

キャベツ

L-GCB1

前処理フロー

試料 10g採取 (+添加 2ppm混合標準溶液 50 μ L)

アセトニトリル 10mL

ホモジナイズ

NaCl (食塩) 1g

クエン酸3Na2水和物 1g

クエン酸水素2Na1.5水和物 0.5g

MgSO₄ (無水硫酸マグネシウム) 4g

撈拌 (手で振とう 1分間)

遠心分離 (3000rpm 5分間)

アセトニトリル層

分取2mL

アセトニトリル-水 (1:1) 2mL

試料瓶 (自動前処理装置にセット)

分取 1 mL

自動前処理装置 STQ-L200

固相 C18-30 mg : 精製

洗液 アセトニトリル-水 (4:1) 1mL

流出液

10%食塩水 20mL

固相 C18-50mg : 保持

乾燥 (窒素ガス 2分)

連結固相 PSA-30 mg : 精製

溶出 アセトン/ヘキサン (15/85) 1mL

溶出液

1ppmフェナントレン体+0.1%PEG(300)/アセトン 20 μ L

定容 (1 mL, アセトン/ヘキサン (15/85) で調製)

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。

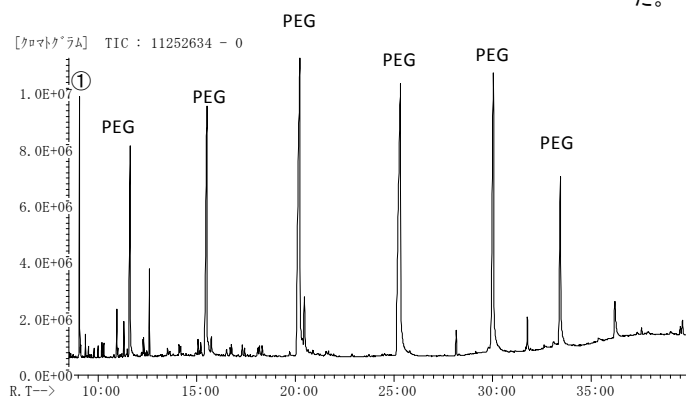
①遠心分離後 ②固相 (C18-30, C18-50+PSA)



考察

大きな夾雑ピークは無く、全体的にやや低めではあるが概ね良好な回収率を得ることができた。

Scan Chromatogram



【夾雑成分】

① Dimethyl tetrasulfide



STQ-L200

For STQ Method

Sample



Information

水分 : 92.7%
脂質 : 0.2%
脂肪酸 : 0.05%

キャベツは、外側変質葉及びしんを除いたものを4等分し、各々から1/2等分を集めたものをフードプロセッサで細切。

AISTI SCIENCE

Product

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

株式会社アイスティサイエンス

〒640-8341
和歌山市黒田120-6アソート黒田2F
TEL. 073-475-0033
FAX. 073-497-5011
www.aisti.co.jp

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-3	79.8	151	Fluthiacet-methyl	52.7	226	Profenofos	79.0
2	3-Hydroxycarbofuran	St-	77	Cypermethrin-4	84.5	152	Flutolanil	79.4	227	Prohydrojasmon-1	70.3
3	4,4'-Dichlorobenzophenone	72.9	78	Cyproconazole-1	71.3	153	Flutriafol	72.6	228	Prohydrojasmon-2	St-
4	Acephate	ND	79	Cyproconazole-2	74.5	154	Fluvalinate-1	117.3	229	Prometryn	74.5
5	Acetamipride	ND	80	DEF(tribufos)	75.7	155	Fluvalinate-2	118.9	230	Propachlor	72.0
6	Acetochlor	72.0	81	Deltamethrin	88.3	156	Formothion	107.0	231	Propanil	62.2
7	Acrinathrin	94.2	82	Demeton-S-methyl	63.6	157	Fosthiazate-1	69.0	232	Propaphos	75.1
8	Alachlor	71.6	83	Diallate-1	78.4	158	Fosthiazate-2	79.2	233	Propargite(BPPS)	78.4
9	Allethrin-1,2	St-	84	Diallate-2	67.2	159	Halfenprox	70.2	234	Propazine	78.0
10	Allethrin-3,4	74.1	85	Diazinone	73.6	160	Hexaconazole	82.7	235	Propiconazole-1	72.2
11	Ametryn	74.5	86	Dichlofenthion	74.8	161	Hexazinone	46.9	236	Propiconazole-2	75.0
12	Anilofos	66.0	87	Dichlofluanid	ND	162	Imazamethabenz methyl	55.9	237	Propoxur	63.3
13	Aramite-3	70.4	88	Dichlorvos	43.7	163	Imibenconazole	45.3	238	Propyzamide	76.9
14	Aramite-4	58.9	89	Diclocymet-1	77.6	164	Imibenconazole-des-benzyl	43.9	239	Prothiophos	72.2
15	Atrazine	71.9	90	Diclocymet-2	80.0	165	Iprobenfos	75.7	240	Pyraclofos	72.1
16	Azaconazole	75.0	91	Diclofop-methyl	73.7	166	Iprodione	148.4	241	Pyraflufen-ethyl	75.3
17	Azinphos-Methyl	40.1	92	Dicloran	84.1	167	Isazophos	80.1	242	Pyrazophos	76.3
18	Benalaxyl	80.4	93	Dicrotofos	ND	168	Isofenphos	78.1	243	Pyributicarb	74.9
19	Bendiocarb	89.8	94	Diethofencarb	73.4	169	Isofenphos P=O	77.3	244	Pyridaben	71.0
20	Benfluranlin	76.3	95	Difenoconazole-1	73.7	170	Isoprocarb	74.4	245	Pyridafenthion	77.4
21	Benfuresate	78.2	96	Difenoconazole-2	74.6	171	Isoprothiolane	80.3	246	Pyrifeno-1	67.4
22	Benoxacor	75.7	97	Diflufenican	76.6	172	Isoxathion	71.0	247	Pyrifeno-2	70.7
23	BHC-alpha	72.6	98	Dimepiperate	73.9	173	Isoxathion-ox	70.4	248	Pyrimethanil	72.0
24	BHC-beta	73.4	99	Dimethametryn	75.0	174	Kresoxim-methyl	76.7	249	Pyrimidifen	72.1
25	BHC-gamma	71.3	100	Dimethenamid	82.1	175	Lenacil	74.4	250	Pyriminobac-methyl-1	76.3
26	BHC-delta	107.1	101	Dimethipin	73.4	176	Malathion	76.2	251	Pyriminobac-methyl-2	77.0
27	Bifenox	75.8	102	Dimethoate	ND	177	Mecarbam	St-	252	Pyriproxyfen	73.7
28	Bifenthrin	71.0	103	Dimethylvinphos-z	74.0	178	Mefenacet	74.4	253	Pyroquilon	38.7
29	Bitertanol-1	76.3	104	Dioxathion	ND	179	Mefenpyr-diethyl	75.9	254	Quinoclamine	ND
30	Bitertanol-2	78.6	105	Diphenamide	77.8	180	Mepronil	78.7	255	Quinolphos	79.3
31	Bromacil	ND	106	Disulfoton	79.1	181	Metalaxyl	77.7	256	Quinomethionate	70.5
32	Bromobutide	79.0	107	Disulfoton sulfone	96.1	182	Methamidophos	ND	257	Quinoxifen	71.6
33	Bromofos methyl	70.8	108	Edifenphos	76.9	183	Methidathion	75.9	258	Quintozen	57.5
34	Bromophos-ethyl	72.7	109	Endosulfan	82.2	184	Methiocarb	125.0	259	Resmethrin-1	St-
35	Bromopropylate	75.0	110	Endosulfan II	66.5	185	Methoprene-1	St-	260	Resmethrin-2	56.2
36	Bupimate	75.1	111	Endosulfan sulfate	74.5	186	Methoprene-2	59.8	261	Silafluofen	64.2
37	Buprofezin	72.0	112	EPN	73.8	187	Methoxychlor	70.7	262	Simazin	41.5
38	Butachlor	72.4	113	Epoxiconazole	74.9	188	Metolachlor	74.1	263	Simetryn	71.1
39	Butamifos	74.6	114	EPTC	59.5	189	Metaminostrobin-e	78.3	264	Spirodiclofen	50.9
40	Butylate	73.8	115	Esprocarb	73.1	190	Metaminostrobin-z	77.9	265	Spiroxamine-1	69.6
41	Cadusafos	76.1	116	Ethalfuralin	78.4	191	Mevinphos	ND	266	Spiroxamine-2	71.1
42	Cafenstrole	82.4	117	Ethiofencarb	114.5	192	Monocrotophos	ND	267	TCMTB	St-
43	Captafol	St-	118	Ethion	71.9	193	Myclobutanil	79.0	268	Tebuconazole	72.9
44	Captan	St-	119	Ethofumesate	76.3	194	Napropamide	78.8	269	Tebufenpyrad	73.8
45	Carbaryl	164.7	120	Ethoprophos	74.6	195	Nitrothal-isopropyl	74.2	270	Tecnazene	77.3
46	Carbofuran	76.0	121	Etofenprox	72.5	196	Norflurazon	82.0	271	Tefluthrine	71.3
47	Carboxin	73.5	122	Etioazole	70.4	197	Oryzalin	St-	272	Terbacil	42.8
48	Carfentrazone ethyl	70.4	123	Etrinfos	73.7	198	Oxadiazon	73.0	273	Terbufos	63.5
49	Chlorbenside	72.4	124	Fenamidone	77.7	199	Oxadixyl	45.8	274	Terbutryn	76.8
50	Chlorbufam	75.3	125	Fenamiphol	84.2	200	Oxyfluorfen	79.3	275	Tetrachlorvinphos	70.5
51	Chlorothoxyphos	73.3	126	Fenarimol	82.4	201	p,p'-DDD	75.6	276	Tetraconazole	79.7
52	Chlorfenapyr	76.3	127	Fenbuconazole	79.1	202	p,p'-DDE	67.7	277	Tetradifon	66.0
53	Chlorfenson	80.2	128	Fenchlorphos	73.1	203	Paclobutrazol	76.0	278	Thenylchlor	58.6
54	Chlorfenvinphos-1	70.3	129	Fenitrothion	71.7	204	Parathion	79.1	279	Thiobencarb	73.9
55	Chlorfenvinphos-2	78.7	130	Fenobucarb	77.7	205	Parathion-methyl	80.9	280	Thiometon	75.3
56	Chlorobenzilate	76.3	131	Fenothiocarb	75.9	206	Penconazole	75.7	281	Tolclofos-methyl	75.6
57	Chloroneb	72.2	132	Fenoxanil	74.8	207	Pendimethalin	75.3	282	Tolfenpyrad	73.9
58	Chlorpropham	81.1	133	Fenpropathrin	76.2	208	Permethrin-cis	71.2	283	Toriadimefon	74.9
59	Chlorpyrifos	76.2	134	Fenpropemorph	72.2	209	Permethrin-trans	72.6	284	Triadimenol-1	72.5
60	Chlorpyrifos-methyl	78.0	135	Fensulfotion	70.7	210	Perthane	71.3	285	Triadimenol-2	70.8
61	Chlorthal-dimethyl	75.2	136	Fenthion	72.1	211	Phenothrin-1	70.8	286	Triallate	70.0
62	Chlozolinate	90.7	137	Fenvalerate-1	85.7	212	Phenothrin-2	73.5	287	Triazophos	74.7
63	Cinidon-ethyl	75.9	138	Fenvalerate-2	78.1	213	Phenthoate	73.1	288	Tricyclazole	ND
64	Clomazone	75.3	139	FIPRONIL	78.2	214	Phorate	70.3	289	Trifloxystrobin	78.4
65	Cyanazine	50.6	140	Flamprop-methyl	81.1	215	Phosalone	71.4	290	Trifluralin	75.5
66	Cyanophos	73.5	141	Fluacrypyrim	77.7	216	Phosmet	81.1	291	Thifluzamide	58.7
67	Cyfluthrin-1	ND	142	Flucythrinate-1	80.6	217	Phosphamidon	67.8	292	Uniconazole	74.6
68	Cyfluthrin-2	102.3	143	Flucythrinate-2	82.6	218	Phthalide	49.3	293	Vinclozoline	78.0
69	Cyfluthrin-3	95.5	144	Fludioxonil	76.5	219	Picolinafen	75.9	294	XMC	76.7
70	Cyfluthrin-4	94.4	145	Flufenpyl-ethyl	81.5	220	Piperonyl butoxide	73.6	295	Zoxamide	ND
71	Cyhalofop-butyl	76.5	146	Flumiclorac-pentyl	76.9	221	Piperophos	74.8			
72	Cyhalothrin-1	77.8	147	Flumioxazin	78.1	222	Pirimicarb	62.9			
73	Cyhalothrin-2	81.4	148	Fluquinconazole	91.9	223	Pirimiphos methyl	75.9			
74	Cypermethrin-1	72.2	149	Fluridone	75.0	224	Pretilachlor	70.9			
75	Cypermethrin-2	98.1	150	Flusilazole	79.1	225	Procymidone	76.9			

*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- 回収率150%以上は