

myStandards GmbH  
Schauenburger Straße 116 | 24118 Kiel | Germany

University of Texas  
Geological Sciences  
2275 Speedway  
EPS Bldg Rm 1.130  
Austin TX 78712  
Attn: Nathan Miller

**REFERENCE MATERIALS  
FOR MICRO ANALYSIS**

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Packing List N°: 011121-1  
Date: 01.11.2021

Kiel, 01.11.2021

**Packing List N° 011121-1**

Dear Mr. Miller,

Thank you for your order! We deliver the following goods as agreed:

Pos.	Description	Quantity
1.	<b>Production of pellets from customized powders in the pellet size of Ø 20 mm</b> Two pellets each from two different cellulose standards Valerian Root: IPE-143-20211026-01 & IPE-143-20211026-02 Beech Wood: IPE-240-20211026-01 & IPE-240-20211026-02	4
2.	<b>Material purchased through us for the pellets by WEPAL</b> Valerian Root/Valeriana officinalis (IPE:143) and Beech Wood/Fagus sylvatica (IPE:240)	2

Goods properly received:

\_\_\_\_\_  
Date, Signature

Harmonized Code (HS Code) for the cellulose materials and standards: 121190, our VAT-ID: DE321359295.

If you have any further questions or comments, please do not hesitate to get in touch with us.  
We are looking forward working with you!  
Kind regards,

**myStandards GmbH**

*Our valid order, sales and delivery conditions apply. The valid version of our general terms and conditions of order, sale and delivery - status 01.09.2019 - can be found on our website: <https://www.my-standards.com/en/terms-and-conditions>. They are also available on request.*

myStandards GmbH  
Schauenburger Straße 116  
24118 Kiel  
Germany

General Manager  
Christina Wittke  
Simon Nordstad

Amtsgericht Kiel  
HRB 20094 KI  
Ust.ID: DE321359295  
St.Nr.: 20/294/08335

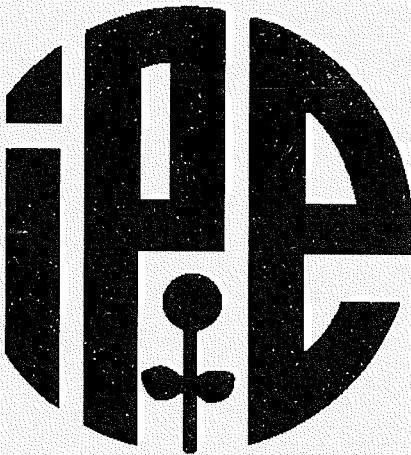
Banking details  
IBAN: DE26 2003 0000 0016 3423 11  
BIC: HYVEDEMM300  
Hypo Vereinsbank



**WAGENINGEN EVALUATING PROGRAMS  
FOR ANALYTICAL LABORATORIES**

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**Certificate of Analysis**



**International Plant-Analytical Exchange**

**REFERENCE MATERIAL**

**IPE sample 240**



**WAGENINGEN**  
UNIVERSITY & RESEARCH



## General Information

In this report an overview is given of analytical data for this sample collected in our proficiency testing program. The consensus values are calculated using a robust statistical model. With this NDA model mean and standard deviation are calculated using all reported data when at least 8 results are left after removal of reported 'lower than' (<) and 0 (= zero) values. No outliers are removed.

This report is divided into three sections: Consensus Values, Indicative Values and Values for Information. The division is made on the reliability of the data. Consensus Values are based on at least 16 results while the coefficient of variation is smaller than 25 %. Indicative Values are based on at least 8 and less than 16 results or a coefficient of variation between 25 % and 50 %. Other values, based on less than 8 results or a coefficient of variation higher than 50 %, are given for information only.

In the section with Consensus Values the following parameters are given: mean, standard deviation, coefficient of variation, number of results, median and MAD (Median of Absolute Deviation). The confidence limits (at 95 % probability) are calculated for these determinands.

In the section with Indicative Values the following parameters are given: mean, standard deviation, coefficient of variation, number of results, median and MAD.

In the section with Information Values the following parameters are given: median, MAD and number of results. For determinands which have at least 5 results reported as smaller than (<) the median of these 'smaller than results' is calculated. In some cases this median of '<' values is much smaller than median and mean of the indicative values. This may be caused by a too optimistic (too low) value for the detection limit reported by a (small) majority of participating laboratories who report '<' -values.

All values, expressed on a weight basis (kg or %), are reported in oven-dry (105 °C) material. Moisture is reported in the material as received.

## Sample information

WE PAL reference materials are from natural sources only. There is no spiking, mixing or other alterations of the samples. For sample preparation the IPE samples are dried at 70 °C and milled to pass a 0.5 mm sieve.

This IPE sample 240 of Beech wood / *Fagus sylvatica* from Netherlands is prepared for the WE PAL proficiency programs. The sample is used in 1 period (or round). The results on which the values in this report are based were taken from the period given in the following table.

Year	Period	Number
2018	1	1



### Indicative Values IPE 240

Method: Inorganic Chemical Composition		Indicative Values					Results smaller than (<)		
Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Median of <	N
B	mg/kg	2.67	0.887	33.2	74	2.85	0.624	4.30	11
Cu	mg/kg	1.09	0.329	30.2	88	1.10	0.230	2.00	13
Fe	mg/kg	7.20	3.183	44.2	89	8.00	2.276	14.15	10
N - Kjeldahl (as N)	g/kg	1.20	0.465	38.7	58	1.24	0.335		
S (as S)	g/kg	0.0957	0.0248	25.9	52	0.1000	0.0180	0.2100	13
Sr	mg/kg	6.91	0.391	5.7	14	6.86	0.290		
Zn	mg/kg	3.37	1.255	37.3	95	3.48	0.875	5.94	6
<b>Method: Real totals</b>									
Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD		
N - elementary	g/kg	1.24	0.403	32.4	46	1.28	0.271		
<b>Method: Nutritional values</b>									
Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD		
Total ash	g/kg	6.41	1.357	21.2	12	6.29	0.900		



**Informative Values IPE 240**

**Method: Other determinations**

Element	Unit
delta 13C	‰ V-PDB
delta 15N	‰ Air

Median
-25.9
2.15

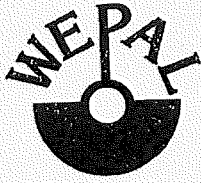
MAD	N
0.04	5
2.181	2

**Method: Nutritional values**

Element	Unit
ADF-ash-free	g/kg
Crude fibre	g/kg
NDF-ash-free	g/kg
Total fat	g/kg

Median
737
673
945
5.58

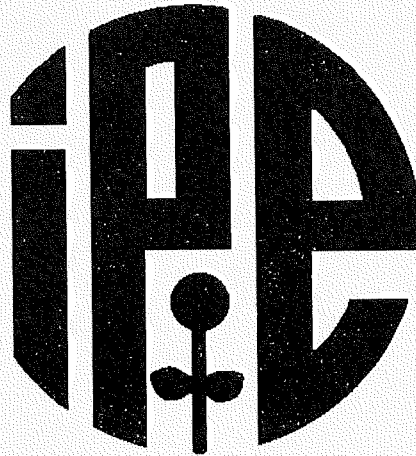
MAD	N
13.8	3
16.0	7
0.3	3
2.580	3



**WAGENINGEN EVALUATING PROGRAMS  
FOR ANALYTICAL LABORATORIES**

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## **Certificate of Analysis**



**International Plant-Analytical Exchange**

**REFERENCE MATERIAL**

**IPE sample 143**



**WAGENINGEN UNIVERSITY  
ENVIRONMENTAL SCIENCES**



## General Information

In this report an overview is given of analytical data for this sample collected in our proficiency testing program. The consensus values are calculated using a robust statistical model. With this NDA model mean and standard deviation are calculated using all reported data when at least 8 results are left after removal of reported 'lower than' (<) and 0 (= zero) values. No outliers are removed.

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## Sample information

WEPAI reference materials are from natural sources only. There is no spiking, mixing or other alterations of the samples. IPE samples are dried at 70 °C and milled to pass a 0.5 mm sieve.

This IPE sample 143 of Valerian Root / Valeriana officinalis from Elburg / Netherlands is prepared for the WEPAI proficiency programs. The sample is used in 1 period (or round). The results on which the values in this report are based were taken from the period given in the following table.

Year	Period	Number
2003	4	3



**Indicative Values IPE 143**

**Method: Inorganic Chemical Composition**

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Results smaller than (<) Median of < N
Ba	mg/kg	17.4	2.14	12.3	11	17.8	1.57	
Cl (as Cl)	g/kg	1.58	0.430	27.3	31	1.61	0.308	
Hg	µg/kg	9.52	2.549	26.8	25	10.20	1.920	150.00
N - NO3 (as N)	mg/kg	83.6	28.18	33.7	15	82.1	19.47	
Se	µg/kg	69.9	14.53	20.8	10	70.7	10.00	500.0
Sr	mg/kg	14.3	0.85	5.9	12	14.4	0.60	
V	µg/kg	3110	488	15.7	11	3080	338	

**Method: Nutritional values**

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD
Total ash	g/kg	112	7.0	6.3	8	110	5.3