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AB 994

*Research laboratory  
accredited by PCA, Nr AB  
994*

Scopes of accreditation:

- concentration and mass measurements of flow of fine particles
- measurements of concentration and mass flow of SO<sub>2</sub>, NO<sub>x</sub>, CO
- concentration measurements of CO<sub>2</sub>, O<sub>2</sub>
- concentration and mass flow measurements of OWO
- sampling for mass concentration determination of PCDD/PDF and dioxin type PCB
- sampling for concentration determination of (As; Cd; Cr; Co; Cu; Mn; Ni; Pb; Sb; Ti; V)
- sampling for concentration determination of Hg
- sampling and determination of concentration and mass flow of HCl
- sampling and determination of concentration and mass flow of HF
- sampling for determining the concentration of individual gaseous organic compounds
- calibration of Automated Monitoring systems,
- QAL2 procedure
- annual performance test of Automated Monitoring Systems, AST procedure
- noise measurement from machinery, installations and industrial plants

Chorzów, February 4<sup>th</sup> 2026  
Our ref. No.: PW/06/02/26

### **Correction No. 1 to Report No. PW/61/07/24**

**on concentration measurements of PCDDs/PCDFs and dioxins-like PCBs emitted into environment from flue gas channel located at UAB GREN KLAIPEDA, Kretainio g. 3 LT-94103, Klaipeda, Lithuania.**

Client name and address:

**UAB "GREN KLAIPEDA"**  
Kretainio g. 3,  
LT-94103 Klaipeda

Developed by:

mgr Grzegorz Bortel

Calculation and data transfer checked by:

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**1. PURPOSE AND SCOPE OF THE REPORT**

Purpose of executed measurements was to determine the concentration and emission of *PCDDs/PCDFs and dioxins-like PCBs* emitted to environment from flue gas channel located at UAB GREN KLAIPEDA, Kretainio g. 3 LT-94103, Klaipeda, Lithuania

*Measurements range:*

- PCDD/DF emission and concentration,
- PCB emission and concentration.

The measurements were carried out in accordance with the sampling plan and the described sampling methods.

Operating parameters of the technological installation was obtained from the customer's representative.

**2. BASIS OF MEASUREMENTS EXECUTION**

The measurements were taken according to the Purchase Order dated June 06<sup>th</sup> 2024, our reference number PP/28/06/24.

**3. MEASUREMENT TEAM**

The measurements taken on June 06 - 07<sup>th</sup> 2024 were executed by the following team:

- Grzegorz Bortel specialist- measurement team leader,
- Karol Sodo specialist,
- Przemysław Zubel specialist.

**4. MEASUREMENT RESULTS SUMMARY**

Below are presented measurement results summary, full measurement results are presented in chapter no 6, at page 8.

Concentration of the substance in the gas in the reference conditions O2 ref. 11%	PCDDF	ng/m3	0,0022
	PCB	ng/m3	0,0006
Emission limits	PCDDF	ng/m3	0,06

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**5. DESCRIPTION OF THE MEASUREMENT METHOD****Measurement of the gas volumetric flow**

The flow rate was determined according to ISO Standard PN-EN ISO 16911-1:2013 „Stationary source emissions - Manual and automatic determination of velocity and volume flow rate in ducts - Part 1: Manual reference method". Gravimetric dust monitor type Megasystem APIS X-1 and type "S" Pitot tube were used for the measurements. Measurement is accredited.

Accreditation range: differential pressure: > 5 Pa

**Measurement O<sub>2</sub> content**

The concentration of O<sub>2</sub> was determined using gas analyzer HORIBA PG-350E-EU equipped with testing probe 1750 mm long. The measurements were taken according to the procedure described in measurement unit as well as to Polish Standard PN-EN 14789:2017 "Stationary source emissions - Determination of volume concentration of oxygen O<sub>2</sub> - Reference method - Paramagnetism". Measurement is accredited.

Accreditation range: O<sub>2</sub> content: 3-21%

**Measurement CO<sub>2</sub> content**

The concentration of CO<sub>2</sub> was determined using gas analyzer HORIBA PG-350E-EU equipped with testing probe 1750 mm long. The measurements were taken according to the procedure described in measurement unit as well as to Polish Standard PN-ISO 10396:2001 "Stationary Source Emissions - Sampling For The Automated Determination Of Gas Concentrations ". Measurement is accredited.

Accreditation range: CO<sub>2</sub> content: 0,1-20%

**Measurement moisture content**

Moisture content was determined using condensation-absorption method. The measurements were taken according to Polish Standard PN-EN 14790:2017. Measurement is accredited.

Accreditation range: H<sub>2</sub>O content: 29-250 g/m<sup>3</sup>

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**PCDDs/PCDFs and dioxins-like PCBs sampling and determination**

PCDD/DF samples were taken according to the requirements of Polish Standard PN-EN 1948-1:2006 „ Stationary source emissions - Determination of mass concentration of PCDDs/PCDFs and dioxin-type PCBs - Part 1: Sampling of PCDDs/PCDFs”.

PCB samples were taken according to the requirements of Polish Standard PN-EN 1948-4:2014-03 „ Stationary source emissions - Determination of mass concentration of PCDDs/PCDFs and dioxin-type PCBs - Part 4: Sampling and analysis dioxin-like PCBs”.

*The three stages of PCDD/DF and PCBs concentration and emission determination:*

**Stage I - sampling**

For the determination of mass concentration of PCDD/DF and PCBs proper sampling plays important role that affects following stages of the testing. The sampling were performed by means of the filtration and condensation method using PCDD/DF and PCBs sampling system conformed to European Standard PN-EN 1948-1:2006 and PN-EN 1948-4:2014-03.

The following page shows the schematic diagram of the sampling system.

**Stage II - laboratory analysis**

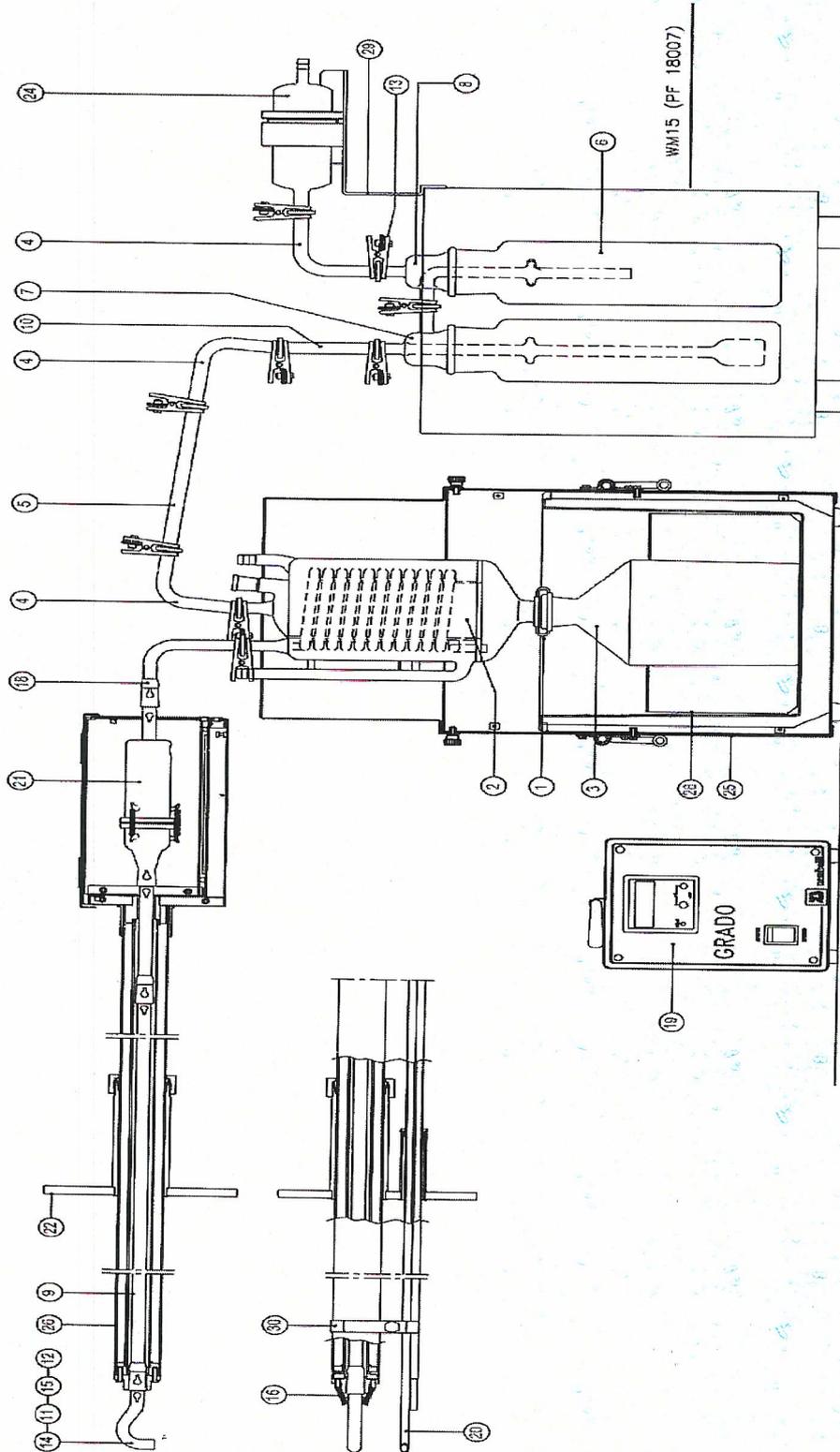
The samples were analysed at the ALS Czech Republic, s.r.o accredited laboratory following the CSN EN 1948-2,3,4 methodology: The determination of polychlorinated dibenzo-p-dioxine, dibenzofurans in emission samples with the method of isotop dilution using HRGC/HRMS.

The dioxin and furans analyses were conducted at the ALS Czech Republic, s.r.o. Laboratory, specifically accredited for the test by the Český Institut Pro Akreditaci, o.p.s. , Nr L 1163.

**Stage III - development and the results and discussion**

The last stage includes results collection from the previous stages, emission calculation and PCDD/DF and PCBs concentration as well as comparison to the standards in force.

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- Opis:
- 1. ferrule
  - 2. cooler
  - 5,10. aspiration path - tubes
  - 13. clamp
  - 20. Pitot tube „S” - type
  - 25. cooler casina
  - 3. condensation pot
  - 6-8. scrubbers
  - 16. holding springs
  - 21. filter casing
  - 26. heated probe
  - 4,18. aspiration path - elbows
  - 9. aspiration path - probe tube
  - 17. aspiration controller
  - 22. yoke
  - 28. cooler coil
  - 11,12,14,15. - aspiration endings
  - 19. temperature controller
  - 24. gas dryer
  - 29,30. support

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**6. MEASUREMENT RESULTS**

**Correction No. 1 to Report No. PW/61/07/24**

- 1) Plant or unit name: **Combined Heat and Power Plant<sup>1)</sup>**
- 2) Flue gases cleaning unit: **ALSTOM NID flue gas cleaning solution (bag filters, activate carbon, ammonia solution, hydrated lime)<sup>1)</sup>**
- 3) Emission source load during measurements: **89 MW**
- 4) Fuel type or material mass flow in process: **40% municipal waste, 60% industrial waste; 33 t/h**
- 5) Location of sampling and measurements: **in duct, after flue gases cleaning unit**

Measurement reference number		06/07-06-01		X	X	
Date of measurement		06-07.06.2024				
Measurement time range		21:16-03:17				
Scope of test		Unit	Results	Uncertainty +/-	Method	
Meteorological conditions	Atmospheric pressure		hPa	1013,7	X	
	Air temperature		oC	14		
Measurement plane	Diameter		m	2,20		
	Area		m2	3,7994		
Stack gas parameters	Temperature		oC	57		
	Static pressure		Pa	-26		
	Differential pressure		Pa	240		
	Gas moistness grade X		kg/kg	0,124		
	Average velocity		m/s	16,6		0,1
	Chemical composition	O2	%	7,7		0,2
		CO2	%	11,6	0,4	PN-ISO 10396:2001
	Wet gas density during testing		kg/m3	1,037	X	PN-EN 14790:2017
Gas density in normal conditions		kg/m3 N	1,253	PN-EN 14790:2017		
Gas density in conventional conditions		kg/m3 U	1,347	PN-EN 14790:2017		
Concentration in the gas at measurement conditions	PCDDF*		ng/m3	0,0022	0,0007	PN-EN 1948:2006
	PCB*			0,0006	0,0002	PN-EN 1948-4:2014-03
Concentration in the gas at normal conditions	PCDDF*		ng/m3 N	0,0022	0,0007	PN-EN 1948:2006
	PCB*			0,0006	0,0002	PN-EN 1948-4:2014-03
Concentration of the substance in the gas in the standard conditions	PCDDF*		ng/m3 U	0,0029	0,0009	PN-EN 1948:2006
	PCB*			0,0008	0,0003	PN-EN 1948-4:2014-03
Concentration of the substance in the gas in the reference conditions O2 ref. 11%	PCDDF*		ng/m3 U	0,0022	0,0007	PN-EN 1948:2006
	PCB*			0,0006	0,0002	PN-EN 1948-4:2014-03
Gas volume flow	measurement conditions		m3/h	226779	3766	X
	normal conditions		m3N/h	187583	3115	
	conventional conditions		m3U/h	155256	2578	
	conventional conditions O2 ref. 11%		m3U/h	206490	5100	
The emission obtained by measuring	PCDDF*		ng/h	450,24	142,44	PN-EN 1948:2006
	PCB*			124,20	39,29	PN-EN 1948-4:2014-03
Emission limits	PCDDF*		ng/m3 U	0,06	X	X
Transgerssion	PCDDF*		ng/m3 U	-		

\*- the results obtained from the subcontractor ( accredited )  
<sup>1)</sup>-information obtained from the client

**Correction No. 1 to Report No. PW/61/07/24**Notes:

Normal conditions designate the temperature of 273 K and pressure of 101,3kPa, defining normal cubic meter m<sup>3</sup>N. The conventional conditions designate the temperature of 273K, pressure of 101,3 kPa and dry gases (steam contents less than 5 g/kg of flue gas), defining conventional cubic meter, m<sup>3</sup>U

The specified expanded uncertainty comes from standard uncertainty multiplied by expansion coefficient k = 2, which provides 95% level of confidence for normal distribution. Uncertainty takes into account the sampling and analysis.

Registry of samples delivered to the laboratory: P/47/06/24, P/48/06/24

Date of delivery to the laboratory: 11.06.2024

Date of analysis: 11.06 - 26.06.2024

**Field blanks:**

ID/ number of sample	Type of substance	The criterion of the blank [ng/m <sup>3</sup> ] 11%O <sub>2</sub>	The value of the blank [ng/m <sup>3</sup> ] 11% O <sub>2</sub>	Result [+/-]
P/48/06/24	PCDD/DF	0,006	< 0,0013	+
	PCB	n/a	< 0,0005	+

Work parameters of measurement system:**PCDD/DF (PN-EN 1948:2006) and PCB (PN-EN 1948-4+A1:2013)::**

sampling method:	condensation - adsorption method		
filter parameters:	19 x 90 mm, filter efficiency: 99,998 %		
sampling train:	2 measurement axis		
oxygen reference :	11 %		
time of dioxins and furans measurement:	21:16 – 03:17 (360,1 min)		
nozzle diameter:	6	mm	
probe temperature:	118	°C	
scrubbers temperature	4	°C	
aspired gas volume	7,394	m <sup>3</sup>	
average sampling flow	20,5	l/min	
isokinetic ratio:	98,4	%	
leak test:	+ / +		
gas meter temperature	20,9	°C	
gas meter pressure	0	bar	
spiking pattern:	filter surface		
absorption solution:	100 ml H <sub>2</sub> O dest. + 50 ml 2-etoksyetanol		
recovery:	93 %	<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PECDF,	/>50%/
	91 %	<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDF,	/>50%/
	74 %	<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9 HpCDF.	/>50%/
	63 %	<sup>13</sup> C <sub>12</sub> -2,3,4,4'-tetraCB (60),	/>50%/
	55 %	<sup>13</sup> C <sub>12</sub> -2,3,3',4,5,5'-hexaCB (159).	/>50%/
PCDD/DF TEQ sample mass:	0,02	ng	
PCB TEQ sample mass:	0,0055	ng	

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**H<sub>2</sub>O (PN-EN 14790:2017)**

sampling train: 2 measurement axis  
 sampling equipment: titanium sampling train  
 heated probe 2,0 m long  
 sampling pump: X1 APIS 0185  
 cartridge: PCDDF / moisture measurement set  
 number of samplings: 1  
 sampling time: 360,1 min  
 sampling volume: 20,5 l/min  
 H<sub>2</sub>O maas: 1150,00 g  
 absorption efficiency: 99,5 %

**O<sub>2</sub> paramagnetic (PN-EN 14789:2017):**

Range : 0 – 5 % [ ]  
 0 – 10 % [X]  
 0 – 25 % [ ]  
 Calibration gas: O<sub>2</sub> – 8,001% [X] R/07/W  
 O<sub>2</sub> – 18,85% [ ] R/12/W  
 N<sub>2</sub> – 99,99% [X] R/17/  
 Sampling train: 2 measurement axis  
 Sampling time/ average time: 360 min / 1 min

O <sub>2</sub> concentration measurement (paramagnetic):		HORIBA PG-350E-EU (130/1/AW/21)			
check operation		unit	result	criterion	result +/-
,0' after adjustment, without sampling train		%	0,02	± 0,1 [%]*	+
,0' after adjustment, with sampling train	before measurement	%	0,05	± 0,2 [%]*	+
	after measurement	%	0,06	± 0,2 [%]*	+
„Span” after adjustment with sampling train standard 8,001 % R/12/W analyzer range 10%/	before measurement	%	8,05	± 0,2 [%]*	+
	after measurement	%	7,99	± 0,2 [%]*	+
	before measurement time T90	% sec.	8,2 31	> 7,2 [%] < 200 sec.	----- +

**Correction No. 1 to Report No. PW/61/07/24****7. MEASUREMENT DEVICES**

Name of measuring device		X1- Apis PLUS
Type of measuring device		Isokinetic sampler S/N 0185
Certificate	Calibration No	94/54/LA/P/2023 G-73/23-46/23 65/1/T/23
Issued by		PLUM Sp. z o.o. KLEOSIN ZAP BESTWINKA LABOSERWIS Sp. z o.o. KATOWICE
Date of issue the certificate of calibration		27.02.2023 r. 23.02.2023 r. 02.03.2023 r.
Expiration date of the certificate of calibration		-

Name of measuring device		HORIBA
Type of measuring device		PG-350E-EU
Certificate	Calibration No	130/1/AW/21
Issued by		Laboserwis Sp. z o.o. Katowice
Date of issue the certificate of calibration		28.05.2021
Expiration date of the certificate of calibration		-

**Correction No. 1 to Report No. PW/61/07/24****8. ANALYSIS RESULTS****Attachment no. 1 to the Certificate of Analysis for work order PR2469525**

Sample: P/47/06/24

ALS SAMPLE ID: PR2469525/ 001

Measurement results PCDD/Fs:

Sample: P/47/06/24		Final extract [ $\mu$ l]: 60			
		Injection volume [ $\mu$ l]: 4			
		Acquisition date [d.m.y h.m]: 18.6.24 5:42			
2,3,7,8-PCDD/Fs	Result [ng/sample]	Limit of Detection [ng/sample]	Limit of Quantification [ng/sample]	<sup>4</sup> I-TEFs	I-TEQ Upperbound [ng/sample]
2,3,7,8-TCDD	< 0.0029	0.0029	0.0057	1	0.0029
1,2,3,7,8-PeCDD	< 0.0038	0.0038	0.0075	0.5	0.0019
1,2,3,4,7,8-HxCDD	< 0.0061	0.0061	0.012	0.1	0.00061
1,2,3,6,7,8-HxCDD	< 0.0061	0.0061	0.012	0.1	0.00061
1,2,3,7,8,9-HxCDD	< 0.0061	0.0061	0.012	0.1	0.00061
1,2,3,4,6,7,8-HpCDD	< 0.02	0.02	0.04	0.01	0.0002
OCDD	< 0.021	0.021	0.042	0.001	0.000021
2,3,7,8-TCDF	< 0.011	0.0057	0.011	0.1	0.0011
1,2,3,7,8-PeCDF	< 0.014	0.007	0.014	0.05	0.0007
2,3,4,7,8-PeCDF	< 0.014	0.007	0.014	0.5	0.007
1,2,3,4,7,8-HxCDF	< 0.013	0.0065	0.013	0.1	0.0013
1,2,3,6,7,8-HxCDF	< 0.013	0.0065	0.013	0.1	0.0013
1,2,3,7,8,9-HxCDF	< 0.0065	0.0065	0.013	0.1	0.00065
2,3,4,6,7,8-HxCDF	< 0.013	0.0065	0.013	0.1	0.0013
1,2,3,4,6,7,8-HpCDF	< 0.016	0.0079	0.016	0.01	0.00016
1,2,3,4,7,8,9-HpCDF	< 0.0079	0.0079	0.016	0.01	0.000079
OCDF	< 0.015	0.015	0.031	0.001	0.000015
I-TEQ from quantified 2,3,7,8-PCDD/Fs - "Lowerbound"					0
I-TEQ from 2,3,7,8-PCDD/Fs - "Mediumbound"					0.01
Maximum possible I-TEQ - "Upperbound"					0.02
PCDDs	Result [ng/sample]	PCDFs	Result [ng/sample]		
Tetra-CDDs	< 0.063	Tetra-CDFs	0.51		
Penta-CDDs	< 0.053	Penta-CDFs	< 0.2		
Hexa-CDDs	< 0.061	Hexa-CDFs	< 0.1		
Hepta-CDDs	< 0.04	Hepta-CDFs	< 0.032		
OCDD	< 0.021	OCDF	< 0.015		

<sup>4</sup>I-TEF according to NATO.

Limits of quantification are defined as double of the detection limits.

The limit of detection is defined as the amount of analyte producing a signal with S/N $\geq$ 3.

The value of the detection limit is mentioned as the actual value at the acquisition date.

Measurement uncertainty is expressed as a double (k=2) relative standard deviation (RSD%), and corresponds to 95% confidence interval.

Estimation of uncertainty of each 2,3,7,8-PCDD/F congener is 30% and total I-TEQ is 20%.

These values were ensured by analyses of certified reference material under conditions of internal reproducibility.

Results marked with "&lt;" are below limit of detection or quantification.

"Lowerbound" and "Upperbound" are levels defined in Regulation 2017/644 and EN 1948-4.

"Mediumbound" is levels defined in Regulation 2017/644.

**Correction No. 1 to Report No. PW/61/07/24**

**Attachment no. 1 to the Certificate of Analysis for work order PR2469525**

Sample: P/47/06/24

**Standards recovery:**

Sample:		P/47/06/24			
		Final extract [µl]:		60	
		Injection volume [µl]:		4	
		Acquisition date [d.m.y h:m]:		18.6.24 5:42	
Extraction standard	Recovery [%]	Acceptable range [%]		Accept. rec. with respect to	
		Basic	Extended	basic range	extended range
<b>PCDDs</b>					
13C12 - 2,3,7,8-TCDD	97	50 - 130	30 - 150	YES	-
13C12 - 1,2,3,7,8-PeCDD	56	50 - 130	30 - 150	YES	-
13C12 - 1,2,3,4,7,8-HxCDD	96	50 - 130	30 - 150	YES	-
13C12 - 1,2,3,6,7,8-HxCDD	97	50 - 130	30 - 150	YES	-
13C12 - 1,2,3,4,6,7,8-HpCDD	85	40 - 130	20 - 150	YES	-
13C12 - OCDD	100	40 - 130	20 - 150	YES	-
<b>PCDFs</b>					
13C12 - 2,3,7,8-TCDF	96	50 - 130	30 - 150	YES	-
13C12 - 2,3,4,7,8-PeCDF	60	50 - 130	30 - 150	YES	-
13C12 - 1,2,3,4,7,8-HxCDF	77	50 - 130	30 - 150	YES	-
13C12 - 1,2,3,6,7,8-HxCDF	94	50 - 130	30 - 150	YES	-
13C12 - 2,3,4,6,7,8-HxCDF	93	50 - 130	30 - 150	YES	-
13C12 - 1,2,3,4,6,7,8-HpCDF	96	40 - 130	20 - 150	YES	-
13C12 - OCDF	78	40 - 130	20 - 150	YES	-
Sampling standard	Recovery [%]	Acceptable range [%]		Rec. in range?	
13C12-1,2,3,7,8-PeCDF	93	> 50		YES	
13C12-1,2,3,7,8,9-HxCDF	91	> 50		YES	
13C12-1,2,3,4,7,8,9-HpCDF	74	> 50		YES	

**Correction No. 1 to Report No. PW/61/07/24**

**Attachment no. 3 to the Certificate of Analysis for work order PR2469525**

Sample: P/47/06/24

ALS SAMPLE ID: PR2469525/ 001

Measurement results PCBs:

Sample:		P/47/06/24			
		Final extract [µl]:	250		
		Injection volume [µl]:	4		
		Acquisition date [d.m.y h:m]:	18.6.24 7:06		
PCBs	Result [ng/sample]	Limit of Detection [ng/sample]	Limit of Quantification [ng/sample]	<sup>4</sup> WHO-TEFs	WHO-TEQ Upperbound [ng/sample]
PCB #77	< 0.097	0.026	0.097	0.0001	0.0000097
PCB #81	< 0.034	0.034	0.11	0.0003	0.00001
PCB #126	< 0.042	0.042	0.14	0.1	0.0042
PCB #169	< 0.042	0.042	0.14	0.03	0.0013
PCB #105	< 0.8	0.067	0.8	0.00003	0.000024
PCB #114	< 0.039	0.039	0.13	0.00003	0.0000012
PCB #118	< 0.68	0.041	0.68	0.00003	0.00002
PCB #123	< 0.05	0.05	0.17	0.00003	0.0000015
PCB #156	< 0.097	0.044	0.097	0.00003	0.0000029
PCB #157	< 0.047	0.047	0.16	0.00003	0.0000014
PCB #167	< 0.11	0.032	0.11	0.00003	0.0000032
PCB #170	< 0.37	0.037	0.37	-	0
PCB #180	< 0.66	0.034	0.66	-	0
PCB #189	< 0.026	0.026	0.088	0.00003	0.0000079
WHO-TEQ from quantified PCBs -"Lowerbound"					0
WHO-TEQ from PCBs - "Mediumbound"					0.0028
Maximum possible WHO-TEQ -"Upperbound"					0.0055
PCBs	Result [ng/sample]	Limit of Detection [ng/sample]	Limit of Quantification [ng/sample]	Eindicator PCB Lowerbound [ng/sample]	Eindicator PCB Upperbound [ng/sample]
PCB #28	< 1.5	0.084	1.5	0	1.5
PCB #52	< 0.59	0.03	0.59	0	0.59
PCB #101	< 0.82	0.067	0.82	0	0.82
PCB #118	< 0.68	0.041	0.68	0	0.68
PCB #138	< 1.1	0.08	1.1	0	1.1
PCB #153	< 1.1	0.072	1.1	0	1.1
PCB #180	< 0.66	0.034	0.66	0	0.66
Eindicator PCB6 -"Lowerbound"				0	
Maximal possible Eindicator PCB6 -"Upperbound"					5.9
Eindicator PCB7 -"Lowerbound"				0	
Maximal possible Eindicator PCB7 -"Upperbound"					6.5

<sup>4</sup>WHO 2005 TEF according to Van den Berg et al: Toxicological Sciences Advance Acces, 7 July 2006

Limits of quantification are defined on the base of blank level.

The limit of detection is defined as the amount of analyte producing a signal with S/N≥3.

The value of the detection limit is mentioned as the actual value at the acquisition date.

Measurement uncertainty is expressed as a double (k=2) relative standard deviation (RSD%), and corresponds to 95% confidence interval.

Estimation of uncertainty of each PCB congener is 30% , total WHO-TEQ and PCB6/PCB7 is 20%.

These values were ensured by analyses of certified reference material under conditions of internal reproducibility.

Results marked "<" are lower than the limit of detection or quantification.

"Lowerbound" and "Upperbound" are levels defined in Regulation 2017/644 and EN 1948-4.

"Mediumbound" is level defined in Regulation 2017/644.

**Correction No. 1 to Report No. PW/61/07/24****Attachment no. 3 to the Certificate of Analysis for work order PR2469525**

<b>Sample:</b> P/47/06/24		<b>Final extract [µl]:</b>	250
		<b>Injection volume [µl]:</b>	4
		<b>Acquisition date [d.m.y h.m]:</b>	18.6.24 7:06
<b>Sampling standard</b>	<b>Recovery [%]</b>	<b>Acceptable range [%]</b>	<b>Rec. in range?</b>
13C12-2,3,4,4'-tetraCB (60)	63	> 50	YES
13C12-2,3,3',4,5,5'-hexaCB (159)	55	> 50	YES

**Correction No. 1 to Report No. PW/61/07/24****9. CERTIFICATE OF ACCREDITATION****POLSKIE CENTRUM AKREDYTACJI**  
POLISH CENTRE FOR ACCREDITATIONSygnatariusz EA MLA  
EA MLA Signatory**CERTYFIKAT AKREDYTACJI**  
**LABORATORIUM BADAWCZEGO**  
ACCREDITATION CERTIFICATE OF TESTING LABORATORY  
**Nr AB 994**

Potwierdza się, że / This is to confirm that:

**„PROFTECH” Sp. z o.o.**  
**ul. Kurta Aldera 44, 41-506 Chorzów**spełnia wymagania normy PN-EN ISO/IEC 17025:2018-02  
meets requirements of the PN-EN ISO/IEC 17025:2018-02 standardAkredytowana działalność jest określona w Zakresie Akredytacji Nr AB 994  
Accredited activity is defined in the Scope of Accreditation No AB 994Akredytacja pozostaje w mocy pod warunkiem przestrzegania  
wymagań jednostki akredytującej określonych w kontrakcie Nr AB 994  
This accreditation remains in force provided the Laboratory observes  
the requirements of Accreditation Body defined in the Contract No AB 994Akredytacji udzielono dnia 30.01.2009 r.  
Accreditation was granted on 30.01.2009DYREKTOR  
POLSKIEGO CENTRUM AKREDYTACJI

LUCYNA OLBORSKA

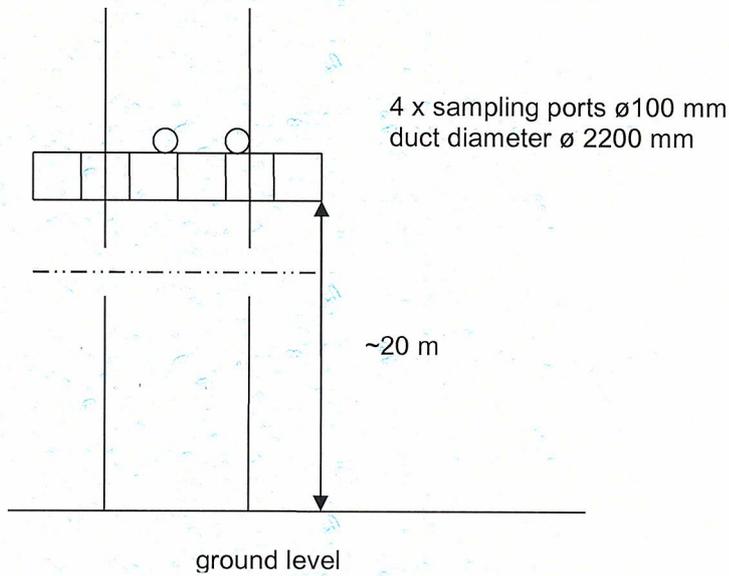
Warszawa, dnia 9 grudnia 2019 roku

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**Correction No. 1 to Report No. PW/61/07/24**

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**10. MEASUREMENT PLANE SCHEME**



**DYREKTOR**  
Approved by  
**Dariusz Guja**

.....  
Name and Signature

END OF REPORT

