Attachment no. 4 to the Certificate of Analysis for work order FP2327046

Sample: **NC Power Cacao: 23045-01**

ALS SAMPLE ID: **FP2327046/ 004**

Measurement results PAH 4:

Sample:	NC Power Cacao: 23045-01		
Sample weight [g]:	10.39	Final extract volume [µl]:	1000
		Injection volume [µl]:	2
		Acquisition date [d/m/y]:	04.10.23
PAH	Result [µg/kg]	Limit of Detection [µg/kg]	Limit of Quantification [µg/kg]
Benzo[a]anthracene	< 0.48	0.018	0.48
Chrysene	< 0.48	0.021	0.48
Benzo[b]fluoranthene	< 0.48	0.0085	0.48
Benzo[a]pyrene	< 0.48	0.009	0.48
Σ 4PAH -"Lowerbound"	0	-	-
Σ 4PAH -"Upperbound"	1.9	-	-

The 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 PAH is 30% for each PAH and 20% for summation parameters.

These values were ensured by analyses of certified reference material under conditions of internal reproducibility. Results marked "<" lower than the limit of detection or quantification.

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

Sum of 4PAH and maximum levels are defined in Commission Regulation (EU) No 835/2011

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Sample: **NC Power Cacao: 23045-01**

ALS SAMPLE ID: **FP2327046/ 004**

Measurement results PAH 16:

Sample:	NC Power Cacao: 23045-01		
Sample weight [g]:	10.39	Final extract volume [µl]:	1000
		Injection volume [µl]:	2
		Acquisition date [d/m/y]:	04.10.23
PAH	Result [µg/kg]	Limit of Detection [µg/kg]	Limit of Quantification [µg/kg]
Naphtalene	< 14	0.48	14
Acenaphtylene	< 0.96	0.074	0.96
Acenaphtene	4.4	0.17	0.96
Fluorene	4.1	0.11	2.4
Phenanthrene	10	0.28	3.8
Anthracene	< 1.2	0.24	1.2
Fluoranthene	2.4	0.13	2.4
Pyrene	2.3	0.15	1.4
Benzo[a]anthracene	< 0.48	0.018	0.48
Chrysene	< 0.48	0.021	0.48
Benzo[b]fluoranthene	< 0.48	0.0085	0.48
Benzo[k]fluoranthene	< 0.48	0.01	0.48
Benzo[a]pyrene	< 0.48	0.009	0.48
Indeno[1,2,3-cd]pyrene	< 0.36	0.0036	0.36
Dibenzo[a,h]anthracene	< 0.075	0.0041	0.075
Benzo[g,h,i]perylene	< 0.48	0.0047	0.48
Σ 16PAH -"Lowerbound"	23	-	-
Σ 16PAH -"Upperbound"	43	-	-

The 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 PAH is 30% for each PAH and 20% for summation parameters.

These values were ensured by analyses of certified reference material under conditions of internal reproducibility. Results marked "<" lower than the limit of detection or quantification.

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