

Table A1. Inorganic composition of unextracted (untreated) and solvent-extracted (treated) samples.

Sample	Inorganic compound (mg/kg)					
	Ash	Al	Ca	Fe	K	Mg
S1-Untreated	6 ± 0	390 ± 2	4868 ± 174	272 ± 7	7506 ± 194	2700 ± 95
S1-Extracted	6 ± 0	344 ± 5	4638 ± 15	237 ± 3	1358 ± 4	1548 ± 7
S2-Untreated	6 ± 0	305 ± 27	4633 ± 12	280 ± 17	10909 ± 41	2821 ± 35
S2-Extracted	5 ± 0	308 ± 4	4845 ± 88	309 ± 20	143 ± 11	921 ± 11
S3-Untreated	7 ± 0	556 ± 5	5428 ± 84	379 ± 3	6536 ± 114	2706 ± 44
S3-Extracted	5 ± 0	540 ± 5	5665 ± 45	355 ± 3	184 ± 2	1213 ± 54
S4-Untreated	7 ± 0	1018 ± 78	5618 ± 179	800 ± 73	6958 ± 9	2440 ± 108
S4-Extracted	6 ± 0	924 ± 40	5255 ± 90	768 ± 30	349 ± 1	1182 ± 106
S5-Untreated	7 ± 0	395 ± 9	6171 ± 52	342 ± 13	6264 ± 62	2430 ± 36
S5-Extracted	6 ± 0	387 ± 1	6404 ± 194	363 ± 9	172 ± 5	934 ± 24
S6-Untreated	7 ± 0	537 ± 11	5464 ± 102	468 ± 7	7068 ± 122	2659 ± 11
S6-Extracted	7 ± 0	568 ± 14	5876 ± 128	546 ± 37	225 ± 5	1113 ± 27
S7-Untreated	7 ± 0	819 ± 33	5545 ± 159	613 ± 33	7419 ± 114	2434 ± 58
S7-Extracted	7 ± 0	693 ± 13	5640 ± 16	587 ± 9	271 ± 10	1031 ± 29
S8-Untreated	9 ± 0	683 ± 7	4363 ± 227	385 ± 3	4167 ± 221	2282 ± 134
S8-Extracted	6 ± 0	760 ± 9	5962 ± 179	522 ± 7	261 ± 14	1234 ± 82
S9-Untreated	3 ± 0	42 ± 4	1600 ± 111	49 ± 2	6210 ± 41	1547 ± 14
S9-Extracted	2 ± 0	54 ± 4	1504 ± 53	42 ± 3	38 ± 2	610 ± 21
S10-Untreated	4 ± 0	53 ± 3	2481 ± 213	156 ± 2	4929 ± 94	1771 ± 39
S10-Extracted	3 ± 0	65 ± 3	2232 ± 213	136 ± 3	36 ± 3	785 ± 29
S11-untreated	4 ± 0	42 ± 4	2348 ± 22	74 ± 2	4596 ± 51	1929 ± 20
S11-Extracted	2 ± 0	38 ± 1	1982 ± 107	42 ± 1	43 ± 3	837 ± 44
S12-Untreated	3 ± 0	24 ± 3	1466 ± 66	33 ± 1	5334 ± 53	1144 ± 62
S12-Extracted	2 ± 0	23 ± 1	1542 ± 82	31 ± 1	79 ± 5	584 ± 24
S13-Untreated	3 ± 0	24 ± 4	1871 ± 25	52 ± 2	3766 ± 43	1464 ± 13
S13-Extracted	2 ± 0	34 ± 2	1394 ± 72	37 ± 0	27 ± 1	630 ± 34
S14-Untreated	4 ± 0	52 ± 4	2793 ± 32	76 ± 0	4052 ± 23	1810 ± 14
S14-Extracted	3 ± 0	52 ± 4	2373 ± 122	59 ± 2	42 ± 3	696 ± 36
S15-Untreated	4 ± 0	34 ± 2	1604 ± 19	44 ± 1	5821 ± 75	1391 ± 16
S15-Extracted	3 ± 0	46 ± 4	1489 ± 35	48 ± 4	31 ± 2	599 ± 14
S16-Untreated	3 ± 0	36 ± 1	1984 ± 29	47 ± 0	4677 ± 40	1661 ± 29
S16-Extracted	2 ± 0	48 ± 2	1773 ± 62	45 ± 2	26 ± 2	642 ± 23
S17-Untreated	3 ± 0	15 ± 2	1162 ± 28	25 ± 1	4528 ± 103	1442 ± 22
S17-Extracted	2 ± 0	14 ± 1	1069 ± 11	25 ± 2	24 ± 1	593 ± 4
S18-Untreated	3 ± 0	36 ± 1	1455 ± 55	40 ± 1	4476 ± 122	1279 ± 47
S18-Extracted	2 ± 0	36 ± 2	1311 ± 35	41 ± 2	22 ± 2	496 ± 16
S19-Untreated	4 ± 0	25 ± 2	1832 ± 56	35 ± 1	3542 ± 130	1601 ± 52
S19-Extracted	2 ± 0	25 ± 2	1663 ± 29	35 ± 1	31 ± 1	630 ± 13
S20-Untreated	3 ± 0	33 ± 1	1665 ± 28	33 ± 1	3436 ± 48	1260 ± 18
S20-Extracted	2 ± 0	32 ± 1	1665 ± 28	35 ± 0	32 ± 3	642 ± 17
S21-Untreated	3 ± 0	23 ± 2	1576 ± 42	34 ± 1	3188 ± 62	1335 ± 31
S21-Extracted	2 ± 0	27 ± 3	1408 ± 39	34 ± 1	31 ± 1	559 ± 14
S22-Untreated	3 ± 0	48 ± 2	1416 ± 55	46 ± 2	3824 ± 70	1279 ± 34
S22-Extracted	2 ± 0	50 ± 2	1218 ± 12	49 ± 0	24 ± 1	484 ± 3
S23-Untreated	3 ± 0	20 ± 1	1183 ± 14	29 ± 1	4749 ± 46	1463 ± 11
S23-Extracted	2 ± 0	20 ± 1	979 ± 17	26 ± 0	30 ± 0	647 ± 10
S24-Untreated	3 ± 0	22 ± 2	1887 ± 24	31 ± 2	3702 ± 18	1631 ± 13
S24-Extracted	2 ± 0	25 ± 1	1739 ± 20	31 ± 1	26 ± 1	671 ± 9

Sample	Mn	Na	P	S	Si	Zn
S1-Untreated	133 ± 0	86 ± 4	774 ± 2	1350 ± 2	12205 ± 3	19 ± 0
S1-Extracted	124 ± 2	54 ± 1	521 ± 12	891 ± 7	12510 ± 158	17 ± 0
S2-Untreated	154 ± 2	417 ± 0	1264 ± 1	1438 ± 13	10812 ± 567	20 ± 1
S2-Extracted	109 ± 2	39 ± 2	252 ± 5	905 ± 4	11688 ± 958	17 ± 1
S3-Untreated	184 ± 0	119 ± 2	859 ± 10	1428 ± 8	12089 ± 3	20 ± 0
S3-Extracted	143 ± 1	62 ± 1	312 ± 5	796 ± 9	12670 ± 69	20 ± 0
S4-Untreated	143 ± 3	187 ± 9	1424 ± 60	1471 ± 55	12749 ± 1120	20 ± 1
S4-Extracted	123 ± 4	85 ± 8	391 ± 3	1147 ± 15	13587 ± 492	19 ± 0
S5-Untreated	142 ± 0	92 ± 3	936 ± 12	1281 ± 23	13436 ± 328	18 ± 1
S5-Extracted	112 ± 2	42 ± 2	246 ± 4	949 ± 21	15207 ± 826	21 ± 0
S6-Untreated	210 ± 2	106 ± 6	1425 ± 30	1472 ± 28	14218 ± 151	24 ± 0
S6-Extracted	168 ± 5	45 ± 2	405 ± 8	1125 ± 15	15724 ± 1252	24 ± 1
S7-Untreated	135 ± 2	181 ± 16	1165 ± 10	1427 ± 7	14737 ± 205	15 ± 1
S7-Extracted	108 ± 2	71 ± 4	299 ± 7	1088 ± 4	15474 ± 401	15 ± 2
S8-Untreated	95 ± 1	118 ± 6	963 ± 12	1041 ± 11	10415 ± 68	12 ± 0
S8-Extracted	117 ± 1	89 ± 7	307 ± 13	1102 ± 9	12218 ± 94	12 ± 0
S9-Untreated	73 ± 3	20 ± 0	932 ± 6	651 ± 5	5355 ± 45	26 ± 1
S9-Extracted	54 ± 2	116 ± 1	152 ± 10	264 ± 7	5222 ± 453	17 ± 0
S10-Untreated	95 ± 2	128 ± 3	990 ± 7	585 ± 9	6997 ± 83	24 ± 0
S10-Extracted	76 ± 2	22 ± 0	273 ± 12	256 ± 6	6928 ± 165	24 ± 1
S11-Untreated	73 ± 3	64 ± 3	1166 ± 27	654 ± 4	6836 ± 48	30 ± 1
S11-Extracted	57 ± 1	13 ± 1	265 ± 7	226 ± 4	5249 ± 1	29 ± 0
S12-Untreated	49 ± 1	13 ± 0	1229 ± 29	590 ± 10	5291 ± 33	22 ± 1
S12-Extracted	39 ± 0	13 ± 0	129 ± 5	222 ± 1	4992 ± 19	19 ± 0
S13-Untreated	58 ± 2	16 ± 1	889 ± 34	597 ± 14	6334 ± 297	20 ± 1
S13-Extracted	44 ± 0	10 ± 0	186 ± 8	242 ± 7	5050 ± 96	19 ± 1
S14-Untreated	106 ± 0	117 ± 1	987 ± 7	610 ± 5	8390 ± 125	24 ± 0
S14-Extracted	86 ± 3	17 ± 1	247 ± 11	276 ± 6	7876 ± 251	25 ± 1
S15-Untreated	63 ± 1	68 ± 1	928 ± 13	667 ± 10	7421 ± 133	20 ± 0
S15-Extracted	65 ± 3	8 ± 1	120 ± 2	319 ± 4	7346 ± 166	22 ± 3
S16-Untreated	1 ± 0	59 ± 0	876 ± 10	559 ± 8	6651 ± 82	16 ± 0
S16-Extracted	54 ± 1	16 ± 1	153 ± 5	222 ± 7	6258 ± 299	17 ± 0
S17-Untreated	130 ± 5	8 ± 0	1196 ± 56	700 ± 50	6389 ± 426	20 ± 2
S17-Extracted	92 ± 1	4 ± 1	206 ± 1	229 ± 4	5921 ± 187	17 ± 1
S18-Untreated	94 ± 3	84 ± 3	1112 ± 12	928 ± 2	6107 ± 87	18 ± 2
S18-Extracted	70 ± 3	8 ± 0	253 ± 14	223 ± 1	6068 ± 232	16 ± 1
S19-Untreated	122 ± 3	27 ± 1	1175 ± 8	663 ± 19	7200 ± 284	20 ± 1
S19-Extracted	87 ± 2	3 ± 0	286 ± 16	191 ± 2	6532 ± 85	18 ± 1
S20-Untreated	79 ± 1	27 ± 2	876 ± 3	1036 ± 20	7316 ± 255	15 ± 1
S20-Extracted	59 ± 2	6 ± 0	229 ± 19	252 ± 14	6434 ± 614	16 ± 1
S21-Untreated	112 ± 2	11 ± 0	914 ± 18	850 ± 27	6976 ± 419	14 ± 1
S21-Extracted	79 ± 1	6 ± 1	197 ± 15	224 ± 1	6646 ± 300	13 ± 0
S22-Untreated	152 ± 2	64 ± 2	1035 ± 6	881 ± 3	7274 ± 336	18 ± 1
S22-Extracted	108 ± 1	7 ± 1	232 ± 1	207 ± 14	6963 ± 160	16 ± 1
S23-Untreated	132 ± 2	32 ± 1	1107 ± 29	1116 ± 42	7529 ± 400	19 ± 0
S23-Extracted	91 ± 2	5 ± 0	125 ± 1	257 ± 6	6895 ± 206	19 ± 1
S24-Untreated	96 ± 2	20 ± 0	1202 ± 16	908 ± 6	7539 ± 216	19 ± 1
S24-Extracted	72 ± 2	8 ± 0	345 ± 15	243 ± 4	7154 ± 176	19 ± 2

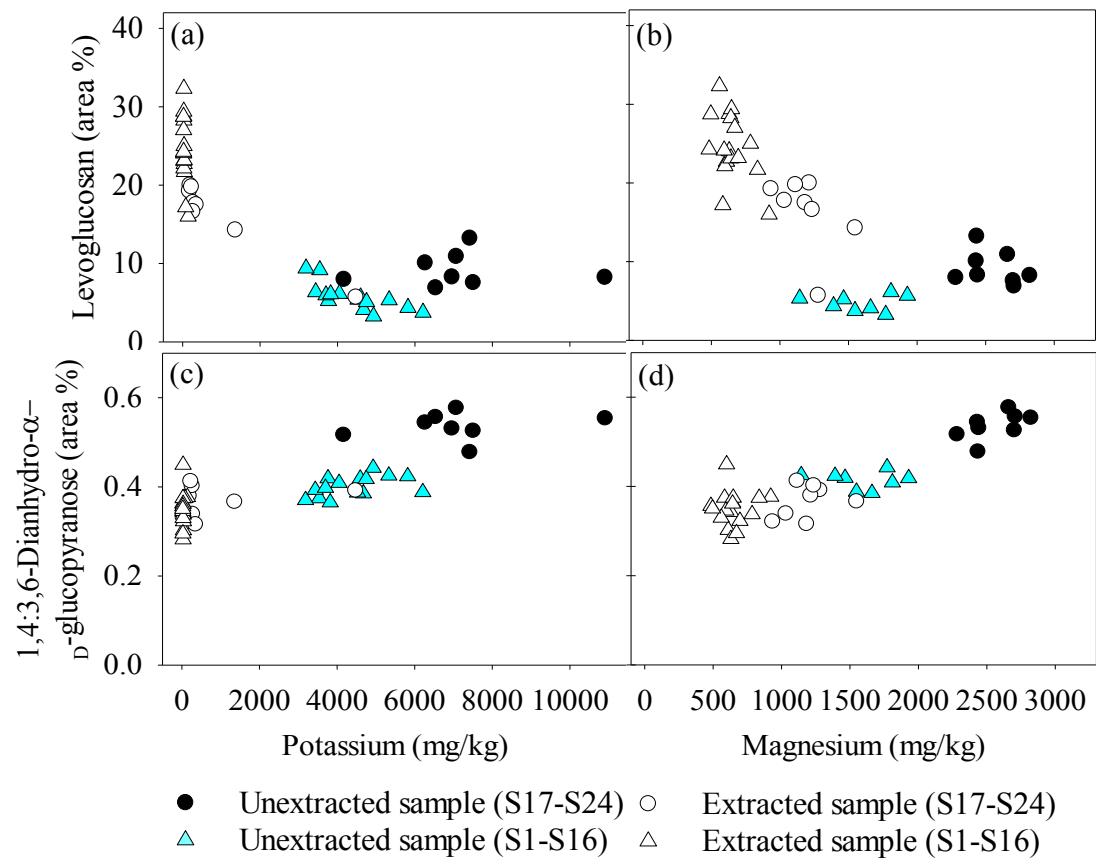


Fig. A.1. Peak area (%) of anhydrosugars produced from raw and extractives-free switchgrass samples with potassium and magnesium.

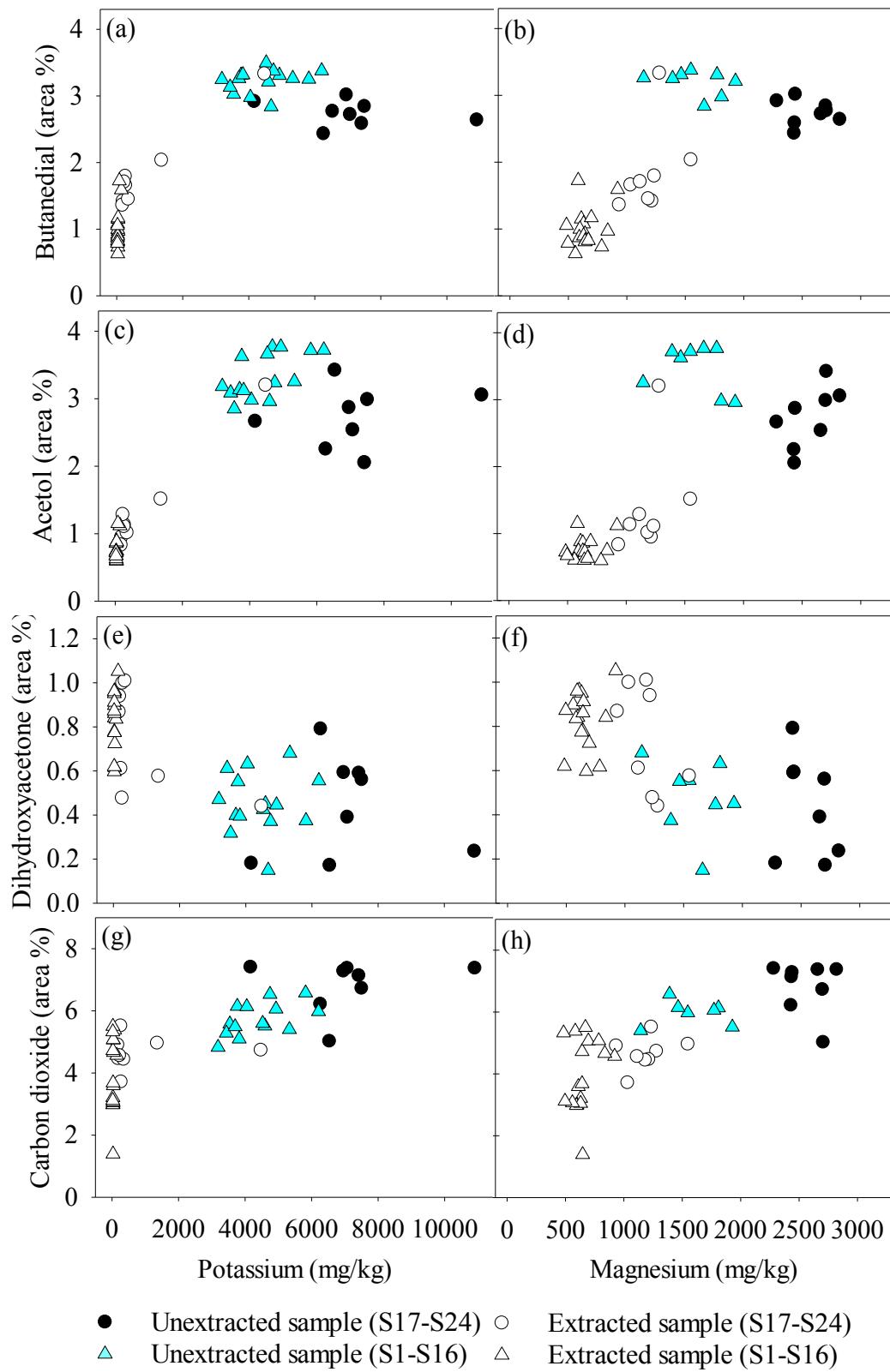


Fig. A.2. Peak area (%) of light oxygenated compounds produced from unextracted and extractives-free switchgrass samples in function of potassium and magnesium content.

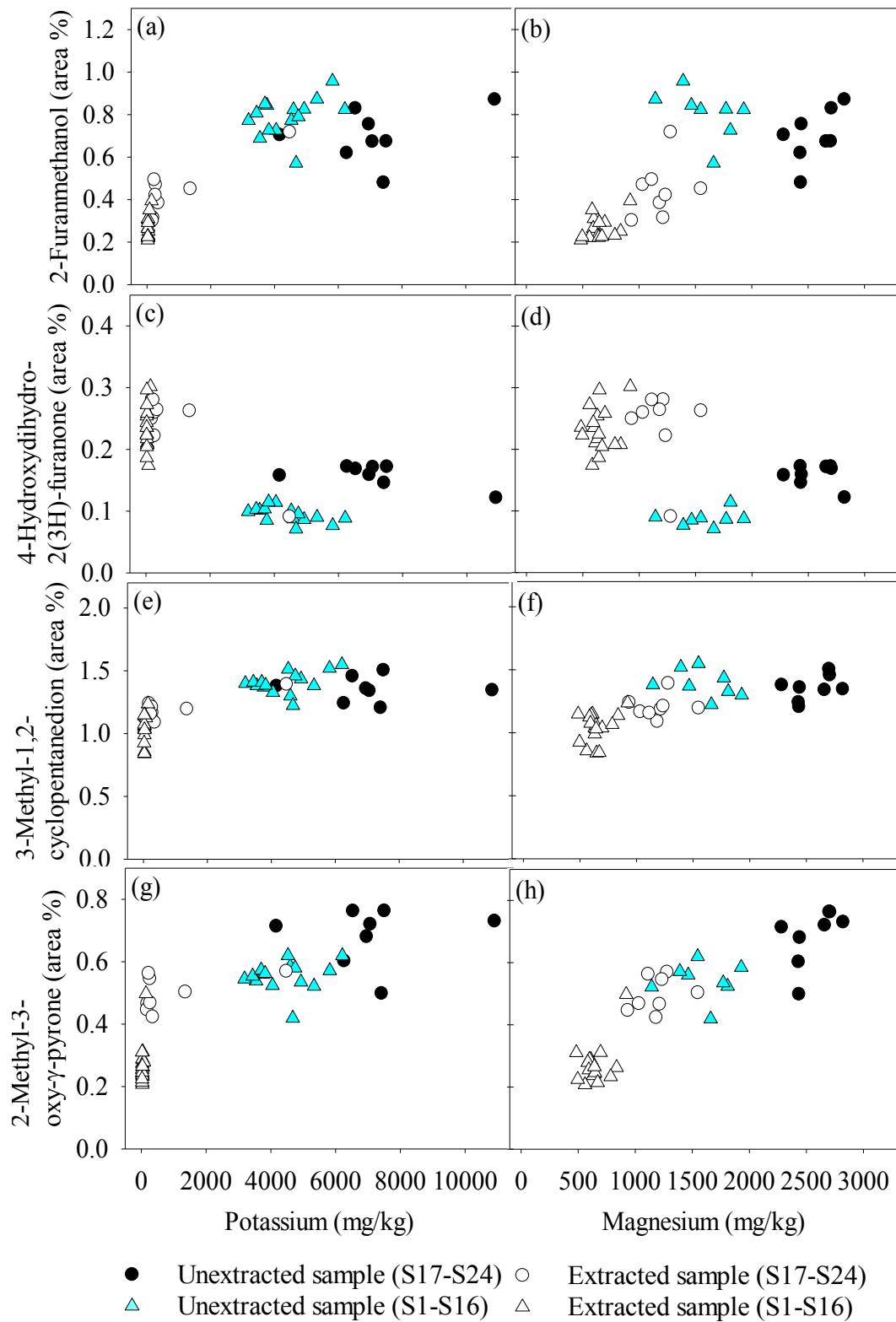


Fig. A.3. Peak area (%) of furans/pyrans/cyclopentanes produced from unextracted and extractives-free switchgrass samples in function of potassium and magnesium content.

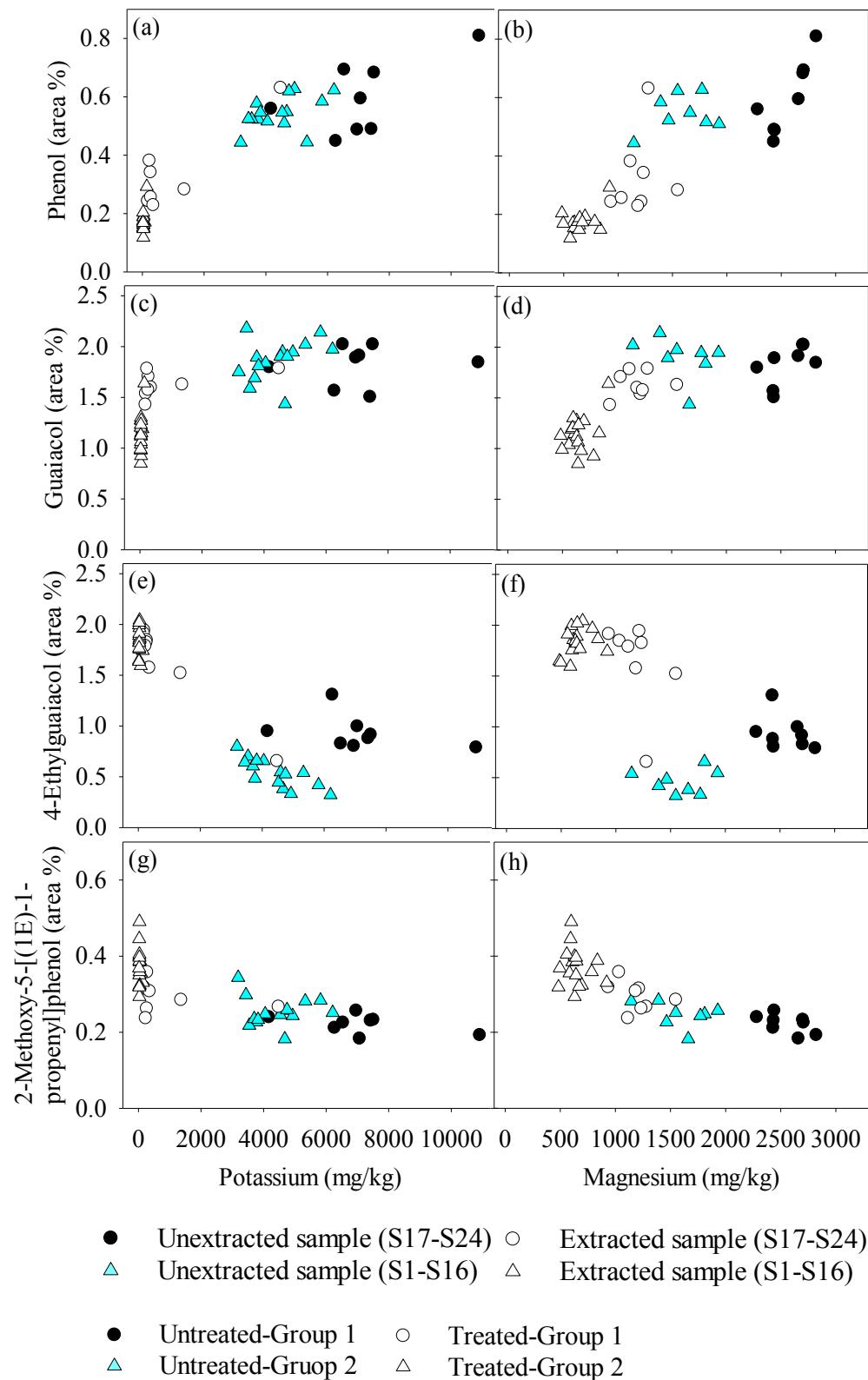


Fig. A.4. Peak area (%) of phenolic compounds produced from unextracted and extractives-free switchgrass samples in function of potassium and magnesium content.