

ほうれん草

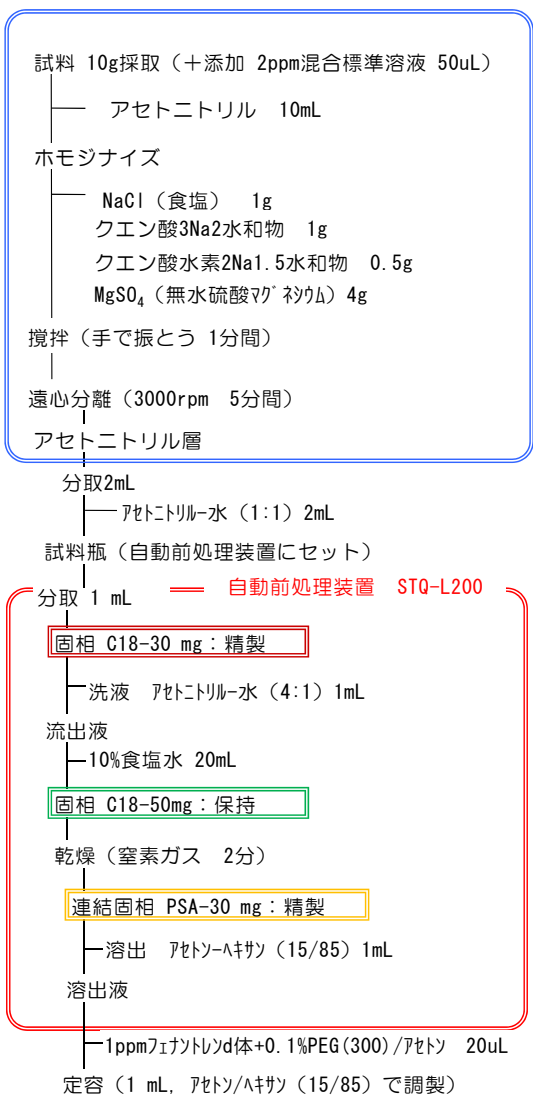
L – G C B 1



STQ-L200

For STQ Method

前処理フロー



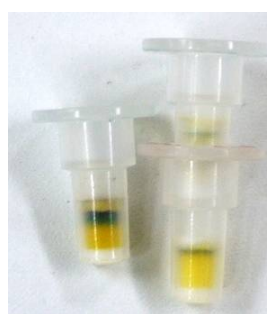
GC/MS (LVI-S200 大量注入25 μ L : 試料12.5mg相当)

目的/実験方法

自動前処理装置STQ-L200を用いた
添加回収試験(GC-B1法)

- 添加濃度 (試料中) : 10ppb
- 最終バイアル中濃度 : 5ppb
- 農薬 : 関東MIX-22, 31, 34, 48, 51
- 検量線 :
 - ・PEG共注入標準溶液、絶対、直線検量線
 - ・1点 : 5ppb
 - ・20ppbフェナントレン体+20ppmPEG + 農薬混合標準溶液 (アセトン-ヘキサン)
 - * フェナントレン体は装置の感度評価の目安として使用。
- 測定 : 1 Injection によるSCAN測定
- 測定条件 : 参考資料に従う。

①遠心分離後 ②固相 (C18-30, C18-50+PSA)



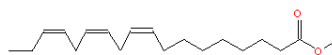
考察

RT31分付近でピテルタノール1のピークに夾雑ピーク(SCANIにはピーク出ない)が重なり、解析に影響を与えている。

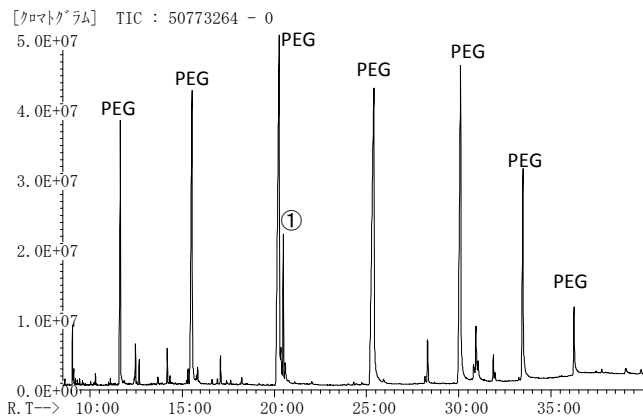
その他は大きな夾雑ピークは無く、概ね良好な回収率を得ることができた。

【夾雑成分】

① Methyl linolenate



Scan Chromatogram



Sample



Information

水分 : 92.4%
脂質 : 0.4%
脂肪酸 : 0.23%

ほうれん草は、赤色根部を含み、ひげ根および変質葉を除去したものを、フードプロセッサーで細切。

AiSTI SCIENCE

Product

LVI-S200
STQ-L200
Smart-SPE C18-30
Smart-SPE C18-50
Smart-SPE PSA-30

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No.	農薬名	回収率(%)	No.	農薬名	回収率(%)	No.	農薬名	回収率(%)	No.	農薬名	回収率(%)
1	1-Naphthylacetamide	ND	76	Cypermethrin-4	90.7	151	Flutolanil	99.3	226	Prohydrojasmon-1	90.8
2	3-Hydroxycarbofuran	59.5	77	Cyproconazole-1	90.4	152	Flutriafol	68.1	227	Prohydrojasmon-2	St-
3	4,4'-Dichlorobenzophenone	90.7	78	Cyproconazole-2	87.5	153	Fluvalinate-1	81.8	228	Prometryn	96.5
4	Acephate	ND	79	DEF(tribufos)	83.9	154	Fluvalinate-2	83.7	229	Propachlor	91.7
5	Acetamipride	ND	80	Deltamethrin	85.1	155	Formothion	46.5	230	Propanil	99.3
6	Acetochlor	94.1	81	Demeton-S-methyl	73.8	156	Fosthiazate-1	89.9	231	Propaphos	101.3
7	Acrinathrin	79.7	82	Diallate-1	96.7	157	Fosthiazate-2	103.4	232	Propargite(BPPS)	84.5
8	Alachlor	94.1	83	Diallate-2	101.3	158	Halfenprox	83.5	233	Propazine	99.4
9	Allethrin-1,2	St-	84	Diazinone	92.3	159	Hexaconazole	88.8	234	Propiconazole-1	101.9
10	Allethrin-3,4	101.5	85	Dichlofenthion	87.4	160	Hexazinone	41.2	235	Propiconazole-2	101.4
11	Ametryn	94.6	86	Dichlofuanid	ND	161	Imazamethabenz methyl	67.3	236	Propoxur	59.0
12	Anilofos	111.3	87	Dichlorvos	44.7	162	Imibenconazole	91.0	237	Propyzamide	89.7
13	Aramite-3	90.4	88	Diclocymet-1	78.9	163	Imibenconazole-des-benzyl	ND	238	Prothiophos	88.8
14	Aramite-4	89.7	89	Diclocymet-2	93.0	164	Iprobenfos	95.5	239	Pyraclufos	102.1
15	Atrazine	95.4	90	Diclofop-methyl	89.1	165	Iprodione	86.4	240	Pyraflufen-ethyl	89.3
16	Azaconazole	88.6	91	Dicloran	93.4	166	Isazophos	89.8	241	Pyrazophos	93.5
17	Azinphos-Methyl	108.2	92	Dicrotofos	ND	167	Isofenphos	102.5	242	Pyributicarb	86.8
18	Benalaxyl	94.4	93	Diethofencarb	110.3	168	Isofenphos P=O	105.2	243	Pyridaben	102.6
19	Bendiocarb	76.7	94	Difenoconazole-1	106.6	169	Isoprocarbe	100.5	244	Pyridafenthion	90.6
20	Benfluranlin	90.7	95	Difenoconazole-2	91.4	170	Isoprothiolane	99.5	245	Pyrifenox-1	86.4
21	Benfuresate	100.3	96	Diflufenican	91.5	171	Isoxathion	91.6	246	Pyrifenox-2	90.9
22	Benoxacor	97.2	97	Dimepiperate	83.7	172	Isoxathion-ox	86.5	247	Pyrimethanil	88.8
23	BHC-alpha	108.9	98	Dimethametryn	96.7	173	Kresoxim-methyl	91.6	248	Pyrimidifen	93.9
24	BHC-beta-gamma	94.0	99	Dimethenamid	98.2	174	Lenacil	74.1	249	Pyriminobac-methyl-1	94.9
25	BHC-delta	103.8	100	Dimethipin	116.0	175	Malathion	103.7	250	Pyriminobac-methyl-2	87.3
26	Bifenox	97.5	101	Dimethoate	ND	176	Mecarbam	84.6	251	Pyriproxyfen	91.3
27	Bifenthrin	77.2	102	Dimethylvinphos-z	108.5	177	Mefenacet	105.0	252	Pyroquilon	34.3
28	Bitertanol-1	96.5	103	Dioxathion	102.4	178	Mefenpyr-diethyl	96.5	253	Quinoclamine	ND
29	Bitertanol-2	69.9	104	Diphenamide	99.7	179	Mepronil	105.5	254	Quinolphos	95.8
30	Bromacil	ND	105	Disulfoton	97.3	180	Metalaxyl	90.1	255	Quinomethionate	86.3
31	Bromobutide	94.4	106	Disulfoton sulfone	95.2	181	Methamidophos	ND	256	Quinoxifen	82.6
32	Bromofos methyl	91.7	107	Edifenphos	99.8	182	Methidathion	96.1	257	Quintozen	83.5
33	Bromophos-ethyl	88.9	108	Endosulfan	79.5	183	Methiocarb	98.8	258	Resmethrin-1	St-
34	Bromopropylate	93.7	109	Endosulfan II	86.8	184	Methoprene-1	71.4	259	Resmethrin-2	97.8
35	Bupimate	98.4	110	Endosulfan sulfate	96.8	185	Methoprene-2	62.9	260	Silafluofen	66.8
36	Buprofezin	90.5	111	EPN	92.7	186	Methoxychlor	97.4	261	Simazin	44.3
37	Butachlor	88.2	112	Epoxiconazole	97.3	187	Metolachlor	107.2	262	Simetryn	79.5
38	Butamifos	91.3	113	EPTC	93.3	188	Metominostrobin-e	92.1	263	Spirodiclofen	84.3
39	Butylate	95.8	114	Esprocarb	94.2	189	Metominostrobin-z	93.1	264	Spiroxamine-1	76.1
40	Cadusafos	95.9	115	Ethalfuralin	84.6	190	Mevinphos	ND	265	Spiroxamine-2	79.3
41	Cafenstrole	129.0	116	Ethiofencarb	100.2	191	Monocrotophos	ND	266	TCMTB	58.8
42	Captafol	St-	117	Ethion	95.2	192	Myclobutanil	89.2	267	Tebuconazole	89.9
43	Captan	St-	118	Ethofumesate	95.5	193	Napropamide	97.8	268	Tebufenpyrad	96.9
44	Carbaril	82.0	119	Ethoprophos	102.9	194	Nitrothal-isopropyl	85.0	269	Tecnazene	86.0
45	Carbofuran	72.5	120	Etofenprox	81.5	195	Norflurazon	78.0	270	Tefluthrine	85.6
46	Carboxin	104.0	121	Etoxazole	83.1	196	Oryzalin	St-	271	Terbacil	ND
47	Carfentrazone ethyl	93.5	122	Etrinfos	94.8	197	Oxadiazone	87.6	272	Terbufos	97.8
48	Chlorbenside	88.1	123	Fenamidone	103.3	198	Oxadixyl	50.4	273	Terbutryn	93.8
49	Chlorbufam	96.7	124	Fenamiphos	94.9	199	Oxyfluorfe	92.9	274	Tetrachlorvinphos	101.1
50	Chlorethoxyphos	90.4	125	Fenarimol	99.5	200	p,p'-DDD	88.7	275	Tetraconazole	97.6
51	Chlorfenapyr	90.0	126	Fenbuconazole	89.3	201	p,p'-DDE	82.5	276	Tetradifon	91.1
52	Chlorfenson	81.0	127	Fenchlorphos	92.3	202	Pacllobutrazol	98.7	277	Thenylchlor	101.6
53	Chlorfenvinphos-1	96.7	128	Fenitrothion	96.6	203	Parathion	94.0	278	Thiobencarb	96.8
54	Chlorfenvinphos-2	97.6	129	Fenobucarb	98.8	204	Parathion-methyl	88.4	279	Thiometon	106.5
55	Chlorobenzilate	96.4	130	Fenothiocarb	94.8	205	Penconazole	94.2	280	Tolclofos-methyl	102.3
56	Chloroneb	94.8	131	Fenoxanil	91.6	206	Pendimethalin	92.0	281	Tolfenpyrad	88.7
57	Chlorpropham	96.2	132	Fenpropathrin	82.1	207	Permethrin-cis	87.7	282	Toriadimefon	96.8
58	Chlorpyrifos	92.1	133	Fenpropemorph	88.6	208	Permethrin-trans	91.0	283	Triadimenol-1	112.9
59	Chlorpyrifos-methyl	100.3	134	Fensulfotlion	101.4	209	Perthane	87.5	284	Triadimenol-2	90.5
60	Chlorthal-dimethyl	96.0	135	Fenthion	98.8	210	Phenothrin-1	96.8	285	Triallate	86.2
61	Chlozolinate	98.4	136	Fenvalerate-1	78.5	211	Phenothrin-2	90.8	286	Triazophos	97.0
62	Cinidon-ethyl	100.2	137	Fenvalerate-2	83.0	212	Phenthoate	94.1	287	Tricyclazole	ND
63	Clomazone	102.1	138	FIPRONIL	92.7	213	Phorate	97.6	288	Trifloxystrobin	100.7
64	Cyanazine	60.5	139	Flamprop-methyl	97.4	214	Phosalone	103.9	289	Trifluralin	89.1
65	Cyanophos	97.3	140	Fluacrypyrim	98.5	215	Phosmet	97.6	290	Thifluzamide	37.2
66	Cyfluthrin-1	91.6	141	Flucythrinate-1	93.7	216	Phosphamidon	73.4	291	Uniconazole	92.1
67	Cyfluthrin-2	88.3	142	Flucythrinate-2	99.4	217	Phthalide	98.7	292	Vinclozoline	94.6
68	Cyfluthrin-3	82.1	143	Fludioxonil	38.7	218	Picolinafen	90.9	293	XMC	90.1
69	Cyfluthrin-4	84.4	144	Flufenpyl-ethyl	101.1	219	Piperonyl butoxide	95.9	294	Zoxamide	87.5
70	Cyhalofop-butyl	94.9	145	Flumiclorac-pentyl	84.9	220	Piperophos	93.7			
71	Cyhalothrin-1	96.7	146	Flumioxazin	96.0	221	Pirimicarb	52.3			
72	Cyhalothrin-2	92.1	147	Fluquinacozazole	97.7	222	Pirimiphos methyl	101.1			
73	Cypermethrin-1	92.3	148	Fluridone	58.2	223	Pretilachlor	97.1			
74	Cypermethrin-2	94.2	149	Flusilazole	97.5	224	Procymidone	90.9			
75	Cypermethrin-3	92.1	150	Fluthiacet-methyl	82.8	225	Profenofos	97.7			

*PEG共注入標準溶液による絶対検量線を使用 回収率30%未満は ND スタンダードNDは St-