

## Soil chemistry data for 533 Central European vascular plant taxa.

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ABSTRACT: Nine soil chemistry characters (pH, carbonate content, oxidisable carbon content, total nitrogen content and the content of available mineral nutrients P, K, Ca, Mg, Na) were studied for 533 taxa of vascular plants on 47 localities from Slovakia, Czech Republic, Hungary and Romania. For 200 taxa occurring on at least 3 localities basic statistic data (minimum, maximum, average, coefficient of variation) are presented.

KEYWORDS: vascular plants, soil chemistry, Central Europe

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### Introduction

The relationships among soil, soil chemistry and plants are generally very well-known. Plant ecology employes indicator values of plants worked by Ellenberg's team (ELLENBERG & al. 1991) above all, but certain indicator values are provided also by other authors (e. g. ZÓLYOMI et al. 1967, SIMON 1992). Definite soil chemistry data for soils where particular plant species grow are found in literature less often. Soil analyses are used in agriculture above all. Such data are rare for wild plants, although they occur as secondary product of ecological, ecophysiological, pedological and other studies (WALTER 1960, GOLLEY & al. 1975, BAUMEISTER & ERNST 1978, BOWEN 1979, LARCHER 1980). Definite data are known for several species, e. g. HADAČ & al. (1988) or WOLF (1999) give soil reaction values for many taxa, various soil chemistry data for *Oenanthe aquatica* (L.) POIR. are presented by HROUDOVÁ & al. (1992), for the genus

*Thymus* by MÁRTONFI & al. (1994, 1997). In this paper further data accumulated during the above mentioned study (MÁRTONFI & al. 1997) as well as new data are presented. These data concern the occurrence of plants on localities with particular soil chemistry characterization and have not been published yet. In order not to keep them for ourselves we are giving this survey of the obtained and statistically evaluated data.

## Material and methods

Soil samples were collected from each of the 47 localities in Central Europe (for details see Appendix). The following analyses were made for each sample: pH was measured in H<sub>2</sub>O and 1 M KCl electrometrically, and carbonate content (CaCO<sub>3</sub>) by decomposition of the soil sample with diluted HCl (3:1). Organic matter was determined as oxidisable carbon (C<sub>ox</sub>) by oxidation with K<sub>2</sub>Cr<sub>2</sub>O<sub>7</sub> and H<sub>2</sub>SO<sub>4</sub> according to the method of Tjurin (in HRAŠKO et al. 1962). Total N was determined by mineralization of soil samples with H<sub>2</sub>SO<sub>4</sub> and selenic catalyzer, according to the method of MEDVEĎ (1988). Available mineral nutrients (P, K, Ca, Mg, Na) were determined by use of the Mehlich II method (DAMAŠKA 1992).

On each locality the list of taxa growing in the plots 3 x 3 m to 10 x 10 m depending on the homogeneity of plant community was taken. The names of the taxa are in accordance with Checklist of MARHOLD & HINDÁK (1998), the taxa that are not included in the checklist are according to TUTIN & al. (1964-1980).

Statistical methods: for each taxon that occurred on at least 3 localities selected statistics were calculated were calculated (minimum, maximum, average, coefficient of variation; while calculating averages for pH the logarithmic scale was respected).

## Results

The results of soil chemistry analyses on particular localities (see Appendix) are given in Table 1. Table 2 provides soil chemistry data for the plants occurring at least three localities. Table 3 presents the list of taxa occurring on one or two localities, the respective data for them are given in Table 1.

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**Tab. 1. Results of soil analyses. Abbreviations according to methods; labels: x - average, v - coefficient of variation, min - minimum, max - maximum. List of localities in Appendix.**

Locality	pH <sub>KCl</sub>	pH <sub>H<sub>2</sub>O</sub>	Co <sub>x</sub> [%]	N <sub>i</sub> [%]	CaCO <sub>3</sub> [%]	P [mg.kg <sup>-1</sup> ]	K[mg.kg <sup>-1</sup> ]	Ca[mg.kg <sup>-1</sup> ]	Mg[mg.kg <sup>-1</sup> ]	Na[mg.kg <sup>-1</sup> ]
1	5.77	6.12	1.03	0.10	0.25	4.26	101.30	1777.23	440.62	43.41
2	4.14	4.85	0.57	0.06	0.09	3.10	192.40	1494.84	685.53	32.06
3	6.31	6.50	1.73	0.16	0.33	11.69	506.70	1805.10	521.50	29.13
4	6.71	6.97	5.23	0.58	13.20	6.49	242.86	4867.10	1444.52	68.65
5	6.97	7.14	3.53	0.33	49.27	8.02	224.88	4783.90	862.19	68.21
6	7.33	7.46	1.22	0.12	76.81	8.29	96.34	8097.26	624.94	94.69
7	7.41	7.58	1.16	0.10	87.44	6.84	84.20	5839.29	618.53	71.81
8	6.88	7.32	2.46	0.24	33.87	5.42	178.42	6117.20	1108.70	82.28
9	6.22	7.28	5.98	0.53	0.71	8.08	511.16	5754.65	1048.19	58.39
10	7.02	7.62	5.35	0.37	31.36	109.74	334.54	6542.00	440.26	97.30
11	7.76	8.27	0.42	0.04	25.89	4.36	28.08	1685.06	426.98	28.22
12	7.48	8.01	1.24	0.07	45.39	6.39	42.65	1392.81	991.55	20.13
13	6.00	6.74	4.43	0.39	0.16	40.44	274.36	2867.00	256.86	31.21
14	7.32	7.72	4.53	0.25	91.16	15.79	64.15	28607.16	73.65	211.29
15	6.49	7.28	6.31	0.46	11.58	6.08	227.71	6942.49	893.96	68.58
16	6.58	7.53	2.80	0.25	2.14	8.10	234.81	6075.90	391.83	68.79
17	6.79	7.58	6.86	0.75	8.74	13.87	355.95	8067.68	1033.43	75.71
18	6.71	7.71	2.29	0.20	3.24	6.00	410.33	4380.97	588.12	41.41
19	5.72	6.32	3.20	0.36	0.16	7.45	153.11	3016.12	245.56	26.65
20	3.75	4.78	1.88	0.20	0.05	6.65	110.25	870.93	164.53	13.60
21	4.68	5.43	3.37	0.34	0.21	16.91	212.52	1821.82	282.39	19.78
22	4.32	5.31	2.05	0.23	0.14	7.65	274.99	1902.79	442.01	21.15
23	6.88	7.11	9.01	1.10	50.93	7.89	333.89	10947.25	99.20	87.55

**Tab. 1. – continued**

Locality	pH <sub>KCl</sub>	pH <sub>H<sub>2</sub>O</sub>	Co <sub>x</sub> [%]	N <sub>i</sub> [%]	CaCO <sub>3</sub> [%]	P [mg.kg <sup>-1</sup> ]	K[mg.kg <sup>-1</sup> ]	Ca[mg.kg <sup>-1</sup> ]	Mg[mg.kg <sup>-1</sup> ]	Na[mg.kg <sup>-1</sup> ]
24	6.34	6.68	13.32	1.75	0.84	9.10	234.04	10249.35	224.95	99.20
25	6.21	6.52	2.19	0.28	0.47	0.61	48.40	2165.50	123.35	32.85
26	7.27	7.43	6.59	0.76	77.73	2.46	148.88	16195.60	113.70	136.90
27	6.48	6.79	23.04	1.68	7.86	14.03	391.49	9531.50	1911.00	130.15
28	7.12	7.7	8.26	1.08	8.8	7.25	319.81	11521.55	85.00	88.83
29	6.69	7.29	9.99	1.25	4.6	5.42	211.37	8574.40	149.95	88.19
30	7.00	7.6	6.89	0.76	4.4	58.41	200.32	7034.95	77.40	69.35
31	6.49	7.22	8.65	1.10	0.95	4.41	238.94	8071.90	476.55	87.42
32	6.88	7.64	8.21	0.94	6.30	5.15	212.59	10608.30	399.10	101.66
33	8.02	8.44	1.32	0.11	31.00	1.92	64.94	9431.80	205.60	77.89
34	5.63	6.55	0.84	0.07	0.54	2.92	39.21	721.85	74.95	34.85
35	4.69	5.77	0.87	0.07	0.09	3.81	36.76	494.50	61.30	32.32
36	3.80	4.63	0.87	0.09	0.06	0.55	31.95	151.55	29.00	39.99
37	4.23	5.23	1.49	0.12	0.26	5.88	76.69	398.80	24.55	32.92
38	8.18	8.32	0.61	0.08	7.64	1.68	38.34	10129.50	91.90	93.76
39	7.76	8.04	1.43	0.12	75.10	1.75	90.11	4307.15	307.20	70.60
40	7.45	7.92	1.12	0.11	23.8	1.01	72.85	9822.65	234.65	92.01
41	7.07	7.47	2.83	0.23	0.53	0.33	59.43	2731.85	224.95	43.86
42	3.56	4.67	1.16	0.16	0.23	0.00	125.90	785.65	447.65	32.74
43	3.84	4.88	2.36	0.29	0.17	0.66	102.89	1515.50	1470.70	45.83
44	3.66	4.95	1.03	0.14	0.08	0.00	99.70	1276.90	338.60	46.89
45	6.90	7.31	5.33	0.57	32.40	0.74	128.44	4027.95	1100.60	47.10
46	5.31	5.85	8.16	1.01	0.19	2.81	323.60	5611.25	140.30	76.15
47	5.64	7.03	13.29	1.32	38.20	17.93	141.54	7338.10	2063.35	93.01

**Tab. 2. Results of soil analyses for species studied. Abbreviations according to methods; labels: x - average, v - coefficient of variation, min - minimum, max - maximum**

Taxon and localities		pH <sub>KCl</sub>	pH <sub>H<sub>2</sub>O</sub>	Co <sub>x</sub> [%]	N <sub>t</sub> [%]	CaCO <sub>3</sub> [%]	P [mg.kg <sup>-1</sup> ]	K [mg.kg <sup>-1</sup> ]	Ca [mg.kg <sup>-1</sup> ]	Mg [mg.kg <sup>-1</sup> ]	Na [mg.kg <sup>-1</sup> ]
<i>Acer campestre</i> 1,2,32,	x	4.61	5.30	3.27	0.36	2.21	4.17	168.76	4626.79	508.42	59.04
	min	4.14	4.85	0.57	0.06	0.09	3.10	101.30	1494.84	399.10	32.06
	max	6.88	7.64	8.21	0.94	6.30	5.15	212.59	10608.30	685.53	101.66
	v	97.09	97.82	106.89	111.66	130.59	20.13	28.69	91.45	24.86	51.64
<i>Acer pseudoplatanus</i> 15,19,20,21,45,46,47,	x	4.53	5.49	5.93	0.61	11.83	8.37	185.31	4232.67	698.67	49.27
	min	3.75	4.78	1.88	0.20	0.05	0.74	110.25	870.93	140.30	13.60
	max	6.90	7.31	13.29	1.32	38.20	17.93	323.60	7338.10	2063.35	93.01
	v	93.14	95.57	60.47	61.64	130.36	73.19	37.32	54.70	94.29	57.75
<i>Acinos arvensis</i> 4,5,13,18,19,20,21,28, 29,30,32,	x	4.73	5.71	5.21	0.58	8.22	15.29	233.85	5486.09	414.15	56.14
	min	3.75	4.78	1.88	0.20	0.05	5.15	110.25	870.93	77.40	13.60
	max	7.12	7.71	10.00	1.25	49.27	58.41	410.33	11521.55	1444.52	101.66
	v	90.70	93.17	50.01	59.91	165.21	110.01	32.79	61.29	95.40	52.30
<i>Acosta rhenana</i> 17,18,36,	x	4.28	5.11	3.34	0.35	4.01	6.81	266.08	4200.07	550.18	52.37
	min	3.80	4.63	0.87	0.09	0.06	0.55	31.95	151.55	29.00	39.99
	max	6.79	7.71	6.86	0.75	8.74	13.87	410.33	8067.68	1033.43	75.71
	v	96.51	97.08	76.60	83.37	89.34	80.33	62.78	77.01	74.69	31.53
<i>Aegopodium podagraria</i> 15,19,20,21,22,	x	4.30	5.29	3.36	0.32	2.43	8.95	195.72	2910.83	405.69	29.95
	min	3.75	4.78	1.88	0.20	0.05	6.08	110.25	870.93	164.53	13.60
	max	6.49	7.28	6.31	0.46	11.58	16.91	274.99	6942.49	893.96	68.58
	v	97.11	98.72	47.37	29.95	188.48	44.93	29.54	73.08	64.16	65.96
<i>Agrostis capillaris</i> 13,19,20,21,42,43,	x	3.98	5.03	2.73	0.29	0.16	12.02	163.17	1812.84	477.95	28.30
	min	3.56	4.67	1.16	0.16	0.05	0.00	102.89	785.65	164.53	13.60
	max	6.00	6.74	4.43	0.39	0.23	40.44	274.36	3016.12	1470.70	45.83
	v	100.00	101.01	39.08	28.61	34.93	115.44	37.71	48.25	94.57	36.12

Taxon and localities		pH <sub>KCl</sub>	pH <sub>H<sub>2</sub>O</sub>	Co <sub>x</sub> [%]	N <sub>t</sub> [%]	CaCO <sub>3</sub> [%]	P [mg.kg <sup>-1</sup> ]	K [mg.kg <sup>-1</sup> ]	Ca [mg.kg <sup>-1</sup> ]	Mg [mg.kg <sup>-1</sup> ]	Na [mg.kg <sup>-1</sup> ]
<i>Achillea collina</i> 5,7,18,33,42,	x	4.26	5.37	1.89	0.18	34.24	4.56	182.05	5044.32	544.42	58.41
	min	3.56	4.67	1.16	0.10	0.23	0.00	64.94	785.65	205.60	32.74
	max	8.02	8.44	3.53	0.33	87.44	8.02	410.33	9431.80	862.19	77.89
	v	92.95	94.45	48.62	46.02	94.05	67.30	69.65	55.03	39.61	30.65
<i>Achillea millefolium</i> 19,20,21,25,	x	4.30	5.28	2.66	0.30	0.22	7.91	131.07	1968.59	203.96	23.22
	min	3.75	4.78	1.88	0.20	0.05	0.61	48.40	870.93	123.35	13.60
	max	6.21	6.52	3.37	0.36	0.47	16.91	212.52	3016.12	282.39	32.85
	v	96.09	98.06	23.97	20.85	69.29	73.79	45.76	39.04	30.95	31.12
<i>Achillea pannonica</i> 5,16,17,18,32,	x	6.76	7.47	4.74	0.49	13.94	8.23	287.71	6783.35	654.93	71.16
	min	6.58	7.14	2.29	0.20	2.14	5.15	212.59	4380.97	391.83	41.41
	max	6.97	7.71	8.21	0.94	49.27	13.87	410.33	10608.30	1033.43	101.66
	v	107.40	103.27	49.75	60.17	127.84	37.00	27.84	33.97	38.95	27.04
<i>Ajuga genevensis</i> 1,2,4,32,33,	x	4.83	5.52	3.27	0.36	10.17	4.18	162.82	5635.85	635.07	64.73
	min	4.14	4.85	0.57	0.06	0.09	1.92	64.94	1494.84	205.60	32.06
	max	8.02	8.44	8.21	0.94	31.00	6.49	242.86	10608.30	1444.52	101.66
	v	94.07	95.15	90.95	98.12	112.83	37.88	41.77	67.22	68.12	38.30
<i>Ajuga reptans</i> 1,2,4,45,46,	x	4.80	5.48	4.07	0.46	9.23	3.48	197.72	3555.67	762.31	53.47
	min	4.14	4.85	0.57	0.06	0.09	0.74	101.30	1494.84	140.30	32.06
	max	6.90	7.31	8.16	1.01	32.40	6.49	323.60	5611.25	1444.52	76.15
	v	94.75	96.02	70.55	76.38	136.98	54.17	40.47	46.35	60.86	30.67
<i>Allium scorodoprasum</i> 19,20,21,	x	4.17	5.16	2.81	0.30	0.14	10.34	158.63	1902.96	230.83	20.01
	min	3.75	4.78	1.88	0.20	0.05	6.65	110.25	870.93	164.53	13.60
	max	5.72	6.32	3.37	0.36	0.21	16.91	212.52	3016.12	282.39	26.65
	v	98.29	99.96	23.67	23.40	47.74	45.08	26.44	46.12	21.33	26.64
<i>Allium victorialis</i> 19,20,21,	x	4.17	5.16	2.81	0.30	0.14	10.34	158.63	1902.96	230.83	20.01
	min	3.75	4.78	1.88	0.20	0.05	6.65	110.25	870.93	164.53	13.60
	max	5.72	6.32	3.37	0.36	0.21	16.91	212.52	3016.12	282.39	26.65
	v	98.29	99.96	23.67	23.40	47.74	45.08	26.44	46.12	21.33	26.64

Taxon and localities		pH <sub>KCl</sub>	pH <sub>H<sub>2</sub>O</sub>	Co <sub>x</sub> [%]	N <sub>t</sub> [%]	CaCO <sub>3</sub> [%]	P [mg.kg <sup>-1</sup> ]	K [mg.kg <sup>-1</sup> ]	Ca [mg.kg <sup>-1</sup> ]	Mg [mg.kg <sup>-1</sup> ]	Na [mg.kg <sup>-1</sup> ]
<i>Alyssum montanum</i> 23,24,33,	x	6.70	7.01	7.88	0.99	27.59	6.30	210.96	10209.47	176.58	88.21
	min	6.34	6.68	1.32	0.11	0.84	1.92	64.94	9431.80	99.20	77.89
	max	8.02	8.44	13.32	1.75	50.93	9.10	333.89	10947.25	224.95	99.20
	v	100.35	100.81	62.95	68.58	74.63	49.79	52.62	6.07	31.31	9.88
<i>Angelica sylvestris</i> 15,19,20,21,	x	4.30	5.28	3.69	0.34	3.00	9.27	175.90	3162.84	396.61	32.15
	min	3.75	4.78	1.88	0.20	0.05	6.08	110.25	870.93	164.53	13.60
	max	6.49	7.28	6.31	0.46	11.58	16.91	227.71	6942.49	893.96	68.58
	v	96.07	97.90	43.95	27.30	165.13	47.84	26.75	73.06	73.19	66.97
<i>Anthericum ramosum</i> 7,8,17,	x	6.95	7.48	3.49	0.37	43.35	8.71	206.19	6674.72	920.22	76.60
	min	6.79	7.32	1.16	0.10	8.74	5.42	84.20	5839.29	618.53	71.81
	max	7.41	7.58	6.86	0.75	87.44	13.87	355.95	8067.68	1108.70	82.28
	v	104.68	106.93	69.78	76.35	75.71	42.42	54.64	14.85	23.42	5.64
<i>Anthyllis vulneraria</i> 19,20,21,24,29,32,33,44,	x	4.28	5.39	5.29	0.64	5.41	6.58	162.32	5731.20	251.34	59.23
	min	3.66	4.78	1.03	0.11	0.05	0.00	64.94	870.93	149.95	13.60
	max	8.02	8.44	13.32	1.75	31.00	16.91	234.04	10608.30	399.10	101.66
	v	95.11	96.85	81.51	89.43	183.73	72.59	36.96	70.90	31.78	57.98
<i>Arenaria serpyllifolia</i> 2,13,32,36,	x	4.24	5.02	3.52	0.37	1.65	12.31	177.83	3780.42	342.62	51.23
	min	3.80	4.63	0.57	0.06	0.06	0.55	31.95	151.55	29.00	31.21
	max	6.88	7.64	8.21	0.94	6.30	40.44	274.36	10608.30	685.53	101.66
	v	98.83	99.59	88.22	96.16	162.39	132.59	50.31	107.32	69.45	57.23
<i>Arrhenatherum elatius</i> 3,25,31,32,	x	6.41	6.76	5.19	0.62	2.01	5.47	251.66	5662.70	380.13	62.77
	min	6.21	6.50	1.73	0.16	0.33	0.61	48.40	1805.10	123.35	29.13
	max	6.88	7.64	8.65	1.10	6.30	11.69	506.70	10608.30	521.50	101.66
	v	105.18	101.70	62.43	65.79	123.53	72.93	65.31	66.88	40.67	51.30
<i>Artemisia campestris</i> 16,17,18,28,29,	x	6.74	7.53	6.04	0.71	5.50	8.13	306.45	7724.10	449.67	72.59
	min	6.58	7.29	2.29	0.20	2.14	5.42	211.37	4380.97	85.00	41.41
	max	7.12	7.71	10.00	1.25	8.80	13.87	410.33	11521.55	1033.43	88.83
	v	106.92	105.33	50.12	60.16	50.48	37.16	24.24	31.26	76.14	23.89

Taxon and localities		pH <sub>KCl</sub>	pH <sub>H<sub>2</sub>O</sub>	Co <sub>x</sub> [%]	N <sub>t</sub> [%]	CaCO <sub>3</sub> [%]	P [mg.kg <sup>-1</sup> ]	K [mg.kg <sup>-1</sup> ]	Ca [mg.kg <sup>-1</sup> ]	Mg [mg.kg <sup>-1</sup> ]	Na [mg.kg <sup>-1</sup> ]
<i>Asarum europaeum</i> 14,19,20,21,46,47,	x	4.46	5.43	5.74	0.58	21.66	11.26	167.53	7877.56	494.96	73.41
	min	3.75	4.78	1.88	0.20	0.05	2.81	64.15	870.93	73.65	13.60
	max	7.32	7.72	13.29	1.32	91.16	17.93	323.60	28607.16	2063.35	211.29
	v	95.56	96.32	68.01	73.29	157.16	51.81	49.48	120.93	142.38	93.12
<i>Asperula cynanchica</i> 4,6,7,16,17,18,	x	6.82	7.39	3.26	0.33	31.93	8.27	237.42	6221.37	783.56	70.18
	min	6.58	6.97	1.16	0.10	2.14	6.00	84.20	4380.97	391.83	41.41
	max	7.41	7.71	6.86	0.75	87.44	13.87	410.33	8097.26	1444.52	94.69
	v	103.88	101.75	64.54	73.35	112.16	31.92	50.83	23.03	44.92	22.27
<i>Aster amellus</i> agg. 6,8,16,	x	6.83	7.43	2.16	0.32	24.74	8.76	220.07	6886.79	710.15	78.05
	min	6.58	7.32	1.22	0.12	2.14	5.42	96.34	6075.90	391.83	68.79
	max	7.33	7.53	2.80	0.75	76.81	13.87	355.95	8097.26	1108.70	94.69
	v	103.20	109.21	31.50	68.46	115.35	31.63	38.53	14.18	43.32	12.44
<i>Astrantia major</i> 14,19,20,21,45,47,	x	4.47	5.46	5.26	0.51	27.03	10.91	135.00	7613.68	655.01	68.57
	min	3.75	4.78	1.88	0.20	0.05	0.74	64.15	870.93	73.65	13.60
	max	7.32	7.72	13.29	1.32	91.16	17.93	212.52	28607.16	2063.35	211.29
	v	93.69	95.69	71.20	75.07	121.16	58.28	33.20	126.19	109.15	100.66
<i>Betonica officinalis</i> 19,20,21,43,44,	x	3.95	5.04	2.37	0.27	0.13	6.33	135.69	1700.25	500.36	30.55
	min	3.66	4.78	1.03	0.14	0.05	0.00	99.70	870.93	164.53	13.60
	max	5.72	6.32	3.37	0.36	0.21	16.91	212.52	3016.12	1470.70	46.89
	v	102.95	103.51	36.38	31.54	44.43	96.17	31.65	42.80	97.62	44.38
<i>Betula pendula</i> 19,20,21,	x	4.17	5.16	2.81	0.30	0.14	10.34	158.63	1902.96	230.83	20.01
	min	3.75	4.78	1.88	0.20	0.05	6.65	110.25	870.93	164.53	13.60
	max	5.72	6.32	3.37	0.36	0.21	16.91	212.52	3016.12	282.39	26.65
	v	98.29	99.96	23.67	23.40	47.74	45.08	26.44	46.12	21.33	26.64
<i>Brachypodium sylvaticum</i> 19,20,21,	x	4.17	5.16	2.81	0.30	0.14	10.34	158.63	1902.96	230.83	20.01
	min	3.75	4.78	1.88	0.20	0.05	6.65	110.25	870.93	164.53	13.60
	max	5.72	6.32	3.37	0.36	0.21	16.91	212.52	3016.12	282.39	26.65
	v	98.29	99.96	23.67	23.40	47.74	45.08	26.44	46.12	21.33	26.64

Taxon and localities		pH <sub>KCl</sub>	pH <sub>H<sub>2</sub>O</sub>	Co <sub>x</sub> [%]	N <sub>t</sub> [%]	CaCO <sub>3</sub> [%]	P [mg.kg <sup>-1</sup> ]	K [mg.kg <sup>-1</sup> ]	Ca [mg.kg <sup>-1</sup> ]	Mg [mg.kg <sup>-1</sup> ]	Na [mg.kg <sup>-1</sup> ]
<i>Bromus hordeaceus</i> 1,2,8,	x	4.61	5.30	1.35	0.13	11.40	4.26	157.37	3129.76	744.95	52.58
	min	4.14	4.85	0.57	0.06	0.09	3.10	101.30	1494.84	440.62	32.06
	max	6.88	7.32	2.46	0.24	33.87	5.42	192.40	6117.20	1108.70	82.28
	v	97.09	97.85	59.21	60.73	139.31	22.23	25.45	67.60	37.04	40.89
<i>Bromus sterilis</i> 1,3,9,	x	6.03	6.43	2.91	0.26	0.43	8.01	373.05	3112.33	670.10	43.64
	min	5.77	6.12	1.03	0.10	0.25	4.26	101.30	1777.23	440.62	29.13
	max	6.31	7.28	5.98	0.53	0.71	11.69	511.16	5754.65	1048.19	58.39
	v	103.85	101.72	75.06	73.34	46.67	37.87	51.51	60.03	40.20	27.37
<i>Bupleurum longifolium</i> 19,20,21,46,	x	4.29	5.26	4.15	0.48	0.15	8.46	199.87	2830.03	208.20	34.05
	min	3.75	4.78	1.88	0.20	0.05	2.81	110.25	870.93	140.30	13.60
	max	5.72	6.32	8.16	1.01	0.21	16.91	323.60	5611.25	282.39	76.15
	v	96.39	98.71	57.51	65.56	40.52	61.35	40.09	62.77	27.82	72.68
<i>Calamagrostis arundinacea</i> 19,20,21,46,	x	4.29	5.26	4.15	0.48	0.15	8.46	199.87	2830.03	208.20	34.05
	min	3.75	4.78	1.88	0.20	0.05	2.81	110.25	870.93	140.30	13.60
	max	5.72	6.32	8.16	1.01	0.21	16.91	323.60	5611.25	282.39	76.15
	v	96.39	98.71	57.51	65.56	40.52	61.35	40.09	62.77	27.82	72.68
<i>Calamagrostis epigejos</i> 15,19,20,21,25,	x	4.39	5.37	3.39	0.33	2.49	7.54	150.40	2963.37	341.96	32.29
	min	3.75	4.78	1.88	0.20	0.05	0.61	48.40	870.93	123.35	13.60
	max	6.49	7.28	6.31	0.46	11.58	16.91	227.71	6942.49	893.96	68.58
	v	94.66	96.74	46.30	26.42	182.24	69.87	43.96	71.03	82.38	59.65
<i>Calamagrostis varia</i> 26,27,45,47,	x	6.15	7.07	12.06	1.08	39.05	8.79	202.59	9273.29	1297.16	101.79
	min	5.64	6.79	5.33	0.57	7.86	0.74	128.44	4027.95	113.70	47.10
	max	7.27	7.43	23.04	1.68	77.73	17.93	391.49	16195.60	2063.35	136.90
	v	98.05	103.41	58.21	40.88	64.20	83.57	53.96	48.00	59.75	35.10
<i>Campanula patula</i> 32,41,44,	x	4.14	5.42	4.03	0.44	2.30	1.83	123.91	4872.35	320.88	64.14
	min	3.66	4.95	1.03	0.14	0.08	0.00	59.43	1276.90	224.95	43.86
	max	7.07	7.64	8.21	0.94	6.30	5.15	212.59	10608.30	399.10	101.66
	v	96.38	97.29	75.77	81.64	122.95	128.85	52.32	84.13	22.50	41.41

Taxon and localities		pH <sub>KCl</sub>	pH <sub>H<sub>2</sub>O</sub>	Co <sub>x</sub> [%]	N <sub>t</sub> [%]	CaCO <sub>3</sub> [%]	P [mg.kg <sup>-1</sup> ]	K [mg.kg <sup>-1</sup> ]	Ca [mg.kg <sup>-1</sup> ]	Mg [mg.kg <sup>-1</sup> ]	Na [mg.kg <sup>-1</sup> ]
<i>Campanula persicifolia</i> 19,20,21,	x	4.17	5.16	2.81	0.30	0.14	10.34	158.63	1902.96	230.83	20.01
	min	3.75	4.78	1.88	0.20	0.05	6.65	110.25	870.93	164.53	13.60
	max	5.72	6.32	3.37	0.36	0.21	16.91	212.52	3016.12	282.39	26.65
	v	98.29	99.96	23.67	23.40	47.74	45.08	26.44	46.12	21.33	26.64
<i>Campanula rapunculoides</i> 19,20,21,33,	x	4.30	5.28	2.44	0.25	7.86	8.23	135.21	3785.17	224.52	34.48
	min	3.75	4.78	1.32	0.11	0.05	1.92	64.94	870.93	164.53	13.60
	max	8.02	8.44	3.37	0.36	31.00	16.91	212.52	9431.80	282.39	77.89
	v	96.05	97.87	35.48	41.29	170.12	66.05	40.27	88.44	19.60	73.91
<i>Campanula sibirica</i> 5,24,32,	x	6.63	6.99	8.35	1.01	18.80	7.42	223.84	8547.18	495.41	89.69
	min	6.34	6.68	3.53	0.33	0.84	5.15	212.59	4783.90	224.95	68.21
	max	6.97	7.64	13.32	1.75	49.27	9.10	234.04	10608.30	862.19	101.66
	v	102.45	101.58	47.87	57.87	115.18	22.45	3.93	31.18	54.28	16.97
<i>Campanula trachelium</i> 19,20,21,22,46,47,	x	4.37	5.34	5.32	0.58	6.49	9.90	202.67	3426.84	556.36	41.72
	min	3.75	4.78	1.88	0.20	0.05	2.81	110.25	870.93	140.30	13.60
	max	5.72	7.03	13.29	1.32	38.20	17.93	323.60	7338.10	2063.35	93.01
	v	96.18	98.19	77.64	74.44	218.44	56.17	37.52	67.04	122.40	74.12
<i>Carex hirta</i> 1,2,3,33,	x	4.73	5.42	1.16	0.41	0.50	5.09	200.43	1269.62	412.24	26.48
	min	4.14	4.85	0.57	0.06	0.09	1.32	1.32	1.32	1.32	1.32
	max	8.02	8.44	1.73	1.32	1.32	11.69	506.70	1805.10	685.53	43.41
	v	95.32	96.39	36.19	129.74	97.09	77.56	94.45	58.46	61.40	58.43
<i>Carex humilis</i> 11,23,24,	x	6.69	7.01	7.59	0.96	25.89	7.12	198.67	7627.22	250.38	71.66
	min	6.34	6.68	0.43	0.04	0.84	4.36	28.08	1685.06	99.20	28.22
	max	7.76	8.27	13.32	1.75	50.93	9.10	333.89	10947.25	426.98	99.20
	v	100.53	100.89	70.65	72.84	78.99	28.26	64.09	55.22	53.93	43.37
<i>Carex michelii</i> 5,6,33,	x	7.26	7.43	2.02	0.19	52.36	6.08	128.72	7437.65	564.24	80.26
	min	6.97	7.14	1.22	0.11	31.00	1.92	64.94	4783.90	205.60	68.21
	max	8.02	8.44	3.53	0.33	76.81	8.29	224.88	9431.80	862.19	94.69
	v	101.82	101.59	52.70	54.34	35.96	48.40	53.75	26.27	48.11	13.63

Taxon and localities		pH <sub>KCl</sub>	pH <sub>H<sub>2</sub>O</sub>	Co <sub>x</sub> [%]	N <sub>t</sub> [%]	CaCO <sub>3</sub> [%]	P [mg.kg <sup>-1</sup> ]	K [mg.kg <sup>-1</sup> ]	Ca [mg.kg <sup>-1</sup> ]	Mg [mg.kg <sup>-1</sup> ]	Na [mg.kg <sup>-1</sup> ]
<i>Carex montana</i> 19,20,21,	x	4.17	5.16	2.81	0.30	0.14	10.34	158.63	1902.96	230.83	20.01
	min	3.75	4.78	1.88	0.20	0.05	6.65	110.25	870.93	164.53	13.60
	max	5.72	6.32	3.37	0.36	0.21	16.91	212.52	3016.12	282.39	26.65
	v	98.29	99.96	23.67	23.40	47.74	45.08	26.44	46.12	21.33	26.64
<i>Carex muricata</i> agg. 8,19,20,21,32,	x	4.40	5.38	3.82	0.42	8.12	8.32	173.38	4486.87	440.06	48.79
	min	3.75	4.78	1.88	0.20	0.05	5.15	110.25	870.93	164.53	13.60
	max	6.88	7.64	8.21	0.94	33.87	16.91	212.59	10608.30	1108.70	101.66
	v	94.62	96.59	59.11	64.17	161.31	52.63	22.33	78.78	77.89	73.82
<i>Carex ovalis</i> 19,20,21,	x	4.17	5.16	2.81	0.30	0.14	10.34	158.63	1902.96	230.83	20.01
	min	3.75	4.78	1.88	0.20	0.05	6.65	110.25	870.93	164.53	13.60
	max	5.72	6.32	3.37	0.36	0.21	16.91	212.52	3016.12	282.39	26.65
	v	98.29	99.96	23.67	23.40	47.74	45.08	26.44	46.12	21.33	26.64
<i>Carex praecox</i> 23,24,35,	x	5.15	6.18	7.73	0.97	17.29	6.93	201.56	7230.37	128.48	73.02
	min	4.69	5.77	0.87	0.07	0.09	3.81	36.76	494.50	61.30	32.32
	max	6.88	7.11	13.32	1.75	50.93	9.10	333.89	10947.25	224.95	99.20
	v	97.44	99.26	66.79	71.03	137.63	32.64	61.25	65.99	54.44	39.95
<i>Carex sylvatica</i> 19,20,21,	x	4.17	5.16	2.81	0.30	0.14	10.34	158.63	1902.96	230.83	20.01
	min	3.75	4.78	1.88	0.20	0.05	6.65	110.25	870.93	164.53	13.60
	max	5.72	6.32	3.37	0.36	0.21	16.91	212.52	3016.12	282.39	26.65
	v	98.29	99.96	23.67	23.40	47.74	45.08	26.44	46.12	21.33	26.64
<i>Carex tomentosa</i> 4,5,6,8,32,33,	x	6.98	7.32	3.66	0.39	35.08	5.88	170.01	7317.59	774.18	82.23
	min	6.71	6.97	1.22	0.11	6.30	1.92	64.94	4783.90	205.60	68.21
	max	8.02	8.44	8.21	0.94	76.81	8.29	242.86	10608.30	1444.52	101.66
	v	103.34	102.09	66.98	75.78	66.54	36.19	39.22	30.44	54.17	15.16
<i>Centaurium erythraea</i> 19,20,21,42,44,	x	3.86	4.97	2.13	0.24	0.15	6.20	140.30	1554.28	295.75	27.93
	min	3.56	4.67	1.03	0.14	0.05	0.00	99.70	785.65	164.53	13.60
	max	5.72	6.32	3.37	0.36	0.23	16.91	212.52	3016.12	447.65	46.89
	v	102.75	102.77	46.47	38.21	48.35	100.26	28.76	52.61	32.02	41.01

Taxon and localities		pH <sub>KCl</sub>	pH <sub>H<sub>2</sub>O</sub>	Co <sub>x</sub> [%]	N <sub>t</sub> [%]	CaCO <sub>3</sub> [%]	P [mg.kg <sup>-1</sup> ]	K [mg.kg <sup>-1</sup> ]	Ca [mg.kg <sup>-1</sup> ]	Mg [mg.kg <sup>-1</sup> ]	Na [mg.kg <sup>-1</sup> ]
<i>Cerastium brachypetalum</i> 2,28,29,30,31,	x	4.83	5.54	6.87	0.85	3.77	15.72	232.57	7339.53	294.89	73.17
	min	4.14	4.85	0.57	0.06	0.09	3.10	192.40	1494.84	77.40	32.06
	max	7.12	7.70	10.00	1.25	8.80	58.41	319.81	11521.55	685.53	88.83
	v	93.88	94.68	48.03	50.31	82.13	136.08	19.94	44.69	82.78	29.81
<i>Cerastium semidecandrum</i> 1,28,30,	x	6.20	6.57	5.40	0.65	4.48	23.31	207.14	6777.91	201.01	67.20
	min	5.77	6.12	1.03	0.10	0.25	4.26	101.30	1777.23	77.40	43.41
	max	7.12	7.70	8.26	1.08	8.80	58.41	319.81	11521.55	440.62	88.83
	v	98.64	98.29	58.13	63.32	77.87	106.63	43.13	58.75	84.31	27.69
<i>Cerasus avium</i> 19,20,21,	x	4.17	5.16	2.81	0.30	0.14	10.34	158.63	1902.96	230.83	20.01
	min	3.75	4.78	1.88	0.20	0.05	6.65	110.25	870.93	164.53	13.60
	max	5.72	6.32	3.37	0.36	0.21	16.91	212.52	3016.12	282.39	26.65
	v	98.29	99.96	23.67	23.40	47.74	45.08	26.44	46.12	21.33	26.64
<i>Chamerion angustifolium</i> 19,20,21,	x	4.17	5.16	2.81	0.30	0.14	10.34	158.63	1902.96	230.83	20.01
	min	3.75	4.78	1.88	0.20	0.05	6.65	110.25	870.93	164.53	13.60
	max	5.72	6.32	3.37	0.36	0.21	16.91	212.52	3016.12	282.39	26.65
	v	98.29	99.96	23.67	23.40	47.74	45.08	26.44	46.12	21.33	26.64
<i>Cirsium arvense</i> 3,19,20,21,	x	4.30	5.28	2.54	0.26	0.19	10.68	245.65	1878.49	303.50	22.29
	min	3.75	4.78	1.73	0.16	0.05	6.65	110.25	870.93	164.53	13.60
	max	6.31	6.50	3.37	0.36	0.33	16.91	506.70	3016.12	521.50	29.13
	v	96.08	98.07	29.26	33.21	53.65	38.20	63.11	40.52	43.79	27.25
<i>Cirsium erisithales</i> 19,20,21,45,47,	x	4.39	5.38	5.41	0.56	14.20	9.94	149.17	3414.98	771.29	40.03
	min	3.75	4.78	1.88	0.20	0.05	0.74	110.25	870.93	164.53	13.60
	max	6.90	7.31	13.29	1.32	38.20	17.93	212.52	7338.10	2063.35	93.01
	v	94.75	96.63	75.57	71.29	121.95	65.86	23.28	65.39	94.59	71.93
<i>Cirsium vulgare</i> 24,32,43,	x	4.32	5.35	7.97	0.99	2.44	4.97	183.17	7457.72	698.25	82.23
	min	3.84	4.88	2.36	0.29	0.17	0.66	102.89	1515.50	224.95	45.83
	max	6.88	7.64	13.32	1.75	6.30	9.10	234.04	10608.30	1470.70	101.66
	v	96.57	97.40	56.21	60.34	112.67	69.38	31.36	56.38	78.88	31.32

Taxon and localities		pH <sub>KCl</sub>	pH <sub>H<sub>2</sub>O</sub>	Co <sub>x</sub> [%]	N <sub>t</sub> [%]	CaCO <sub>3</sub> [%]	P [mg.kg <sup>-1</sup> ]	K [mg.kg <sup>-1</sup> ]	Ca [mg.kg <sup>-1</sup> ]	Mg [mg.kg <sup>-1</sup> ]	Na [mg.kg <sup>-1</sup> ]
<i>Clinopodium vulgare</i> 41,45,46,	x	5.77	6.30	5.44	0.60	11.04	1.29	170.49	4123.68	488.62	55.70
	min	5.31	5.85	2.83	0.23	0.19	0.33	59.43	2731.85	140.30	43.86
	max	7.07	7.47	8.16	1.01	32.40	2.81	323.60	5611.25	1100.60	76.15
	v	97.87	98.21	40.03	52.70	136.82	83.92	65.62	28.55	88.85	26.06
<i>Convolvulus arvensis</i> 1,10,17,18,	x	6.27	6.68	3.88	0.36	10.90	33.47	300.53	5191.97	625.61	64.46
	min	5.77	6.12	1.03	0.10	0.25	4.26	101.30	1777.23	440.26	41.41
	max	7.02	7.71	6.86	0.75	31.36	109.74	410.33	8067.68	1033.43	97.30
	v	98.47	97.20	59.96	70.25	111.95	132.02	39.36	45.59	38.85	36.21
<i>Corylus avellana</i> 19,20,21,45,	x	4.30	5.28	3.44	0.37	8.21	7.94	151.08	2434.21	448.27	26.78
	min	3.75	4.78	1.88	0.20	0.05	0.74	110.25	870.93	164.53	13.60
	max	6.90	7.31	5.33	0.57	32.40	16.91	212.52	4027.95	1100.60	47.10
	v	96.06	97.90	35.80	35.55	170.25	72.97	25.55	49.03	84.55	47.07
<i>Corynephorus canescens</i> 34,35,36,	x	4.22	5.07	0.86	0.08	0.23	2.43	35.97	455.97	55.08	35.72
	min	3.80	4.63	0.85	0.07	0.06	0.55	31.95	151.55	29.00	32.32
	max	5.63	6.55	0.87	0.09	0.54	3.81	39.21	721.85	74.95	39.99
	v	98.52	98.08	1.07	13.07	95.45	56.70	8.38	51.41	34.98	8.93
<i>Crepis sibirica</i> 45,46,47,	x	5.61	6.29	8.93	0.97	23.60	7.16	197.86	5659.10	1101.42	72.09
	min	5.31	5.85	5.33	0.57	0.19	0.74	128.44	4027.95	140.30	47.10
	max	6.90	7.31	13.29	1.32	38.20	17.93	323.60	7338.10	2063.35	93.01
	v	101.73	98.62	36.90	31.87	70.86	107.02	45.02	23.89	71.28	26.30
<i>Cruciata glabra</i> 15,19,20,21,46,	x	4.39	5.35	4.58	0.48	2.44	7.98	205.44	3652.52	345.35	40.95
	min	3.75	4.78	1.88	0.20	0.05	2.81	110.25	870.93	140.30	13.60
	max	6.49	7.28	8.16	1.01	11.58	16.91	323.60	6942.49	893.96	76.15
	v	94.93	97.31	50.26	59.01	187.50	59.34	35.31	62.62	80.83	63.71
<i>Cruciata pedemontana</i> 28,29,30,	x	6.90	7.49	8.38	1.03	5.93	23.69	243.83	9043.63	104.12	82.12
	min	6.69	7.29	6.89	0.76	4.40	5.42	200.32	7034.95	77.40	69.35
	max	7.12	7.70	10.00	1.25	8.80	58.41	319.81	11521.55	149.95	88.83
	v	105.18	104.93	15.14	19.66	34.19	103.66	22.11	20.58	31.27	11.00

Taxon and localities		pH <sub>KCl</sub>	pH <sub>H<sub>2</sub>O</sub>	Co <sub>x</sub> [%]	N <sub>t</sub> [%]	CaCO <sub>3</sub> [%]	P [mg.kg <sup>-1</sup> ]	K [mg.kg <sup>-1</sup> ]	Ca [mg.kg <sup>-1</sup> ]	Mg [mg.kg <sup>-1</sup> ]	Na [mg.kg <sup>-1</sup> ]
<i>Cyanus triumfettii</i> 4,5,6,8,33,	x	7.01	7.27	2.75	0.28	40.83	6.03	161.49	6659.45	849.19	78.34
	min	6.71	6.97	1.22	0.11	13.20	1.92	64.94	4783.90	205.60	68.21
	max	8.02	8.44	5.23	0.58	76.81	8.29	242.86	9431.80	1444.52	94.69
	v	102.55	102.50	54.52	62.47	52.23	38.22	43.34	27.51	49.58	12.50
<i>Cynoglossum officinale</i> 13,17,32,	x	6.37	7.11	6.50	0.69	5.07	19.82	280.97	7180.99	563.13	69.53
	min	6.00	6.74	4.43	0.39	0.16	5.15	212.59	2867.00	256.86	31.21
	max	6.88	7.64	8.21	0.94	8.74	40.44	355.95	10608.30	1033.43	101.66
	v	100.48	100.23	24.09	33.04	71.24	75.73	20.90	44.87	59.95	41.84
<i>Dactylis glomerata</i> 3,15,16,19,20,21,22,46,	x	4.50	5.46	3.69	0.38	1.85	8.42	255.46	3505.80	385.26	40.48
	min	3.75	4.78	1.73	0.16	0.05	2.81	110.25	870.93	140.30	13.60
	max	6.58	7.53	8.16	1.01	11.58	16.91	506.70	6942.49	893.96	76.15
	v	94.31	96.62	59.01	68.64	201.83	46.86	44.36	62.44	59.43	59.93
<i>Daphne mezereum</i> 45,46,47,	x	5.61	6.29	8.93	0.97	23.60	7.16	197.86	5659.10	1101.42	72.09
	min	5.31	5.85	5.33	0.57	0.19	0.74	128.44	4027.95	140.30	47.10
	max	6.90	7.31	13.29	1.32	38.20	17.93	323.60	7338.10	2063.35	93.01
	v	101.73	98.62	36.90	31.87	70.86	107.02	45.02	23.89	71.28	26.30
<i>Dentaria bulbifera</i> 19,20,21,	x	4.17	5.16	2.81	0.30	0.14	10.34	158.63	1902.96	230.83	20.01
	min	3.75	4.78	1.88	0.20	0.05	6.65	110.25	870.93	164.53	13.60
	max	5.72	6.32	3.37	0.36	0.21	16.91	212.52	3016.12	282.39	26.65
	v	98.29	99.96	23.67	23.40	47.74	45.08	26.44	46.12	21.33	26.64
<i>Deschampsia cespitosa</i> 19,20,21,	x	4.17	5.16	2.81	0.30	0.14	10.34	158.63	1902.96	230.83	20.01
	min	3.75	4.78	1.88	0.20	0.05	6.65	110.25	870.93	164.53	13.60
	max	5.72	6.32	3.37	0.36	0.21	16.91	212.52	3016.12	282.39	26.65
	v	98.29	99.96	23.67	23.40	47.74	45.08	26.44	46.12	21.33	26.64
<i>Dianthus carthusianorum</i> 7,28,29,31,	x	6.79	7.40	7.02	0.88	25.45	5.98	213.58	8501.79	332.51	84.06
	min	6.49	7.22	1.16	0.10	0.95	4.41	84.20	5839.29	85.00	71.81
	max	7.41	7.70	10.00	1.25	87.44	7.25	319.81	11521.55	618.53	88.83
	v	102.29	105.01	49.03	51.58	141.07	18.94	39.64	23.82	66.77	8.44

Taxon and localities		pH <sub>KCl</sub>	pH <sub>H<sub>2</sub>O</sub>	Co <sub>x</sub> [%]	N <sub>t</sub> [%]	CaCO <sub>3</sub> [%]	P [mg.kg <sup>-1</sup> ]	K [mg.kg <sup>-1</sup> ]	Ca [mg.kg <sup>-1</sup> ]	Mg [mg.kg <sup>-1</sup> ]	Na [mg.kg <sup>-1</sup> ]
<i>Dianthus pontederiae</i> 28,29,30,31,	x	6.75	7.41	8.45	1.05	4.69	18.87	242.61	8800.70	197.23	83.45
	min	6.49	7.22	6.89	0.76	0.95	4.41	200.32	7034.95	77.40	69.35
	max	7.12	7.70	10.00	1.25	8.80	58.41	319.81	11521.55	476.55	88.83
	v	103.76	104.89	13.08	16.98	59.36	121.07	19.26	18.93	83.01	9.77
<i>Digitalis grandiflora</i> 19,20,21,22,25,40,45,	x	4.45	5.43	2.73	0.30	8.18	5.86	142.94	3375.39	370.44	36.16
	min	3.75	4.78	1.12	0.11	0.05	0.61	48.40	870.93	123.35	13.60
	max	7.45	7.92	5.33	0.57	32.40	16.91	274.99	9822.65	1100.60	92.01
	v	94.85	96.79	46.82	45.30	156.68	92.52	51.21	82.62	84.35	68.88
<i>Epipactis helleborine</i> 19,20,21,47,	x	4.29	5.28	5.43	0.56	9.66	12.24	154.36	3261.74	688.96	38.26
	min	3.75	4.78	1.88	0.20	0.05	6.65	110.25	870.93	164.53	13.60
	max	5.72	7.03	13.29	1.32	38.20	17.93	212.52	7338.10	2063.35	93.01
	v	96.21	97.93	84.17	80.07	170.69	42.54	24.01	75.82	115.34	83.50
<i>Equisetum arvense</i> 25,38,43,	x	4.32	5.35	1.72	0.22	2.76	0.98	63.21	4603.50	561.98	57.48
	min	3.84	4.88	0.61	0.08	0.17	0.61	38.34	1515.50	91.90	32.85
	max	8.18	8.32	2.36	0.29	7.64	1.68	102.89	10129.50	1470.70	93.76
	v	96.58	97.47	45.97	43.60	125.10	50.14	44.86	85.08	114.36	45.57
<i>Euphrasia stricta</i> 5,6,8,	x	7.02	7.29	2.40	0.23	53.32	7.24	166.55	6332.79	865.28	81.73
	min	6.88	7.14	1.22	0.12	33.87	5.42	96.34	4783.90	624.94	68.21
	max	7.33	7.46	3.53	0.33	76.81	8.29	224.88	8097.26	1108.70	94.69
	v	106.07	107.12	39.35	36.32	33.31	17.86	31.91	21.50	22.83	13.24
<i>Fagus sylvatica</i> 15,19,20,21,45,47,	x	4.47	5.46	5.56	0.54	13.77	9.29	162.26	4002.90	791.73	44.79
	min	3.75	4.78	1.88	0.20	0.05	0.74	110.25	870.93	164.53	13.60
	max	6.90	7.31	13.29	1.32	38.20	17.93	227.71	7338.10	2063.35	93.01
	v	93.71	95.70	67.40	67.27	115.08	66.11	26.59	60.60	84.32	63.31
<i>Festuca pallens</i> 11,23,24,	x	6.69	7.01	7.59	0.96	25.89	7.12	198.67	7627.22	250.38	71.66
	min	6.34	6.68	0.43	0.04	0.84	4.36	28.08	1685.06	99.20	28.22
	max	7.76	8.27	13.32	1.75	50.93	9.10	333.89	10947.25	426.98	99.20
	v	100.53	100.89	70.65	72.84	78.99	28.26	64.09	55.22	53.93	43.37

Taxon and localities		pH <sub>KCl</sub>	pH <sub>H<sub>2</sub>O</sub>	Co <sub>x</sub> [%]	N <sub>t</sub> [%]	CaCO <sub>3</sub> [%]	P [mg.kg <sup>-1</sup> ]	K [mg.kg <sup>-1</sup> ]	Ca [mg.kg <sup>-1</sup> ]	Mg [mg.kg <sup>-1</sup> ]	Na [mg.kg <sup>-1</sup> ]
<i>Festuca pseudovina</i> 6,17,18,23,	x	6.87	7.40	4.84	0.54	34.93	9.01	299.13	7873.29	586.42	74.84
	min	6.71	7.11	1.22	0.12	3.24	6.00	96.34	4380.97	99.20	41.41
	max	7.33	7.71	9.01	1.10	76.81	13.87	410.33	10947.25	1033.43	94.69
	v	105.62	103.27	66.18	73.96	87.07	32.56	40.23	29.61	56.47	27.33
<i>Festuca rubra</i> 1,2,3,5,	x	4.73	5.42	1.72	0.16	12.49	6.77	256.32	2465.27	627.46	43.20
	min	4.14	4.85	0.57	0.06	0.09	3.10	101.30	1494.84	440.62	29.13
	max	6.97	7.14	3.53	0.33	49.27	11.69	506.70	4783.90	862.19	68.21
	v	95.34	96.44	65.56	65.04	170.11	49.86	59.10	54.52	25.77	35.63
<i>Festuca rupicola</i> 13,28,29,30,	x	6.46	7.16	7.39	0.87	4.49	27.88	251.47	7499.48	142.30	69.40
	min	6.00	6.74	4.43	0.39	0.16	5.42	200.32	2867.00	77.40	31.21
	max	7.12	7.70	10.00	1.25	8.80	58.41	319.81	11521.55	256.86	88.83
	v	99.33	100.32	27.53	37.77	68.05	80.60	19.30	41.64	50.53	33.71
<i>Festuca valesiaca</i> 17,18,28,30,31,32,	x	6.78	7.54	6.86	0.81	5.41	15.85	289.66	8280.89	443.27	77.40
	min	6.49	7.22	2.29	0.20	0.95	4.41	200.32	4380.97	77.40	41.41
	max	7.12	7.71	8.65	1.10	8.80	58.41	410.33	11521.55	1033.43	101.66
	v	104.55	104.12	31.43	37.54	52.87	121.69	26.87	28.22	73.37	24.64
<i>Fragaria vesca</i> 2,4,15,19,20,21,22,27, 39,40,41,47,	x	4.57	5.47	5.36	0.47	14.24	7.45	180.77	4553.95	741.64	56.68
	min	3.75	4.78	0.57	0.06	0.05	0.33	59.43	870.93	164.53	13.60
	max	7.76	8.04	23.04	1.68	75.10	17.93	391.49	9822.65	2063.35	130.15
	v	94.02	95.92	116.85	102.33	151.69	76.51	51.09	66.26	88.99	61.54
<i>Fragaria viridis</i> 7,16,23,24,38,40,	x	6.81	7.22	4.67	0.57	28.80	5.77	166.36	8843.99	276.84	85.52
	min	6.34	6.68	0.61	0.08	0.84	1.01	38.34	5839.29	91.90	68.79
	max	8.18	8.32	13.32	1.75	87.44	9.10	333.89	10947.25	618.53	99.20
	v	99.82	99.01	102.92	112.83	108.83	55.51	64.56	23.40	65.98	13.24
<i>Galium glaucum</i> 28,29,30,32,	x	6.89	7.53	8.34	1.01	6.03	19.06	236.02	9434.80	177.86	87.01
	min	6.69	7.29	6.89	0.76	4.40	5.15	200.32	7034.95	77.40	69.35
	max	7.12	7.70	10.00	1.25	8.80	58.41	319.81	11521.55	399.10	101.66
	v	106.14	105.00	13.21	17.81	29.28	119.29	20.60	18.53	73.54	13.24

Taxon and localities		pH <sub>KCl</sub>	pH <sub>H<sub>2</sub>O</sub>	Co <sub>x</sub> [%]	N <sub>t</sub> [%]	CaCO <sub>3</sub> [%]	P [mg.kg <sup>-1</sup> ]	K [mg.kg <sup>-1</sup> ]	Ca [mg.kg <sup>-1</sup> ]	Mg [mg.kg <sup>-1</sup> ]	Na [mg.kg <sup>-1</sup> ]
<i>Galium molugo</i> agg. 3,33,38,	x	6.77	6.97	1.22	0.11	12.99	5.10	203.33	7122.13	273.00	66.93
	min	6.31	6.50	0.61	0.08	0.33	1.68	38.34	1805.10	91.90	29.13
	max	8.18	8.44	1.73	0.16	31.00	11.69	506.70	10129.50	521.50	93.76
	v	98.09	98.09	38.08	26.19	100.69	91.50	105.64	52.94	66.57	41.09
<i>Galium verum</i> 10,18,31,33,42,43,	x	4.15	5.24	3.52	0.37	11.16	20.46	212.92	5121.30	604.81	63.77
	min	3.56	4.67	1.16	0.11	0.17	0.00	64.94	785.65	205.60	32.74
	max	8.02	8.44	8.65	1.10	31.36	109.74	410.33	9431.80	1470.70	97.30
	v	95.69	96.83	75.94	90.74	127.21	195.47	59.41	62.59	66.74	38.77
<i>Gentiana asclepiadea</i> 19,20,21,26,27,	x	4.40	5.38	7.61	0.67	17.20	9.50	203.25	6287.19	543.44	65.42
	min	3.75	4.78	1.88	0.20	0.05	2.46	110.25	870.93	113.70	13.60
	max	7.27	7.43	23.04	1.68	77.73	16.91	391.49	16195.60	1911.00	136.90
	v	94.63	96.66	103.30	80.54	176.79	55.16	49.02	92.38	126.30	85.31
<i>Geranium sylvaticum</i> 19,20,21,45,46,	x	4.39	5.35	4.39	0.50	6.60	6.91	185.58	3069.61	386.68	36.66
	min	3.75	4.78	1.88	0.20	0.05	0.74	110.25	870.93	140.30	13.60
	max	6.90	7.31	8.16	1.01	32.40	16.91	323.60	5611.25	1100.60	76.15
	v	94.91	97.30	49.84	56.98	195.38	80.61	41.58	54.07	93.28	62.03
<i>Glechoma hederacea</i> 2,19,20,21,	x	4.17	5.06	2.25	0.24	0.13	8.53	167.07	1800.93	344.50	23.02
	min	3.75	4.78	0.57	0.06	0.05	3.10	110.25	870.93	164.53	13.60
	max	5.72	6.32	3.37	0.36	0.21	16.91	212.52	3016.12	685.53	32.06
	v	99.99	102.16	50.07	51.04	48.47	59.91	23.43	43.33	58.48	30.26
<i>Helianthemum grandiflorum</i> 6,24,28,33,45,	x	6.84	7.20	5.89	0.73	29.97	5.46	168.71	8665.58	448.22	81.54
	min	6.34	6.68	1.22	0.11	0.84	0.74	64.94	4027.95	85.00	47.10
	max	8.02	8.44	13.32	1.75	76.81	9.10	319.81	11521.55	1100.60	99.20
	v	99.23	99.02	77.38	86.00	88.25	63.06	56.06	29.68	83.33	22.86
<i>Heracleum sphondylium</i> 19,20,21,46,	x	4.29	5.26	4.15	0.48	0.15	8.46	199.87	2830.03	208.20	34.05
	min	3.75	4.78	1.88	0.20	0.05	2.81	110.25	870.93	140.30	13.60
	max	5.72	6.32	8.16	1.01	0.21	16.91	323.60	5611.25	282.39	76.15
	v	96.39	98.71	57.51	65.56	40.52	61.35	40.09	62.77	27.82	72.68

Taxon and localities		pH <sub>KCl</sub>	pH <sub>H<sub>2</sub>O</sub>	Co <sub>x</sub> [%]	N <sub>t</sub> [%]	CaCO <sub>3</sub> [%]	P [mg.kg <sup>-1</sup> ]	K [mg.kg <sup>-1</sup> ]	Ca [mg.kg <sup>-1</sup> ]	Mg [mg.kg <sup>-1</sup> ]	Na [mg.kg <sup>-1</sup> ]
<i>Hieracium murorum</i> 14,19,20,21,22,47,	x	4.38	5.37	4.72	0.45	21.65	12.06	159.43	7259.49	545.25	64.25
	min	3.75	4.78	1.88	0.20	0.05	6.65	64.15	870.93	73.65	13.60
	max	7.32	7.72	13.29	1.32	91.16	17.93	274.99	28607.16	2063.35	211.29
	v	95.92	97.56	83.39	87.25	157.25	40.31	42.87	134.59	126.21	110.54
<i>Hieracium sabaudum</i> 19,20,21,	x	4.17	5.16	2.81	0.30	0.14	10.34	158.63	1902.96	230.83	20.01
	min	3.75	4.78	1.88	0.20	0.05	6.65	110.25	870.93	164.53	13.60
	max	5.72	6.32	3.37	0.36	0.21	16.91	212.52	3016.12	282.39	26.65
	v	98.29	99.96	23.67	23.40	47.74	45.08	26.44	46.12	21.33	26.64
<i>Hippocrepis comosa</i> 7,8,12,32,	x	7.08	7.57	3.27	0.34	43.25	5.95	129.47	5989.40	779.47	68.97
	min	6.88	7.32	1.16	0.07	6.30	5.15	42.65	1392.81	399.10	20.13
	max	7.48	8.01	8.21	0.94	87.44	6.84	212.59	10608.30	1108.70	101.66
	v	103.43	103.84	88.70	103.77	67.52	11.60	53.08	54.42	36.51	43.73
<i>Hypericum hirsutum</i> 19,20,21,25,41,	x	4.40	5.37	2.69	0.28	0.28	6.39	116.74	2121.24	208.16	27.35
	min	3.75	4.78	1.88	0.20	0.05	0.33	48.40	870.93	123.35	13.60
	max	7.07	7.47	3.37	0.36	0.53	16.91	212.52	3016.12	282.39	43.86
	v	94.65	96.73	21.32	21.33	65.06	94.42	52.10	35.46	27.42	38.34
<i>Hypericum maculatum</i> 22,25,44,46,	x	4.17	5.35	3.36	0.41	0.22	2.77	186.67	2739.11	261.07	44.26
	min	3.66	4.95	1.03	0.14	0.08	0.00	48.40	1276.90	123.35	21.15
	max	6.21	6.52	8.16	1.01	0.47	7.65	323.60	5611.25	442.01	76.15
	v	97.20	100.38	83.68	84.19	67.95	108.63	61.80	61.68	51.50	46.42
<i>Hypericum perforatum</i> 3,4,5,18,19,20,21,25,33, 36,38,40,42,43,44	x	4.18	5.22	2.13	0.23	8.66	4.64	163.04	3788.33	470.02	48.63
	min	3.56	4.63	0.61	0.08	0.05	0.00	31.95	151.55	29.00	13.60
	max	8.18	8.44	5.23	0.58	49.27	16.91	506.70	10129.50	1470.70	93.76
	v	96.32	97.33	57.39	57.45	165.28	104.06	81.90	87.35	93.57	50.71
<i>Inula ensifolia</i> 5,7,8,12,16,18,	x	6.89	7.47	2.25	0.20	36.89	6.80	195.88	4765.01	760.15	58.77
	min	6.58	7.14	1.16	0.07	2.14	5.42	42.65	1392.81	391.83	20.13
	max	7.48	8.01	3.53	0.33	87.44	8.10	410.33	6117.20	1108.70	82.28
	v	102.83	102.95	37.13	44.08	79.26	14.58	60.62	34.51	32.70	36.14

Taxon and localities		pH <sub>KCl</sub>	pH <sub>H<sub>2</sub>O</sub>	Co <sub>x</sub> [%]	N <sub>t</sub> [%]	CaCO <sub>3</sub> [%]	P [mg.kg <sup>-1</sup> ]	K [mg.kg <sup>-1</sup> ]	Ca [mg.kg <sup>-1</sup> ]	Mg [mg.kg <sup>-1</sup> ]	Na [mg.kg <sup>-1</sup> ]
<i>Knautia arvensis</i> 4,16,32,	x	6.71	7.27	5.41	0.59	7.21	6.58	230.09	7183.77	745.15	79.70
	min	6.58	6.97	2.80	0.25	2.14	5.15	212.59	4867.10	391.83	68.65
	max	6.88	7.64	8.21	0.94	13.20	8.10	242.86	10608.30	1444.52	101.66
	v	108.42	101.97	40.87	48.11	63.23	18.33	5.56	34.40	66.37	19.48
<i>Koeleria macrantha</i> 5,6,7,8,28,29,30,31,32,33,	x	6.93	7.44	5.17	0.60	30.34	11.11	183.18	8008.06	460.80	83.03
	min	6.49	7.14	1.16	0.10	0.95	1.92	64.94	4783.90	77.40	68.21
	max	8.02	8.44	10.00	1.25	87.44	58.41	319.81	11521.55	1108.70	101.66
	v	101.87	103.52	65.23	73.40	99.04	142.78	41.15	25.31	71.54	12.76
<i>Larix decidua</i> 19,20,21,	x	4.17	5.16	2.81	0.30	0.14	10.34	158.63	1902.96	230.83	20.01
	min	3.75	4.78	1.88	0.20	0.05	6.65	110.25	870.93	164.53	13.60
	max	5.72	6.32	3.37	0.36	0.21	16.91	212.52	3016.12	282.39	26.65
	v	98.29	99.96	23.67	23.40	47.74	45.08	26.44	46.12	21.33	26.64
<i>Laserpitium latifolium</i> 5,14,45,47,	x	6.19	7.23	6.67	0.62	52.76	10.62	139.75	11189.28	1024.95	104.90
	min	5.64	7.03	3.53	0.25	32.40	0.74	64.15	4027.95	73.65	47.10
	max	7.32	7.72	13.29	1.32	91.16	17.93	224.88	28607.16	2063.35	211.29
	v	97.25	104.50	58.11	68.36	43.57	63.96	40.94	90.54	69.26	60.57
<i>Lathyrus niger</i> 19,20,21,22,	x	4.21	5.19	2.62	0.28	0.14	9.67	187.72	1902.92	283.62	20.30
	min	3.75	4.78	1.88	0.20	0.05	6.65	110.25	870.93	164.53	13.60
	max	5.72	6.32	3.37	0.36	0.21	16.91	274.99	3016.12	442.01	26.65
	v	98.95	100.44	25.39	24.48	41.34	43.45	33.09	39.94	35.57	22.87
<i>Lathyrus pratensis</i> 19,20,21,45,	x	4.30	5.28	3.44	0.37	8.21	7.94	151.08	2434.21	448.27	26.78
	min	3.75	4.78	1.88	0.20	0.05	0.74	110.25	870.93	164.53	13.60
	max	6.90	7.31	5.33	0.57	32.40	16.91	212.52	4027.95	1100.60	47.10
	v	96.06	97.90	35.80	35.55	170.25	72.97	25.55	49.03	84.55	47.07
<i>Lathyrus sylvestris</i> 19,20,21,32,	x	4.30	5.28	4.16	0.46	1.68	9.04	172.12	4079.29	272.90	40.42
	min	3.75	4.78	1.88	0.20	0.05	5.15	110.25	870.93	164.53	13.60
	max	6.88	7.64	8.21	0.94	6.30	16.91	212.59	10608.30	399.10	101.66
	v	96.06	97.89	57.82	61.50	158.81	51.09	25.09	94.27	30.94	88.21

Taxon and localities		pH <sub>KCl</sub>	pH <sub>H<sub>2</sub>O</sub>	Co <sub>x</sub> [%]	N <sub>t</sub> [%]	CaCO <sub>3</sub> [%]	P [mg.kg <sup>-1</sup> ]	K [mg.kg <sup>-1</sup> ]	Ca [mg.kg <sup>-1</sup> ]	Mg [mg.kg <sup>-1</sup> ]	Na [mg.kg <sup>-1</sup> ]
<i>Leontodon hispidus</i> 19,20,21,25,39,45,	x	4.47	5.45	2.90	0.31	18.07	5.69	123.81	2701.58	370.61	35.10
	min	3.75	4.78	1.43	0.12	0.05	0.61	48.40	870.93	123.35	13.60
	max	7.76	8.04	5.33	0.57	75.10	16.91	212.52	4307.15	1100.60	70.60
	v	93.59	95.78	44.33	45.20	155.46	100.47	41.39	44.95	89.76	54.28
<i>Lepidium campestre</i> 1,2,32,	x	4.61	5.30	3.27	0.36	2.21	4.17	168.76	4626.79	508.42	59.04
	min	4.14	4.85	0.57	0.06	0.09	3.10	101.30	1494.84	399.10	32.06
	max	6.88	7.64	8.21	0.94	6.30	5.15	212.59	10608.30	685.53	101.66
	v	97.09	97.82	106.89	111.66	130.59	20.13	28.69	91.45	24.86	51.64
<i>Leucanthemum vulgare</i> agg. 1,19,20,21,42,44,	x	3.94	5.04	1.94	0.22	0.16	5.88	133.80	1591.44	319.89	30.51
	min	3.56	4.67	1.03	0.10	0.05	0.00	99.70	785.65	164.53	13.60
	max	5.77	6.32	3.37	0.36	0.25	16.91	212.52	3016.12	447.65	46.89
	v	100.42	101.03	50.93	45.82	46.04	97.35	29.59	47.19	31.86	39.14
<i>Lilium martagon</i> 19,20,21,47,	x	4.29	5.28	5.43	0.56	9.66	12.24	154.36	3261.74	688.96	38.26
	min	3.75	4.78	1.88	0.20	0.05	6.65	110.25	870.93	164.53	13.60
	max	5.72	7.03	13.29	1.32	38.20	17.93	212.52	7338.10	2063.35	93.01
	v	96.21	97.93	84.17	80.07	170.69	42.54	24.01	75.82	115.34	83.50
<i>Linaria vulgaris</i> 19,20,21,	x	4.17	5.16	2.81	0.30	0.14	10.34	158.63	1902.96	230.83	20.01
	min	3.75	4.78	1.88	0.20	0.05	6.65	110.25	870.93	164.53	13.60
	max	5.72	6.32	3.37	0.36	0.21	16.91	212.52	3016.12	282.39	26.65
	v	98.29	99.96	23.67	23.40	47.74	45.08	26.44	46.12	21.33	26.64
<i>Linum flavum</i> 4,5,6,	x	6.93	7.15	3.33	0.34	46.43	7.60	188.03	5916.09	977.22	77.18
	min	6.71	6.97	1.22	0.12	13.20	6.49	96.34	4783.90	624.94	68.21
	max	7.33	7.46	5.23	0.58	76.81	8.29	242.86	8097.26	1444.52	94.69
	v	104.06	105.35	49.48	54.45	56.10	10.43	34.70	26.08	35.24	16.04
<i>Logfia arvensis</i> 34,35,36,	x	4.22	5.07	0.86	0.08	0.23	2.43	35.97	455.97	55.08	35.72
	min	3.80	4.63	0.85	0.07	0.06	0.55	31.95	151.55	29.00	32.32
	max	5.63	6.55	0.87	0.09	0.54	3.81	39.21	721.85	74.95	39.99
	v	98.52	98.08	1.07	13.07	95.45	56.70	8.38	51.41	34.98	8.93

Taxon and localities		pH <sub>KCl</sub>	pH <sub>H<sub>2</sub>O</sub>	Co <sub>x</sub> [%]	N <sub>t</sub> [%]	CaCO <sub>3</sub> [%]	P [mg.kg <sup>-1</sup> ]	K [mg.kg <sup>-1</sup> ]	Ca [mg.kg <sup>-1</sup> ]	Mg [mg.kg <sup>-1</sup> ]	Na [mg.kg <sup>-1</sup> ]
<i>Lonicera xylosteum</i> 19,20,21,	x	4.17	5.16	2.81	0.30	0.14	10.34	158.63	1902.96	230.83	20.01
	min	3.75	4.78	1.88	0.20	0.05	6.65	110.25	870.93	164.53	13.60
	max	5.72	6.32	3.37	0.36	0.21	16.91	212.52	3016.12	282.39	26.65
	v	98.29	99.96	23.67	23.40	47.74	45.08	26.44	46.12	21.33	26.64
<i>Lotus corniculatus</i> 1,2,3,10,19,20,21,38,39, 41,42,43,44,	x	4.15	5.20	2.04	0.20	8.94	12.63	163.63	2928.81	435.49	45.82
	min	3.56	4.67	0.57	0.06	0.05	0.00	38.34	785.65	91.90	13.60
	max	8.18	8.32	5.35	0.37	75.10	109.74	506.70	10129.50	1470.70	97.30
	v	96.84	98.54	64.14	51.98	233.10	225.24	75.45	87.96	77.03	55.14
<i>Luzula campestris</i> 23,33,35,	x	5.16	6.23	3.73	0.43	27.34	4.54	145.20	6957.85	122.03	65.92
	min	4.69	5.77	0.87	0.07	0.09	1.92	36.76	494.50	61.30	32.32
	max	8.02	8.44	9.01	1.10	50.93	7.89	333.89	10947.25	205.60	87.55
	v	97.17	98.07	100.09	112.24	76.50	54.87	92.23	66.28	50.05	36.53
<i>Luzula luzuloides</i> 15,19,20,21,22,	x	4.30	5.29	3.36	0.32	2.43	8.95	195.72	2910.83	405.69	29.95
	min	3.75	4.78	1.88	0.20	0.05	6.08	110.25	870.93	164.53	13.60
	max	6.49	7.28	6.31	0.46	11.58	16.91	274.99	6942.49	893.96	68.58
	v	97.11	98.72	47.37	29.95	188.48	44.93	29.54	73.08	64.16	65.96
<i>Maianthemum bifolium</i> 19,20,21,22,	x	4.21	5.19	2.62	0.28	0.14	9.67	187.72	1902.92	283.62	20.30
	min	3.75	4.78	1.88	0.20	0.05	6.65	110.25	870.93	164.53	13.60
	max	5.72	6.32	3.37	0.36	0.21	16.91	274.99	3016.12	442.01	26.65
	v	98.95	100.44	25.39	24.48	41.34	43.45	33.09	39.94	35.57	22.87
<i>Medicago lupulina</i> 3,18,30,31,38,39,	x	6.72	7.14	3.60	0.40	15.28	13.99	247.46	5954.93	343.78	65.28
	min	6.31	6.50	0.61	0.08	0.33	1.68	38.34	1805.10	77.40	29.13
	max	8.18	8.32	8.65	1.10	75.10	58.41	506.70	10129.50	588.12	93.76
	v	100.57	97.44	84.27	95.89	175.83	144.01	66.92	46.24	58.74	35.50
<i>Melampyrum nemorosum</i> 1,14,15,19,20,21,22,33,	x	4.50	5.48	2.96	0.26	16.82	8.34	151.12	6796.29	343.54	60.29
	min	3.75	4.78	1.03	0.10	0.05	1.92	64.15	870.93	73.65	13.60
	max	8.02	8.44	6.31	0.46	91.16	16.91	274.99	28607.16	893.96	211.29
	v	94.13	96.26	56.44	46.32	177.66	59.36	49.15	128.06	69.75	101.48

Taxon and localities		pH <sub>KCl</sub>	pH <sub>H<sub>2</sub>O</sub>	Co <sub>x</sub> [%]	N <sub>t</sub> [%]	CaCO <sub>3</sub> [%]	P [mg.kg <sup>-1</sup> ]	K [mg.kg <sup>-1</sup> ]	Ca [mg.kg <sup>-1</sup> ]	Mg [mg.kg <sup>-1</sup> ]	Na [mg.kg <sup>-1</sup> ]
<i>Melica ciliata</i> 9,16,17,40,	x	6.58	7.52	4.19	0.41	8.85	7.77	293.69	7430.22	677.03	73.73
	min	6.22	7.28	1.12	0.11	0.71	1.01	72.85	5754.65	234.65	58.39
	max	7.45	7.92	6.86	0.75	23.80	13.87	511.16	9822.65	1048.19	92.01
	v	101.54	104.21	55.55	60.72	103.40	58.70	54.75	22.09	54.36	16.58
<i>Melica nutans</i> 15,19,20,21,46,	x	4.39	5.35	4.58	0.48	2.44	7.98	205.44	3652.52	345.35	40.95
	min	3.75	4.78	1.88	0.20	0.05	2.81	110.25	870.93	140.30	13.60
	max	6.49	7.28	8.16	1.01	11.58	16.91	323.60	6942.49	893.96	76.15
	v	94.93	97.31	50.26	59.01	187.50	59.34	35.31	62.62	80.83	63.71
<i>Melica transsilvanica</i> 13,34,35,	x	5.10	6.14	2.05	0.18	0.26	15.72	116.78	1361.12	131.04	32.79
	min	4.69	5.77	0.85	0.07	0.09	2.92	36.76	494.50	61.30	31.21
	max	6.00	6.74	4.43	0.39	0.54	40.44	274.36	2867.00	256.86	34.85
	v	99.05	100.28	82.26	85.77	75.08	111.18	95.42	78.53	68.03	4.64
<i>Melittis melissophyllum</i> 19,20,21,45,	x	4.30	5.28	3.44	0.37	8.21	7.94	151.08	2434.21	448.27	26.78
	min	3.75	4.78	1.88	0.20	0.05	0.74	110.25	870.93	164.53	13.60
	max	6.90	7.31	5.33	0.57	32.40	16.91	212.52	4027.95	1100.60	47.10
	v	96.06	97.90	35.80	35.55	170.25	72.97	25.55	49.03	84.55	47.07
<i>Milium effusum</i> 15,19,20,21,	x	4.30	5.28	3.69	0.34	3.00	9.27	175.90	3162.84	396.61	32.15
	min	3.75	4.78	1.88	0.20	0.05	6.08	110.25	870.93	164.53	13.60
	max	6.49	7.28	6.31	0.46	11.58	16.91	227.71	6942.49	893.96	68.58
	v	96.07	97.90	43.95	27.30	165.13	47.84	26.75	73.06	73.19	66.97
<i>Mycelis muralis</i> 25,41,47,	x	6.00	6.84	6.10	0.61	13.07	6.29	83.12	4078.48	803.88	56.57
	min	5.64	6.52	2.19	0.23	0.47	0.33	48.40	2165.50	123.35	32.85
	max	7.07	7.47	13.29	1.32	38.20	17.93	141.54	7338.10	2063.35	93.01
	v	100.43	101.39	83.37	81.96	136.01	130.87	49.99	56.80	110.90	46.23
<i>Myosotis ramosissima</i> 2,28,30,31,38,41,	x	4.91	5.62	4.64	0.55	3.74	12.53	174.87	6830.77	273.56	69.21
	min	4.14	4.85	0.57	0.06	0.09	0.33	38.34	1494.84	77.40	32.06
	max	8.18	8.32	8.65	1.10	8.80	58.41	319.81	11521.55	685.53	93.76
	v	92.98	93.88	73.86	80.60	93.17	164.67	56.24	53.37	84.46	34.10

Taxon and localities		pH <sub>KCl</sub>	pH <sub>H2O</sub>	Co <sub>x</sub> [%]	N <sub>t</sub> [%]	CaCO <sub>3</sub> [%]	P [mg.kg <sup>-1</sup> ]	K [mg.kg <sup>-1</sup> ]	Ca [mg.kg <sup>-1</sup> ]	Mg [mg.kg <sup>-1</sup> ]	Na [mg.kg <sup>-1</sup> ]
<i>Myosotis sylvatica</i> agg. 19,20,21,	x	4.17	5.16	2.81	0.30	0.14	10.34	158.63	1902.96	230.83	20.01
	min	3.75	4.78	1.88	0.20	0.05	6.65	110.25	870.93	164.53	13.60
	max	5.72	6.32	3.37	0.36	0.21	16.91	212.52	3016.12	282.39	26.65
	v	98.29	99.96	23.67	23.40	47.74	45.08	26.44	46.12	21.33	26.64
<i>Omalothea sylvatica</i> 19,20,21,35,44,	x	4.06	5.17	2.07	0.22	0.12	6.96	122.47	1496.05	218.48	27.85
	min	3.66	4.78	0.87	0.07	0.05	0.00	36.76	494.50	61.30	13.60
	max	5.72	6.32	3.37	0.36	0.21	16.91	212.52	3016.12	338.60	46.89
	v	99.60	100.73	50.78	50.71	49.53	80.64	47.70	58.72	44.31	41.01
<i>Origanum vulgare</i> 18,38,40,45,	x	7.04	7.67	2.34	0.24	16.77	2.36	162.49	7090.27	503.82	68.57
	min	6.71	7.31	0.61	0.08	3.24	0.74	38.34	4027.95	91.90	41.41
	max	8.18	8.32	5.33	0.57	32.40	6.00	410.33	10129.50	1100.60	93.76
	v	101.21	101.35	78.44	80.39	70.56	90.38	90.26	40.77	77.22	35.59
<i>Paris quadrifolia</i> 14,19,20,21,	x	4.30	5.28	3.24	0.29	22.90	11.70	135.01	8579.01	191.53	67.83
	min	3.75	4.78	1.88	0.20	0.05	6.65	64.15	870.93	73.65	13.60
	max	7.32	7.72	4.53	0.36	91.16	16.91	212.52	28607.16	282.39	211.29
	v	96.05	97.88	28.99	22.37	172.15	39.96	40.52	135.08	41.93	122.30
<i>Petrorragia prolifera</i> 9,13,17,34,35,	x	5.31	6.35	3.79	0.36	2.05	13.82	243.49	3581.14	494.95	46.50
	min	4.69	5.77	0.85	0.07	0.09	2.92	36.76	494.50	61.30	31.21
	max	6.79	7.58	6.86	0.75	8.74	40.44	511.16	8067.68	1048.19	75.71
	v	96.22	97.65	66.47	73.54	163.77	100.26	75.67	81.95	91.13	38.05
<i>Phyteuma spicatum</i> 19,20,21,22,	x	4.21	5.19	2.62	0.28	0.14	9.67	187.72	1902.92	283.62	20.30
	min	3.75	4.78	1.88	0.20	0.05	6.65	110.25	870.93	164.53	13.60
	max	5.72	6.32	3.37	0.36	0.21	16.91	274.99	3016.12	442.01	26.65
	v	98.95	100.44	25.39	24.48	41.34	43.45	33.09	39.94	35.57	22.87
<i>Picea abies</i> 14,15,19,20,21,22,26, 27,39,40,41,	x	4.64	5.63	5.12	0.43	26.21	7.28	164.14	7795.46	444.87	75.87
	min	3.75	4.78	1.12	0.11	0.05	0.33	59.43	870.93	73.65	13.60
	max	7.76	8.04	23.04	1.68	91.16	16.91	391.49	28607.16	1911.00	211.29
	v	92.40	94.56	115.72	99.76	132.15	77.91	60.48	101.64	114.52	78.30

Taxon and localities		pH <sub>KCl</sub>	pH <sub>H<sub>2</sub>O</sub>	Co <sub>x</sub> [%]	N <sub>t</sub> [%]	CaCO <sub>3</sub> [%]	P [mg.kg <sup>-1</sup> ]	K [mg.kg <sup>-1</sup> ]	Ca [mg.kg <sup>-1</sup> ]	Mg [mg.kg <sup>-1</sup> ]	Na [mg.kg <sup>-1</sup> ]
<i>Pilosella officinarum</i> 17,18,33,34,42,44,	x	4.08	5.26	2.25	0.24	7.31	4.12	182.67	4110.81	448.06	51.58
	min	3.56	4.67	0.85	0.07	0.08	0.00	39.21	721.85	74.95	32.74
	max	8.02	8.44	6.86	0.75	31.00	13.87	410.33	9431.80	1033.43	77.89
	v	96.30	96.70	93.77	98.33	150.80	116.80	79.46	85.79	68.93	35.70
<i>Pimpinella saxifraga</i> 6,7,8,15,39,42,43,	x	4.22	5.30	2.30	0.21	40.74	4.15	129.37	4800.65	781.67	66.65
	min	3.56	4.67	1.16	0.10	0.17	0.00	84.20	785.65	307.20	32.74
	max	7.76	8.04	6.31	0.46	87.44	8.29	227.71	8097.26	1470.70	94.69
	v	94.65	95.99	74.65	56.09	87.26	73.38	38.61	53.06	47.92	29.25
<i>Pinus sylvestris</i> 16,19,20,21,	x	4.30	5.28	2.81	0.29	0.64	9.78	177.67	2946.19	271.08	32.21
	min	3.75	4.78	1.88	0.20	0.05	6.65	110.25	870.93	164.53	13.60
	max	6.58	7.53	3.37	0.36	2.14	16.91	234.81	6075.90	391.83	68.79
	v	96.07	97.89	20.53	22.80	135.62	42.44	27.61	66.54	30.15	67.14
<i>Plantago lanceolata</i> 2,5,7,8,	x	4.74	5.45	1.93	0.18	42.67	5.85	169.98	4558.81	818.74	63.59
	min	4.14	4.85	0.57	0.06	0.09	3.10	84.20	1494.84	618.53	32.06
	max	7.41	7.58	3.53	0.33	87.44	8.02	224.88	6117.20	1108.70	82.28
	v	95.01	95.73	59.40	59.67	73.54	31.36	30.78	40.31	23.16	29.76
<i>Plantago media</i> 19,20,21,31,32,38,41,	x	4.54	5.52	4.11	0.47	2.26	6.08	146.45	5321.49	269.28	55.25
	min	3.75	4.78	0.61	0.08	0.05	0.33	38.34	870.93	91.90	13.60
	max	8.18	8.32	8.65	1.10	7.64	16.91	238.94	10608.30	476.55	101.66
	v	92.76	94.93	69.93	77.88	133.07	82.33	50.25	71.98	45.47	63.49
<i>Poa badensis</i> 11,12,23,	x	7.22	7.51	3.56	0.41	40.74	6.21	134.87	4675.04	505.91	45.30
	min	6.88	7.11	0.43	0.04	25.89	4.36	28.08	1392.81	99.20	20.13
	max	7.76	8.27	9.01	1.10	50.93	7.89	333.89	10947.25	991.55	87.55
	v	101.10	99.61	108.63	121.08	26.36	23.28	104.43	94.90	72.85	66.35
<i>Poa compressa</i> 1,17,18,	x	6.16	6.57	3.39	0.35	4.08	8.04	289.19	4741.96	687.39	53.51
	min	5.77	6.12	1.03	0.10	0.25	4.26	101.30	1777.23	440.62	41.41
	max	6.79	7.71	6.86	0.75	8.74	13.87	410.33	8067.68	1033.43	75.71
	v	99.68	98.30	73.79	82.07	86.25	51.98	46.58	54.42	36.66	29.38

Taxon and localities		pH <sub>KCl</sub>	pH <sub>H2O</sub>	Co <sub>x</sub> [%]	N <sub>t</sub> [%]	CaCO <sub>3</sub> [%]	P [mg.kg <sup>-1</sup> ]	K [mg.kg <sup>-1</sup> ]	Ca [mg.kg <sup>-1</sup> ]	Mg [mg.kg <sup>-1</sup> ]	Na [mg.kg <sup>-1</sup> ]
<i>Poa nemoralis</i> 19,20,21,46,	x	4.29	5.26	4.15	0.48	0.15	8.46	199.87	2830.03	208.20	34.05
	min	3.75	4.78	1.88	0.20	0.05	2.81	110.25	870.93	140.30	13.60
	max	5.72	6.32	8.16	1.01	0.21	16.91	323.60	5611.25	282.39	76.15
	v	96.39	98.71	57.51	65.56	40.52	61.35	40.09	62.77	27.82	72.68
<i>Poa pratensis</i> 1,2,4,8,15,19,20,21,	x	4.46	5.35	3.01	0.29	7.43	7.05	177.32	3363.47	658.23	44.38
	min	3.75	4.78	0.57	0.06	0.05	3.10	101.30	870.93	164.53	13.60
	max	6.88	7.32	6.31	0.58	33.87	16.91	242.86	6942.49	1444.52	82.28
	v	94.76	97.10	61.63	57.04	151.64	56.07	27.60	64.26	65.35	54.22
<i>Polygala major</i> 5,6,7,8,	x	7.09	7.34	2.09	0.20	61.85	7.14	145.96	6209.41	803.59	79.25
	min	6.88	7.14	1.16	0.10	33.87	5.42	84.20	4783.90	618.53	68.21
	max	7.41	7.58	3.53	0.33	87.44	8.29	224.88	8097.26	1108.70	94.69
	v	104.43	105.65	46.77	46.17	34.49	15.88	39.89	19.29	25.10	13.00
<i>Populus tremula</i> 19,20,21,22,32,	x	4.30	5.29	3.74	0.41	1.37	8.76	192.69	3643.99	306.72	36.57
	min	3.75	4.78	1.88	0.20	0.05	5.15	110.25	870.93	164.53	13.60
	max	6.88	7.64	8.21	0.94	6.30	16.91	274.99	10608.30	442.01	101.66
	v	97.09	98.70	61.87	65.31	179.63	47.57	29.29	97.36	33.05	89.72
<i>Potentilla arenaria</i> 23,24,28,29,32,33,36,	x	4.64	5.47	7.28	0.90	14.65	5.33	201.23	8783.46	170.40	83.33
	min	3.80	4.63	0.87	0.09	0.06	0.55	31.95	151.55	29.00	39.99
	max	8.02	8.44	13.32	1.75	50.93	9.10	333.89	11521.55	399.10	101.66
	v	91.69	93.04	58.10	62.19	120.82	54.50	53.19	41.42	66.28	22.98
<i>Potentilla recta</i> 1,2,9,	x	4.60	5.30	2.53	0.23	0.35	5.15	268.29	3008.91	724.78	44.62
	min	4.14	4.85	0.57	0.06	0.09	3.10	101.30	1494.84	440.62	32.06
	max	6.22	7.28	5.98	0.53	0.71	8.08	511.16	5754.65	1048.19	58.39
	v	97.18	97.85	96.80	93.89	75.09	41.34	65.50	64.64	34.44	24.17
<i>Prenanthes purpurea</i> 19,20,21,22,47,	x	4.30	5.29	4.76	0.49	7.75	11.32	178.48	2989.95	639.57	34.84
	min	3.75	4.78	1.88	0.20	0.05	6.65	110.25	870.93	164.53	13.60
	max	5.72	7.03	13.29	1.32	38.20	17.93	274.99	7338.10	2063.35	93.01
	v	97.23	98.74	90.60	85.59	196.39	44.21	32.80	76.18	112.20	84.34

Taxon and localities		pH <sub>KCl</sub>	pH <sub>H<sub>2</sub>O</sub>	Co <sub>x</sub> [%]	N <sub>t</sub> [%]	CaCO <sub>3</sub> [%]	P [mg.kg <sup>-1</sup> ]	K [mg.kg <sup>-1</sup> ]	Ca [mg.kg <sup>-1</sup> ]	Mg [mg.kg <sup>-1</sup> ]	Na [mg.kg <sup>-1</sup> ]
<i>Primula veris</i> 4,7,17,	x	6.88	7.27	4.42	0.48	36.46	9.07	227.67	6258.02	1032.16	72.06
	min	6.71	6.97	1.16	0.10	8.74	6.49	84.20	4867.10	618.53	68.65
	max	7.41	7.58	6.86	0.75	87.44	13.87	355.95	8067.68	1444.52	75.71
	v	104.26	102.00	54.21	57.57	99.00	37.49	48.96	21.41	32.67	4.01
<i>Prunella vulgaris</i> 25,39,41,42,43,44,	x	3.97	5.11	1.83	0.20	12.76	0.56	87.74	2130.43	485.41	45.46
	min	3.56	4.67	1.03	0.12	0.08	0.00	48.40	785.65	123.35	32.74
	max	7.76	8.04	2.83	0.29	75.10	1.75	125.90	4307.15	1470.70	70.60
	v	99.37	99.47	36.28	32.75	218.42	106.17	30.10	54.26	93.07	27.79
<i>Pseudolysimachion spicatum</i> 5,7,8,16,	x	6.87	7.36	2.49	0.23	43.18	7.10	180.58	5704.07	745.31	72.77
	min	6.58	7.14	1.16	0.10	2.14	5.42	84.20	4783.90	391.83	68.21
	max	7.41	7.58	3.53	0.33	87.44	8.10	234.81	6117.20	1108.70	82.28
	v	103.22	105.17	34.46	35.35	71.07	15.34	32.99	9.50	35.92	7.77
<i>Psyllium arenarium</i> 34,35,36,	x	4.22	5.07	0.86	0.08	0.23	2.43	35.97	455.97	55.08	35.72
	min	3.80	4.63	0.85	0.07	0.06	0.55	31.95	151.55	29.00	32.32
	max	5.63	6.55	0.87	0.09	0.54	3.81	39.21	721.85	74.95	39.99
	v	98.52	98.08	1.07	13.07	95.45	56.70	8.38	51.41	34.98	8.93
<i>Pulmonaria mollis</i> 4,19,20,21,	x	4.30	5.28	3.42	0.37	3.41	9.38	179.69	2643.99	534.25	32.17
	min	3.75	4.78	1.88	0.20	0.05	6.49	110.25	870.93	164.53	13.60
	max	6.71	6.97	5.23	0.58	13.20	16.91	242.86	4867.10	1444.52	68.65
	v	96.06	97.94	34.99	36.58	166.09	46.57	28.64	56.42	98.69	67.02
<i>Pulmonaria obscura</i> 4,15,19,20,21,45,46,	x	4.53	5.49	4.78	0.50	8.26	6.73	199.78	3879.67	610.27	45.79
	min	3.75	4.78	1.88	0.20	0.05	0.74	110.25	870.93	140.30	13.60
	max	6.90	7.31	8.16	1.01	32.40	16.91	323.60	6942.49	1444.52	76.15
	v	93.03	95.58	41.24	47.91	135.90	70.09	34.58	51.00	80.20	52.50
<i>Pyrethrum corymbosum</i> 19,20,21,46,47,	x	4.38	5.35	5.98	0.65	7.76	10.35	188.20	3731.64	579.23	45.84
	min	3.75	4.78	1.88	0.20	0.05	2.81	110.25	870.93	140.30	13.60
	max	5.72	7.03	13.29	1.32	38.20	17.93	323.60	7338.10	2063.35	93.01
	v	95.05	97.33	70.80	67.68	196.07	57.88	40.05	64.41	128.42	70.56

Taxon and localities		pH <sub>KCl</sub>	pH <sub>H<sub>2</sub>O</sub>	Co <sub>x</sub> [%]	N <sub>t</sub> [%]	CaCO <sub>3</sub> [%]	P [mg.kg <sup>-1</sup> ]	K [mg.kg <sup>-1</sup> ]	Ca [mg.kg <sup>-1</sup> ]	Mg [mg.kg <sup>-1</sup> ]	Na [mg.kg <sup>-1</sup> ]
<i>Pyrus communis</i> 23,29,33,	x	6.94	7.35	6.78	0.82	28.84	5.08	203.40	9651.15	151.58	84.54
	min	6.69	7.11	1.32	0.11	4.60	1.92	64.94	8574.40	99.20	77.89
	max	8.02	8.44	10.00	1.25	50.93	7.89	333.89	10947.25	205.60	88.19
	v	102.26	102.16	57.22	61.97	65.79	48.25	54.05	10.17	28.67	5.57
<i>Quercus petraea</i> 2,19,20,21,22,	x	4.19	5.10	2.21	0.24	0.13	8.35	188.65	1821.30	364.00	22.65
	min	3.75	4.78	0.57	0.06	0.05	3.10	110.25	870.93	164.53	13.60
	max	5.72	6.32	3.37	0.36	0.21	16.91	274.99	3016.12	685.53	32.06
	v	100.42	102.05	45.78	46.24	42.69	54.87	29.46	38.39	50.65	27.71
<i>Ranunculus auricomus</i> 19,20,21,	x	4.17	5.16	2.81	0.30	0.14	10.34	158.63	1902.96	230.83	20.01
	min	3.75	4.78	1.88	0.20	0.05	6.65	110.25	870.93	164.53	13.60
	max	5.72	6.32	3.37	0.36	0.21	16.91	212.52	3016.12	282.39	26.65
	v	98.29	99.96	23.67	23.40	47.74	45.08	26.44	46.12	21.33	26.64
<i>Reseda lutea</i> 3,17,24,33,35,	x	5.37	6.35	4.82	0.57	8.20	8.08	239.68	6009.69	409.36	62.85
	min	4.69	5.77	0.87	0.07	0.09	1.92	36.76	494.50	61.30	29.13
	max	8.02	8.44	13.32	1.75	31.00	13.87	506.70	10249.35	1033.43	99.20
	v	94.93	97.66	99.02	113.28	144.50	56.40	73.83	67.39	84.53	43.76
<i>Salvia pratensis</i> 4,5,6,10,23,24,25,30,31,32,	x	6.66	7.03	6.36	0.73	23.45	21.81	216.68	7336.75	477.25	80.69
	min	6.21	6.52	1.22	0.12	0.47	0.61	48.40	2165.50	77.40	32.85
	max	7.33	7.64	13.32	1.75	76.81	109.74	334.54	10947.25	1444.52	101.66
	v	101.44	100.40	54.14	64.62	109.87	152.50	39.23	36.93	83.94	24.99
<i>Salvia verticillata</i> 4,7,10,16,17,34,38,39,40,	x	6.45	7.24	2.82	0.27	27.77	16.93	165.87	6263.68	515.25	74.83
	min	5.63	6.55	0.61	0.07	0.54	1.01	38.34	721.85	74.95	34.85
	max	8.18	8.32	6.86	0.75	87.44	109.74	355.95	10129.50	1444.52	97.30
	v	95.26	97.75	79.09	86.57	108.73	195.12	72.07	43.77	83.32	23.82
<i>Sanguisorba minor</i> 1,17,18,28,29,30,31,32,33,	x	6.49	6.96	5.95	0.70	7.59	11.85	235.06	7718.75	383.97	74.87
	min	5.77	6.12	1.03	0.10	0.25	1.92	64.94	1777.23	77.40	41.41
	max	8.02	8.44	10.00	1.25	31.00	58.41	410.33	11521.55	1033.43	101.66
	v	97.15	95.38	54.60	60.94	115.29	141.30	45.21	37.06	74.95	25.95

Taxon and localities		pH <sub>KCl</sub>	pH <sub>H<sub>2</sub>O</sub>	Co <sub>x</sub> [%]	N <sub>t</sub> [%]	CaCO <sub>3</sub> [%]	P [mg.kg <sup>-1</sup> ]	K [mg.kg <sup>-1</sup> ]	Ca [mg.kg <sup>-1</sup> ]	Mg [mg.kg <sup>-1</sup> ]	Na [mg.kg <sup>-1</sup> ]
<i>Scabiosa canescens</i> 28,38,39,41,	x	7.33	7.77	3.28	0.38	23.02	2.75	126.92	7172.51	177.26	74.26
	min	7.07	7.47	0.61	0.08	0.53	0.33	38.34	2731.85	85.00	43.86
	max	8.18	8.32	8.26	1.08	75.10	7.25	319.81	11521.55	307.20	93.76
	v	101.71	102.29	90.84	107.80	131.36	96.55	88.93	51.97	52.74	26.34
<i>Scabiosa lucida</i> 14,26,27,45,	x	6.85	7.17	9.87	0.81	52.29	8.26	183.24	14590.55	799.74	131.36
	min	6.48	6.79	4.53	0.25	7.86	0.74	64.15	4027.95	73.65	47.10
	max	7.32	7.72	23.04	1.68	91.16	15.79	391.49	28607.16	1911.00	211.29
	v	101.24	101.06	77.35	65.17	64.34	81.30	67.80	62.83	95.30	44.26
<i>Scabiosa ochroleuca</i> 4,6,16,18,28,	x	6.81	7.38	3.96	0.45	20.84	7.23	260.83	6988.56	626.88	72.47
	min	6.58	6.97	1.22	0.12	2.14	6.00	96.34	4380.97	85.00	41.41
	max	7.33	7.71	8.26	1.08	76.81	8.29	410.33	11521.55	1444.52	94.69
	v	104.14	101.44	63.68	79.21	135.66	12.29	39.80	37.26	72.01	25.85
<i>Scrophularia nodosa</i> 19,20,21,25,	x	4.30	5.28	2.66	0.30	0.22	7.91	131.07	1968.59	203.96	23.22
	min	3.75	4.78	1.88	0.20	0.05	0.61	48.40	870.93	123.35	13.60
	max	6.21	6.52	3.37	0.36	0.47	16.91	212.52	3016.12	282.39	32.85
	v	96.09	98.06	23.97	20.85	69.29	73.79	45.76	39.04	30.95	31.12
<i>Securigera varia</i> 18,36,38,40,	x	4.40	5.23	1.22	0.12	8.69	2.31	138.37	6121.17	235.92	66.79
	min	3.80	4.63	0.61	0.08	0.06	0.55	31.95	151.55	29.00	39.99
	max	8.18	8.32	2.29	0.20	23.80	6.00	410.33	10129.50	588.12	93.76
	v	94.60	95.46	52.70	38.79	105.15	93.85	114.03	67.57	91.80	39.08
<i>Sedum acre</i> 16,23,24,28,29,31,32,33,	x	6.70	7.23	7.70	0.95	13.20	6.16	231.30	9435.06	254.02	87.44
	min	6.34	6.68	1.32	0.11	0.84	1.92	64.94	6075.90	85.00	68.79
	max	8.02	8.44	13.32	1.75	50.93	9.10	333.89	11521.55	476.55	101.66
	v	102.52	99.84	47.02	52.81	128.68	35.96	33.09	17.80	54.99	11.31
<i>Sedum album</i> 26,28,29,30,	x	6.96	7.48	7.94	0.96	23.88	18.39	220.10	10831.63	106.51	95.82
	min	6.69	7.29	6.59	0.76	4.40	2.46	148.88	7034.95	77.40	69.35
	max	7.27	7.70	10.00	1.25	77.73	58.41	319.81	16195.60	149.95	136.90
	v	103.94	105.91	16.94	21.98	130.38	126.04	28.27	32.23	26.76	26.07

Taxon and localities		pH <sub>KCl</sub>	pH <sub>H<sub>2</sub>O</sub>	Co <sub>x</sub> [%]	N <sub>t</sub> [%]	CaCO <sub>3</sub> [%]	P [mg.kg <sup>-1</sup> ]	K [mg.kg <sup>-1</sup> ]	Ca [mg.kg <sup>-1</sup> ]	Mg [mg.kg <sup>-1</sup> ]	Na [mg.kg <sup>-1</sup> ]
<i>Sedum sexangulare</i> 11,17,28,29,33,	x	7.03	7.67	5.37	0.65	15.81	6.56	196.03	7856.10	380.19	71.77
	min	6.69	7.29	0.43	0.04	4.60	1.92	28.08	1685.06	85.00	28.22
	max	8.02	8.44	10.00	1.25	31.00	13.87	355.95	11521.55	1033.43	88.83
	v	101.17	101.19	71.02	76.28	66.78	61.54	67.11	42.05	91.08	31.22
<i>Senecio ovatus</i> 45,46,47,	x	5.61	6.29	8.93	0.97	23.60	7.16	197.86	5659.10	1101.42	72.09
	min	5.31	5.85	5.33	0.57	0.19	0.74	128.44	4027.95	140.30	47.10
	max	6.90	7.31	13.29	1.32	38.20	17.93	323.60	7338.10	2063.35	93.01
	v	101.73	98.62	36.90	31.87	70.86	107.02	45.02	23.89	71.28	26.30
<i>Seseli osseum</i> 33,34,35,	x	5.12	6.18	1.01	0.08	10.54	2.88	46.97	3549.38	113.95	48.35
	min	4.69	5.77	0.85	0.07	0.09	1.92	36.76	494.50	61.30	32.32
	max	8.02	8.44	1.32	0.11	31.00	3.81	64.94	9431.80	205.60	77.89
	v	98.44	99.19	21.74	21.47	137.21	26.78	27.14	117.22	57.08	43.25
<i>Silene donetzica</i> subsp. <i>sillingeri</i> 28,29,31,	x	6.70	7.36	8.97	1.14	4.78	5.69	256.71	9389.28	237.17	88.15
	min	6.49	7.22	8.26	1.08	0.95	4.41	211.37	8071.90	85.00	87.42
	max	7.12	7.70	10.00	1.25	8.80	7.25	319.81	11521.55	476.55	88.83
	v	104.46	105.49	8.28	6.55	67.05	20.65	17.93	16.21	72.24	0.65
<i>Stachys alpina</i> 19,20,21,	x	4.17	5.16	2.81	0.30	0.14	10.34	158.63	1902.96	230.83	20.01
	min	3.75	4.78	1.88	0.20	0.05	6.65	110.25	870.93	164.53	13.60
	max	5.72	6.32	3.37	0.36	0.21	16.91	212.52	3016.12	282.39	26.65
	v	98.29	99.96	23.67	23.40	47.74	45.08	26.44	46.12	21.33	26.64
<i>Stachys recta</i> 11,28,29,30,33,	x	7.09	7.68	5.38	0.65	14.94	15.47	164.90	7649.55	188.99	70.50
	min	6.69	7.29	0.43	0.04	4.40	1.92	28.08	1685.06	77.40	28.22
	max	8.02	8.44	10.00	1.25	31.00	58.41	319.81	11521.55	426.98	88.83
	v	100.90	101.14	70.97	76.19	75.35	139.21	64.25	43.35	67.64	31.67
<i>Stellaria holostea</i> 2,19,20,21,46,	x	4.25	5.14	3.44	0.39	0.14	7.38	198.38	2562.99	303.66	33.65
	min	3.75	4.78	0.57	0.06	0.05	2.81	110.25	870.93	140.30	13.60
	max	5.72	6.32	8.16	1.01	0.21	16.91	323.60	5611.25	685.53	76.15
	v	98.22	100.64	74.81	83.14	43.33	69.20	36.16	65.41	65.15	65.82

Taxon and localities		pH <sub>KCl</sub>	pH <sub>H<sub>2</sub>O</sub>	Co <sub>x</sub> [%]	N <sub>t</sub> [%]	CaCO <sub>3</sub> [%]	P [mg.kg <sup>-1</sup> ]	K [mg.kg <sup>-1</sup> ]	Ca [mg.kg <sup>-1</sup> ]	Mg [mg.kg <sup>-1</sup> ]	Na [mg.kg <sup>-1</sup> ]
<i>Stipa joannis</i> 11,24,32,	x	6.69	7.10	7.32	0.91	11.01	6.20	158.24	7514.24	350.34	76.36
	min	6.34	6.68	0.43	0.04	0.84	4.36	28.08	1685.06	224.95	28.22
	max	7.76	8.27	13.32	1.75	25.89	9.10	234.04	10608.30	426.98	101.66
	v	100.53	99.07	72.43	76.44	97.69	33.43	58.43	54.89	25.52	44.60
<i>Swida sanguinea</i> 1,3,19,20,21,22,23,	x	4.45	5.42	3.18	0.35	7.44	8.93	241.82	3163.03	313.69	34.47
	min	3.75	4.78	1.03	0.10	0.05	4.26	101.30	870.93	99.20	13.60
	max	6.88	7.11	9.01	1.10	50.93	16.91	506.70	10947.25	521.50	87.55
	v	94.93	97.12	78.60	89.33	238.69	43.01	55.38	102.11	46.61	67.74
<i>Taraxacum</i> sect. <i>Ruderalia</i> 2,25,28,	x	4.61	5.32	3.68	0.47	3.12	3.65	186.87	5060.63	297.96	51.25
	min	4.14	4.85	0.57	0.06	0.09	0.61	48.40	1494.84	85.00	32.06
	max	7.12	7.70	8.26	1.08	8.80	7.25	319.81	11521.55	685.53	88.83
	v	96.87	97.45	90.06	93.12	128.83	74.97	59.33	90.44	92.13	51.86
<i>Teucrium chamaedrys</i> 4,5,6,8,9,16,17,18,23,24,28, 29,30,31,32,33,34,35,36,	x	5.01	5.86	5.19	0.60	15.60	9.01	219.92	6629.06	472.89	71.86
	min	3.80	4.63	0.85	0.07	0.06	0.55	31.95	151.55	29.00	32.32
	max	8.02	8.44	13.32	1.75	76.81	58.41	511.16	11521.55	1444.52	101.66
	v	88.80	90.17	70.18	80.98	138.14	133.22	57.79	50.98	89.48	29.36
<i>Teucrium montanum</i> 6,9,23,24,32,33,	x	6.64	7.18	6.51	0.76	27.77	6.74	242.16	9181.44	433.66	86.56
	min	6.22	6.68	1.22	0.11	0.71	1.92	64.94	5754.65	99.20	58.39
	max	8.02	8.44	13.32	1.75	76.81	9.10	511.16	10947.25	1048.19	101.66
	v	100.27	99.91	66.00	76.43	102.61	36.78	61.80	19.52	74.30	17.16
<i>Thesium linophyllum</i> 5,6,32,	x	7.02	7.36	4.32	0.46	44.13	7.15	177.94	7829.82	628.74	88.19
	min	6.88	7.14	1.22	0.12	6.30	5.15	96.34	4783.90	399.10	68.21
	max	7.33	7.64	8.21	0.94	76.81	8.29	224.88	10608.30	862.19	101.66
	v	106.07	104.24	67.36	74.85	65.75	19.86	32.55	30.46	30.07	16.34
<i>Thymus</i> – for various taxa see MÁRTONFI & al. (1994, 1997)											
<i>Tilia cordata</i> 19,20,21,	x	4.17	5.16	2.81	0.30	0.14	10.34	158.63	1902.96	230.83	20.01
	min	3.75	4.78	1.88	0.20	0.05	6.65	110.25	870.93	164.53	13.60
	max	5.72	6.32	3.37	0.36	0.21	16.91	212.52	3016.12	282.39	26.65
	v	98.29	99.96	23.67	23.40	47.74	45.08	26.44	46.12	21.33	26.64

Taxon and localities		pH <sub>KCl</sub>	pH <sub>H<sub>2</sub>O</sub>	Co <sub>x</sub> [%]	N <sub>t</sub> [%]	CaCO <sub>3</sub> [%]	P [mg.kg <sup>-1</sup> ]	K [mg.kg <sup>-1</sup> ]	Ca [mg.kg <sup>-1</sup> ]	Mg [mg.kg <sup>-1</sup> ]	Na [mg.kg <sup>-1</sup> ]
<i>Tithymalus amygdaloides</i> 4,5,26,41,47,	x	6.26	7.16	6.30	0.64	35.79	7.05	163.52	7183.31	941.74	82.13
	min	5.64	6.97	2.83	0.23	0.53	0.33	59.43	2731.85	113.70	43.86
	max	7.27	7.47	13.29	1.32	77.73	17.93	242.86	16195.60	2063.35	136.90
	v	96.75	105.17	59.34	59.74	76.02	86.53	40.19	65.94	78.27	38.34
<i>Tithymalus cyparissias</i> 2,7,15,17,24,29,30,31,32,33,	x	5.13	5.84	6.33	0.73	15.59	11.43	202.25	7631.50	476.50	77.19
	min	4.14	4.85	0.57	0.06	0.09	1.92	64.94	1494.84	77.40	32.06
	max	8.02	8.44	13.32	1.75	87.44	58.41	355.95	10608.30	1033.43	101.66
	v	90.92	92.10	62.55	72.67	163.08	139.79	38.21	32.61	64.92	24.28
<i>Tithymalus dulcis</i> 19,20,21,	x	4.17	5.16	2.81	0.30	0.14	10.34	158.63	1902.96	230.83	20.01
	min	3.75	4.78	1.88	0.20	0.05	6.65	110.25	870.93	164.53	13.60
	max	5.72	6.32	3.37	0.36	0.21	16.91	212.52	3016.12	282.39	26.65
	v	98.29	99.96	23.67	23.40	47.74	45.08	26.44	46.12	21.33	26.64
<i>Tithymalus epithymoides</i> 23,24,33,46,	x	5.86	6.37	7.95	0.99	20.74	5.43	239.12	9059.91	167.51	85.20
	min	5.31	5.85	1.32	0.11	0.19	1.92	64.94	5611.25	99.20	76.15
	max	8.02	8.44	13.32	1.75	50.93	9.10	333.89	10947.25	224.95	99.20
	v	97.07	97.96	54.06	59.00	103.27	57.29	45.08	22.76	30.08	10.77
<i>Tragopogon dubius</i> 30,31,32,	x	6.73	7.44	7.92	0.93	3.88	22.66	217.28	8571.72	317.68	86.14
	min	6.49	7.22	6.89	0.76	0.95	4.41	200.32	7034.95	77.40	69.35
	max	7.00	7.64	8.65	1.10	6.30	58.41	238.94	10608.30	476.55	101.66
	v	104.05	104.36	9.42	14.78	57.03	111.59	7.42	17.51	54.40	15.35
<i>Trifolium alpestre</i> 11,17,18,	x	6.90	7.77	3.19	0.33	12.62	8.08	264.79	4711.24	682.84	48.45
	min	6.71	7.58	0.43	0.04	3.24	4.36	28.08	1685.06	426.98	28.22
	max	7.76	8.27	6.86	0.75	25.89	13.87	410.33	8067.68	1033.43	75.71
	v	103.03	103.75	84.66	91.45	76.41	51.39	63.77	55.53	37.56	41.32
<i>Trifolium pannonicum</i> 19,20,21,	x	4.17	5.16	2.81	0.30	0.14	10.34	158.63	1902.96	230.83	20.01
	min	3.75	4.78	1.88	0.20	0.05	6.65	110.25	870.93	164.53	13.60
	max	5.72	6.32	3.37	0.36	0.21	16.91	212.52	3016.12	282.39	26.65
	v	98.29	99.96	23.67	23.40	47.74	45.08	26.44	46.12	21.33	26.64

Taxon and localities		pH <sub>KCl</sub>	pH <sub>H<sub>2</sub>O</sub>	Co <sub>x</sub> [%]	N <sub>t</sub> [%]	CaCO <sub>3</sub> [%]	P [mg.kg <sup>-1</sup> ]	K [mg.kg <sup>-1</sup> ]	Ca [mg.kg <sup>-1</sup> ]	Mg [mg.kg <sup>-1</sup> ]	Na [mg.kg <sup>-1</sup> ]
<i>Trifolium pratense</i> 1,2,19,20,21,25,37,38,40,41,	x	4.48	5.38	1.83	0.19	3.35	4.79	106.53	3422.92	251.80	43.09
	min	3.75	4.78	0.57	0.06	0.05	0.33	38.34	398.80	24.55	13.60
	max	8.18	8.32	3.37	0.36	23.80	16.91	212.52	10129.50	685.53	93.76
	v	95.28	97.23	53.85	55.54	214.18	98.65	54.00	98.12	71.82	61.29
<i>Trifolium repens</i> 19,20,21,38,43,	x	4.16	5.17	2.28	0.25	1.65	6.67	123.42	3470.77	451.02	39.92
	min	3.75	4.78	0.61	0.08	0.05	0.66	38.34	870.93	91.90	13.60
	max	8.18	8.32	3.37	0.36	7.64	16.91	212.52	10129.50	1470.70	93.76
	v	98.95	99.97	43.80	40.00	182.11	86.51	46.76	98.00	113.98	72.67
<i>Tussilago farfara</i> 19,20,21,25,38,42,	x	4.10	5.15	2.07	0.24	1.46	5.55	114.75	3131.59	225.90	36.56
	min	3.56	4.67	0.61	0.08	0.05	0.00	38.34	785.65	91.90	13.60
	max	8.18	8.32	3.37	0.36	7.64	16.91	212.52	10129.50	447.65	93.76
	v	96.74	98.34	48.33	41.44	189.50	105.08	52.06	102.85	52.69	72.42
<i>Verbascum chaixii</i> subsp. <i>austricum</i> 7,8,10,35,38,41,	x	5.46	6.51	2.21	0.18	26.82	21.30	121.95	5309.06	424.27	70.22
	min	4.69	5.77	0.61	0.07	0.09	0.33	36.76	494.50	61.30	32.32
	max	8.18	8.32	5.35	0.37	87.44	109.74	334.54	10129.50	1108.70	97.30
	v	93.77	95.26	73.34	58.81	113.07	185.93	87.28	57.29	85.44	34.72
<i>Verbascum lychnitis</i> 5,6,7,17,38,	x	7.14	7.48	2.67	0.28	45.98	7.74	159.94	7383.53	646.20	80.84
	min	6.79	7.14	0.61	0.08	7.64	1.68	38.34	4783.90	91.90	68.21
	max	8.18	8.32	6.86	0.75	87.44	13.87	355.95	10129.50	1033.43	94.69
	v	101.62	102.31	86.73	91.30	72.37	50.20	72.49	25.45	49.18	13.84
<i>Veronica chamaedrys</i> 1,2,19,20,21,22,25,38,	x	4.39	5.29	1.86	0.21	1.13	6.04	141.41	2897.34	309.49	35.41
	min	3.75	4.78	0.57	0.06	0.05	0.61	38.34	870.93	91.90	13.60
	max	8.18	8.32	3.37	0.36	7.64	16.91	274.99	10129.50	685.53	93.76
	v	96.50	98.45	54.13	53.55	218.86	79.29	54.48	96.34	60.88	66.88
<i>Veronica prostrata</i> 5,7,19,20,21,23,24,	x	4.54	5.52	5.07	0.60	26.99	8.98	193.27	5361.24	356.76	55.26
	min	3.75	4.78	1.16	0.10	0.05	6.65	84.20	870.93	99.20	13.60
	max	7.41	7.58	13.32	1.75	87.44	16.91	333.89	10947.25	862.19	99.20
	v	92.77	95.05	80.99	93.31	121.86	37.02	40.65	68.30	72.05	58.15

Taxon and localities		pH <sub>KCl</sub>	pH <sub>H2O</sub>	Co <sub>x</sub> [%]	N <sub>t</sub> [%]	CaCO <sub>3</sub> [%]	P [mg.kg <sup>-1</sup> ]	K [mg.kg <sup>-1</sup> ]	Ca [mg.kg <sup>-1</sup> ]	Mg [mg.kg <sup>-1</sup> ]	Na [mg.kg <sup>-1</sup> ]
<i>Viburnum opulus</i> 19,20,21,22,	x	4.21	5.19	2.62	0.28	0.14	9.67	187.72	1902.92	283.62	20.30
	min	3.75	4.78	1.88	0.20	0.05	6.65	110.25	870.93	164.53	13.60
	max	5.72	6.32	3.37	0.36	0.21	16.91	274.99	3016.12	442.01	26.65
	v	98.95	100.44	25.39	24.48	41.34	43.45	33.09	39.94	35.57	22.87
<i>Vicia cracca</i> 19,20,21,38,	x	4.30	5.28	2.26	0.25	2.02	8.17	128.56	3959.59	196.10	38.45
	min	3.75	4.78	0.61	0.08	0.05	1.68	38.34	870.93	91.90	13.60
	max	8.18	8.32	3.37	0.36	7.64	16.91	212.52	10129.50	282.39	93.76
	v	96.05	97.87	49.36	45.59	161.20	67.39	49.39	91.99	37.60	83.92
<i>Vincetoxicum hirsutinaria</i> 18,23,24,32,45,	x	6.68	7.12	7.63	0.91	18.74	5.78	263.86	8042.76	482.39	75.38
	min	6.34	6.68	2.29	0.20	0.84	0.74	128.44	4027.95	99.20	41.41
	max	6.90	7.71	13.32	1.75	50.93	9.10	410.33	10947.25	1100.60	101.66
	v	103.22	100.48	48.49	57.22	105.05	49.77	37.22	39.09	72.61	34.39
<i>Viola arvensis</i> 29,31,32,33,38,	x	6.87	7.54	5.76	0.69	10.10	3.72	153.24	9363.18	264.62	89.78
	min	6.49	7.22	0.61	0.08	0.95	1.68	38.34	8071.90	91.90	77.89
	max	8.18	8.44	10.00	1.25	31.00	5.42	238.94	10608.30	476.55	101.66
	v	100.73	101.15	68.85	71.91	105.85	43.08	54.79	10.06	55.91	8.72
<i>Viola hirta</i> 4,18,23,	x	6.76	7.17	5.51	0.63	22.46	6.79	329.03	6731.77	710.61	65.87
	min	6.71	6.97	2.29	0.20	3.24	6.00	242.86	4380.97	99.20	41.41
	max	6.88	7.71	9.01	1.10	50.93	7.89	410.33	10947.25	1444.52	87.55
	v	111.34	103.79	49.92	58.77	91.47	11.79	20.81	44.38	78.24	28.75

**Tab. 3. List of taxa occurring on one or two localities. Serial numbers of localities corresponding with those in Appendix and Tab. 1 are given for each taxon.**

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<i>Acer platanoides</i> – 47,	<i>Campanula carpatica</i> – 14,26,
<i>Acer tataricum</i> – 1,3,	<i>Campanula cochlearifolia</i> – 27,
<i>Acetosa thyrsoiflora</i> – 36,	<i>Campanula serrata</i> – 45,
<i>Acetosella tenuifolia</i> – 36,	<i>Capsella bursa – pastoris</i> – 2,
<i>Aconitum variegatum</i> – 46,	<i>Carduus acanthoides</i> – 38,
<i>Agrimonia eupatoria</i> – 1,18,	<i>Carduus glaucinus</i> – 26,
<i>Agrostis vinnealis</i> – 34,	<i>Carduus nutans</i> – 5,8,
<i>Aira caryophyllea</i> – 36,	<i>Carduus personata</i> – 46,
<i>Allium oleraceum</i> – 16,	<i>Carex caryophyllea</i> – 1,
<i>Allium senescens</i> subsp. <i>montanum</i> – 6,	<i>Carex flacca</i> – 45,
<i>Allium sphaerocephalon</i> – 9,	<i>Carex sempervirens</i> subsp. <i>sempervirens</i> – 45,
<i>Alopecurus pratensis</i> – 3,	<i>Carex supina</i> – 34,36,
<i>Althaea cannabina</i> – 9,	<i>Carex vulpina</i> agg. – 2,25,
<i>Alyssum alyssoides</i> – 28,	<i>Carlina acaulis</i> – 45,
<i>Amaranthus retroflexus</i> – 9,13,	<i>Carlina vulgaris</i> – 18,
<i>Amygdalus communis</i> – 9,	<i>Carpinus betulus</i> – 2
<i>Anemone sylvestris</i> – 6,8,	<i>Centaurium pulchellum</i> – 13,
<i>Anchusa officinalis</i> – 1,9,	<i>Cerastium glutinosum</i> – 29,30,
<i>Anthemis ruthenica</i> – 36,	<i>Cerastium pumilum</i> – 23,
<i>Anthoxanthum odoratum</i> – 1,2,	<i>Cerintho minor</i> – 4,
<i>Anthriscus sylvestris</i> – 46,	<i>Cichorium intybus</i> – 17,
<i>Arabis glabra</i> – 33,	<i>Cirsium palustre</i> – 25,
<i>Arenaria leptocladus</i> – 28,	<i>Clematis alpina</i> – 22,
<i>Armeria vulgaris</i> – 35,	<i>Colymbada scabiosa</i> – 16,
<i>Artemisia absinthium</i> – 17,18,	<i>Conioselinum tataricum</i> – 46,
<i>Aruncus vulgaris</i> – 45,	<i>Conium maculatum</i> – 13,
<i>Asphodelus albus</i> – 12,	<i>Convallaria majalis</i> – 45,47,
<i>Asplenium ruta-muraria</i> – 32,33,	<i>Convolvulus cantabrica</i> – 9,
<i>Asplenium viride</i> – 45,47,	<i>Cornus mas</i> – 6,7,
<i>Astragalus onobrychis</i> – 9,	<i>Coronilla vaginalis</i> – 26,
<i>Astragalus vesicarius</i> – 24,	<i>Cortusa matthioli</i> – 45,
<i>Athyrium filix – femina</i> – 25,	<i>Corydalis solida</i> – 4,
<i>Atriplex sagittata</i> – 13,	<i>Cota tinctoria</i> – 24,
<i>Avenula pubescens</i> – 32,33,	<i>Cotinus coggygria</i> – 9,
<i>Ballota nigra</i> – 9,	<i>Crataegus laevigata</i> – 6,
<i>Bellidiastrum michelii</i> – 45,	<i>Crepis capillaris</i> – 35,
<i>Bellis perennis</i> – 41,	<i>Crepis paludosa</i> – 45,
<i>Berberis vulgaris</i> – 5,33,	<i>Cyanus mollis</i> – 45,46,
<i>Berteroa incana</i> – 10,	<i>Danthonia decumbens</i> – 34,36,
<i>Briza media</i> – 42,	<i>Daphne cneorum</i> – 11,
<i>Bromus squarrosus</i> – 34,	<i>Daphne laureola</i> – 11,
<i>Bromus tectorum</i> – 13,	<i>Daucus carota</i> – 44,
<i>Bryonia alba</i> – 9,	<i>Delphinium elatum</i> – 46,
<i>Bupleurum falcatum</i> – 13,16,	<i>Descurainia sophia</i> – 13,
<i>Camelina microcarpa</i> – 34,35,	<i>Dianthus giganteiformis</i> – 11,
<i>Campanula bononiensis</i> – 12,16,	<i>Dorycnium herbaceum</i> – 10,

*Draba lasiocarpa* – 23,24,  
*Echinops sphaerocephalus* – 24,  
*Elaeagnus angustifolia* – 10,  
*Elytrigia intermedia* – 13,35,  
*Elytrigia repens* – 9,  
*Epilobium ciliatum* – 25,  
*Epilobium montanum* – 46,  
*Epipactis palustris* – 15,  
*Erigeron acris* – 35,  
*Erodium cicutarium* – 28,  
*Eryngium planum* – 6,7,  
*Erysimum marschallianum* – 13,  
*Erysimum odoratum* – 11,  
*Euonymus europaeus* – 3,9,  
*Eupatorium cannabinum* – 45,  
*Falcaria vulgaris* – 9,  
*Festuca carpatica* – 45,  
*Festuca dominii* – 35,  
*Festuca ovina* – 1  
*Festuca pratensis* – 32,  
*Festuca tatrae* – 14,  
*Ficaria bulbifera* – 4,  
*Filipendula ulmaria* – 25,  
*Fragaria moschata* – 31,  
*Fumana procumbens* – 11,  
*Fumaria officinalis* – 17,  
*Fumaria vaillantii* – 13,  
*Gagea pratensis* – 24,  
*Galium anisophyllum* – 45,  
*Galium pycnotrichum* – 33,  
*Galium schultesii* – 45,46,  
*Genista germanica* – 1,2,  
*Genista tinctoria* – 22,32,  
*Genistella sagittalis* – 37,  
*Gentiana cruciata* – 6,15,  
*Gentianella lutescens* subsp.  
*carpatica* – 6,  
*Gentianopsis ciliata* – 6,27,  
*Geranium columbinum* – 41,  
*Geranium dissectum* – 32,  
*Geranium robertianum* – 14,26,  
*Geranium sanguineum* – 24,  
*Geum aleppicum* – 46,  
*Gymnadenia odoratissima* – 7,  
*Gypsophila paniculata* – 34,  
*Helichrysum arenarium* – 36,  
*Heliotropium europaeum* – 9,  
*Heracleum sphondylium* subsp.  
*trachycarpum* – 45,  
*Hesiodia montana* – 9,  
*Hesperis tristis* – 28,29,  
*Hieracium bupleuroides* – 22,  
*Himantoglossum adriaticum* – 11,  
*Holcus lanatus* – 33,  
*Hordeum geniculatum* – 9,  
*Hylotelephium argutum* – 46,  
*Hylotelephium maximum* – 24,  
*Hypericum carpaticum* – 25,  
*Hypochaeris radicata* – 35,  
*Chaerophyllum hirsutum* – 46,  
*Chamaecytisus albus* – 6,  
*Chelidonium majus* – 3,  
*Chondrilla juncea* – 34,  
*Inula hirta* – 12,  
*Isatis tinctoria* – 33,40,  
*Jacea phrygia* – 15,  
*Jacea pratensis* – 38,  
*Jasione montana* – 34,35,  
*Jovibarba globifera* subsp.  
*hirta* – 29,33,  
*Juncus effusus* – 42,44,  
*Jurinea mollis* – 11,33,  
*Knautia drymeia* – 10,  
*Knautia maxima* – 15,  
*Lactuca perennis* – 24,33,  
*Lamium album* – 3,  
*Lamium purpureum* – 3,46,  
*Laserpitium archangelica* – 45,  
*Lathyrus latifolius* – 17,  
*Lathyrus vernus* – 45,47,  
*Lavandula angustifolia* – 9,  
*Lavatera thuringiaca* – 17,  
*Lembotropis nigricans* – 12,18,  
*Leontodon autumnalis* – 44,  
*Leontodon incanus* – 11,  
*Lepidium densiflorum* – 36,  
*Lepidium ruderale* – 33,  
*Linaria genistifolia* – 34,  
*Linum catharticum* – 41,  
*Linum perenne* subsp.  
*extraaxillare* – 45,  
*Linum tenuifolium* – 7,17,  
*Logfia minima* – 34,35,  
*Lolium perenne* – 9,  
*Lunaria rediviva* – 46,  
*Luzula divulgata* – 34,  
*Luzula multiflora* – 25,  
*Luzula sylvatica* – 25,  
*Lychnis flos-cuculi* – 3,  
*Lysimachia nummularia* – 3,41,

*Lythrum salicaria* – 42,  
*Malva sylvestris* – 9,  
*Marrubium vulgare* – 10,  
*Matricaria recutita* – 2,  
*Medicago falcata* – 10,18,  
*Melampyrum arvense* – 16,  
*Melampyrum sylvaticum* – 14,  
*Melica picta* – 32,  
*Melilotus altissimus* – 13,  
*Mentha arvensis* – 25,  
*Mentha longifolia* – 40,  
*Mercurialis perennis* – 46,47,  
*Minuartia hirsuta* subsp.  
*frutescens* – 11,  
*Minuartia setacea* – 24,  
*Molinia caerulea* – 45,  
*Morus alba* – 9,  
*Nardus stricta* – 42,43,  
*Nigella damascena* – 17,  
*Onobrychis viciifolia* – 32,  
*Ononis spinosa* – 10,  
*Onosma tornensis* – 24,  
*Orchis morio* – 3,  
*Orlaya grandiflora* – 9,30,  
*Oryzopsis virescens* – 32,  
*Paronychia cephalotes* – 9,  
*Petasites kablikianus* – 14,  
*Petrorhagia saxifraga* – 11,  
*Peucedanum cervaria* – 26,  
*Peucedanum oreoselinum* – 12,  
*Phalaroides arundinacea* – 45,  
*Phyteuma orbiculare* – 45,  
*Pilosella aurantiaca* – 37,  
*Pilosella bauhinii* – 32,33,  
*Pimpinella major* – 45,  
*Plantago major* – 25,43,  
*Pleurospermum austriacum* – 47,  
*Poa bulbosa* – 17,  
*Polygala comosa* – 1,2,  
*Polygonatum latifolium* – 9,  
*Polygonatum verticillatum* – 22,46,  
*Potentilla argentea* – 1,2,  
*Potentilla heptaphylla* – 4,7,  
*Primula elatior* – 45,46,  
*Prunella grandiflora* – 45,  
*Prunella laciniata* – 11,  
*Prunus spinosa* – 3,32,  
*Pteridium aquilinum* – 41,  
*Pulsatilla grandis* – 24,  
*Pulsatilla subslavica* – 6,7,  
*Pyrus pyraeaster* – 10,  
*Quercus robur* – 32,  
*Ranunculus acris* – 3,15,  
*Ranunculus illyricus* – 31,  
*Ranunculus lanuginosus* – 47,  
*Ranunculus nemorosus* – 45,  
*Ranunculus platanifolius* – 45,  
*Ranunculus polyanthemus* – 2,  
*Ranunculus repens* – 3,43,  
*Roegneria canina* – 45,  
*Rosa canina* – 16,43,  
*Rosa pendulina* – 45,  
*Rubus idaeus* – 46,  
*Rumex crispus* – 3,  
*Ruscus aculeatus* – 12,  
*Salix silesiaca* – 25,45,  
*Salvia glutinosa* – 45,47,  
*Salvia nemorosa* – 17,  
*Salvia officinalis* – 10,  
*Sanicula europaea* – 22,  
*Saponaria officinalis* – 36,  
*Saxifraga tridactylites* – 23,24,  
*Scleranthus annuus* – 3,36,  
*Scleranthus polycarpus* – 34,  
*Scorzonera austriaca* – 24,  
*Scorzonera parviflora* – 9,  
*Sempervivum marmoreum* agg.  
– 32,33,  
*Senecio jacobaea* – 16,  
*Senecio vernalis* – 13,  
*Seseli annuum* – 5,7,  
*Seseli leucospermum* – 11,  
*Seseli pallasii* – 17,18,  
*Sesleria albicans* – 23,33,  
*Silene nemoralis* – 24,  
*Silene nutans* – 1,  
*Silene viscosa* – 34,35,  
*Silene vulgaris* – 26,46,  
*Solanum dulcamara* – 25,  
*Solidago canadensis* – 13,  
*Solidago virgaurea* – 42,44,  
*Solidago virgaurea* subsp. *minuta* – 45,  
*Sorbus aria* – 45,47,  
*Sorbus austriaca* – 4,7,  
*Spergula morrisonii* – 34,36,  
*Spergula pentandra* – 35,  
*Spergularia rubra* – 36,  
*Stachys sylvatica* – 46,  
*Stipa borysthena* – 34,  
*Stipa capillata* – 9,24,

*Stipa eriocalis* – 11,  
*Stipa pulcherrima* – 17,  
*Swida australis* – 24,  
*Symphytum officinale* – 2  
*Symphytum tuberosum* – 22,  
*Tanacetum vulgare* – 3,  
*Taraxacum* sect. *Erythrosperma*  
– 23,24,  
*Telekia speciosa* – 38,  
*Thalictrum aquilegifolium* – 45,47,  
*Thesium alpinum* – 26,  
*Thlaspi jankae* – 23,  
*Thlaspi perfoliatum* – 18,  
*Tithymalus esula* – 3,  
*Tithymalus seguierianus* – 11,  
*Trifolium arvense* – 36,  
*Trifolium campestre* – 1,13,  
*Trifolium flexuosum* – 43,  
*Trifolium ochroleucon* – 29,  
*Tripleurospermum perforatum* – 43,44,  
*Urtica dioica* – 46,  
*Valeriana excelsa* subsp.  
*sambucifolia* – 45,  
*Valeriana officinalis* – 10,40,  
*Valeriana tripteris* – 45,47,  
*Valerianella locusta* – 3,31,  
*Veratrum nigrum* – 11,  
*Verbascum phoeniceum* – 30,31,  
*Verbascum thapsus* – 10,11,  
*Verbena officinalis* – 13,  
*Veronica austriaca* – 24,  
*Veronica officinalis* – 22,42,  
*Veronica persica* – 18,  
*Viburnum lantana* – 24,  
*Vicia grandiflora* – 1,3,  
*Vicia hirsuta* – 1,2,  
*Vicia sativa* – 1  
*Vicia sepium* – 2  
*Vicia sylvatica* – 22,46,  
*Vicia tenuifolia* – 1,7,  
*Vicia tetrasperma* – 35,  
*Viola canina* – 34,35,  
*Viola collina* – 4,24,  
*Viola kitaibeliana* – 23,  
*Viola tricolor* – 2,  
*Vulpia myuros* – 13,36,  
*Waldsteinia geoides* – 24,  
*Xanthium italicum* – 3,  
*Xeranthemum annuum* – 9.

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## Appendix: List of localities.

Given are: serial number of the locality; description of the locality; date of soil sample collection. The samples, except for localities no. 13, 19-22, 45-47 were collected by P. MÁRTONFI.

**1.** Slovakia, Zemplínska Šírava – Kamenec, estate of cottage, 190 m a.s.l., 21 May 1993.  
**2.** 100 m east from locality 1, 190 m a.s.l., 21 May 1993. **3.** Slovakia, Zemplínska Šírava - Klokočov; west of the village, 200 m a.s.l., 21 May 1993. **4.** Slovakia, Košice - Kavečany, below the road to Kavečany, 380 m a.s.l., 30 May 1993. **5.** 300 m north from locality 4, 400 m a.s.l., 30 May 1993. **6.** Slovakia, Košice - Kavečany, slope around the road, 480 m a.s.l., 30 May 1993. **7.** 200 m north from locality 6, 500 m a.s.l., 30 May 1993. **8.** 400 m north from locality 6, 500 m a.s.l., 30 May 1993. **9.** Hungaria, Balatonfüred, Tamas-hegy hill, north of Balaton; 310 m a.s.l., 29 June 1993. **10.** Hungaria, Balatonaracs, part of Balatonfüred, Koloska valley, north of Balaton, 300 m a.s.l., 29 June 1993. **11.** Hungaria, Keszthely, near the road, north-east of the village, 250 m a.s.l., 30 June 1993. **12.** Hungaria, Keszthely, „Fagyoskereszt“, 300 m a.s.l., 30 June 1993. **13.** Czech Republic, between Býkev and Cytov villages, near the railway, 6 July 1993 (coll. P. MRÁZ). **14.** Slovakia, Hrabušice, Suchá Belá gorge, 660 m a.s.l., 31 July 1993. **15.** Slovakia, Kláštorisko, towards to Malý Kyseľ gorge, 780 m a.s.l., 31 July 1993. **16.** Slovakia, Smižianska Maša, limestone rock, 500 m a.s.l., 31 July 1993. **17.** Slovakia, Ladmovce, Šomoš hill (215.7 m), east of the village, 160 m a.s.l., 25 August

1993. **18.** Slovakia, Ladmovce, on the slope of Šomoš hill, east of the village, 200 m a.s.l., 25 August 1993. **19.** Slovakia, Levočské vrchy hills, Dlhé Stráže, near the Strašný potok brook, above forest path, 740 m a.s.l., 29 September 1993 (coll. I. TURISOVÁ). **20.** Close to locality 19, 29 September 1993 (coll. I. TURISOVÁ). **21.** Close to locality 19, 29 September 1993 (coll. I. TURISOVÁ). **22.** Slovakia, Levočské vrchy hills, town of Levoča, "Kráľovec" near the old Kežmarok road, 730 m a.s.l., 29 September 1993 (coll. I. Turisová). **23.** Slovakia, Zádiel, Zádielsky kameň hill, 7 May 1994. **24.** Slovakia, Turňa nad Bodvou, slope of Turniansky hradný vrch hill, 340 m a.s.l., 7 May 1994. **25.** Slovakia, village of Prakovce, path near the dextral feeder of Hrelíkov potok brook, 23. August 1994. **26.** Slovakia, Nízke Tatry Mts., Demänovská dolina valley, at the foot of Siná Mt., 850 m s. m., 8 September 1994. **27.** Slovakia, Nízke Tatry Mts., north of the Sedlo pod Sinou saddle, ca. 1310 m s. m., 8 September 1994. **28.** Slovakia, town of Nitra, forest-steppe on the slope of Zobor hill, 390 m a.s.l., 2 June 1995. **29.** Slovakia, town of Nitra, forest-steppe, east of the Plieška (393 m) hill, 380 m a.s.l., 2 June 1995. **30.** Slovakia, town of Nitra, Žibrica hill, 580 m a.s.l., 3 June 1995. **31.** Slovakia, town of Nitra, saddle below the Žibrica hill, 410 m a.s.l., 3 June 1995. **32.** Slovakia, town of Plešivec, Plešivecká planina plateau, 500 m a.s.l., 8 June 1995. **33.** Slovakia, town of Plešivec, slope of the Plešivecká planina plateau, ca. 410 m s. m., 8 June 1995. **34.** Czech Republic, south Moravia, sands near the railway station of Bzenec-Přívov, 180 m a.s.l., 2 July 1995. **35.** 300 m south from locality 34, 180 m a.s.l., 2 July 1995. **36.** Slovakia, sands near the village of Sekule, 160 m a.s.l., 4 June 1995. **37.** Romania, Munții Cindrelui Mts., near the village of Păltiniș, 15 July 1995. **38.** Romania, Apuseni, Munții Bihorului Mts, calcareous rocks between the Albac and Scărișoara villages, 16 July 1995. **39.** 200 m west of the locality 38, 16 July 1995. **40.** 1 km west of the 38, 16 July 1995. **41.** Close to locality 40, 16 July 1995. **42.** Slovakia, path near the Runina village, 540 m a.s.l., 31 July 1995. **43.** Slovakia, meadow, west of the Runina village, 570 m a.s.l., 31 July 1995. **44.** 100 m west of the locality 43, 570 m a.s.l., 31 July 1995. **45.** Slovakia, Krivánska Malá Fatra Mts., Stoh hill, 1000 m a.s.l., 29 September 1995 (coll. I. TURISOVÁ). **46.** Nízke Tatry Mts., unnamed hill (1336 m), west of Zvolen hill, 1289 m a.s.l., 1 August 1995 (coll. I. TURISOVÁ). **47.** Slovakia, Veľká Fatra Mts., Zárniky hill, 870 m a.s.l., 9 August 1995 (coll. I. TURISOVÁ).

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