBN EN versie worden gewerkt. Hetzelfde geldt voor EN normen voor de overname of niet als NBN norm.

*ISO standards for methods can be adopted as EN standards and / or standard NBN. In the scope the ISO methods are indicated when the laboratory works according to them. The laboratory can then govern the corresponding EN, NBN or NBN. If, during a transitional period, the new version of ISO has not yet been taken over by EN and/or NBN the laboratory can also continue to work according to the old NBN, EN or NBN EN version.
The same goes for the adoption of EN standards as a NBN standard.

Biodiesel = 100 % F.A.M.E. = 100% Fatty Acid Methyl Ester

Nr. Test	Code	Matrix / Products tested	Gemeten eigenschappen / Characteristics measured	Methode-Techniek / Method specification-Techniques used	Uit-voering	Site
PHYSICAL AND CHEMICAL ANALYSIS OF COALS, COKES & SOLID (BIO)FUELS						
8.01	LP/SOP/09-104	Solid (bio)fuels	Gross calorific value by the bomb calorimetric method	ISO1928 / ASTM D5865 (solid fuels) NEN EN ISO 18125 (solid biofuels)	lab	8
8.02	LP/SOP/09-107	Solid (bio)fuels	Moisture by Proximate analysis	ASTM D 7582 (solid fuels : analytical moisture) In house method based on ASTM D 7582 (solid biofuels : analytical moisture)	lab	8
8.03	LP/SOP/09-111	Solid (bio)fuels	Determination of sulphur using a high temperature tube furnace combustion method – IR absorption	ASTM D 4239:A (solid fuels) - In house method based on ASTM D 4239:A (solid biofuels)	lab	8
8.04	LP/SOP/09-112	Solid (bio)fuels	Ash	ISO1171 (solid fuels) NEN EN ISO 18122 (solid biofuels)	lab	8
8.05	LP/SOP/09-113	Coke coal and coke coal dust	Moisture in the analysis sample	ISO 687	lab	8
8.06	LP/SOP/09-114	Solid (bio)fuels	Volatile matter by muffle furnace	ISO562 (solid fuels) NEN EN 18123 (solid biofuels)	lab	8
8.07	LP/SOP/09-155	Solid (bio)fuels	Automated determination of carbon, hydrogen and nitrogen	ASTM D 5373 and ISO 29541 (solid fuels) ISO 16948 (solid biofuels)	lab	8
8.08	LP/SOP/463	Solid (bio)fuels	Ash Fusion Temperature	ISO540 (solid fuels) – ASTM D1857 (solid fuels) – In house method based on ISO540 (solid biofuels) – In house method based on ASTM D1857 (solid biofuels)	lab	8
8.09	LP/SOP/456	Solid (bio)fuels	Determination of Major / Minor Elements in ash of solid (bio) fuels	ASTM D4326 (solid fuels) – In house method based on ASTM D4326 (solid biofuels) with XRF	lab	8
8.10	LP/SOP/Free Swelling Index (ISO & ASTM)	Solid fuels	Free Swelling Index	ISO 501 - ASTM D720/ASTM D720M	lab	8
8.11	LP/SOP/CSR-CRI	Cokes	Coke Reactivity Index - Coke Strenght after Reaction	ASTM D5341/D5341M	lab	8
8.12	LP/SOP/09-165	Coal, petcokes, solid (bio)fuels	Moisture in nitrogen atmosphere	ISO 11722 (solid fuels) ISO 18143-3 (solid biofuels)	lab	8
8.13	-	Coal and coke, solid mineral fuels, petroleum coke	Calculation of carbon dioxide emission factor	Directive 2003/87/EC in accordance with Directive 2007/589/EC	lab	8
8.14	-	Coal and coke, solid mineral fuels, petroleum coke	Calculation of fixed carbon content by difference: 100 – (moisture + ash + volatile matter) in weight percent	ISO 17246	lab	8
8.15	LP/SOP/09-111	Solid (bio)fuels	Determination of sulfur by IR spectrometry	ISO 16994 (solid fuels) - In house method based on ISO 16994 (solid biofuels)	lab	8
8.16	LP/SOP/CSR-CRI	Cokes	Coke Reactivity Index - Coke Strenght after Reaction	ISO 18894	lab	8
8.17	LP/SOP/09-114	Brown coal and lignites	Volatile matter by muffle furnace	ISO 5071-1	lab	8
8.18	LP/SOP/09-165	Brown coal and lignites	Moisture in nitrogen atmosphere	ISO 5068-2	lab	8

Nr. Test	Code	Matrix / Products tested	Gemeten eigenschappen / Characteristics measured	Methode-Techniek / Method specification-Techniques used	Uit-voering	Site
8.19	LP/PREP/AV/F041	Hard Coal and Petroleum coke	Determination of total Moisture	ISO 589	lab	8
		Coke		ISO 579		
		Solid (bio) fuels	Determination of moisture content	ISO 18134-2		
8.20	LP/PREP/AV/HGI	Hard Coal	Determination of Hardgrove Grindability Index	ISO 5074 – ASTM D409/D409M	lab	8
		Petroleum coke		ASTM D5003		

Nr. Test	Code	Matrix / Products tested	Gemeten eigenschappen / Characteristics measured	Methode-Techniek / Method specification-Techniques used	Uit-voering	Site
SAMPLING AND CHEMICAL ANALYSIS OF ASBESTOS						
2.1	ECO/AV/As/001	Werkplaatsatmosfeer	Bepaling van asbestvezelconcentratie na actieve monstername (laboratorium en in situ)	NBN T 96-102 (1999)	lab	2
2.2	ECO/M/As/001		Actieve monstername voor de bepaling van asbestvezelconcentratie	NBN T 96-102 (1999)	in situ	2
2.3	ECO/AV/As/002	Asbestverdachte materialen	Identificatie van : chrysotiel, amosiet, anthophyliet, crocidoliet, tremoliet en actinoliet	Eigen methode / lichtmicroscopie met polarisatie	lab	2
3.1	ECO.F/M-As/ 001	Environnement de travail	Echantillonnage en vue de la détermination de la concentration en fibres d'amiante sur filtre membrane	NBN T 96-102 (1999)	in situ	3
3.2	ECO.F/AV-As/001		Détermination de la concentration en fibres après échantillonnage actif sur filtre membrane	NBN T 96-102 (1999)	lab	3
3.3	ECO.F/AV-As/002	Matériaux suspects d'amiante	Détermination qualitative de chrysotile, amosite, antophylite, crocidolite, tremolite et actinolite	Méthode interne / microscopie optique à polarisation	lab	3
PHYSICOCHEMICAL ANALYSIS OF WATER						
2.4	ECO/AV/As/005	Zwevende stoffen in water	Bepaling van het gehalte aan zwevende stoffen in water d.m.v. filtratie	SM 2540 D	lab	2
3.4	ECO.F/AV-As/005	Matières en suspension dans l'eau	Détermination du poids des matières en suspension dans l'eau au moyen de la filtration	SM 2540 D	lab	3
SAMPLING, CHEMICAL AND PHYSICAL ANALYSIS OF (STACK) EMISSIONS						
2.5	ENVI/L/02	Luchtemissies	Vochtgehalte	EN 14790 en LUC/0/003	in situ	2
2.6	ENVI/L/03	Luchtemissies	Temperatuur	ISO 8756 en LUC/0/002	in situ	2
2.7	ENVI/L/010	Luchtemissies	Volumedebiet	ISO 16911-1 en LUC/0/004	in situ	2
				ISO 10780	in situ	2
2.8	ENVI/L/05 + ENVI/L/06	Luchtemissies	Stof	EN 13284-1 en LUC/I/001	in situ / lab	2
2.9	ENVI/L/07	Luchtemissies	Stofvormige zware metalen (Hg, Cd, Tl, As, Ni, Sn, Sb, Pb, Cr, Co, Cu, Mn, V, Se, Zn, Fe)	EN 14385 en LUC/I/002 en en LUC/III/010	in situ / lab	2
2.10		Luchtemissies	Gasvormige zware metalen (Hg, As, Sb, Cu, Se, Cd, Pb)	EN 13211 (Hg) en LUC/III/010	in situ / lab	2
2.11	ENVI/L/08	Luchtemissies	Zuurstof, Koolstofdioxide, Koolstofmonoxide, Stikstofoxiden, Zwaveldioxide	condensatiemethode; LUC [(1)], ISO 7935, ISO 10396, ISO 12039, EN 14789, EN 14792, EN 15058 ,LUC/II/001 en VDI 2456	in situ	2

Nr. Test	Code	Matrix / Products tested	Gemeten eigenschappen / Characteristics measured	Methode-Techniek / Method specification-Techniques used	Uit-voering	Site
2.12	ENVI/L/08	Luchtemissies	Vluchtige organische componenten als totaal organisch koolstof	EN 12619 en LUC/II/001	in situ	2
2.13	ECO/M/L/012	Luchtemissies	Zuurstof, Koolstofdioxide, Koolstofmonoxide, Stikstofoxiden, Zwaveldioxide	methode met electrochemische monitoren, voor stookinstallaties tot 10 MW ; Code van goede praktijk VITO (2019/HEALTH/R/2044) en LUC/II/001	in situ	2
2.14	ENVI/L/07	Luchtemissies	Gasvormige chloriden	EN 1911 –bemonstering en LUC/III/001	in situ / lab	2
2.15	ENVI/L/07	Luchtemissies	Gasvormige fluoriden	NBN T95-501, ISO 15713 en LUC/III/006	in situ / lab	2
				NF X 43-304	in situ / lab	2
2.16	ENVI/L/07	Luchtemissies	Gasvormige bromiden	Conform EN 1911	in situ / lab	2
2.17	ENVI/L/07	Luchtemissies	Chloor	EPA 26A, LUC/III/002	in situ / lab	2
2.18	ENVI/L/07	Luchtemissies	Broom	EPA 26A, LUC/III/002	in situ / lab	2
2.19	ENVI/L/011	Luchtemissies	Organische componenten (2)	VDI 2457/1 –bemonstering en CEN/TS 13649 en LUC/IV/000	in situ / lab	2
2.20	ENVI/L/13	Luchtemissies	Fenol	LUC/III/005	in situ / lab	2
2.21	ENVI/L/09	Luchtemissies	Dioxines - bemonstering	EN 1948-1 -bemonstering en LUC/VI/002	in situ / lab	2
2.22	ENVI/L/09	Luchtemissies	Dioxineachtige PCB's	EN 1948-1 -bemonstering en LUC/VI/002	in situ / lab	2
2.23	ENVI/L/09	Luchtemissies	Merker PCB's	EN 1948-1 -bemonstering	in situ / lab	2
2.24	ENVI/L/09	Luchtemissies	PAK's (16 volgens EPA) - bemonstering	ISO 11338-1 bemonstering en LUC/VI/001	in situ	2
2.25	ENVI/L/07	Luchtemissies	Zwaveldioxide (SOx als SO2)	EN 14791 - bemonstering en LUC/III/008	in situ	2
2.26	ENVI/L/07	Luchtemissies	Ammoniak	NEN 2826 en LUC/III/003	in situ / lab	2
				NF X 43-303	in situ / lab	2
2.27	ECO/M/L/039	Luchtemissies	H2S metingen met testbuisjes	Eigen methode (volgens voorschrift producent)	in situ	2
2.28	ECO/M/L/041	Luchtemissies	Bepaling van de concentratie aan totaal koolwaterstoffen in fugitieve emissies met een draagbare FID of PID	EPA Method 21 en NBN EN 15446	in situ	2
2.29	ECO/M/L/048	Luchtemissies	Bepaling van N_2O	ISO/DIS 21258	in situ	2

Nr. Test	Code	Matrix / Products tested	Gemeten eigenschappen / Characteristics measured	Methode-Techniek / Method specification-Techniques used	Uit-voering	Site
2.30	ENVI/L/12	Luchtemissies	Bepaling van de PM10 en PM2,5 massaconcentratie van stof	ISO 23210, LUC/I/003	in situ / lab	2
2.31	ECO/M/L/049	Vast opgestelde Emissiemeetapparatuur	Goedkeuring (kwaliteitsborging)	EN 14181	in situ	2
2.32	ECO/M/L/050	On-line gasanalyseapparatuur (aardgas)	Beoordeling van de performantie (validatie)	ISO 10723	in situ	2
(1) LUC (Compendium voor de monsterneming, meting en analyse van lucht) *(2) Lijst organische componenten beschikbaar in laboratorium*						
3.5	ENVI.F/L/10	Emission d'air	Débit de gaz	ISO 16911-1	in situ	3
				ISO 10780	in situ	
3.6	ENVI.F/L/02		Humidité	EN 14790	in situ	
3.7	ENVI.F/L/03		Température	ISO 8756	in situ	
3.8	ENVI.F/L/05 + ENVI.F/L/06	Emission d'air	Concentration en poussières	EN-13284-1	in situ / lab	
3.9	ENVI.F/L/09	Emission d'air	Dioxines - Furannes	EN 1948-1	in situ / lab	
3.10	ECO.F/M-L/012	Emission d'air	O_2, SO_2, CO, NO_x dans le flux gazeux	Méthode pour moniteurs électrochimiques -	in situ	
				Testo pour chaudières jusqu'à 10 MW;	in situ	
				Code de bonne pratique VITO (2019/HEALTH/R/2044)	in situ	
3.11	ENVI.F/L/07	Emission d'air	Métaux totaux (Hg, Cd, Tl, As, Ni, Sn, Sb, Pb, Cr, Co, Cu, Mn, V, Se, Zn, Fe)	EN 14385 EN 13211 (Hg)	in situ / lab	
3.12			Mercure (Hg)		in situ / lab	
3.13	ENVI.F/L/07	Emission d'air	Chlorures gazeux	EN 1911 -échantillonage	in situ / lab	
3.14	ENVI.F/L/07	Emission d'air	Fluorures gazeux et particulaires	NBN T95-501	in situ / lab	
				NF X 43-304	in situ / lab	
				ISO 15713	in situ / lab	
3.15	ENVI.F/L/07	Emission d'air	Dioxide de soufre	EN 14791 - échantillonage	in situ	
3.16	ENVI.F/L/07	Emission d'air	Ammoniac	EPA CTM-027	in situ / lab	
				NF X 43-303	in situ / lab	
3.17	ENVI.F/L/08	Emission d'air	O_2, CO_2, SO_2, CO, NO_x dans le flux gazeux	Méthode condensation (analyseur portatif - Horiba) LUC[(1)], ISO 7935, ISO 10396, ISO 12039, EN 14789, EN 14792, EN 15058, EPA 3A en VDI 2456	in situ	
3.18	ENVI.F/L/08	Emission d'air	Hydrocarbures totaux (FID)	EN 12619	in situ	
3.19	ENVI.F/L/09	Emission d'air	Echantillonage de HAP's en émissions	ISO 11338-1	in situ	
(1) LUC (Compendium voor de monsterneming, meting en analyse van lucht)						

Nr test	Code	Matrix / Products tested	Gemeten eigenschappen / Characteristics measured	Methode-Techniek / Method specification-Techniques used	Uit-voering	Site
NOISE TESTING						
4.01	1	Geluidmetingen (met geluiddrukmeter) van het omgevingsgeluid op immissieniveau	meten van het oorspronkelijk omgevingsgeluid	i.h.k.v. Industriele MER-studies (WI_017), Infrastructuur MER-studies (WI_018), de bepaling van de grenswaarde voor nieuwe inrichtingen voor een Volledig Akoestisch Onderzoek volgens Vlarem (WI_08)	in situ	4
4.02	2.1	Geluidmetingen (met geluiddrukmeter) ter bepaling van het specifiek geluid op immissieniveau	meten van het omgevingsgeluid op ontvangersniveau met de betreffende inrichting/activiteit wel en niet in werking, volgens HMRI (Handleiding rekenen en meten Industrielawaai, 1999)*.	voor de bepaling van het specifieke geluid i.h.k.v. een Volledig akoestisch onderzoek volgens Vlarem (WI_08) en voor akoestische studies in Wallonië, volgens de Brusselse Milieuwetgeving (WI_28), een akoestisch onderzoek voor inrichtingen volgens indelingslijst rubriek 32 Vlarem (WI_10)	in situ	4
4.03	2.2	Geluidmetingen (met geluiddrukmeter) ter bepaling van het specifiek geluid op een referentiepositie (tussen ontvanger en inrichting)	meten van het omgevingsgeluid op een tussenliggende referentiepositie, al dan niet met de betreffende inrichting/activiteit wel en niet in werking. Om vervolgens via de geometrische uitbreiding de specifieke bijdrage op ontvangersniveau te bepalen. Methodiek volgens HMRI 1999*	voor de bepaling van het specifieke geluid i.h.k.v. een Volledig akoestisch onderzoek volgens Vlarem (WI_08) en voor akoestische studies in Wallonië,) volgens de Brusselse Milieuwetgeving (WI_28), een akoestisch onderzoek voor inrichtingen volgens indelingslijst rubriek 32 Vlarem (WI_10)	in situ	4
4.04	2.3	Geluidmetingen (met geluiddrukmeter) ter bepaling van het geluidvermogenniveau volgens handleiding meten en rekenen industrielawaai	geluidemissiemetingen (met geluiddrukmeter) ter bepaling van het geluidvermogenniveau (met emissiemethodiek volgens HMRI 1999*), om in volgend stadium o.b.v. geluidoverdrachtsberekeningen volgens ISO 9613 (akoestische modellering) de specifieke geluidimmissies op ontvangersniveau te bepalen	voor de bepaling van het specifieke geluid i.h.k.v. een Volledig akoestisch onderzoek volgens Vlarem (WI_08)) en akoestisch onderzoek voor inrichtingen volgens indelingslijst rubriek 32 Vlarem (WI_10) en voor akoestische studies in Wallonië., volgens de Brusselse Milieuwetgeving (WI_28) – per deelbron i.h.k.v. een saneringsplan volgens Vlarem (WI_09) en voor akoestische saneringsstudies in Brussel of Wallonië.	in situ	4
		* HMRI 1999 is een praktische handleiding voor het meten en beoordelen van het specifieke geluid, samengesteld door TNO Delft, M+P Raadgevende Ingenieurs en Adviesbureau Peutz & Associés. Gebaseerd op diverse ISO-normen, waaronder ISO 1996-3 voor de metingen op immissieniveau of referentieposities en ISO 3744, ISO 3746, ISO 8297 (Stüber-methode) voor de emissiemetingen.				

Nr test	Code	Matrix / Products tested	Gemeten eigenschappen / Characteristics measured	Methode-Techniek / Method specification-Techniques used	Uit-voering	Site
GEOTECHNICAL ANALYSIS						
5.01	ENVI/Geo/01	grond, op land, op water en op zee	Licht dynamische sondering type PANDA	Eigen methode , based on NF P94-105	in situ	5
10.06						10
5.02	ENVI/Geo/03		Statisch continu sondering met mechanische conus CPT-M	ISO 22476-12	in situ	5
10.01						10
5.03	ENVI/Geo/05		Statisch continue sondering met een elektrische conus CPT-E	ISO 22476-1	in situ	5
10.02						10
5.04	ENVI/Geo/11		Statisch discontinu sondering met mechanische conus CPT-M	ISO 22476-12	in situ	5
10.03						10
5.05a	ENVI/Geo/18		Monstername door boringen met de geoprobe & bepaling van de aard van de grond op zicht	Monstername: ISO 22475-1 Cat. B	in situ	10
5.05b				Identificatie: ISO 14688-1 exclusief §6 en §7		5
10.04						10
5.06	ENVI/Geo/16	grond, op land, op water en op zee	Statisch continue sondering met waterspanningsconus CPT-U	ISO 22476-1	in situ	5
10.05						10

Nr. Test	Code	Matrix / Products tested	Gemeten eigenschappen / Characteristics measured	Methode-Techniek / Method specification-Techniques used	Uit-voering	Site
SAMPLING AND IN SITU PHYSICOCHEMICAL ANALYSIS OF WATER						
6.001	MV-B-PEILBUIS	Grondwater	Staalname bestaande peilbuizen (<30m)	CMA 1/A.2 , WAC/I/A/005	in situ	6
6.002	MV-B-SCHEP	Grond-, oppervlakte- en afvalwater	Ogenblikkelijke monstername aan kraan en nemen van schepmonster van water (incl. conservering)	WAC/I/A/002, WAC/I/A/003 (WAC/I/A/011) NEN 6600-1	in situ	6
6.003	MV-B-VELD	Grond- en afvalwater Oppervlaktewater	In situ metingen Bepaling van pH, soortelijke geleiding, temperatuur en opgeloste zuurstof	Multiparameterkit cfr. WAC/I/A/011 pH: WAC/III/A/005 en NEN ISO 10523 Soortelijke geleiding: WAC/III/A/004 en NEN-ISO 7888 Oxidatie-reductiepotentiaal: SM 2580 B Temperatuur: WAC/III/A/003; Opgeloste zuurstof: WAC/III/A/008	in situ	6
6.004	MV-B-HEFFING	Afvalwater	Tijds- en debietsgebonden monstername	WAC/I/A/004 en NEN 6600-1	in situ	6
Veldwerk bij milieuhygiënisch bodem- en waterbodemonderzoek AS SIKB 2000 (versie 07-02-2014) betrekking hebbend op protocol 2002 (heeft betrekking op dhr. M.C. Engels, dhr. W.F.K. Peleman en Dhr. M.G.J. van Looveren)						
9.001	MV-PEILBUIS	Grondwater	Monsterneming grondwater (incl. bijbehorende veldmetingen geleidbaarheid, troebelheid en optioneel pH en zuurstof)	NEN 5744	in situ	9

Nr. Test	Code	Matrix / Products tested	Gemeten eigenschappen / Characteristics measured	Methode-Techniek / Method specification-Techniques used	Uit-voering	Site
CHEMICAL ANALYSIS OF ABSORPTION MATERIAL FROM EMISSION, IMMISION, AMBIENT AIR						
Organic chemical analysis						
6.008	ECO/AV/IAC/001	Absorption materials from emission samples (flue gases)	2,3,7,8-substituted PCDDs and PCDFs and total TEQ	GC-HRMS according to EN 1948-2 and EN 1948- 3	lab	6
6.115	ECO/AV/IAC/018			GC-APGC according to EN 1948-2 and EN 1948-3	lab	6
6.009	ECO/AV/IAC/004	Immissions collected with deposition jars	2,3,7,8-substituted PCDDs and PCDFs and total TEQ	GC-HRMS* based on EPA Method 1613	lab	6
6.116				GC-APGC* based on EPA Method 1613	lab	6
6.010	ECO/AV/IAC/015	Absorption materials from emission samples (flue gases)	Dioxin-like PCB's (12 WHO-PCB's)	GC-HRMS* based on EPA 1668, JIS K 0311 and JIS K 0312	lab	6
6.126				GC-APGC* based on EPA 1668, JIS K 0311 and JIS K 0312		
6.011	ECO/AV/IAC/018	Absorption materials from emission samples	Dioxin-like PCB's (12 WHO-PCB's)	GC-HRMS according to CEN/TS 1948-4	lab	6
6.127				GC-APGC according to CEN/TS 1948-4		
6.012	ECO/AV/IAC/020	Absorption materials from emission samples (flue gases)	2,3,7,8-substituted PCDDs and PCDFs and total TEQ	GC-HRMS* based on EPA Method 23 en EPA 8290	lab	6
6.013	ECO/AV/IAC/023	Absorption materials of emission samples	PAH's (16 according to EPA)	GC-HRMS; CARB Method 429 modified	lab	6
6.014	ECO/AV/IAC/031	Absorption material from ambient air samplers	2,3,7,8-substituted PCDDs and PCDFs and total TEQ	GC-HRMS, based on EPA 23, EPA 8290, NBN EN1948 and TO-9A	lab	6
6.117				GC-APGC, based on EPA 23, EPA 8290, NBN EN1948 and TO-9A	lab	6
Inorganic chemical analysis (Metals)						
6.015	ECO/AV/IMA/001	Absorption liquids of emission samples	Gaseous heavy metals: Hg	EN 13211 (CV-AAS)	lab	6
6.020	ECO/AV/IMA/003	Filters from emission samples	Heavy metals in dust: Hg	EN 13211 (CV-AAS)	lab	6

Nr. Test	Code	Matrix / Products tested	Gemeten eigenschappen / Characteristics measured	Methode-Techniek / Method specification-Techniques used	Uit-voering	Site
Inorganic chemical analysis						
6.025	ECO/AV/IMA/013	Absorption liquids of stack emission samples	Cl-	EN 1911 (Ion chromatography)	lab	6
6.026	ECO/AV/IMA/014	Absorption liquids of stack emission samples	SO2	EN 14791 (Ion chromatography)	lab	6
6.027	ECO/AV/IMA/015	Absorption liquids of stack emission samples	F-	NBN T95-501 (ion selective electrode)	lab	6
6.028	ECO/AV/IMA/024	Absorption liquids of stack emission samples	Bromide sampled in H2O	in-house method (ion chromatography)	lab	6
6.029	ECO/AV/IMA/025	Absorption liquids of stack emission samples	NH3 as ammonium sampled in 0,05M H2SO4	in-house method (ion chromatography)	lab	6
6.030	ECO/AV/IMA/026	Absorption liquids of stack emission samples	Chloride & bromide sampled in 0,1M NaOH and Na2S2O3	LUC/III/001 (ion chromatography)	lab	6
6.031	ECO/AV/IMA/027	Absorption liquids of stack emission samples	Chloride & bromide sampled in 0,05M H2SO4	in-house method (ion chromatography)	lab	6

Nr. Test	Code	Matrix / Products tested	Gemeten eigenschappen / Characteristics measured	Methode-Techniek / Method specification-Techniques used	Uit-voering	Site
CHEMICAL ANALYSIS OF SOIL, WATER, ENVIRONMENTAL SAMPLES						
Organic chemical analysis						
6.032	ECO/AV/IAC/012	Soil and sediment	2,3,7,8-substituted PCDDs and PCDFs and total TEQ	GC-HRMS* based on EPA 1613	lab	6
6.118				GC-APGC* based on EPA 1613	lab	6
6.033	ECO/AV/IAC/013	Water	2,3,7,8-substituted PCDDs and PCDFs and total TEQ	GC-HRMS* based on EPA 1613	lab	6
6.119				GC-APGC* based on EPA 1613	lab	6
6.034	ECO/AV/IAC/014	Fly ash and bottom ash	2,3,7,8-substituted PCDDs and PCDFs and total TEQ	GC-HRMS* based on EPA 8290 and EPA 1613	lab	6
6.120				GC-APGC* based on EPA 8290 and EPA 1613	lab	6
6.035	ECO/AV/IAC/015	Soil and sediment, fly ash and bottom ash.	Dioxin-like PCB's (12 WHO-PCB's)	GC-HRMS* based on EPA 1668, JIS K 0311 and JIS K 0312	lab	6
6.128				GC-APGC* based on EPA 1668, JIS K 0311 and JIS K 0313		
6.037	ECO/AV/IAC/035	Soil, sludge, sediment	Fast dioxin analysis	GC-HRMS* based on EPA 1613, EPA 23 and EPA 8290	lab	6
* In house method						

Nr. Test	Code	Matrix / Products tested	Gemeten eigenschappen / Characteristics measured	Methode-Techniek / Method specification-Techniques used	Uit-voering	Site
6.124	ECO/AV/IMA/028	Water	Organotincompounds in water	GC-ICP-SF-MS	lab	6
6.125	ECO/AV/IAC/091	Water	Glyphosaat en AMPA	UPLC-MS/MS	lab	6
9.003	NL-ENV-G-SP-AV-WI045	Afvalwater	Het bepalen van het gehalte aan EOX; microcoulometrie	conform NEN 6676	lab	9
9.004	NL-ENV-G-SP-AV-WI044	Drink- en grondwater en afvalwater	Het bepalen van het gehalte aan EOX; microcoulometrie	conform NEN 6402	lab	9
9.005	NL-ENV-G-GC-AV-WI007	Oppervlakte-, drink-, grond-en afvalwater	Het bepalen van het gehalte aan minerale olie; GC-FID	conform CMA/3/R1 en conform WAC/IV/B/025	lab	9
9.006	NL-ENV-G-GC-AV-WI008	Afvalwater	Het bepalen van de minerale olie index; GC-FID	conform ISO 9377-2 (monsterconservering conform SIKB 3001)	lab	9
9.007	NL-ENV-G-GC-AV-WI004	Afvalwater	Het bepalen van gedispergeerde olie in water; GC-FID	conform OSPAR 2005-15	lab	9
9.008	NL-ENV-G-GC-AV-WI020	Grond- en afvalwater	Het bepalen van het gehalte aan vluchtige (aromatische) koolwaterstoffen; headspace en GC-FID (benzeen, tolueen, ethylbenzeen, de som van para- en meta-xyleen, ortho-xyleen, cumeen, styreen, limoneen, aceton, IPA, MIBK, THF en methanol)	eigen methode	lab	9

Nr. Test	Code	Matrix / Products tested	Gemeten eigenschappen / Characteristics measured	Methode-Techniek / Method specification-Techniques used	Uit-voering	Site
9.009	NL-ENV-G-GC-AV-WI020	Grond- en afvalwater	Het bepalen van het gehalte aan alifatische gechloreerde koolwaterstoffen ; headspace en GC-FID (dichloormethaan, trichloormethaan, tetrachloormethaan)	eigen methode	lab	9
9.010	NL-ENV-G-GC-AV-WI013	Grondwater	Het bepalen van het gehalte aan polycyclische aromatische koolwaterstoffen (PAK's), organochloorbestrijdingsmiddelen (OCB's), polychloorbifenylen (PCB's) en chloorbenzenen; (grootvolume) GC-MS PAK's: naftaleen, acenaftyleen, acenafteen, fluoreen, fenantreen, antraceen, fluoranteen, pyreen, benz(a)antraceen, chryseen, benzo(b)fluoranteen, benzo(k)fluoranteen, benzo(a)pyreen, indeno(1,2,3)pyreen, dibenz(a,h)antraceen en benzo(g,h,i)pyreen OCB's: 1,3-hexachloor-1,1',2,3,4,4'-butadiëen, alfa-HCH, gamma-HCH, beta-HCH, heptachloor, delta-HCH, aldrin, isobenzan (=telodrin), isodrin, epoxide B (= cis-heptachloorepoxide), epoxide A (= trans-heptachloorepoxide), endosulfan I (=a-endosulfan), dieldrin, endrin, cis-chloordaan (=a-chloordaan), trans-chloordaan (=g-chloordaan), o,p'-DDE, p,p'-DDE, o,p'-DDD, o,p'-DDT, p,p'-DDD en p,p'-DDT PCB's: PCB 28, PCB 52, PCB 101, PCB 118, PCB 153, PCB 138 en PCB 180 chloorbenzenen:1,3,5-trichloorbenzeen, 1,2,4-trichloorbenzeen, 1,2,3-trichloorbenzeen, 1,2,3,5-tetrachloorbenzeen, 1,2,4,5-tetrachloorbenzeen, 1,2,3,4-tetrachloorbenzeen en pentachloorbenzeen	eigen methode	lab	9

Nr. Test	Code	Matrix / Products tested	Gemeten eigenschappen / Characteristics measured	Methode-Techniek / Method specification-Techniques used	Uit-voering	Site
9.011	NL-ENV-G-GC-AV-WI031	Drink-, oppervlakte- en afvalwater	Het bepalen van het gehalte aan monocyclische aromatische koolwaterstoffen, naftaleen, gebromeerde en gechloreerde koolwaterstoffen; purge&trap en GC-MS Monocyclische aromatische koolwaterstoffen en naftaleen: 1,2,4-trimethylbenzeen, 1,3,5-trimethylbenzeen, benzeen, cumeen, ethylbenzeen, de som van para- en meta-xyleen, naftaleen, n-butylbenzeen, ortho--xyleen, p-isopropyltolueen, propylbenzeen, sec-butylbenzeen, styreen, tert-butylbenzeen en tolueen Vluchtige gechloreerde en gebromeerde koolwaterstoffen: 1,1-dichloorethaan, 1,1-dichlooretheen, 1,1,1-trichloorethaan, 1,1,1,2-tetrachloorethaan, 1,1,2-trichloorethaan, 1,1,2,2-tetrachloorethaan, 1,2-dibroom-3-chloorpropaan, 1,2-dibroomethaan, 1,2-dichloorbenzeen, 1,2-dichloorethaan, 1,2-dichloorpropaan, 1,2,3-trichloorbenzeen, 1,2,3-trichloorpropaan, 1,2,4-trichloorbenzeen, 1,3-dichloorbenzeen, 1,3-dichloorpropaan, 1,4-dichloorbenzeen, 2-chloortolueen, 4-chloortolueen, broombenzeen, broomchloormethaan, chloorbenzeen, broomdichloormethaan, cis-1,2-dichlooretheen, cis-1,3-dichloorpropeen, dibroomchloormethaan, dibroommethaan, dichloormethaan, hexachloorbutadieën, monochloorbenzeen, tetrachlooretheen, tetrachloormethaan, trans-1,2- dichlooretheen, trans-1,3-dichloopropeen, tribroommethaan, trichlooretheen, trichloormethaan en vinylchloride	eigen methode (monsterconservering conform SIKB 3001; analyse conform ISO 15680)	lab	9

Nr. Test	Code	Matrix / Products tested	Gemeten eigenschappen / Characteristics measured	Methode-Techniek / Method specification-Techniques used	Uit-voering	Site
9.012	NL-ENV-G-GC-AV-WI018	Grond-, oppervlakte-, drink-,en afvalwater	Het bepalen van het gehalte aan vluchtige organische componenten; headspace en GC-MS (dichloormethaan, trans 1,2-dichlooretheen, 1,1-dichloorethaan, 2,2-dichloorpropaan, cis 1,2-dichlooretheen, broomchloormethaan, trichloormethaan, 1,1,1-trichloorethaan, 1,1-dichloorpropeen, 1,1,1,2-tetrachloorethaan, ethylbenzeen, m+p-xyleen, o-xyleen, styreen, tribroommethaan, isopropylbenzeen, 1,1,2,2-tetrachloorethaan, broombenzeen, 1,2,3,-trichloorpropaan, propylbenzeen, 2-chloortolueen, tert.butylbenzeen, 1,2,4-trimethylbenzeen, tetrachloormethaan, benzeen, 1,2-dichloorethaan, dibroommethaan, broomdichloormethaan, 1,2-dibroomethaan, chloorbenzeen, sec.butylbenzeen, 1,3-dichloorbenzeen, p-isopropyltolueen, 1,4-dichloorbenzeen, n-butylbenzeen, 1,2-dichloorbenzeen, 1,2-dibroom-3-chloorpropaan, 1,2,4-trichloorbenzeen, cis 1,3dichloorpropeen, tolueen, trans 1,3-dichloorpropeen, 1,1,2-trichloorethaan, tetrachlooretheen, dibroom-chloormethaan, 1,1-dichlooretheen, trichlooretheen, hexachloorbutadieen, 1,2,3-trichloorbenzeen, 1,2-dichloorpropaan, 1,3-dichloorpropaan, 4-chloortolueen, 1,3,5-trimethylbenzeen, naftaleen, MTBE, vinylchloride, broommethaan, dichloordifluormethaan, chloorethaan, trichloorfluormethaan, n-hexaan, n-heptaan en n-octaan)	conform CMA/3/E en conform WAC/IV/A/016	lab	9
9.014	NL-ENV-G-GC-AV-WI003	Afvalwater	Het bepalen van het gehalte aan fenol, o-cresol, bisfenol A en 2,6-dimethylfenol; HPLC-(UV/fluorescentie)	eigen methode	lab	9

Nr. Test	Code	Matrix / Products tested	Gemeten eigenschappen / Characteristics measured	Methode-Techniek / Method specification-Techniques used	Uit-voering	Site
9.015	NL-ENV-G-SP-AV-WI035	Grond- en afvalwater	Het bepalen van het gehalte aan TOC en DOC; IR-spectroscopie	conform EN 1484	lab	9
9.016	NL-ENV-G-NC-AV-WI020	Grond-, oppervlakte-, drink-, en afvalwater	Het bepalen van het gehalte aan met tetrachlooretheen extraheerbare stoffen; IR-spectroscopie	conform CMA/3/C en conform WAC/IV/B/026	lab	9
9.017	NL-ENV-G-GC-AV-WI036	Afvalwater	Bepaling van polycyclische aromatische koolwatwaterstoffen (Pak) en polychloorbifenylen (PCB) in afvalwater m.b.v. GCMS	Eigen methode	lab	9
9.018	NL-ENV-G-GC-AV-WI035	Grond-, oppervlakte-, drink-, en afvalwater	Bepaling van polycyclische aromatische koolwatwaterstoffen (PAK) m.b.v. GCMS naftaleen, acenaftyleen, acenafteen, fluoreen, fenantreen, anthraceen, fluorantheen, pyreen, benz(a)anthraceen, chryseen, benzo(b)fluorantheen, benzo(k)fluorantheen, benzo(a)pyreen, indeno(1,2,3,c,d)pyreen, dibenzo(a,h)anthraceen, benzo(g,h,i)peryleen)	Conform WAC/IV/A/002 Conform CMA/3/B (enkel matrix grondwater)	lab	9

Nr. Test	Code	Matrix / Products tested	Gemeten eigenschappen / Characteristics measured	Methode-Techniek / Method specification-Techniques used	Uit-voering	Site
9.019	NL-ENV-G-GC-AV-WI035	Grond-, oppervlakte-, drink-, en afvalwater	Bepaling van PCB's, OCB's en chloorbenzenen m.b.v. GCMS PCB28, PCB52, PCB 101, PCB118, PCB 138, PCB 153, PCB 180 alfa-bhc, gamma-BHC, beta-BHC, delta-BHC, Heptachloor, Aldrin, Isobenzan(telodrin) (§), Isodrin, Heptachloorepoxide B, Heptachloorepoxide A, trans-chloordaan, o,p'-DDE, cis chloordaan, alfa-endosulfan, p.p-DDE, Dieldrin, o,p'-DDD, 2,3,5,6-tetrachloornitrobenzeen (§), pentachloornitrobenzeen (§), p,p'-methoxychloor (§), endrin, beta-endosulfan, endosulfansulfaat, p,p'-DDD, o,p'-DDT, p,p'-DDT, hexachloorethaan, hexachloorbutadieen, 1-chloornaftaleen en 2-chloornaftaleen 1,2,3 trichloorbenzeen, 1,2,4-trichloorbenzeen, 1,3,5-trichloorbenzeen, 1,2,3,4-tetrachloorbenzeen, 1,2,4,5-tetrachloorbenzeen, 1,2,3,5-tetrachloorbenzeen, pentachloorbenzeen en hexachloorbenzeen.	Conform WAC/IV/A/015 Conform CMA/3/I (enkel matrix grondwater en uitgezonderd de parameters aangeduid met (§))	lab	9
9.020	NL-ENV-G-GC-AV-WI037	Olie	Bepaling totaal gehalte aan PCB's in isolerende olie m.b.v. GC-ECD, gebaseerd op 6 congeneren.	conform EN 61619 / berekening EN 12766-2 methode B	lab	9
9.021	NL-ENV-G-GC-AV-WI037	Olie	Bepaling totaal gehalte aan PCB's in isolerende olie m.b.v. GC-ECD, gebaseerd op 132 congeneren.	conform EN 61619	lab	9

Nr. Test	Code	Matrix / Products tested	Gemeten eigenschappen / Characteristics measured	Methode-Techniek / Method specification-Techniques used	Uit-voering	Site
Inorganic leaching analysis						
9.022	NL-ENV-G-MB-AV-WI002	Poeder- en korrelvormige materialen van vaste grond- en steenachtige materialen	Het bepalen van de cumulatieve uitloging van anorganische componenten met een vereenvoudigde procedure voor de kolomproef	conform NEN 7383	lab	9
9.023	NL-ENV-G-MB-AV-WI001	Poeder- en korrelvormige materialen van vaste grond- en steenachtige materialen	Het bepalen van de uitloging van anorganische componenten met een kolomproef	conform NEN 7373	lab	9
Inorganic chemical analysis						
9.024	NL-ENV-G-MB-AV-WI021	Luchtdroge grond	Het bepalen van het gehalte aan droge stof; gravimetrie	NEN-EN 15934	lab	9
9.025	NL-ENV-G-MB-AV-WI020	Grond	Het bepalen van het gehalte aan droge stof; gravimetrie	NEN-EN 15934	lab	9
9.026	NL-ENV-G-MB-AV-WI012	Grond-, oppervlakte-, drink-, en afvalwater	Het bepalen van de droogrest; gravimetrie	conform CMA/2/I/A.3,WAC/III/A/001, gebaseerd op EN 15216	lab	9
9.027	NL-ENV-G-MB-AV-WI022	Grond	Het bepalen van het organische stof gehalte; gravimetrie	conform NEN 5754	lab	9
9.028	NL-ENV-G-MB-AV-WI028	Grond en slib	Het bepalen van het gloeiverlies; gravimetrie	eigen methode	lab	9
9.029	NL-ENV-G-MB-AV-WI008	Grond-, oppervlakte-, drink-, en afvalwater	Het bepalen van de asrest; gravimetrie	conform WAC/III/A/002	lab	9
9.030	NL-ENV-G-MB-AV-WI023	Filtreerbaar slib en afvalwater	Het bepalen van het gehalte aan onopgeloste bestanddelen; gravimetrie	conform NEN 6621	lab	9
9.031	NL-ENV-G-MB-AV-WI023	Drink- en oppervlakte-water	Het bepalen van het gehalte aan onopgeloste bestanddelen; gravimetrie	conform NEN 6484	lab	9
9.032	NL-ENV-G-MB-AV-WI009	Grond-, oppervlakte-, drink-, en afvalwater	Het bepalen van de hoeveelheid bezinkbare stoffen; volumetrie	conform WAC/III/D/001	lab	9
9.033	NL-ENV-G-MB-AV-WI018	Afvalwater	Het bepalen van het gehalte aan oliën en vetten; gravimetrie	conform NEN 6671	lab	9
9.034	NL-ENV-G-NC-AV-WI034	Grond	Het bepalen van het lutumgehalte; pipetmethode	conform NEN 5753	lab	9
9.035	NL-ENV-G-MB-AV-WI013	Afvalwater en eluaten	Het bepalen van de pH; potentiometrie	conform ISO 10523	lab	9

Nr. Test	Code	Matrix / Products tested	Gemeten eigenschappen / Characteristics measured	Methode-Techniek / Method specification-Techniques used	Uit-voering	Site
9.036	NL-ENV-G-NC-AV-WI036	Grond	Het bepalen van de pH-H_2O; potentiometrie	conform ISO 10390	lab	9
9.037	NL-ENV-G-NC-AV-WI036	Grond	Het bepalen van de pH-KCl; potentiometrie	conform ISO 10390	lab	9
9.038	NL-ENV-G-NC-AV-WI036	Grond	Het bepalen van de pH-$CaCl_2$; potentiometrie	conform ISO 10390	lab	9
9.039	NL-ENV-G-MB-AV-WI010	Afvalwater en eluaten	Het bepalen van de geleidbaarheid; conductometrie	conform ISO 7888	lab	9
9.040	NL-ENV-G-NC-AV-WI022	Grond-, oppervlakte-,drink-, en afvalwater	Het bepalen van de opgeloste hoeveelheid zuurstof; elektrochemie	conform WAC/III/A/008, gebaseerd op EN 25814	lab	9
9.041	NL-ENV-G-NC-AV-WI031	Grond-, oppervlakte-,drink-, en afvalwater	Het bepalen van het BZV; elektrochemie	conform EN 1899-1	lab	9
9.042	NL-ENV-G-NC-AV-WI033	Grond-, oppervlakte-,drink-, en afvalwater	Het bepalen van het CZV; titrimetrie	conform NEN 6633	lab	9
9.043	NL-ENV-G-NC-AV-WI008	Grond-, oppervlakte-,drink-, en afvalwater	Het bepalen van het CZV; UV-VIS spectrometrie	conform ISO 15705	lab	9
9.044	NL-ENV-G-NC-AV-WI010	Grond-, oppervlakte-,drink-, en afvalwater	Het bepalen van de alkaliteit/zuurtegraad (Buffercapaciteit); titrimetrie	conform WAC/III/A/006, gebaseerd op ISO 9963-1	lab	9
9.045	NL-ENV-G-NC-AV-WI017	Oppervlakte-,drinkwater	Het bepalen van de oxydeerbaarheid bij warmte; titrimetrie	conform WAC/III/D/022, gebaseerd op ISO 8467	lab	9
9.046	NL-ENV-G-NC-AV-WI014	Grond-, oppervlakte-,drink-, en afvalwater	Het bepalen van de totale hardheid; titrimetrie	conform NBN 304.04	lab	9
9.047	NL-ENV-G-NC-AV-WI015	Grond-, oppervlakte-,drink-, en afvalwater	Het bepalen van het gehalte aan vrij koolzuur; titrimetrie	conform SM4500-CO2 C (1998)	lab	9
9.048	NL-ENV-G-SP-AV-WI024	Oppervlakte- , grond- en afvalwater en eluaten	Het bepalen van het gehalte aan opgeloste anionen; ionchromatografie bromide, chloride, nitriet, nitraat en sulfaat	conform ISO 10304-1	lab	9
9.049	NL-ENV-G-SP-AV-WI024	Grond- en drinkwater	Het bepalen van het gehalte aan opgelost fluoride; ionchromatografie	conform ISO 10304-1	lab	9
9.051	NL-ENV-G-SP-AV-WI016	Grond	Het bepalen van het gehalte aan cyaniden (totaal-vrij en totaal-complex pH > 5); doorstroomanalysesysteem	conform ISO 17380	lab	9

Nr. Test	Code	Matrix / Products tested	Gemeten eigenschappen / Characteristics measured	Methode-Techniek / Method specification-Techniques used	Uit-voering	Site
9.052	NL-ENV-G-SP-AV-WI017	Oppervlakte-,grond-,drink-, en afvalwater en eluaten	Het bepalen van het gehalte aan cyaniden (totaal-vrij en totaal-complex pH > 5); doorstroomanalysesysteem	conform ISO 14403: 2002	lab	9
9.053	NL-ENV-G-SP-AV-WI019	Grond-, oppervlakte-, drink- en afvalwater	Het bepalen van de fenolindex; doorstroomanalysesysteem	conform ISO 14402	lab	9
9.054	NL-ENV-G-SP-AV-WI027	Grond-, oppervlakte-, drink- en afvalwater	Het bepalen van het gehalte aan ortho-fosfaat; doorstroomanalysesysteem	conform ISO 15681-2	lab	9
9.055	NL-ENV-G-SP-AV-WI029	Grond-, oppervlakte-, drink- en afvalwater	Het bepalen van het gehalte aan totaal-fosfor doorstroomanalysesysteem	eigen methode (destructie conform ISO 6878; meting conform ISO 15681-2)	lab	9
9.056	NL-ENV-G-SP-AV-WI004	Grond-, oppervlakte-, drink- en afvalwater	Het bepalen van het gehalte aan ammonium-stikstof; doorstroomanalysesysteem	conform NEN 6646	lab	9
9.057	NL-ENV-G-SP-AV-WI003	Absorptie-vloeistoffen van lucht-bemonstering	Het bepalen van het gehalte aan ammonium-stikstof; doorstroomanalysesysteem	eigen methode	lab	9
9.058	NL-ENV-G-SP-AV-WI025	Grond-, oppervlakte-, drink- en afvalwater	Het bepalen van de som van de gehalten aan ammoniumstikstof en aan organisch gebonden stikstof volgens Kjeldahl; doorstroomanalysesysteem	conform NEN 6646 en WAC/III//D30	lab	9
9.059	NL-ENV-G-SP-AV-WI033	Grond-, oppervlakte-,drink- en afvalwater	Het bepalen van het totaal stikstof-gehalte met behulp van sommatie gehaltes Kj-stikstof, nitraat en nitriet (werkvoorschriften met interne referentienummers A/C-Kj-NCF-WTR, A/C-NO2-CF.WTR en A/C-ION.WTR/ELUAAT)	eigen methode	lab	9

Nr. Test	Code	Matrix / Products tested	Gemeten eigenschappen / Characteristics measured	Methode-Techniek / Method specification-Techniques used	Uit-voering	Site
9.061	NL-ENV-G-SP-AV-WI018	Grond- en afvalwater	Het bepalen van het gehalte aan anionen; discrete analyser chloride, sulfaat, nitriet, fosfaat en ammonium	conform ISO 15923-1	lab	9
9.062	NL-ENV-G-SP-AV-WI018	Grond- en afvalwater	Het bepalen van het gehalte aan nitraat; discrete analyser	gelijkwaardig ISO 15923-1	lab	9
9.064	NL-ENV-G-SP-AV-WI028	Grond- en afvalwater	Het bepalen van het gehalte aan totaal fosfor; discrete analyser	eigen methode (destructie conform ISO 6878; meting conform ISO 15923-1)	lab	9
9.065	NL-ENV-G-NC-AV-WI043	Grond-, oppervlakte-,drink- en afvalwater	Het bepalen van het gehalte aan totaal stikstof na oxidatie met peroxodisulfaat, dootrstroomanalyse	Conform WAC/III/D/031 en WAC/III/D/032 en gebaseerd op IOS 11905-1	lab	9
9.066	NL-ENV-G-SP-AV-WI053	Afval- en oppervlaktewater	Het bepalen van het gehalte aan totale stikstof na oxidatie tot stikstofdioxiden, chemiluminescentie	Conform WAC/III/D/033 en EN 12260	lab	9
9.174	NL-ENV-G-SP-AV-WI055	Verf	Het bepalen van het gehalte aan chroom VI; spectrometrie	eigen methode	lab	9
AP04-verrichtingen, pakket SG1 (samenstelling grond) (versie 23-6-2016); volledig pakket						
9.069	NL-ENV-G-MB-AV-WI006	Grond	Monster(voor)behandeling t.b.v. AP04-SG1	conform AP04-V	lab	9
9.070	NL-ENV-G-NC-AV-WI004	Grond	Het bepalen van de pH-$CaCl_2$; potentiometrie	conform AP04-SG-I en conform ISO 10390	lab	9
9.071	NL-ENV-G-MB-AV-WI003	Veldvochtige grond	Het bepalen van het gehalte aan droge stof; gravimetrie	conform AP04-SG-II en conform NEN-EN 15934	lab	9
9.072	NL-ENV-G-MB-AV-WI004	Luchtdroge grond	Het bepalen van het gehalte aan droge stof; gravimetrie	conform AP04-SG-II en conform NEN-EN 15934	lab	9
9.073	NL-ENV-G-NC-AV-WI003	Grond	Het bepalen van het lutumgehalte; pipetmethode	conform AP04-SG-III en conform NEN 5753	lab	9
9.074	NL-ENV-G-MB-AV-WI005	Grond	Het bepalen van het gehalte aan organische stof; gravimetrie	conform AP04-SG-IV en conform NEN 5754	lab	9
6.059	ECO/AV/IMA/114	Grond	Monstervoorbereiding: microgolfovendigestie met koningswater	conform AP04-SG-V (conform NEN 6961)	lab	6
6.060	ECO/AV/IMA/112	Grond	Het bepalen van het gehalte aan metalen op gronddestruaten; ICP-AES (Cu, Zn, As, Pb, Cd, Ni, Cr, Sb, Ba, Co, Mo, Se, Sn en V)	conform AP04-SG-V en conform NEN 6966/C1 (EN-ISO 11885)	lab	6

Nr. Test	Code	Matrix / Products tested	Gemeten eigenschappen / Characteristics measured	Methode-Techniek / Method specification-Techniques used	Uit-voering	Site
6.062	ECO/AV/IMA/115	Grond	Het bepalen van het gehalte aan niet-vluchtig kwik op gronddestruaten; AAS-koude damptechniek	conform AP04-SG-VI en conform ISO 16772	lab	6
9.075	NL-ENV-G-GC-AV-WI001	Grond	Het bepalen van het gehalte aan polycyclische aromatische koolwaterstoffen (PAK's); HPLC-UV/ fluorescentie (naftaleen, fenanthreen, anthraceen, fluorantheen, benzo(a)anthraceen, chryseen, benzo(k)fluorantheen, benzo(a)pyreen, benzo(ghi)peryleen, indeno(1,2,3-cd)pyreen en de som van deze 10 PAK)	conform AP04-SG-IX en conform NEN 6970 (extractie conform NEN 6971, clean-up conform NEN 6976, meting conform NEN 6977)	lab	9
9.076	NL-ENV-G-GC-AV-WI002	Grond	Het bepalen van het gehalte aan polychloorbifenylen (PCB's); GC-ECD PCB 28 (2,4,4' trichloorbifenyl), PCB 52 (2,5 2,5' tetrachloorbifenyl), PCB 101 (2,4,5 2',5' pentachloorbifenyl), PCB 118 (2,4,5 3',4' pentachloorbifenyl), PCB 138 (2,3,4 2',4',5' hexachloorbifenyl), PCB 153 (2,4,5 2',4',5' hexachloorbifenyl), PCB 180 (2,3,4,5 2',4',5' heptachloorbifenyl)	conform AP04-SG-X en conform NEN 6970 (extractie conform NEN 6972, clean-up conform NEN 6974, meting conform NEN 6980)	lab	9
9.077	NL-ENV-G-GC-AV-WI026	Grond	Het bepalen van het gehalte aan minerale olie; GC-FID	conform AP04-SG-XI en conform ISO 16703	lab	9

Nr. Test	Code	Matrix / Products tested	Gemeten eigenschappen / Characteristics measured	Methode-Techniek / Method specification-Techniques used	Uit-voering	Site
AP04-verrichtingen, pakket SG2 (samenstelling grond) (versie 23-6-2016); volledig pakket						
9.078	NL-ENV-G-MB-AV-WI006	Grond	Monster(voor)behandeling t.b.v. AP04-SG2	conform AP04-V	lab	9
9.079	NL-ENV-G-GC-AV-WI002	Grond	Het bepalen van het gehalte aan organochloorbestrijdingsmiddelen (OCB's) (hexachloorbenzeen (HCB), α-hexachloorcyclohexaan (α HCH), β-hexachloorcyclohexaan (β-HCH), γ hexachloorcyclohexaan (γ HCH), δ-Hexachloorcyclohexaan (δ-HCH), aldrin, dieldrin, endrin, som van deze drie "drin's", o,p'-DDD, p,p'-DDD, som van deze twee DDD's, o,p' DDE, p,p'-DDE, som van deze twee DDE's, o,p'-DDT, p,p' DDT, som van deze twee DDT's, isodrin, telodrin, hexachloorbutadieen, heptachloor, α endosulfan, cis heptachloorepoxide, trans heptachloorepoxide, som van deze twee heptachloorepoxiden, cis-chloordaan, trans-chloordaan en som van deze twee chloordanen, endosulfansulfaat en som organochloorhoudende bestrijdingsmiddelen)	conform AP04-SG-XIV en conform NEN 6970 (extractie conform NEN 6972, clean-up conform NEN 6974, meting conform NEN 6980)	lab	9
9.080	NL-ENV-G-GC-AV-WI002	Grond	Het bepalen van het gehalte aan niet vluchtige chloorbenzenen; GC-ECD (1,2,3-trichloorbenzeen, 1,2,4-trichloorbenzeen, 1,3,5-trichloorbenzeen, som van deze drie trichloorbenzenen, 1,2,3,4-tetrachloorbenzeen, 1,2,3,5-tetrachloorbenzeen, 1,2,4,5-tetrachloorbenzeen, som van deze drie tetrachloorbenzenen, pentachloorbenzeen en hexachloorbenzeen, som van chloorbenzenen (zie ook pakket AP04-SG3))	conform AP04-SG-XV conform NEN 6970 (extractie conform NEN 6972, clean-up conform NEN 6974, meting conform NEN 6980)	lab	9

Nr. Test	Code	Matrix / Products tested	Gemeten eigenschappen / Characteristics measured	Methode-Techniek / Method specification-Techniques used	Uit-voering	Site
AP04-verrichtingen, pakket SG3 (samenstelling grond) (versie23-6-2016); volledig pakket						
9.081	NL-ENV-G-MB-AV-WI006	Grond	Monster(voor)behandeling t.b.v. AP04-SG3	conform AP04-V	lab	9
9.082	NL-ENV-G-GC-AV-WI017	Grond	Bepalen van het gehalte aan vluchtige aromatische, vluchtige gehalogeneerde koolwaterstoffen, MTBE en ETBE; headspace en GC-MS vluchtige aromatische koolwaterstoffen: benzeen, tolueen, ethylbenzeen, o-xyleen, som m- en p-xyleen, som van deze drie xylenen, styreen en som vluchtige aromatische koolwaterstoffen vluchtige gehalogeneerde koolwaterstoffen: monochlooretheen (vinylchloride), dichloormethaan, trichloormethaan, tetrachloormethaan, trichlooretheen, tetrachlooretheen, 1,1-dichloorethaan*), 1,2-dichloorethaan*), som van deze twee dichloorethanen*), 1,1-dichlooretheen*), cis-1,2-dichlooretheen, trans-1,2-dichlooretheen, som van deze drie dichloorethenen, 1,1,1-trichloorethaan, 1,1,2-trichloorethaan*), 1,1-dichloorpropaan, 1,2-dichloorpropaan, 1,3-dichloorpropaan en de som van deze drie dichloorpropanen overige vluchtige verbindingen: methyl(tert)butylether (MTBE) *) en ethyl(tert)butylether (ETBE) *)	conform AP04-SG-VIII en conform NEN-EN-ISO 22155	lab	9
9.083	NL-ENV-G-GC-AV-WI017	Grond	Het bepalen van het gehalte aan vluchtige chloorbenzenen; headspace en GC-MS (monochloorbenzeen, 1,2-dichloorbenzeen, 1,3-dichloorbenzeen*), 1,4-dichloorbenzeen*), som van deze drie dichloorbenzenen*), 1,2,3-trichloorbenzeen*), 1,2,4-trichloorbenzeen*), 1,3,5,-trichloorbenzeen*) en som trichloorbenzenen*))	conform AP04-SG-XV-en conform NEN-EN-ISO 22155	lab	9
AP04-verrichtingen, pakket SG4 (samenstelling grond) (versie 23-6-2016); niet-volledig pakket						
9.084	NL-ENV-G-MB-AV-WI006	Grond	Monster(voor)behandeling t.b.v. AP04-SG4	conform AP04-V	lab	9
9.085	NL-ENV-G-SP-AV-WI001	Grond	Het bepalen van het gehalte aan cyaniden (vrij en totaal); spectrofotometrie	conform AP04-SG-VII en conform ISO 17380	lab	9

Nr. Test	Code	Matrix / Products tested	Gemeten eigenschappen / Characteristics measured	Methode-Techniek / Method specification-Techniques used	Uit-voering	Site
AP04-verrichtingen, pakket SG5 (samenstelling grond)(versie23-6-2016); niet-volledig pakket						
9.086	NL-ENV-G-MB-AV-WI006	Grond	Monster(voor)behandeling t.b.v. AP04-SG5	conform AP04 V	lab	9
9.087	NL-ENV-G-GC-AV-WI017	Grond	Het bepalen van het gehalte aan aromatische oplosmid-delen; headspace en GC-MS (1,2,3-trimethylbenzeen, 1,2,4-trimethylbenzeen, 1,3,5-trimethylbenzeen, 2-ethyl-tolueen, 3-ethyltolueen, 4-ethyltolueen, isopropylben-zeen, propylbenzeen en som aromatische oplosmiddelen)	conform AP04-SG-XVII	lab	9
AP04-verrichtingen, pakket U1 (uitloogonderzoek; grond, niet-vormgegeven en vormgegeven bouwstoffen; niet diffusiebepaalde uitloging) (versie 23-6-2016); volledig pakket						
9.088	NL-ENV-G-MB-AV-WI006	Grond en bouwstoffen	Monster(voor)behandeling t.b.v. AP04-U1 (en AP04-E)	conform AP04-V	lab	9
9.089	NL-ENV-G-MB-AV-WI002	Grond en bouwstoffen	Het bepalen van de emissie van anorganische componenten d.m.v. de kolomproef	conform AP04-U-I en conform NEN 7383	lab	9
9.090	NL-ENV-G-MB-AV-WI015	Eluaten	Het bepalen van de pH; potentiometrie	conform AP04-U-IV en conform ISO 10523	lab	9
9.091	NL-ENV-G-MB-AV-WI017	Eluaten	Het bepalen van de geleidbaarheid; conductometrie	conform AP04-U-V en conform ISO 7888	lab	9
6.063	ECO/AV/IMA/105	Eluaten	Het bepalen van het gehalte aan metalen; ICP-AES (Pb, Cd, Zn, Ni, As, Cr, Cu, Mo, Ba, Sn, Co, Sb, Se en V)	conform AP04-E pb E.I, -.II, -.III, -.IV, -.V, -.VI, -.VII, -.IX, -.X, -.XI, -.XII, -.XIII, -.XIV, en -.XV en conform NEN 6966/C1	lab	6
6.064	ECO/AV/IMA/107	Eluaten	Het bepalen van het gehalte aan kwik; AAS-koude damptechniek	conform AP04-E-VIII en conform ISO 12846	lab	6
6.065	ECO/AV/IMA/106	Eluaten	Het bepalen van het gehalte aan metalen; ICP-MS (Sn, Se en Sb)	conform AP04-E pb E-XI, - XIV en -XIII en NEN-EN-ISO 17294-2	lab	6
9.092	NL-ENV-G-SP-AV-WI015	Eluaten	Het bepalen van het gehalte aan cyaniden (vrij en complex); spectrofotometrie	conform AP04-E-XVI en conform ISO 14403	lab	9
9.093	NL-ENV-G-SP-AV-WI024	Eluaten	Het bepalen van het gehalte aan bromide, chloride en sulfaat; ionchromatografie	conform AP04-E-XVII	lab	9
9.094	NL-ENV-G-SP-AV-WI021	Eluaten	Het bepalen van het gehalte aan fluoride; ionselectieve electrode	conform AP04-E-XVIII en conform NEN 6589/C1	lab	9

Nr. Test	Code	Matrix / Products tested	Gemeten eigenschappen / Characteristics measured	Methode-Techniek / Method specification-Techniques used	Uit-voering	Site
AS3000; pakket 3010 (Laboratoriumanalyses voor grond-, waterbodem- en grondwateronderzoek; standaardpakket) (versie 23-6-2016); volledig pakket						
9.095	NL-ENV-G-MB-AV-WI033	Grond	Monsterbehandeling t.b.v. AS3010	conform AS3000 en conform NEN-EN 16179	lab	9
9.096	NL-ENV-G-NC-AV-WI036	Grond	Het bepalen van de pH-$CaCl_2$; potentiometrie	conform prestatieblad 3010-1	lab	9
9.097	NL-ENV-G-MB-AV-WI020	Grond	Het bepalen van het gehalte aan droge stof; gravimetrie	conform prestatieblad 3010-2 en conform NEN-EN 15934	lab	9
9.098	NL-ENV-G-MB-AV-WI022	Grond	Het bepalen van het gehalte aan organische stof; gravimetrie	conform prestatieblad 3010-3 en conform NEN 5754	lab	9
9.099	NL-ENV-G-NC-AV-WI034	Grond	Het bepalen van het lutumgehalte; pipetmethode	conform prestatieblad 3010-4 en conform NEN 5753	lab	9
6.066	ECO/AV/IMA/114	Grond	Monstervoorbereiding: microgolfovendigestie met koningswater	conform prestatieblad 3010-5 (conform NEN 6961)	lab	6
6.067	ECO/AV/IMA/112	Grond	Het bepalen van het gehalte aan elementen in gronddestruaten; ICP-AES (Ba, Cd, Co, Cu, Pb, Mo, Ni en Zn)	conform prestatieblad 3010-5 (meting conform NEN 6966/C1)	lab	6
6.069	ECO/AV/IMA/115	Grond	Het bepalen van het gehalte aan niet-vluchtig kwik op gronddestruaten; AAS-koude damptechniek.	conform prestatieblad 3010-5 meting conform ISO 16772)	lab	6
9.100	NL-ENV-G-GC-AV-WI010	Grond	Het bepalen van het gehalte aan polyclische aromatische koolwaterstoffen (PAK's); HPLC-UV/fluorescentie (naftaleen, fenantreen, antraceen, fluoranteen, benzo(a)antraceen, chryseen, benzo(k)fluoranteen, benzo(a)pyreen, benzo(ghi)peryleen en indeno(123cd)pyreen)	conform prestatieblad 3010-6 en conform NEN 6970 (extractie conform NEN 6971, clean-up conform NEN 6976, meting conform NEN 6977)	lab	9
9.101	NL-ENV-G-GC-AV-WI006	Grond	Het bepalen van het gehalte aan minerale olie; GC-FID	conform prestatieblad 3010-7 (monsterconservering conform SIBK 3001)	lab	9
9.102	NL-ENV-G-GC-AV-WI029	Grond	Het bepalen van het gehalte aan polychloorbifenylen (PCB) GC-MS (PCB 28, PCB 52, PCB 101, PCB 118, PCB 138, PCB 153, PCB 180 en de som van deze zeven PCB's)	conform prestatieblad 3010-8 (monsterconservering conform SIBK 3001)	lab	9

Nr. Test	Code	Matrix / Products tested	Gemeten eigenschappen / Characteristics measured	Methode-Techniek / Method specification-Techniques used	Uit-voering	Site
AS3000; pakket 3020 (Laboratoriumanalyses voor grond-, waterbodem- en grondwateronderzoek; grond aanvullend I) (versie 23-6-2016); volledig pakket						
9.103	NL-ENV-G-MB-AV-WI033	Grond	Monsterbehandeling t.b.v. AS3020	conform AS3000 en conform NEN-EN 16179	lab	9
9.104	NL-ENV-G-GC-AV-WI030	Grond	Het bepalen van het gehalte aan organochloorbeschrijdingsmiddelen (OCB); GC-ECD (hexachloorbenzeen (HCB), α-hexachloorcyclohexaan (α-HCH), β-hexachloorcyclohexaan (β-HCH), γ-hexachloorcyclohexaan (γ-HCH), δ-Hexachloorcyclohexaan (δ-HCH) *, som 4 HCH's, aldrin, dieldrin, endrin, som van deze drie "drin's", o,p'-DDD, p,p'-DDD, som van deze twee DDD's, o,p'-DDE, p,p'-DDE, som van deze twee DDE's, o,p'-DDT, p,p'-DDT, som van deze twee DDT's, heptachloor, α-endosulfan, isodrin, telodrin, cis-heptachloorepoxide, trans-heptachloorepoxide, som van deze twee heptachloorepoxiden, cis-chloordaan, trans-chloordaan, som van deze twee chloordanen, som van organochloorbestrijdingsmiddelen, hexachloorbutadieen en endosulfansulfaat *	conform prestatieblad 3020-1 (monsterconservering cnform SIKB 3001) * conform prestatieblad 3020-3 (monsterconservering cnform SIKB 3001)	lab	9
9.105	NL-ENV-G-GC-AV-WI030	Grond	Het bepalen van het gehalte aan tri- en tetrachloorbenzenen en penta- en hexachloorbenzeen; GC-ECD (1,2,3-trichloorbenzeen, 1,2,4-trichloorbenzeen, 1,3,5-trichloorbenzeen, som van deze drie trichloorbenzenen, 1,2,3,4-tetrachloorbenzeen, 1,2,3,5-tetrachloorbenzeen, 1,2,4,5-tetrachloorbenzeen, som van deze drie tetrachloorbenzenen, pentachloorbenzeen en hexachloorbenzeen, som van chloorbenzenen)	conform prestatieblad 3020-2 (monsterconservering cnform SIKB 3001)	lab	9

Nr. Test	Code	Matrix / Products tested	Gemeten eigenschappen / Characteristics measured	Methode-Techniek / Method specification-Techniques used	Uit-voering	Site
AS3000; pakket 3030 (Laboratoriumanalyses voor grond-, waterbodem- en grondwateronderzoek; grond aanvullend II) (versie 23-6-2016); volledig pakket						
9.106	NL-ENV-G-MB-AV-WI033	Grond	Monsterbehandeling t.b.v. AS3030	conform AS3000 en conform NEN-EN 16179	lab	9
9.107	NL-ENV-G-GC-AV-WI017	Grond	Het bepalen van het gehalte aan vluchtige aromaten, vluchtige chloorkoolwaterstoffen, MTBE en ETBE; headspace en GC-MS vluchtige aromatische koolwaterstoffen: benzeen, tolueen, ethylbenzeen, o-xyleen, som m- en p-xyleen, som van deze drie xylenen, styreen, som aromatische oplosmiddelen, naftaleen vluchtige chloorkoolwaterstoffen: monochlooretheen (vinylchoride) *) dichloormethaan, trichloormethaan, tetrachloormethaan, trichlooretheen, tetrachlooretheen, 1,1-dichloorethaan, 1,2-dichloorethaan, 1,1-dichlooretheen, cis-1,2 dichlooretheen, trans-1,2 dichlooretheen, som van deze drie dichloorethenen, 1,1,1-trichloorethaan, 1,1,2-trichloorethaan en som van deze twee trichloorethanen, 1,1- dichloorpropaan*), 1,2-dichloorpropaan, 1,3- dichloorpropaan*), som van deze drie dichloorpropanen*), tribroommethaan overige vluchtige verbindingen: methyl(tert)butylether (MTBE) *) en ethyl(tert)butylether (ETBE) *)	conform prestatieblad 3030-1 en conform NEN-EN-ISO 22155	lab	9
9.108	NL-ENV-G-GC-AV-WI017	Grond	Het bepalen van het gehalte aan mono-chloorbenzeen, di- en trichloorbenzenen; GC-MS (monochloorbenzeen, 1,2-dichloorbenzeen, 1,3 dichloorbenzeen*), 1,4-dichloorbenzeen*) en som van deze drie dichloorbenzenen*), 1,2,3-trichloorbenzeen*), 1,2,4-trichloorbenzeen*), 1,3,5-trichloorbenzeen*) en som van deze drie trichloorbenzenen*))	conform prestatieblad 3030-2–en conform NEN-EN-ISO 22155	lab	9
9.109	NL-ENV-G-GC-AV-WI017	Grond	Het bepalen van het gehalte aan (overige) aromatische oplosmiddelen; headspace en GC-MS (1,2,3-trimethylbenzeen, 1,2,4-trimethylbenzeen, 1,3,5-trimethylbenzeen, 2-ethyltolueen, 3-ethyltolueen, 4-ethyltolueen, isopropylbenzeen, propylbenzeen en som aromatische oplosmiddelen)	conform prestatieblad 3030-3 en conform NEN-EN-ISO 22155	lab	9

Nr. Test	Code	Matrix / Products tested	Gemeten eigenschappen / Characteristics measured	Methode-Techniek / Method specification-Techniques used	Uit-voering	Site
AS3000; pakket 3040 (Laboratoriumanalyses voor grond-, waterbodem- en grondwateronderzoek; grond aanvullend III) (versie 23-6-2016); volledig pakket						
9.110	NL-ENV-G-MB-AV-WI033	Grond	Monsterbehandeling t.b.v. AS3040	conform AS3000 en conform NEN-EN 16179	lab	9
9.111	NL-ENV-G-SP-AV-WI016	Grond	Het bepalen van het gehalte aan cyaniden (vrij, totaal en complex); fotometrie	conform prestatieblad 3040-1 en conform ISO 17380	lab	9
9.112	NL-ENV-G-SP-AV-WI023	Grond	Het bepalen van het gehalte aan chloride; ionchromatografie	conform prestatieblad 3040-2 (meting extract conform ISO 10304)	lab	9
AS3000; pakket 3050 (Laboratoriumanalyses voor grond-, waterbodem- en grondwateronderzoek; grond aanvullend III) (versie 23-6-2016); volledig pakket						
9.113	NL-ENV-G-MB-AV-WI033	Grond	Monsterbehandeling t.b.v. AS3050	conform AS3000 en conform NEN-EN 16179	lab	9
6.070	ECO/AV/IMA/112	Grond	Het bepalen van het gehalte aan elementen op gronddestruaten; ICP-AES (Sb, As, Cr, Sn, V, Be, Te, Tl en Ag)	conform prestatieblad 3050-1 en -2 (meting conform NEN 6966/C1)	lab	6
6.126	ECO/AV/IMA/104	Grond	Het bepalen van het gehalte aan elementen; ICP-MS (Ag, As, Be, Cr, Sb, Sn, Te, Tl, V)	conform prestatieblad 3050-1 en -2 (meting conform EN-ISO 17294-2)	lab	6
AS3000; pakket 3110 (Laboratoriumanalyses voor grond-, waterbodem- en grondwateronderzoek; grondwater standaardpakket) (versie23-6-2016); volledig pakket						
9.114	NL-ENV-G-MB-AV-WI013	Grondwater	Het bepalen van de pH; potentiometrie	conform prestatieblad 3110-1 en conform ISO 10523	lab	9
9.115	NL-ENV-G-MB-AV-WI010	Grondwater	Het bepalen van de elektrische geleiding; conductometrie	conform prestatieblad 3110-2 en conform ISO 7888	lab	9
6.072	ECO/AV/IMA/111	Grondwater	Het bepalen van het gehalte aan elementen; ICP-AES (Ba, Cd, Co, Cu, Mo, Ni, Pb, Zn)	conform prestatieblad 3110-3 en conform NEN-6966/C1 (EN-ISO 11885)	lab	6
6.073	ECO/AV/IMA/104	Grondwater	Het bepalen van het gehalte aan elementen; ICP-MS (Ba, Cd, Co, Cu, Mo, Ni, Pb, Zn)	conform prestatieblad 3110-3 (meting conform EN-ISO 17294-2)	lab	6
6.074	ECO/AV/IMA/107	Grondwater	Het bepalen van het gehalte aan niet-vluchtig kwik; AAS-koude damptechniek.	conform prestatieblad 3110-3 (meting conform ISO 12846)	lab	6
9.117	NL-ENV-G-GC-AV-WI008	Grondwater	Het bepalen van het gehalte aan minerale olie; GC-FID	conform prestatieblad 3110-5 en conform ISO 9377-2 (monsterconservering conform SIKB 3001)	lab	9

Nr. Test	Code	Matrix / Products tested	Gemeten eigenschappen / Characteristics measured	Methode-Techniek / Method specification-Techniques used	Uit-voering	Site
AS 3000; pakket 3120 (Laboratoriumanalyses voor grond-, waterbodem- en grondwateronderzoek; grondwater aanvullend I) (versie 23-6-2016); volledig pakket						
9.118	NL-ENV-G-GC-AV-WI013	Grondwater	Het bepalen van het gehalte aan polychloorbifenylen (PCB) en organochloorbeschrijdingsmiddelen (OCB); GC-MS (PCB 28, PCB 52, PCB 101, PCB 118, PCB 138, PCB 153, PCB 180, de som van deze zeven PCB's, α-hexachloor-cyclohexaan (α-HCH), β-hexachloorcyclohexaan (β-HCH), γ-hexachloorcyclohexaan (γ-HCH), δ-hexachloorcyclohexaan (δ-HCH), de som van deze vier HCH's, aldrin, dieldrin, endrin, de som van deze drie drin's, p,p'-DDE, o,p'-DDD, o,p'-DDT, p,p'-DDD, o,p'-DDE, p,p'-DDT, som van zes DDT, DDE, DDD, heptachloor, α-endosulfan, cis-heptachloor-epoxide, trans-heptachloorepoxide, de som van deze twee heptachloor-epoxiden, cis-chloordaan en trans-chloordaan en som van deze twee chloordanen)	conform prestatieblad 3120-1 (monsterconservering conform SIKB 3001)	lab	9
9.119	NL-ENV-G-GC-AV-WI013	Grondwater	Het bepalen van het gehalte aan tri- en tetrachloorbenzenen, penta- en hexachloorbenzeen; GC-MS (1,2,3-trichloorbenzeen, 1,2,4-trichloorbenzeen, 1,3,5-trichloorbenzeen, de som van deze drie trichloorbenzenen, 1,2,3,4-tetrachloorbenzeen, 1,2,3,5-tetrachloorbenzeen, 1,2,4,5-tetrachloorbenzeen, de som van deze drie tetra-chloorbenzenen, pentachloorbenzeen en hexachloorbenzeen)	conform prestatieblad 3120-2 (monsterconservering conform SIKB 3001)	lab	9

Nr. Test	Code	Matrix / Products tested	Gemeten eigenschappen / Characteristics measured	Methode-Techniek / Method specification-Techniques used	Uit-voering	Site
AS 3000; pakket 3130 (Laboratoriumanalyses voor grond-, waterbodem- en grondwateronderzoek; grondwater aanvullend II) (versie 23-6-2016); volledig pakket						
9.120	NL-ENV-G-GC-AV-WI022	Grondwater	Het bepalen van het gehalte aan vluchtige aromatische en vluchtige gehalogeneerde koolwaterstoffen; GC-MS vluchtige aromatische koolwaterstoffen: benzeen, tolueen, ethylbenzeen, o-xyleen, som m- en p-xyleen, som van deze drie xylenen, styreen, naftaleen vluchtige chloorkoolwaterstoffen: monochlooretheen (vinylchloride)*), dichloormethaan, trichloormethaan, tetrachloormethaan, trichlooretheen, tetrachlooretheen, 1,1-dichloorethaan, 1,2-dichloorethaan, 1,1-dichlooretheen, cis-1,2-dichlooretheen, trans-1,2-dichlooretheen, som van deze drie dichloorethenen, 1,1,1-trichloorethaan, 1,1,2-trichloorethaan, 1,1-dichloorpropaan*), 1,2-dichloorpropaan, 1,3-dichloorpropaan*), som van deze dichloorpropanen*), tribroommethaan overige vluchtige verbindingen: methyl(tert)butylether (MTBE) *) en ethyl(tert)butylether (ETBE) *)	conform prestatieblad 3130-1 en conform ISO 15680 (monsterconservering conform SIKB 3001) *) alleen conform prestatieblad 3130-1	lab	9
9.122	NL-ENV-G-GC-AV-WI022	Grondwater	Het bepalen van het gehalte aan monochloorbenzeen, di- en trichloorbenzenen; P&T en GC-MS (monochloorbenzeen, 1,2-dichloorbenzeen, 1,3 dichloorbenzeen, 1,4-dichloorbenzeen en som van deze drie dichloorbenzenen, 1,2,3-trichloorbenzeen, 1,2,4-trichloorbenzeen, 1,3,5-trichloorbenzeen en som van deze drie trichloorbenzenen)	conform prestatieblad 3130-2 en conform ISO 15680 (monsterconservering conform SIKB 3001)	lab	9

Nr. Test	Code	Matrix / Products tested	Gemeten eigenschappen / Characteristics measured	Methode-Techniek / Method specification-Techniques used	Uit-voering	Site
AS 3000; pakket 3140 (Laboratoriumanalyses voor grond-, waterbodem- en grondwateronderzoek; grondwater aanvullend III) (versie 23-6-2016); volledig pakket						
9.124	NL-ENV-G-SP-AV-WI017	Grondwater	Het bepalen van het gehalte aan cyanide (vrij, totaal en complex); fotometrie	conform prestatieblad 3140-1 en conform ISO 14403 (monsterconservering conform SIKB 3001)	lab	9
9.125	NL-ENV-G-SP-AV-WI024	Grondwater	Het bepalen van het gehalte aan anionen; ionchromatografie (chloride, nitraat en sulfaat)	conform prestatieblad 3140-2 en conform ISO 10304-1	lab	9
9.126	NL-ENV-G-SP-AV-WI018	Grondwater	Het bepalen van het gehalte aan anionen; discrete analyser (chloride, ortho-fosfaat en sulfaat)	conform prestatieblad 3140-2 en conform ISO 15923-1	lab	9
9.127	NL-ENV-G-SP-AV-WI018	Grondwater	Het bepalen van het gehalte aan nitraat; discrete analyser	conform prestatieblad 3140-2 en gelijkwaardig aan ISO 15923-1	lab	9

Nr. Test	Code	Matrix / Products tested	Gemeten eigenschappen / Characteristics measured	Methode-Techniek / Method specification-Techniques used	Uit-voering	Site
AS 3000; pakket 3150 (Laboratoriumanalyses voor grond-, waterbodem- en grondwateronderzoek; grondwater aanvullend IV) (versie 23-6-2016); volledig pakket						
6.075	ECO/AV/IMA/111	Grondwater	Het bepalen van het gehalte aan elementen; ICP-AES (Sb, As, Cr, Sn, V, Be, Te, Tl en Ag)	conform prestatieblad 3150-1 en -2 en conform NEN 6966/C1 (EN-ISO 11885)	lab	6
6.076	ECO/AV/IMA/104	Grondwater	Het bepalen van het gehalte aan elementen ; ICP-MS (Sb, As, Sn, V, Be, Te, Tl, Ag)	conform prestatieblad 3150-1 en -2 (meting conform EN-ISO 17294-2)	lab	6
CMA-analyses						
9.128	NL-ENV-G-MB-AV-WI019	Grond, Pasteuze afvalstoffen en vaste afvalstoffen	Het bepalen van het gehalte aan droge stof; gravimetrie	conform CMA/2/II/A1 , gebaseerd op NEN-EN 15934, conform CWEA S-I-3	lab	9
9.129	NL-ENV-G-GC-AV-WI005	Pasteuze afvalstoffen en vaste afvalstoffen	Het bepalen van het gehalte aan minerale olie; GC-FID	conform CMA/3/R1	lab	9
9.130	NL-ENV-G-GC-AV-WI016	Pasteuze afvalstoffen en vaste afvalstoffen	Het bepalen van het gehalte aan a-specifieke oplosmiddelen; GC-FID	conform CMA/3/Q	lab	9
9.131	NL-ENV-G-SP-AV-WI042	Pasteuze afvalstoffen en vaste afvalstoffen	Het bepalen van het gehalte aan EOX; microcoulometrie	conform CMA/3/N	lab	9
9.132	NL-ENV-G-MB-AV-WI007	Pasteuze afvalstoffen en vaste afvalstoffen	Het bepalen van de asrest; gravimetrie.	conform CMA/2/II/A2, gebaseerd op EN 15169	lab	9
9.133	NL-ENV-G-NC-AV-WI006	Pasteuze afvalstoffen en vaste afvalstoffen	Het bepalen van de uitloging van anorganische componenten met de enkelvoudige schudtest	conform CMA/2/II/A.12 , gebaseerd op EN 12457-4	lab	9
9.134	NL-ENV-G-MB-AV-WI016	Eluaat	Het bepalen van de pH; potentiometrie	conform CMA/2/I/A1 , gebaseerd op ISO 10523	lab	9
9.135	NL-ENV-G-SP-AV-WI046	Eluaat	Het bepalen van het gehalte aan chroom VI; spectrometrie	conform CMA/2/I/C7, gebaseerd op EPA 7199	lab	9
9.136	NL-ENV-G-SP-AV-WI007	Eluaat	Het bepalen van het gehalte aan cyaniden (totaal, vrije en niet-chlooroxydeerbare); spectrofotometrie	conform CMA/2/I/C2.2 en conform CMA/2/I/C2.3 en conform ISO 14403 en conform WAC/III/D/036 en conform WAC/III/C/033	lab	9

Nr. Test	Code	Matrix / Products tested	Gemeten eigenschappen / Characteristics measured	Methode-Techniek / Method specification-Techniques used	Uit-voering	Site
9.137	NL-ENV-G-SP-AV-WI011	Eluaat	Het bepalen van het gehalte aan chloride en sulfaat; ionchromatografie	analyse conform CMA/2/I/C.3 , gebaseerd op ISO 10304	lab	9
9.138	NL-ENV-G-MB-AV-WI012	Eluaat	Het bepalen van de droogrest; gravimetrie	conform CMA/2/I/A.3 , WAC/III/A/001 gebaseerd op EN 15216	lab	9
9.139	NL-ENV-G-SP-AV-WI030	Eluaat	Het bepalen van DOC; IR- spectrometrie	conform CMA/2/I/D7	lab	9
9.140	NL-ENV-G-MB-AV-WI026	Pasteuze afvalstoffen en vaste afvalstoffen	Het bepalen van de uitloging van anorganische componenten met de kolomproef	conform CMA/2/II/A9.5	lab	9
9.142	NL-ENV-G-SP-AV-WI010	Eluaat	Het bepalen van de fenolindex; doorstroomanalysesysteem	conform CMA/2/I/D8 , gebaseerd op ISO 14402	lab	9
9.143	NL-ENV-G-SP-AV-WI009	Eluaat	Het bepalen van het gehalte aan fluoride; potentiometrie	conform CMA/2/I/C.1.2	lab	9
9.144	NL-ENV-G-NC-AV-WI027	Grond	Het bepalen van het kleigehalte (lutum); pipetmethode	conform CMA 2/II/A.6	lab	9
6.081	NL-ENV-G-SP-AV-WI046	Grondwater	Het bepalen van het gehalte aan chroom VI; spectrometrie	conform CMA/2/I/C.7; gebaseerd op EPA 7199	lab	9
9.146	NL-ENV-G-SP-AV-WI007	Grondwater	Het bepalen van het gehalte aan cyaniden (totaal, vrije en niet chlooroxydeerbare) in grondwater; spectrofotometrie.	conform CMA/2/I/C2.2 en conform CMA/2/I/C2.3 ; gebaseerd op ISO 14403	lab	9

Nr. Test	Code	Matrix / Products tested	Gemeten eigenschappen / Characteristics measured	Methode-Techniek / Method specification-Techniques used	Uit-voering	Site
9.147	NL-ENV-G-SP-AV-WI006	Grond	Het bepalen van het gehalte aan cyaniden (totaal, vrije en niet chlooroxydeerbare); spectrofotometrie.	conform CMA/2/I/C.2.2 en conform CMA/2/I/C.2.3 ; gebaseerd op ISO 17380	lab	9
9.150	NL-ENV-G-GC-AV-WI017	Grond	Het bepalen van het gehalte aan vluchtige organische componenten; headspace en GC-MS (dichloormethaan, trans 1,2-dichlooretheen, 1,1-dichloorethaan, 2,2-dichloorpropaan, cis 1,2-dichlooretheen, broomchloormethaan, trichloormethaan, 1,1,1-trichloorethaan, 1,1-dichloorpropeen, 1,1,1,2-tetrachloorethaan, ethylbenzeen, m+p-xyleen, o-xyleen, styreen, tribroommethaan, isopropylbenzeen, 1,1,2,2-tetrachloorethaan, broombenzeen, 1,2,3,-trichloorpropaan, propylbenzeen, 2-chloortolueen, tert.butylbenzeen, 1,2,4-trimethylbenzeen, tetrachloormethaan, benzeen, 1,2-dichloorethaan, dibroommethaan, broomdichloormethaan, 1,2-dibroomethaan, chloorbenzeen, sec.butylbenzeen, 1,3-dichloorbenzeen, p-isopropyltolueen, 1,4-dichloorbenzeen, n-butylbenzeen, 1,2-dichloorbenzeen, 1,2-dibroom-3-chloorpropaan, 1,2,4-trichloorbenzeen, cis 1,3dichloorpropeen, tolueen, trans 1,3-dichloorpropeen, 1,1,2-trichloorethaan, tetrachlooretheen, dibroomchloormethaan, 1,1-dichlooretheen, trichlooretheen, hexachloorbutadieen, 1,2,3-trichloorbenzeen, 1,2-dichloorpropaan, 1,3-dichloorpropaan, 4-chloortolueen, 1,3,5-trimethylbenzeen, naftaleen, MTBE, vinylchloride, broommethaan, dichloordifluormethaan, chloorethaan, trichloorfluormethaan, n-hexaan, n-heptaan en n-octaan)	conform CMA/3/E	lab	9
9.151	NL-ENV-G-GC-AV-WI038	Grond en waterbodem	Het bepalen van PCB's ; GCMS PCB28, PCB52, PCB 101, PCB118, PCB 138, PCB 153, PCB 180	conform CMA/3/I	lab	9
9.153	NL-ENV-G-GC-AV-WI007	Grondwater	Het bepalen van het gehalte aan minerale olie; GC-FID	conform CMA/3/R1	lab	9

Nr. Test	Code	Matrix / Products tested	Gemeten eigenschappen / Characteristics measured	Methode-Techniek / Method specification-Techniques used	Uit-voering	Site
9.154	NL-ENV-G-GC-AV-WI005	Bodem	Het bepalen van het gehalte aan minerale olie; GC-FID	conform CMA/3/R1	lab	9
9.155	NL-ENV-G-SP-AV-WI042	Bodem	Het bepalen van het gehalte aan EOX; microcoulometrie	conform CMA/3/N	lab	9
9.156	NL-ENV-G-SP-AV-WI012	Pasteuze afvalstoffen	Het bepalen van het gehalte aan Kjeldahl-stikstof; doorstroomanalysesysteem.	conform CMA/2/II/A16	lab	9
9.159	NL-ENV-G-NC-AV-WI027	Bodem, bagger- en ruimingsspecie	Het bepalen van het kleigehalte; pipetmethode	conform CMA2/II/A6	lab	9
6.084	ECO/AV/IMA/110	Grond, slib, pasteuze afvalstoffen en vaste afvalstoffen	Bepaling van kwik op digestievloeistoffen na totaalontsluiting mbv CV-AAS	conform CMA/2/I/B.3	lab	6
9.160	NL-ENV-G-MB-AV-WI025	Pasteuze afval-stoffen en vaste afvalstoffen	Het bepalen van de uitloging van anorganische componenten met de kolomproef	conform CMA 2/II/A.9.1	lab	9
9.161	NL-ENV-G-SP-AV-WI042	Pasteuze afval-stoffen en vaste afvalstoffen	Het bepalen van het gehalte aan EOX; microcoulometrie	conform CMA/3/N	lab	9
9.162	NL-ENV-G-GC-AV-WI017	Pasteuze afval-stoffen en vaste afvalstoffen	Het bepalen van het gehalte aan vluchtige organische componenten; headspace en GC-MS (benzeen, tolueen, ethylbenzeen, o- xyleen en som m- en p-xyleen , styreen, hexaan, heptaan, octaan, dichloormethaan, trichloormethaan, tetrachloormethaan, vinylchloride, 1,1-dichloorethaan, 1,2-dichloorethaan, cis+trans-1,2-dichlooretheen, 1,1,1-trichloorethaan, 1,1,2-trichloorethaan, trichlooretheen, tetrachlooretheen, monochloorbenzeen, 1,2-dichloorbenzeen, 1,3-dichloorbenzeen, 1,4-dichloorbenzeen, 1,2,3-trichloorbenzeen, 1,2,4-trichloorbenzeen en 1,3,5-trichloorbenzeen)	conform CMA/3/E	lab	9
9.164	NL-ENV-G-NC-AV-WI001	Olie	Het bepalen van het vlampunt; closed cup volgens Pensky-Martens	conform CMA/2/III/C , gebaseerd op ISO 2719	lab	9
9.165	NL-ENV-G-NC-AV-WI021	Olie	Het bepalen van het watergehalte; Karl Fisher, titrimetrie	conform CMA/2/III/E	lab	9

Nr. Test	Code	Matrix / Products tested	Gemeten eigenschappen / Characteristics measured	Methode-Techniek / Method specification-Techniques used	Uit-voering	Site
9.166	NL-ENV-G-NC-AV-WI002	Pasteuze afval-stoffen, vaste afvalstoffen en olie	Het bepalen van de stookwaarde; calorimetrie	analyse conform CMA/2/II/A5 , gebaseerd op CEN/TS 15400	lab	9
9.167	NL-ENV-G-SP-AV-WI011 NL-ENV-G-SP-AV-WI032	Vaste afval-stoffen en olie	Het bepalen van het gehalte aan fluor, chloor en zwavel; Ionchromatografie na bomdestructie	conform CMA/2/I/C.3 (destructie conform CMA/2/II/B2)	lab	9
9.169	NL-ENV-G-SP-AV-WI011 NL-ENV-G-SP-AV-WI032	Pasteuze afvalstoffen	Het bepalen van het gehalte aan chloor; ionchromatografie na bomdestructie	analyse conform CMA/2/I/C3 (destructie conform CMA/2/II/B2))	lab	9
9.170	NL-ENV-G-SP-AV-WI042	Olie	Het bepalen van het gehalte aan EOX; microcoulometrie	conform CMA/3/N	lab	9
9.171	NL-ENV-G-GC-AV-WI015	Olie	Het bepalen van het gehalte aan a-specifieke oplosmiddelen; GC-FID	conform CMA/3/Q	lab	9
9.172	NL-ENV-G-GC-AV-WI037	Olie	Bepaling PCB-gehalte in olie gebaseerd op de indicator PCB's, te weten: PCB 28, 52, 101, 118, 138, 153 en 180 m.b.v. GC-ECD. De bepaling is inclusief de rapportering van de som 6 (PCB 28, 52, 101, 138, 153 en 180.	conform CMA/3/A	lab	9
9.173	NL-ENV-G-GC-AV-WI023	Vaste afvalstoffen	Het bepalen van het gehalte aan benzo(a)pyreen en pentachloorfenol; GC-MS	conform CMA/3/V	lab	9

Nr. Test	Code	Matrix / Products tested	Gemeten eigenschappen / Characteristics measured	Methode-Techniek / Method specification-Techniques used	Uit-voering	Site
CHEMICAL ANALYSIS OF FOOD & FEED						
Organic chemical analysis						
6.087	ECO/AV/IAC/005	Meat and meat products [1]; liver and derived products [1]; muscle meat of fish and fishery products and products thereof; milk and milk products, including butter fat [1]; hen eggs and egg products [1]; oils and fats	2,3,7,8-substituted PCDDs and PCDFs and total TEQ	GC-HRMS** based on EPA Method 8290	lab	6
6.121				GC-APGC** based on EPA Method 8290	lab	6
6.089	ECO/AV/IAC/007	Feed materials and compound feedingstuffs for animals, including feedingstuffs for fish and pet foods	2,3,7,8-substituted PCDDs and PCDFs and total TEQ	GC-HRMS** based on EPA Method 8290	lab	6
6.122				GC-APGC** based on EPA Method 8290	lab	6
6.090	ECO/AV/IAC/011	Additives (minerals, binding agents, trace elements) and basic ingedients for feedingstuffs	2,3,7,8-substituted PCDDs and PCDFs and total TEQ	GC-HRMS** based on EPA Method 8290	lab	6
6.123				GC-APGC** based on EPA Method 8290	lab	6

[1] with at least 1% fat
* In house method
** in house method for which the performance characteristics meet the requirements of the European legislation

Nr. Test	Code	Matrix / Products tested	Gemeten eigenschappen / Characteristics measured	Methode-Techniek / Method specification-Techniques used	Uit-voering	Site
6.091	ECO/AV/IAC/016	Meat and meat products [1]; liver and derived products [1]; muscle meat of fish and fishery products and products thereof; milk and milk products, including butter fat [1]; hen eggs and egg products [1]; oils and fats	Dioxin-like PCB's (12 WHO-PCB's) and marker PCB's (28, 52, 101, 138, 153, 180)	GC-HRMS** based on EPA 1668 and JIS K 0312	lab	6
6.129				GC-APGC** based on EPA 1668 and JIS K 0312		
6.092	ECO/AV/IAC/017	Feed materials and compound feedingstuffs for animals, including feedingstuffs for fish and pet foods ; additives (minerals, binding agents, trace elements) and basic ingedients for feedingstuffs	Dioxin-like PCB's (12 WHO-PCB's) and marker PCB's (28, 52, 101, 138, 153, 180)	GC-HRMS** based on EPA 1668 and JIS K 0312	lab	6
6.130				GC-APGC** based on EPA 1668 and JIS K 0312		
[1] with at least 1% fat * In house method ** in house method for which the performance characteristics meet the requirements of the European legislation						
6.112	ECO/AV/IMA/040	Water	Determination of the stable $^{2}H/^{1}H$ isotope ratio of hydrogen and the stable $^{18}O/^{16}O$ isotope ration of oxygen	TC/EA-IRMS*	lab	6
6.113	ECO/AV/IMA/041	Alcohol and alcoholic beverages	Determination of the stable $^{13}C/^{12}C$ isotope ratio of carbon	EA-IRMS*	lab	6
* In house method						
7.008	LI/ANL/PCB/001	Animal feed, animal fats and meat	Determination of Polychlorinated biphenyls	In house method / GC-ECD – GC-MS	lab	7

Nr. Test	Code	Matrix / Products tested	Gemeten eigenschappen / Characteristics measured	Methode-Techniek / Method specification-Techniques used	Uit-voering	Site
BACTERIOLOGICAL ANALYSIS OF FOOD, FEED & ANIMAL WASTE						
7.100	LI/ANL/ANV/237	Meat of slaughter animals	Enumeration of anaerobic bacteria at 37° C	NF V 08-051 modified	lab	7
7.101	LI/ANL/BCU/137	Food, animal waste and animal feed	Enumeration of Bacillus cereus at 30°C	ISO 7932	lab	7
7.102	LI/ANL/CAU/166	Food	Detection of Campylobacter	ISO 10272-1	lab	7
7.103			Enumeration of Campylobacter spp.	ISO 10272-2	lab	7
7.104	LI/ANL/COU/137	Food, animal waste and animal feed	Enumeration of coliforms at 30 °C	ISO 4832	lab	7
7.105	LI/ANL/COU/147	Food, animal waste and animal feed	Detection and enumeration of coliforms at 30 °C - MPN	ISO 4831	lab	7
7.106	LI/ANL/CPU/154	Food, animal waste and animal feed	Enumeration of Clostridium perfringens at 37 °C	ISO 7937	lab	7
7.107	LI/ANL/ECU/068	Food, animal waste and animal feed	Enumeration of β-glucoronodase positive Escherichia coli at 44 °C.	ISO 16649-2	lab	7
7.108	LI/ANL/ECU/169	Food, animal feed and animal waste	Detection and enumeration of β-glucoronidase positive Escherichia coli at 44°C - MPN	ISO/TS 16649-3	lab	7
7.109	LI/ANL/ECV/268	Meat of slaughtered animals	Detection of the number of β-glucoronidase positieve Escherichia coli at 44°C as part of BVO	AFNOR SDP-07/1-07/93	lab	7
7.110	LI/ANL/ENU/154	Food, animal waste and animal feed	Enumeration of Enterobacteriaceae at 30°C and 37°C	ISO 21528-2	lab	7
7.111	LI/ANL/ENU/164	Food, animal waste and animal feed	Detection and enumeration of Enterobacteriaceae at 30°C and 37°C - MPN	ISO 21528-1	lab	7
7.112	LI/ANL/ESU/168	Milk and milk products	Detection of Cronobacter sakazakii	ISO/TS 22964	lab	7
7.113	LI/ANL/FCU/068	Food, animal waste and animal feed	Enumeration of thermotolerant (fecal) coliforms at 44°C	NF V 08-060	lab	7
7.114	LI/ANL/FSU/054	Food, animal waste and animal feed	Enumeration of fecal streptococci at 37 °C	Food Microbiology part 9.12 modified	lab	7
7.115	LI/ANL/GSU/134	Food, animal waste and animal feed	Enumeration of yeasts and moulds at 25 °C	ISO 21527-1 and ISO 21527-2	lab	7
7.116	LI/ANL/LAU/037	Food and animal waste	Enumeration of Lactobacilli at 30 °C	NF V 04-503 modified	lab	7
7.117	LI/ANL/LIU/137	Food, animal waste and animal feed	Detection of Listeria monocytogenes	ISO 11290-1 modified	lab	7
7.118			Enumeration of Listeria monocytogenes	ISO 11290-2 modified	lab	7

Nr. Test	Code	Matrix / Products tested	Gemeten eigenschappen / Characteristics measured	Methode-Techniek / Method specification-Techniques used	Uit-voering	Site
7.119	LI/ANL/LIU/237	Food, animal waste and animal feed	Detection of Listeria species using RT-PCR	AFNOR BRD-07/10-04/05	lab	7
7.120			Detection of Listeria monocytogenes using RT-PCR	AFNOR BRD-07/13-05/07	lab	7
7.121	LI/ANL/LIR/837	Food	Detection of Listeria species and Listeria monocytogenes using RAPID L'MONO	AFNOR BRD 07/04-09/98	lab	7
7.122			Enumeration of Listeria species and Listeria monocytogenes using RAPID L'MONO	AFNOR BRD 07/05-09/01	lab	7
7.123	LI/ANL/PSU/037	Food	Enumeration of Pseudomonas spp. at 25°C	ISO 13720 modified	lab	7
7.124	LI/ANL/SAU/154	Food, animal waste and animal feed	Enumeration of Staphylococcus aureus at 37°C	ISO 6888-1	lab	7
7.125	LI/ANL/SAU/854	Food	Detection and enumeration of coagulase positive Staphylococci by MPN at 37°C	ISO 6888-3	lab	7
7.126	LI/ANL/SLU/054	Food, animal waste and animal feed	Detection of Salmonella spp. at 37°C	ISO 6579 modified	lab	7
7.127	LI/ANL/SLU/154	Food, animal waste and animal feed, processed manure	Detection of Salmonella spp. at 37°C	ISO 6579	lab	7
7.128	LI/ANL/SLU/254	Food, animal waste and animal feed	Detection of Salmonella spp. using RT-PCR	AFNOR BRD-07/6-07/04	lab	7
7.129	LI/ANL/SLV/254	Meat of slaughter animals	Detection of Salmonella spp. as part of BVO	NF V 08-052 modified	lab	7
7.130	LI/ANL/SRU/354	Food, animal waste and animal feed	Enumeration of sulphite reducing anaerobe bacteria at 37 °C	NF-XP-V 08-061	lab	7
7.131	LI/ANL/TAU/037	Food, animal waste and animal feed	Enumeration of anaerobe and facultative anaerobe bacteria at 30°C	ISO 4833 modified	lab	7
7.132	LI/ANL/TKU/137	Food, animal waste and animal feed	Enumeration of total aerobe count at 30 °C	ISO 4833-1	lab	7
7.133	LI/ANL/TKV/237	Meat of slaughter animals	Enumeration of aerobe and facultative aerobe micro-organisms at 30 °C as part of BVO	NF V 08-051 modified	lab	7
7.134	LI/ANL/VIU/054	Food, animal waste and animal feed	Detection of Vibrio species other than cholerae and parahaemolyticus	ISO/TS 21872-2 modified	lab	7
7.135	LI/ANL/VPU/154	Food, animal waste and animal feed	Detection of Vibrio cholerae en Vibrio parahaemolyticus	ISO/TS 21872-1 modified	lab	7
7.153	LI/ANL/BCU/837		Enumeration of Bacillus cereus at 30°C	AFNOR BRD 07/26-22/03 RAPID Bacillus cereus	lab	7
7.154	LI/ANL/ENU/854		Enumeration of Enterobacteriaceae at 37°C	AFNOR BRD 07/24-11/13 RAPID'Enterobacteriaceae/ agar	lab	7
7.155	LI/ANL/GSU/834		Enumeration of yeasts and moulds at 25 °C	AFNOR BKR 23/11-12/18 Symphony agar	lab	7

Nr. Test	Code	Matrix / Products tested	Gemeten eigenschappen / Characteristics measured	Methode-Techniek / Method specification-Techniques used	Uit-voering	Site
BACTERIOLOGICAL ANALYSIS OF WATER						
7.136	LI/ANL/FCD/658	Drinking water, process water	Enumeration of thermotolerant (fecal) coliforms at 44°C using membrane filtration	BRD 07/20-03/11 modified	lab	7
7.137	LI/ANL/TKD/631	Drinking water, process water, surface water	Enumeration of total aerobe count at 22°C and 37°C	ISO 6222 (WAC/V/A/001)	lab	7
7.138	LI/ANL/SRD/654	Drinking water	Enumeration and detection of sulphite reducing clostridia using membrane filtration	ISO 6461-2	lab	7
7.139			Enumeration and detection of Clostridium perfringens using membrane filtration	ISO 6461-2 modified (WAC/V/A/007)	lab	7
7.140	LI/ANL/SLD/654	Drinking water	Detection of Salmonella spp. using membrane filtration	ISO/DIS 19250 modified (WAC/V/A/004)	lab	7
7.141	LI/ANL/PSD/654	Drinking water	Enumeration of Pseudomonas aeruginosa using membrane filtration	ISO 16266 modified (WAC/V/A/006)	lab	7
7.142	LI/ANL/LEU/654	Drinking water	Enumeration of Legionella spp. and L. pneumophila	ISO 11731	lab	7
7.143	LI/ANL/ECD/654	Drinking water	Detection and enumeration of Escherichia coli and coliforms at 37°C using membrane filtration -	ISO 9308/1 (WAC/V/A/002))	lab	7
7.144	LI/ANL/FSD/654	Drinking water	Enumeration of fecal streptococci at 37°C using membrane filtration	ISO 7899-2 (WAC/V/A/003)	lab	7
BACTERIOLOGICAL ANALYSIS OF Hygiene products						
7.162	LI/ANL/TKN/932	Absorbent hygiene products	Total Aerobe Count (32,5 °C)/g	In house method based upon ISO 11737-1 and EP 2.6.12	lab	7
7.163	LI/ANL/GSN/934		Enumeration of Yeasts (22,5°C)/g		lab	7
7.164	LI/ANL/GSN/934		Enumeration of Moulds (22,5°C)/g		lab	7
7.165	LI.ANL/CAN/932		Detection of Candida albicans (32,5 °C)/g		lab	7
7.166	LI/ANL/PAN/932		Detection of Pseudomonas aeruginosa (32,5 °C)/g		lab	7
7.167	LI/ANL/SAN/932		Detection of Staphylococcus aureus (32,5 °C)/g		lab	7
7.168	LI/ANL/GNN/932		Detection of Bile-tolerant Gram negative bacteria (32,5 °C)/g		lab	7

Nr. Test	Code	Matrix / Products tested	Gemeten eigenschappen / Characteristics measured	Methode-Techniek / Method specification-Techniques used	Uit-voering	Site
SAMPLING						
Food, feed & surfaces						
7.151	OI/OPE/GT/001	Voedingsmiddelen, Dierenvoeders en monsters veeteelt projecten	Geconditioneerd transport van monsters	Interne methode	in situ	7
7.152	OI/MSN/WT/001	Drinkwater	Steriele bemonstering	WAC/I/A/001	in situ	7
7.153	OI/MSN/OPP/001	Oppervlakken	Steriele bemonstering rodacs	Interne methode	in situ	7
7.154	OI/MSN/OPP/002	Oppervlakken	Steriele bemonstering swabs	Interne methode	in situ	7
7.156	OI/MSN/VLB/001	Vloeibare levensmiddelen m.u.v. water	Steriele bemonstering	Interne methode	in situ	7
7.157	OI/MSN/VST/001	Vaste en semi-vloeibareLevensmiddelen	Steriele bemonstering	Interne methode	in situ	7
7.158	OI/OPE/TM/001	Voedingsmiddelen, ruimten en oppervlakken	Het ter indicatie meten van de temperatuur	Interne methode	in situ	7
7.161	OI/MSN/DP/001	Dierlijke bijproducten	Bemonstering	CMA/1/A,21	in situ	7

Nr. Test	Code	Matrix / Products tested	Gemeten eigenschappen / Characteristics measured	Methode-Techniek / Method specification-Techniques used	Uit-voering	Site
CHEMICAL ANALYSIS OF FOOD & FEED, VEGETABLE AND ANIMAL OILS AND FATS, FERTILIZERS, OILSEEDS, FIRE DEBRIS						
SECTIE: DIERENVOEDERS EN EETWAREN - SECTION: FOOD AND FEED						
12.001	WV.FD.23	Diervoeders en voedermiddelen / Feed and feedingstuffs	Vochtgehalte /Moisture content	Verordening (EG) 2009/152 en ICC (gravimetrie) / Regulation (EC) 2009/152 and ICC 110 (gravimetry)	lab	12
12.002	WV.FD.10		Ivermectine / Ivermectin	Eigen methode (HPLC-UV) / In-house method (HPLC-UV)	lab	12
12.003	WV.FD.24		Tilmicosine / Tilmicosin	Elanco-B04081 (HPLC-UVD) / Elanco-B04081 (HPLC - UVD)	lab	12
12.004	WV.FD.26		Ruw vet (rechtstr. extraheerbaar) / Crude fat (directly extractable)	Verordening (EG) 2009/152en AOCS Ba 3-38 (gravimetrie) / Regulation (EC) 2009/152 and AOCS Ba 3-38 (gravimetry)	lab	12
12.005	WV.FD.26		Ruw vet (totaal) / Crude fat (total)	Verordening (EG) 2009/152 (gravimetrie) / Regulation (EC) 2009/152 (gravimetry)	lab	12
12.006	WV.FD.27		Ruwe as / Crude ash	Verordening (EG) 2009/152 en ICC 104 (gravimetrie) / Regulation (EC) 2009/152 and ICC 104 (gravimetry)	lab	12
12.007	WV.FD.28		Totaal Suikers / Total sugars	Verordening (EG) 2009/152 (titrimetrie) / Regulation (EC) 2009/152 (titrimetry)	lab	12
12.008	WV.FD.34		Ruwe celstof / Crude fibre	AOCS Ba 6a-05 (Ankom-systeem - Filter bag) / AOCS Ba 6a-05 (Ankom- system - filter bags)	lab	12
12.009	WV.FD.37		Tiamuline (waterstoffumaraat) / Tiamulin	JAOAC Vol. 76, No. 2 (HPLC - UVD)	lab	12
12.010	WV.FD.38		Amoxicilline / Amoxicillin	Analytica Chimica Acta 483 (2003) 69-72 (HPLC - FD)	lab	12
12.011	WV.FD.39		Doxycycline (hyclaat) / Doxycyclin	Analytical letters 35(4), 687-705 (HPLC - UVD)	lab	12
12.012	WV.FD.12	Diervoeders, voedermiddelen en concentraten / Feed, feedingstuffs, concentrates	Vitamine A (retinol)	Verordening (EG) 2009/152 en DSM (HPLC-UVD) / Regulation (EC) 2009/152 and DSM (HPLC - UVD)	lab	12
12.013	WV.FD.18		Vitamine E (Tocoferol / Tocoferolacetaat)	Verordening (EG) 2009/152 en DSM (HPLC-UVD) / Regulation (EC) 2009/152 and DSM (HPLC - UVD)	lab	12
12.014	WV.FD.19	Diervoeders en premixen / Feed and premixes	Flubendazole / Flubendazol	Eigen methode (HPLC-UVD) / In-house method (HPLC-UVD)	lab	12
12.015	WV.FD.20		Fenbendazole / Fenbendazol	Eigen methode (HPLC-UVD) / In-house method (HPLC-UVD)	lab	12
12.016	WV.FD.14	Diervoeders en voedermiddelen / Feed and feedingstuffs	Ruw eiwit / Crude protein	Verordening (EG) 2009/152 / Regulation (EC) 2009/152 ISO 5983-2 (E) ICC 105/2 (Kjeldahl)	lab	12
12.017	WV.FD.33		Ochratoxine A / Ochratoxin A	EN 16007 (HPLC-FD)	lab	12
12.018	WV.FD.50	Diervoeders en voedermiddelen / Feed and feedingstuffs	Sulfadiazine en Trimethoprim / Sulfadiazine and Trimethoprim	Eigen methode afgeleid van 'Analysis of Multiclass Veterinary Drugs by UHPLC - LCMSMS' van Thermo Scientific (LC-MS/MS) / In-house method dervide from 'Analysis of Multiclass Veterinary Drugs by UHPLC - LCMSMS' from Thermo Scientific (LC-MS/MS)	lab	12
12.019	WV.HV.6	Diervoeders, granen, graanmelen, ontbijtgranen, brood, pasta en noten / Feed and feedingstuffs, grains and meals, cereals, bread, pasta and nuts	Multi-mycotoxine bepaling - Simultane bepaling van 12 mycotoxines / Multi-mycotoxin determination - Simultaneous determination of 12 mycotoxins	CODA-CERVA SOP/MYC/ANA/07 (LC-MS/MS)	lab	12
12.020	WV.HV.16	Koffie / Coffee	Ochratoxine A / Ochratoxin A	Eigen methode (HPLC-FD) / In house method (HPLC-FD)	lab	12
12.021	WV.HV.11	Koffie & koffieproducten / Coffee and coffee products	Cafeïne / Caffeine	Eigen methode (HPLC-UVD) / In house method (HPLC-UVD)	lab	12

Nr. Test	Code	Matrix / Products tested	Gemeten eigenschappen / Characteristics measured	Methode-Techniek / Method specification-Techniques used	Uit-voering	Site
12.022	WV.HV.9	Levensmiddelen / Food	Benzoëzuur en sorbinezuur / Benzoic and Sorbic acid	Eigen methode (HPLC-UVD) / In house method (HPLC-UVD)	lab	12
Flexibele scope						
12.023	WV.FD.17	Diervoeders en voedermiddelen en levensmiddelen (*) / Feed, feedingstuffs and food (*)	Aflatoxines B1, B2, G1, G2 / Aflatoxins B1, B2, G1, G2	HPLC- FD	lab	12
12.023	WV.FD.21		Zetmeel / Starch	Polarimetrie / Polarimetry	lab	12
12.023	WV.FD.36	Diervoeders en voedermiddelen en levensmiddelen (*) / Feed, feedingstuffs and food (*)	Mineralen en spoorelementen (Ca, Na, P, Mg, K, Fe, Zn, Cu, Mn, Co) / Minerals and trace elements (Ca,Na, P, Mg, K, Fe, Zn, Cu, Mn, Co)	Diervoeders en voedermiddelen: NBN-EN 15621 (ICP-AES) Levensmiddelen: eigen methode (uitvoering volgens NBN-EN 15621, ICP-AES) / Feed and feedinstuffs: NBN-EN 15621 (ICP-AES) Food: in house method (execution according to NBN-EN 15621, ICP-AES)	lab	12
(*) In het kader van zijn accreditatie heeft het laboratorium de toelating om de parameters vermeld in de tweede kolom, te bepalen voor alle producten, behorende tot de groep (van producten) vermeld in de eerste kolom. Deze toelating wordt gegeven op voorwaarde dat een aangepaste validatie wordt uitgevoerd overeenkomstig het globaal validatieconcept, zoals vastgelegd in het kwaliteitssysteem van het laboratorium. Het laboratorium houdt, ten behoeve van elke aanvrager, een gedetailleerde en geactualiseerde lijst bij van de specifieke beproevingen en producten die onder de voornoemde groepen vallen. *(*) In the framework of its accreditation, the laboratory is authorized to determine the characteristics mentioned in the second column for all products belonging to the group (of products) mentioned in the first column. This authorization is given, provided that an appropriate validation is performed according to the general validation concept as set out in the laboratory's quality system. The laboratory keeps, for anyone involved, a detailed and up-to-date list of the tests and products, belonging to the above mentioned group.*						
SECTIE: PLANTAARDIGE EN DIERLIJKE OLIËN EN VETTEN - SECTION: VEGETABLE AND ANIMAL OILS AND FATS						
12.024	WV.OIL.1	Alle plantaardige en dierlijke olïen en vetten / All vegetable and animal oils and fats	Vetzuursamenstelling / Fatty Acid composition (FAME)	ISO 12966-1, ISO 12966-2 & ISO 12966-4 (GC-FID)	lab	12
12.025	WV.OIL.2		Afzonderlijke sterolen (sterolsamenstelling) (o.a. Cholesterol) / Separate sterols (composition of the sterols) (e.g.. Cholesterol)	ISO 12228 (GC-FID)	lab	12
12.026	WV.OIL.20		Zuurgetal en Zuurheid / Acid number and acidty	ISO 660 & IUPAC 2.201 (titrimetrie) / ISO 660 en IUPAC 2.201 (titrimetry)	lab	12
12.027	WV.OIL.5		Joodgetal / Iodine value	ISO 3961 (titrimetrie) /ISO 3961 (titrimetry)	lab	12
12.028	WV.OIL.6		Onoplosbare verontreinigingen / Insoluble impurities	Afgeleid van ISO 663 (Gravimetrie) / Derived from ISO 663 (gravimetry)	lab	12
12.029	WV.OIL.7		Peroxidegetal / Peroxid value	Afgeleid van ISO 3960 (Titrimetrie) / Derived from ISO 3960 (titrimetry)	lab	12
12.030	WV.OIL.14		Gepolymeriseerde triglyceriden (= triacylglycerolen) / Polymerized triglycerids (=triacylglycerols)	ISO 16931 (HPLC-RID)	lab	12
12.031	WV.OIL.15		Vocht en Vluchtige stoffen / Moisture and volatile matter	ISO 662 (gravimetrie) / ISO 662 (gravimetry)	lab	12
12.032	WV.OIL.17		Vocht (Karl Fischer) / Water (Karl Fischer)	ISO 8534 en AOCS Ca 2e-84 (titrimetrie) / ISO 8534 and AOCS Ca 2e-84 (titrimetry)	lab	12

Nr. Test	Code	Matrix / Products tested	Gemeten eigenschappen / Characteristics measured	Methode-Techniek / Method specification-Techniques used	Uit-voering	Site
SECTIE: MESTSTOFFEN - SECTION: FERTILIZERS						
12.033	WV.FRT.1	Minerale meststoffen / Mineral fertilizers	Ammoniumstikstof / Ammonia nitrogen	Afgeleid van Verordening (EG) 2003/2003 (titrimetrie) / Derived from Regulation (EC) 2003/2003 (titrimetry)	lab	12
12.034	WV.FRT.2		Nitraatstikstof / Nitrate nitrogen	Afgeleid van Verordening (EG) 2003/2003 (titrimetrie) / Derived from Regulation (EC) 2003/2003 (titrimetry)	lab	12
12.035	WV.FRT.5	Minerale meststoffen (meer dan 3% ureumstikstof) / Mineral fertilizers (over 3 % urea)	Ureumstikstof / Urea nitrogen	Afgeleid van Verordening (EG) 2003/2003 (gravimetrie) / Derived from Regulation (EC) 2003/2003 (gravimetry)	lab	12
12.036	WV.FRT.10	Minerale meststoffen / Mineral fertilizers	In water oplosbaar kalium / Water-soluble potassium	Afgeleid van verordening (EG) 2003/2003 (gravimetrie) / Derived from Regulation (EC) 2003/2003 (gravimetry)	lab	12
12.037	WV.FRT.12		Totaal stikstof (als de som van nitraat-, ammonium- en ureumstikstof) / Total Nitrogen (as sum of Nitrate-Ammonium- and Urea nitrogen)	Berekening als de som van nitraat-, ammonium- en ureumstikstof / Calculation as sum of Nitrate- Ammonium- and Urea nitrogen	lab	12
SECTIE: OLIEHOUDENDE ZADEN - SECTION: OILSEEDS						
12.038	WV.OSD.1	Oliehoudende zaden / Oilseeds	Vocht en vluchtige stoffen / Moisture and volatile matter	ISO 665 (gravimetrie) / ISO 665 (gravimetry)	lab	12
12.039	WV.OSD.2	Oliehoudende zaden / Oilseeds	Zuurheid van de geëxtraheerde olie / Acidity of the extracted oil	ISO 660 (na ISO 659) (titrimetrie) / ISO 660 (after ISO 659) (titrimetry)	lab	12
12.040	WV.OSD.3	Oliehoudende zaden (uitgezonderd coprah en aanverwanten en aardnoten) / Oilseeds (except coprah and familiar and groundnut)	Verontreinigingen / Admixture (Dockage)	Afgeleid van ISO 658 (gravimetrie) / Derived from ISO 658 (gravimetry)	lab	12
12.041	WV.OSD.5	Oliehoudende zaden soya, koolzaad, lijnzaad, zonnepit Oilseeds soya, rapeseed, linseed, sunflowerseed	Oliegehalte / Oil content	ISO 659 (gravimetrie) / ISO 659 (gravimetry)	lab	12
SECTIE: FORENSISCH ONDERZOEK - SECTION: FORENSICS						
12.042	WV.FOR.1	Brandresten / Fire debris	Residuen van ontvlambare vloeistoffen / Residues of ignitable liquids	Afgeleid van ASTM E 1618 + E 1388 + E 1386 (GC-MS, kwalitatief) / Derived from ASTM E 1618 + E 1388 + E 1386 (GC-MS, qualitative)	lab	12

Flexible scope with respect to product tested

(*) In the framework of its accreditation, the laboratory is authorized to determine the characteristics mentioned in the second column, for all products belonging to the group of products mentioned in the first column. This authorization is given, provided that an appropriate validation is performed according to the general validation concept as set out in the laboratory's quality system. The laboratory keeps a detailed list of the characteristics and products, belonging to the above mentioned groups, up-to-date for anyone involved.

Nr	Product tested	Substance	Technique	site
		ORGANIC CHEMICAL ANALYSIS		
		FOOD & FEED		
FLEX-6.01	Food and basic ingredients for food	Acrylamide	LC-ESI-MS-MS	6
		INORGANIC CHEMICAL ANALYSIS		
		ENVIRONMENT		
FLEX-6.02	Waters and eluates	Hg	CV-AAS	6

Flexible scope with respect to substance and product tested

(*) In the framework of its accreditation, the laboratory is authorized to determine all characteristics belonging to the group of characteristics mentioned in the second column, for all products belonging to the group of products mentioned in the first column. This authorization is given, provided that an appropriate validation is performed according to the general validation concept as set out in the laboratory's quality system. The laboratory keeps a detailed list of the characteristics and products, belonging to the above mentioned groups, up-to-date for anyone involved.

Nr	Product tested	Substance	Technique	site
		ORGANIC CHEMICAL ANALYSIS		

ENVIRONMENT				
FLEX-6.04	Environmental samples	Brominated flame retardants	GC-HRMS	6
FLEX-6.05	Environmental samples	Perfluorinated compounds	LC-ESI-MS-MS	6
FLEX-6.06	Water	Short chain chlorinated paraffins	GC/MS-MS	6
FOOD & FEED				
FLEX-6.11	Food and food related products	Brominated flame retardants	GC-HRMS	6
FLEX-6.12	Food and food related products	Perfluorinated compounds	LC-ESI-MS-MS	6
FLEX-6.13	Food	Photo-initiators	UPLC-ESI-MS-MS	6
FLEX-6.14	Food	Volatile organic compounds	HS-GC/MS	6
FLEX-7.14	Food and animal feed	Allergens	Elisa	7
INORGANIC CHEMICAL ANALYSIS				
ENVIRONMENT				
FLEX-6.16	Water and eluates	Elements (including heavy metals)	ICP-OES	6
FLEX-6.17		Elements (including heavy metals)	ICP-MS	
MOLECULAR BIOLOGICAL ANALYSIS OF FOOD				
FLEX-7.18	Food	GMO screening	In house method / DNA-extractie + real-time PCR	7
FLEX-7.19	Food	GMO identificatie en kwantificatie	In house method / DNA-extractie + real-time PCR	7

Flexible scope with respect to substance tested

(*) In the framework of its accreditation, the laboratory is authorized to determine all characteristics belonging to the group of characteristics mentioned in the second column, for the products mentioned in the first column. This authorization is given, provided that an appropriate validation is performed according to the general validation concept as set out in the laboratory's quality system. The laboratory keeps a detailed list of the characteristics and products, belonging to the above mentioned groups, up-to-date for anyone involved.

INORGANIC CHEMICAL ANALYSIS

ENVIRONMENT

	Product tested	Substance	Technique	site
FLEX-6.19	Absorption liquids	Elements (including heavy metals)	ICP-OES	6
FLEX-6.20		Elements (including heavy metals)	ICP-MS	
FLEX-6.21	Filters from emission samples and dust	Elements (including heavy metals)	ICP-OES	6
FLEX-6.22		Elements (including heavy metals)	ICP-MS	
FLEX-6.23	Soil, sludge, solid and pasty waste	Elements (including heavy metals)	ICP-OES	6
FLEX-6.24	Oil	Metals	ICP-OES	6

ACCREDITATION CERTIFICATE

LB-TEST-178

Emirates International Accreditation Centre

has accredited

SGS GULF LTD.

ENVIRONMENTAL TESTING LABORATORY

Blue Shed Warehouse TC-3, Jebel Ali Zone

Dubai - United Arab Emirates

In accordance with the requirements of

ISO/IEC 17025:2017

General requirements for the competence of testing and calibration laboratories to undertake the tests in the attached accreditation scope

This Accreditation is invalid without the attached accreditation scope and shall remain in force within the validity period printed below, subject to continuing compliance with the requirements of the accreditation criteria.

Validity: 23/02/2021 to 22/10/2023

Initial Accreditation Date: 23- 10- 2008

CHIEF EXECUTIVE OFFICER
APPROVAL

Accreditation Scope

Environmental Testing

LB-TEST-178

SGS Gulf Ltd.

Environmental Testing Laboratory

Blue Shed Warehouse TC-3, Jebel Ali Zone

Dubai - United Arab Emirates

Issue no.: 03 **Date: 23-02-2021** **Valid to: 22-10-2023**

Type of Activity	Test Materials/Products	Test Name	Test Method
Chemical	Wastewater	Biochemical Oxygen Demand	APHA 5210B
		Chemical Oxygen Demand	APHA 5220B
		Determination of metals by ICP-MS: Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Copper, Lead, Manganese, Mercury, Uranium, Molybdenum, Nickel, Selenium, Silver, Thallium, Thorium, Vanadium, Zinc	APHA 3125 22nd Ed. EPA 200.8 Rev. 5.4

Accreditation Scope

Environmental Testing

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Issue no.: 03 **Date: 23-02-2021** **Valid to: 22-10-2023**

Type of Activity	Test Materials/Products	Test Name	Test Method
Chemical	Water/ Wastewater	pH	APHA 4500H$^+$B
		Total Dissolved Solids	APHA 2540C
		Total Suspended Solids	APHA 2540D
		Oil and Grease	APHA 5520B
		Determination of Anions in Water by Ion Chromatography: F, Cl, NO_2, NO_3, Br, PO_4, SO_4, BrO_3	APHA 4110B APHA 4110D

Accreditation Scope

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Issue no.: 03 **Date: 23-02-2021** **Valid to: 22-10-2023**

Type of Activity	Test Materials/Products	Test Name	Test Method
Chemical	Water/ Wastewater	Determination of metals by ICP-OES: Barium, Antimony, Arsenic, Aluminium, Berylium, Boron, Cadmium, Cerium, Chromium, Cobalt, Copper, Iron, Lead, Tin, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selinium, Silica, Silver, Zinc, Sodium, Strontium, Thalium, Titanium, Vanadium	EPA 200.7 Rev. 5

Accreditation Scope

Environmental Testing

LB-TEST-178

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Dubai - United Arab Emirates

Issue no.: 03 **Date: 23-02-2021** **Valid to: 22-10-2023**

Type of Activity	Test Materials/Products	Test Name	Test Method
Chemical	Soil/ Sludge	Anions: Flouride, Chloride, Nitrite, Nitrate, Bromide, Phosphate, Sulphate, Bromate	In-House Test Method FL-SOP-TECH-307 based on: APHA 4110B , 22nd Ed. APHA 4110D , 22nd Ed.
Chemical	Drinking Water	**Volatile Organic compounds (VOC) in Waters by GCMS with Head Space:**	
		Dichlorodifluromethane Chloromethane Vinyl Chloride Bromomethane Chloroethane	EPA 8260C, 5030

Accreditation Scope

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Issue no.: 03 **Date: 23-02-2021** **Valid to: 22-10-2023**

Type of Activity	Test Materials/Products	Test Name	Test Method
Chemical	Drinking Water	**Volatile Organic compounds (VOC) in Waters by GCMS with Head Space:**	
		Trichlorofluoromethane	EPA 8260C, 5030
		1,1-Dichloroethane	
		Methylene Chloride	
		Trans -1,2-Dichloroethene	
		-Cis-1,2-Dichloroethene	
		1,1-Dichloroethane	
		Chloroform	
		2,2-Dichloropropane	
		1,1,1-Trichloroethane	

Accreditation Scope

Environmental Testing

LB-TEST-178

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Issue no.: 03 **Date: 23-02-2021** **Valid to: 22-10-2023**

Type of Activity	Test Materials/Products	Test Name	Test Method
Chemical	Drinking Water	**Volatile Organic compounds (VOC) in Waters by GCMS with Head Space:**	
		Carbon Tetrachloride 1,1-Dichloropropene Benzene 1,2-Dichloroethane Trichloroethene 1,2-Dichloropropane Dibromomethane Bromodichloromethane Cis-1,3-dichloropropene Toluene	EPA 8260C, 5030

Accreditation Scope

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Issue no.: 03 **Date: 23-02-2021** **Valid to: 22-10-2023**

Type of Activity	Test Materials/Products	Test Name	Test Method
Chemical	Drinking Water	**Volatile Organic compounds (VOC) in Waters by GCMS with Head Space:**	
		Trans,1,3 Dichloropropene 1,1,2-Trichloroethane Tetrachloroethene 1,3-Dichloropropane 1,2-Dibomoethane Chlorobenzene Ethyl benzene 1,1,1,2-Tetrachloroethane M&P-Xylene O-Xylene	EPA 8260C, 5030

Accreditation Scope

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Dubai - United Arab Emirates

Issue no.: 03 **Date: 23-02-2021** **Valid to: 22-10-2023**

Type of Activity	Test Materials/Products	Test Name	Test Method
Chemical	Drinking Water	**Volatile Organic compounds (VOC) in Waters by GCMS with Head Space:**	
		Styrene Bromoform Isopropyl benzene Bromobenzene N-Propyl benzene 1,1,2,2Tetrachloroethane 1,2,3-Trichloropropane 2-Chlorotoluene 4-Chlorotoluene	EPA 8260C, 5030

Accreditation Scope

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Issue no.: 03 **Date: 23-02-2021** **Valid to: 22-10-2023**

Type of Activity	Test Materials/Products	Test Name	Test Method
Chemical	Drinking Water	**Volatile Organic compounds (VOC) in Waters by GCMS with Head Space:**	
		1,3,5-Trimethylbenzene 1,2,4-Trimethylbenzene Sec-Butyl benzene P-Isopropyl toluene 1,3-Dichlorobenzene 1,4-Dichlorobenzene N-Butylbenzene 1,2-Dichlorobenzene 1,2-Dibromo,3 chloropropane	EPA 8260C, 5030

Accreditation Scope

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Issue no.: 03 **Date: 23-02-2021** **Valid to: 22-10-2023**

Type of Activity	Test Materials/Products	Test Name	Test Method
Chemical	Drinking Water	**Volatile Organic compounds (VOC) in Waters by GCMS with Head Space:**	
		Hexachlorobutadiene 1,2,4-Trichlorobenzene Naphthalene 1,2,3-Trichlorobenzene	EPA 8260C, 5030
Chemical	Water	Determination of metals by ICP-MS: Barium, Antimony, Arsenic, Aluminum, Beryllium, Cadmium, Chromium, Cobalt, Copper, Lead, Manganese, Mercury, Molybdenum, Nickel, Selenium, Silver, Thallium, Thorium, Uranium, Vanadium, Zinc	EPA 200.8 APHA 3125

Accreditation Scope

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Issue no.: 03 **Date: 23-02-2021** **Valid to: 22-10-2023**

Type of Activity	Test Materials/Products	Test Name	Test Method
Chemical	Solids	Determination of metals by ICP-OES: Antimony, Arsenic, Berylium, Cadmium, Chromium, Copper, Lead, Zinc, Molybdenum, Selinium, Vanadium	EPA 200.7 Rev. 5
	Soil/ Sediment	Determination of metals by ICP-MS: Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Copper, Lead, Manganese, Mercury, Zinc, Thorium, Thallium, Molybdenum, Nickel, Selenium, Silver, Uranium, Vanadium	EPA 200.8 Rev. 5.4

Accreditation Scope

Environmental Testing

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Issue no.: 03 **Date: 23-02-2021** **Valid to: 22-10-2023**

Type of Activity	Test Materials/Products	Test Name	Test Method
Chemical	Water and Ground Water	Turbidity	APHA 2130 B
Chemical	Water and Ground Water	Conductivity	APHA 2510 B
Chemical	Water and Ground Water	Free Chlorine	APHA 4500-Cl-G
Chemical	Water and Ground Water	Total Hardness, Calcium Hardness, Magnesium Hardness, Calcium, Magnesium	APHA 3500
Chemical	Water and Ground Water	Sodium	APHA 3500 Na B
Chemical	Water and Ground Water	Potassium	APHA 3500 K B
Chemical	Water and Ground Water	Lithium, Strontium, Tin & Iron	EPA 200.8
Chemical	Water and Ground Water	Colour	APHA 2120 C
Chemical	Water and Ground Water	Alkalinity, Bicarbonate & Carbonate	APHA 2320 B

Accreditation Scope

Environmental Testing

LB-TEST-178

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Issue no.: 03 **Date: 23-02-2021** **Valid to: 22-10-2023**

Type of Activity	Test Materials/Products	Test Name	Test Method
Chemical	Soil	Strontium & Tin	EPA 200.8
Microbiology	Water - Potable (Drinking & Bottled), Recreational (Pools), Ground, Sea, Surface, Waste water.	Faecal coliforms	APHA 9222-D (Modified) :Inhouse method.
	Water - Potable (Drinking & Bottled), Recreational (Pools), Ground, Sea, Surface, Waste water.	Yeast & Mould	APHA 9610 D
	Water - Potable (Drinking & Bottled), Recreational (Pools), Ground, Sea, Surface, Waste water.	E. coli	APHA 9222-J

Accreditation Scope

Environmental Testing

LB-TEST-178

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Issue no.: 03 **Date: 23-02-2021** **Valid to: 22-10-2023**

Type of Activity	Test Materials/Products	Test Name	Test Method
Microbiology	Water - Potable (Drinking & Bottled), Recreational (Pools), Ground, Sea, Surface, Waste water.	Heterotrophic plate Count	APHA 9215-B
	Water - Potable (Drinking & Bottled), Recreational (Pools), Ground, Sea, Surface, Waste water.	Total Coliforms	APHA 9222-J
	Water - Potable (Drinking & Bottled), Recreational (Pools), Ground, Sea, Surface, Waste water.	Pseudomonas aruginosa	APHA 9213-E

Accreditation Scope

Environmental Testing

LB-TEST-178

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Issue no.: 03 **Date: 23-02-2021** **Valid to: 22-10-2023**

Type of Activity	Test Materials/Products	Test Name	Test Method
Microbiology	Water - Potable (Drinking & Bottled), Recreational (Pools), Ground, Sea, Surface, Waste water.	Enterococcus/Streptococcus	APHA 9230-C
	Water - Potable (Drinking & Bottled), Recreational (Pools), Ground, Sea, Surface, Waste water.	Legionella	ISO 11731 Matrix A, B & C Procedures 1 - 5 and 7 - 14
	Swab - surface	Total Plate Count	In house method - Petri film
	Swab - surface	Total Coliforms	In house method - Petri film
	Swab - surface	E. coli	In house method - Petri film

Accreditation Scope

Environmental Testing

LB-TEST-178

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Issue no.: 03 **Date: 23-02-2021** **Valid to: 22-10-2023**

Type of Activity	Test Materials/Products	Test Name	Test Method
Microbiology	Swab - surface	Staphylococcus aureus	In house method - Surface spread using BPA
Sampling	Water - Potable (Drinking & Bottled), Recreational (Pools), Ground, Sea, Surface, Waste water.	Legionella and general water sampling	BS 7592
	Swab	Swab sampling - surfaces	US FDA BAM

Accreditation History		
Issue no.	**Details**	**Date**
03	Extension scope (add Chemical: Water and Ground Water) and renewal accreditation from EIAC	23-02-2021
02	Extenson in scope (add Microbiology and Sampling tests) and first issuance under the name of EIAC (Which was formerly known as DAC)	28-06-2020
01	Separate the Environmental Tests in a separate branch	27-03-2018

Accreditation Scope

Air Quality Monitoring Testing

LB-TEST-178

SGS Gulf Ltd.

Environmental Testing Laboratory

Blue Shed Warehouse TC-3, Jebel Ali Zone

Dubai - United Arab Emirates

Issue no.: 01 **Date: 23-02-2021** **Valid to: 22-10-2023**

Type of Activity	Test Materials/Products	Test Name	Test Method
Environmental monitoring	Stack/Flue Gas Emission from Stationary Source	Oxides of Nitrogen NOX	US EPA Method 7E
Environmental monitoring	Stack/Flue Gas Emission from Stationary Source	Sulphur Dioxide (SO2)	US EPA Method 6C
Environmental monitoring	Stack/Flue Gas Emission from Stationary Source	Carbon Monoxide (CO)	US EPA Mehtod 10
Environmental monitoring	Stack/Flue Gas Emission from Stationary Source	Carbon Dioxide (CO2)	US EPA Method 3A

Accreditation Scope

Air Quality Monitoring Testing

LB-TEST-178

SGS Gulf Ltd.

Environmental Testing Laboratory

Blue Shed Warehouse TC-3, Jebel Ali Zone

Dubai - United Arab Emirates

Issue no.: 01 **Date: 23-02-2021** **Valid to: 22-10-2023**

Type of Activity	Test Materials/Products	Test Name	Test Method
Environmental monitoring	Stack/Flue Gas Emission from Stationary Source	Oxygen (O2)	US EPA Method 3A
Environmental monitoring	Stack/Flue Gas Emission from Stationary Source	Total Particulate Matter (TPM)	US EPA Method 5

Accreditation History		
Issue no.	**Details**	**Date**
01	Granted accreditation from EIAC	23-02-2021