



Fractions of Venoms from Elapid, Crotalid and Viperid Snakes, Scorpions, Spider, Amphibians

## PRODUCT INFORMATION

The **KITOXAN®-V03** Library is a set of **5 plates (96-wells)** containing freeze-dried fractions of venoms from the **following species**:



### ELA-2 (Elapid snakes)

*Naja nigricollis, Naja pallida, Dendroaspis jamesoni kaimosae, Naja katiensis.*



### CRO-4 (Crotalid snakes)

*Crotalus horridus horridus, Crotalus vegrandis, Bothrops alternatus, Deinagkistrodon acutus.*



### VIP-3 (Viperid snakes)

*Bitis gabonica rhinoceros, Echis carinatus sochureki, Vipera ammodytes ammodytes, Echis leucogaster.*



### VIP-4 (Viperid snakes)

*Vipera aspis aspis, Echis pyramidium, Bitis nasicornis, Eristicophis macmahonii.*



### SCO-4 (Scorpions)

*Hadogenes zuluanus, Opisthophthalmus carinatus, Parabuthus mossambicensis, Opisthophthalmus glabrifrons.*

## i TECHNICAL INFORMATION

### STORAGE

Lyophilised: + 4°C

Solubilized: **For immediate use only.**

Only if needed, solution can be kept at -20°C.

### HANDLING

**Centrifuge before opening the plates.**

Recommended centrifugation speed is **1100 g for 10 mn** (3000 rpm with a 110mm rotor radius). Open cautiously (lyophilised content).

### RECONSTITUTION

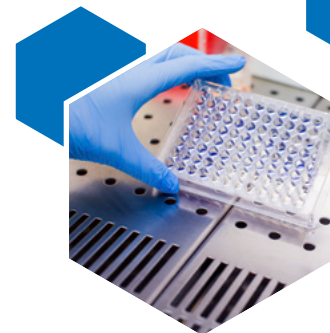
Solvent : 5 to 10% **DMSO** solution

In cases when DMSO cannot be used, wells shall be diluted in a solution water/acetonitrile with ratio **100/0 to 50/50**.

### VENOM FRACTIONATION METHOD

Venoms have been cleared of molecules over **10 kDa**, mostly enzymes, by prior **gel permeation**.

Then each venom has been fragmented in **20 fractions** through HPLC preparative column (cut-offs every 3 min). Location of each fraction is shown on following **plate maps**.

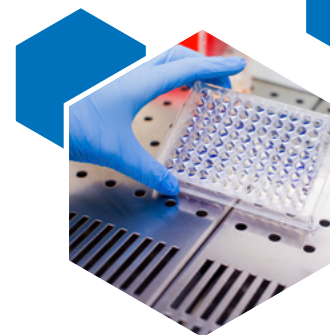


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### PLATE MAPS

Plate ELA-2												
	1	2	3	4	5	6	7	8	9	10	11	12
A	×	NAJNIG	NAJNIG	NAJNIG	NAJNIG	NAJNIG	NAJNIG	NAJNIG	NAJNIG	NAJNIG	NAJNIG	×
B	×	NAJNIG	NAJNIG	NAJNIG	NAJNIG	NAJNIG	NAJNIG	NAJNIG	NAJNIG	NAJNIG	NAJNIG	×
C	×	NAJPAL	NAJPAL	NAJPAL	NAJPAL	NAJPAL	NAJPAL	NAJPAL	NAJPAL	NAJPAL	NAJPAL	×
D	×	NAJPAL	NAJPAL	NAJPAL	NAJPAL	NAJPAL	NAJPAL	NAJPAL	NAJPAL	NAJPAL	NAJPAL	×
E	×	DENJAK	DENJAK	DENJAK	DENJAK	DENJAK	DENJAK	DENJAK	DENJAK	DENJAK	DENJAK	×
F	×	DENJAK	DENJAK	DENJAK	DENJAK	DENJAK	DENJAK	DENJAK	DENJAK	DENJAK	DENJAK	×
G	×	NAJKAT	NAJKAT	NAJKAT	NAJKAT	NAJKAT	NAJKAT	NAJKAT	NAJKAT	NAJKAT	NAJKAT	×
H	×	NAJKAT	NAJKAT	NAJKAT	NAJKAT	NAJKAT	NAJKAT	NAJKAT	NAJKAT	NAJKAT	NAJKAT	×

Plate CRO-4												
	1	2	3	4	5	6	7	8	9	10	11	12
A	×	CROHOH	CROHOH	CROHOH	CROHOH	CROHOH	CROHOH	CROHOH	CROHOH	CROHOH	CROHOH	×
B	×	CROHOH	CROHOH	CROHOH	CROHOH	CROHOH	CROHOH	CROHOH	CROHOH	CROHOH	CROHOH	×
C	×	CROVEG	CROVEG	CROVEG	CROVEG	CROVEG	CROVEG	CROVEG	CROVEG	CROVEG	CROVEG	×
D	×	CROVEG	CROVEG	CROVEG	CROVEG	CROVEG	CROVEG	CROVEG	CROVEG	CROVEG	CROVEG	×
E	×	BOTALT	BOTALT	BOTALT	BOTALT	BOTALT	BOTALT	BOTALT	BOTALT	BOTALT	BOTALT	×
F	×	BOTALT	BOTALT	BOTALT	BOTALT	BOTALT	BOTALT	BOTALT	BOTALT	BOTALT	BOTALT	×
G	×	DEIACU	DEIACU	DEIACU	DEIACU	DEIACU	DEIACU	DEIACU	DEIACU	DEIACU	DEIACU	×
H	×	DEIACU	DEIACU	DEIACU	DEIACU	DEIACU	DEIACU	DEIACU	DEIACU	DEIACU	DEIACU	×



Fractions of Venoms from Elapid, Crotalid and Viperid Snakes, Scorpions, Spider, Amphibians

### Plate VIP-3

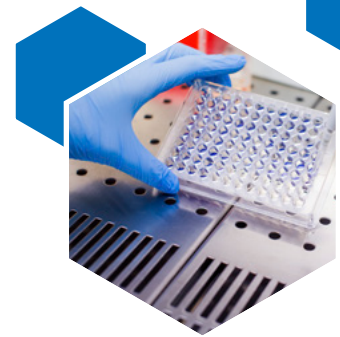
	1	2	3	4	5	6	7	8	9	10	11	12
A	×	BITGAR	BITGAR	BITGAR	BITGAR	BITGAR	BITGAR	BITGAR	BITGAR	BITGAR	BITGAR	×
B	×	BITGAR	BITGAR	BITGAR	BITGAR	BITGAR	BITGAR	BITGAR	BITGAR	BITGAR	BITGAR	×
C	×	ECHSOC	ECHSOC	ECHSOC	ECHSOC	ECHSOC	ECHSOC	ECHSOC	ECHSOC	ECHSOC	ECHSOC	×
D	×	ECHSOC	ECHSOC	ECHSOC	ECHSOC	ECHSOC	ECHSOC	ECHSOC	ECHSOC	ECHSOC	ECHSOC	×
E	×	VIPAMA	VIPAMA	VIPAMA	VIPAMA	VIPAMA	VIPAMA	VIPAMA	VIPAMA	VIPAMA	VIPAMA	×
F	×	VIPAMA	VIPAMA	VIPAMA	VIPAMA	VIPAMA	VIPAMA	VIPAMA	VIPAMA	VIPAMA	VIPAMA	×
G	×	ECHLEU	ECHLEU	ECHLEU	ECHLEU	ECHLEU	ECHLEU	ECHLEU	ECHLEU	ECHLEU	ECHLEU	×
H	×	ECHLEU	ECHLEU	ECHLEU	ECHLEU	ECHLEU	ECHLEU	ECHLEU	ECHLEU	ECHLEU	ECHLEU	×

### Plate VIP-4

	1	2	3	4	5	6	7	8	9	10	11	12
A	×	VIPASP	VIPASP	VIPASP	VIPASP	VIPASP	VIPASP	VIPASP	VIPASP	VIPASP	VIPASP	×
B	×	VIPASP	VIPASP	VIPASP	VIPASP	VIPASP	VIPASP	VIPASP	VIPASP	VIPASP	VIPASP	×
C	×	ECHPYR	ECHPYR	ECHPYR	ECHPYR	ECHPYR	ECHPYR	ECHPYR	ECHPYR	ECHPYR	ECHPYR	×
D	×	ECHPYR	ECHPYR	ECHPYR	ECHPYR	ECHPYR	ECHPYR	ECHPYR	ECHPYR	ECHPYR	ECHPYR	×
E	×	BITNAS	BITNAS	BITNAS	BITNAS	BITNAS	BITNAS	BITNAS	BITNAS	BITNAS	BITNAS	×
F	×	BITNAS	BITNAS	BITNAS	BITNAS	BITNAS	BITNAS	BITNAS	BITNAS	BITNAS	BITNAS	×
G	×	ERIMAC	ERIMAC	ERIMAC	ERIMAC	ERIMAC	ERIMAC	ERIMAC	ERIMAC	ERIMAC	ERIMAC	×
H	×	ERIMAC	ERIMAC	ERIMAC	ERIMAC	ERIMAC	ERIMAC	ERIMAC	ERIMAC	ERIMAC	ERIMAC	×

### Plate SCO-4

	1	2	3	4	5	6	7	8	9	10	11	12
A	×	HADZUL	HADZUL	HADZUL	HADZUL	HADZUL	HADZUL	HADZUL	HADZUL	HADZUL	HADZUL	×
B	×	HADZUL	HADZUL	HADZUL	HADZUL	HADZUL	HADZUL	HADZUL	HADZUL	HADZUL	HADZUL	×
C	×	OPICAR	OPICAR	OPICAR	OPICAR	OPICAR	OPICAR	OPICAR	OPICAR	OPICAR	OPICAR	×
D	×	OPICAR	OPICAR	OPICAR	OPICAR	OPICAR	OPICAR	OPICAR	OPICAR	OPICAR	OPICAR	×
E	×	PARMOS	PARMOS	PARMOS	PARMOS	PARMOS	PARMOS	PARMOS	PARMOS	PARMOS	PARMOS	×
F	×	PARMOS	PARMOS	PARMOS	PARMOS	PARMOS	PARMOS	PARMOS	PARMOS	PARMOS	PARMOS	×
G	×	OPIGLA	OPIGLA	OPIGLA	OPIGLA	OPIGLA	OPIGLA	OPIGLA	OPIGLA	OPIGLA	OPIGLA	×
H	×	OPIGLA	OPIGLA	OPIGLA	OPIGLA	OPIGLA	OPIGLA	OPIGLA	OPIGLA	OPIGLA	OPIGLA	×



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## CERTIFICATE OF ANALYSIS

CoA based on pure venom chromatograms performed by HPLC analysis  
at wave length 214 nm.

*See venom chromatograms on the following pages (Annexes)*

## VENOM SOURCING

All venoms used for KITOXAN fractions come from animals kept in our facilities or safely  
captured, milked and released alive in the wild.

Our facilities are duly controlled by French veterinary authorities and received  
an official operating license.

**KITOXAN venom fractions are not concerned with CITES regulations.**

## PRODUCT ID

**Name :** KITOXAN-V03

**Code :** L5903

**Plates :** L5302 ELA-2 Plate, L5204 CRO-4 Plate, L5103 VIP-3 Plate,  
L5104 VIP-4 Plate, L5604 SCO-4 Plate

**PRODUCT INTENDED FOR RESEARCH USE ONLY**

**FOR MORE INFORMATION PLEASE CONTACT**



**LATOXAN**  
LABORATORY  
Natural Active Ingredients

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FRANCE

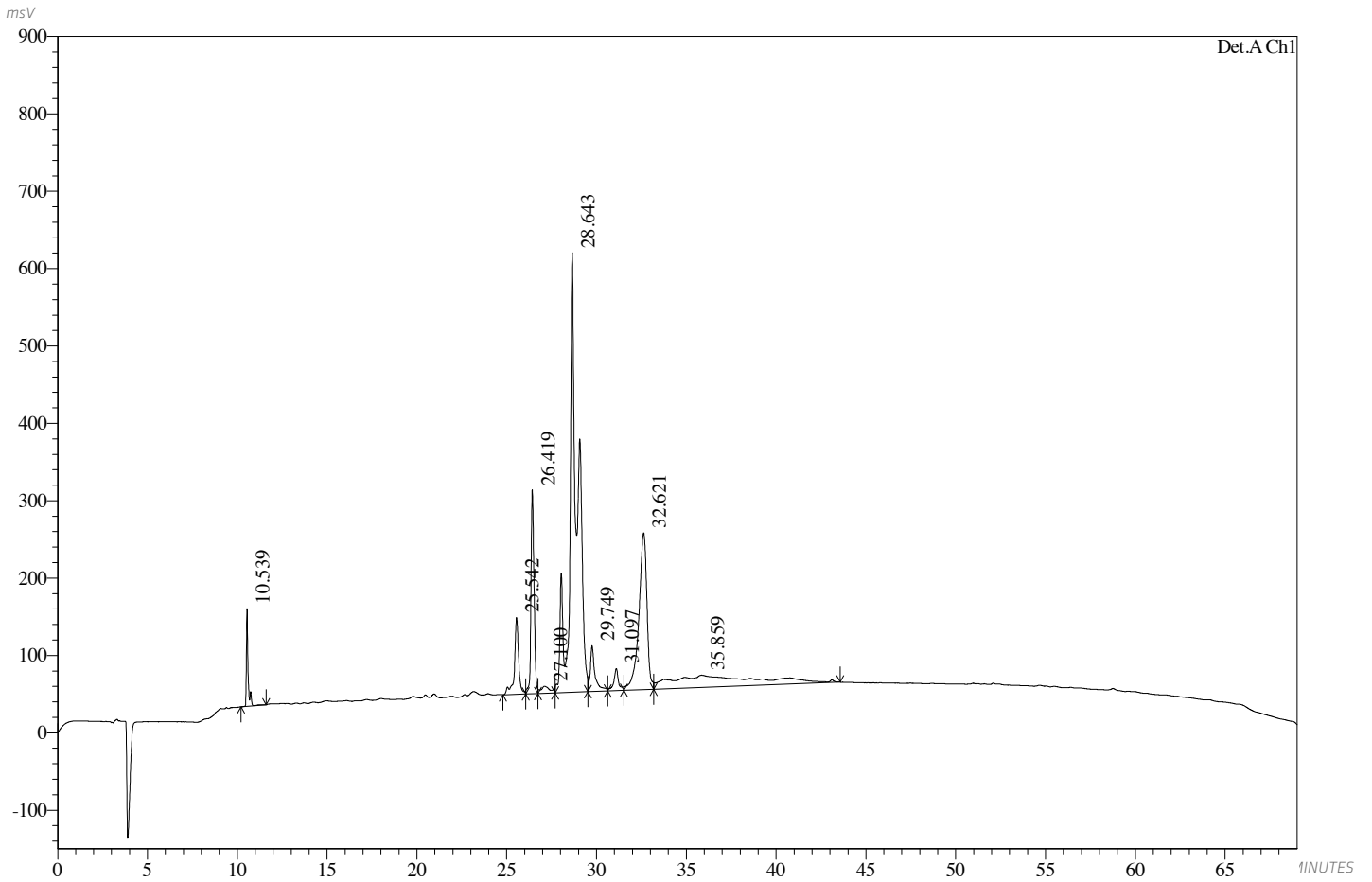
Phone: **+33 475 419 191**

Fax: **+33 475 419 199**

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Follow us on: **www.latoxan.net**

**CHROMATOGRAM**



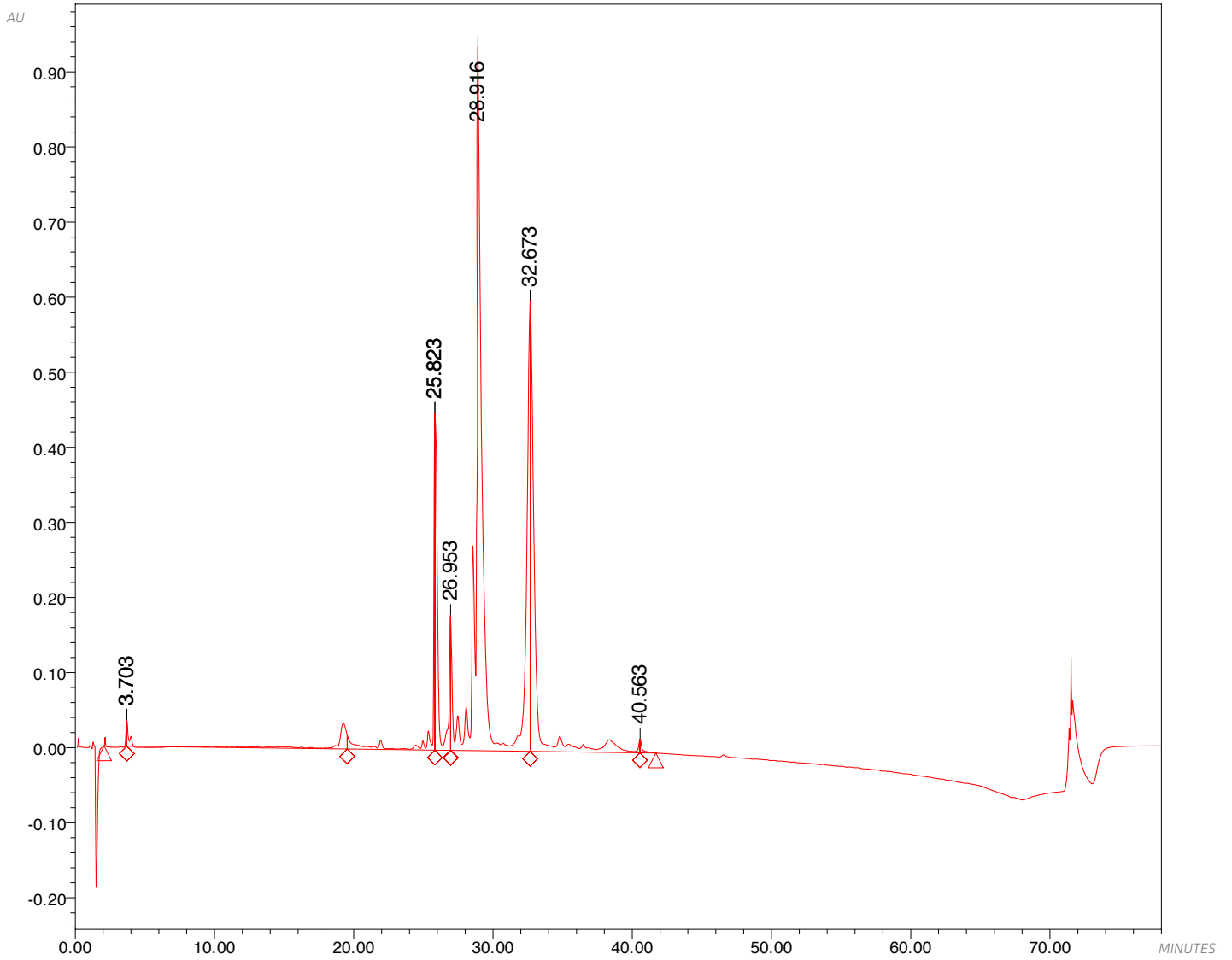
1 Det.A Ch1 / 214nm

624.010.lcd; Vial 4; Ch1: 214 nm; 18/10/2012 01:47:09  
(HPLC Column : LichroCART 250-4 PurospherSTAR RP-18 (5µm) Column n°: 151172)

**PEAK TABLE**

Detector A Ch1 214nm

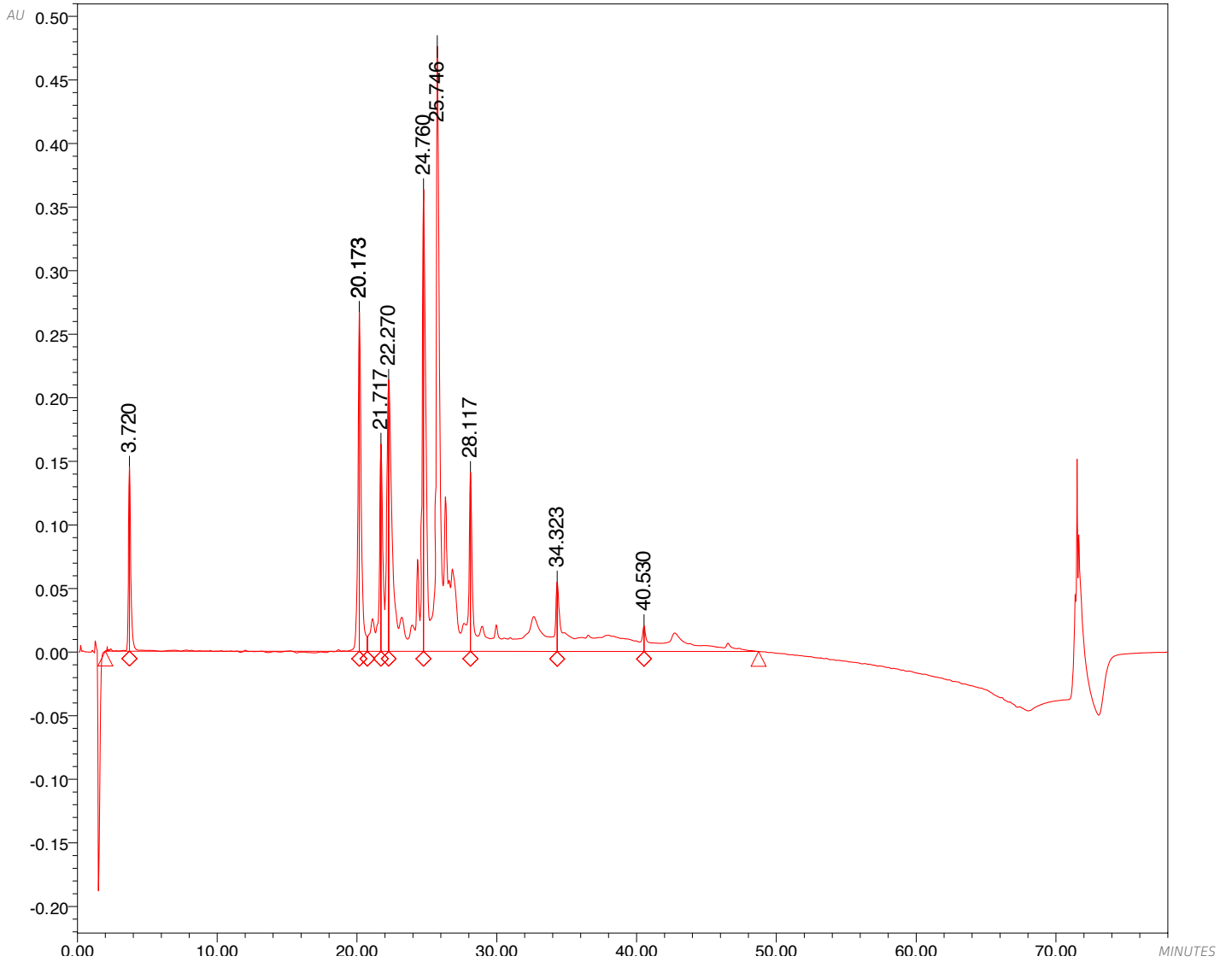
VIAL	RETENTION TIME (MIN.)	AREA	HEIGHT	% AREA	% HEIGHT
1	10.539	818079	126345	2.267	9.208
2	25.542	1635559	99392	4.533	7.244
3	26.419	3153649	263375	8.740	19.195
4	27.100	334170	9155	0.926	0.667
5	28.643	17069634	567919	47.309	41.390
6	29.749	1089077	59170	3.018	4.312
7	31.097	521652	28472	1.446	2.075
8	32.621	6365244	202634	17.641	14.768
9	35.859	5094300	15663	14.119	1.142
<b>Total</b>		<b>36081364</b>	<b>1372127</b>	<b>100.000</b>	<b>100.000</b>



— AL\_LC\_CROPS3142 302.070; Vial 25; Injection 1; Channel 2998 Ch1 214nm@1.2nm; Date Acquired 06/11/2010 00:00:40 GMT

**PEAK RESULTS**

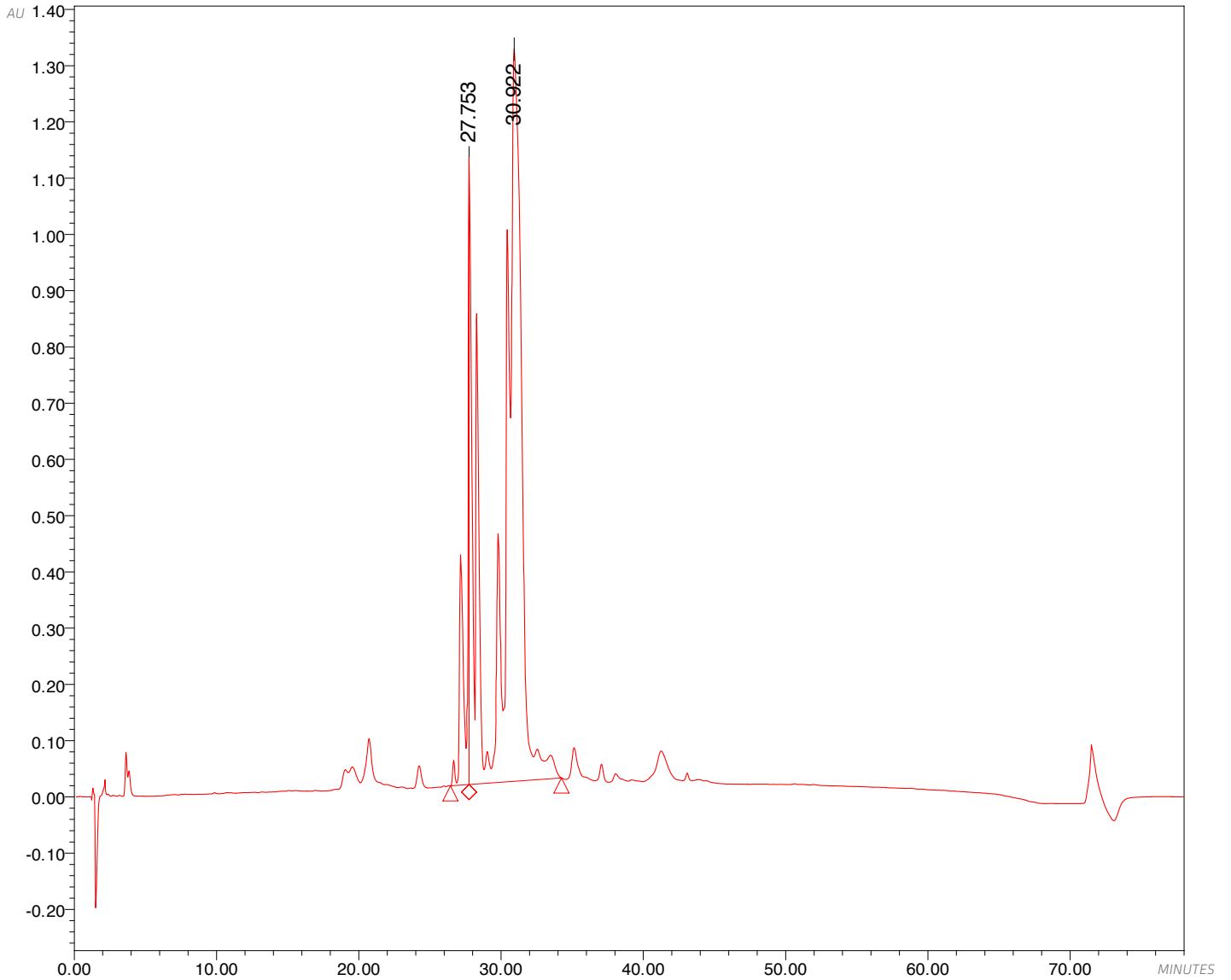
	VIAL	RETENTION TIME (MIN.)	AREA	HEIGHT	% AREA	% HEIGHT
01	25	3.703	274666	34679	0.42	1.28
02	25	3.703	2202911	34679	3.40	1.28
03	25	25.823	3527743	448649	5.45	16.60
04	25	25.823	6713962	448649	10.37	16.60
05	25	26.953	35899	179600	0.06	6.65
06	25	28.916	38358206	938322	59.22	34.72
07	25	32.673	13466318	599411	20.79	22.18
08	25	40.563	194955	18177	0.30	0.67



— AL\_LC\_CROPS3183 405.000; Vial 29; Injection 1; Channel 2998 Ch1 214nm@1.2nm; Date Acquired 11/11/2010 02:50:05 GMT

**PEAK RESULTS**

	VIAL	RETENTION TIME (MIN.)	AREA	HEIGHT	% AREA	% HEIGHT
01	29	3.720	698958	144623	1.38	6.86
02	29	20.173	3297320	266389	6.51	12.64
03	29	20.173	2518645	266389	4.97	12.64
04	29	21.717	1871459	162848	3.69	7.73
05	29	22.270	3479527	213243	6.87	10.12
06	29	24.760	7907422	363008	15.61	17.22
07	29	25.746	17657444	475846	34.86	22.58
08	29	28.117	6106990	140572	12.06	6.67
09	29	34.323	4486035	54521	8.86	2.59
10	29	40.530	2632883	20171	5.20	0.96

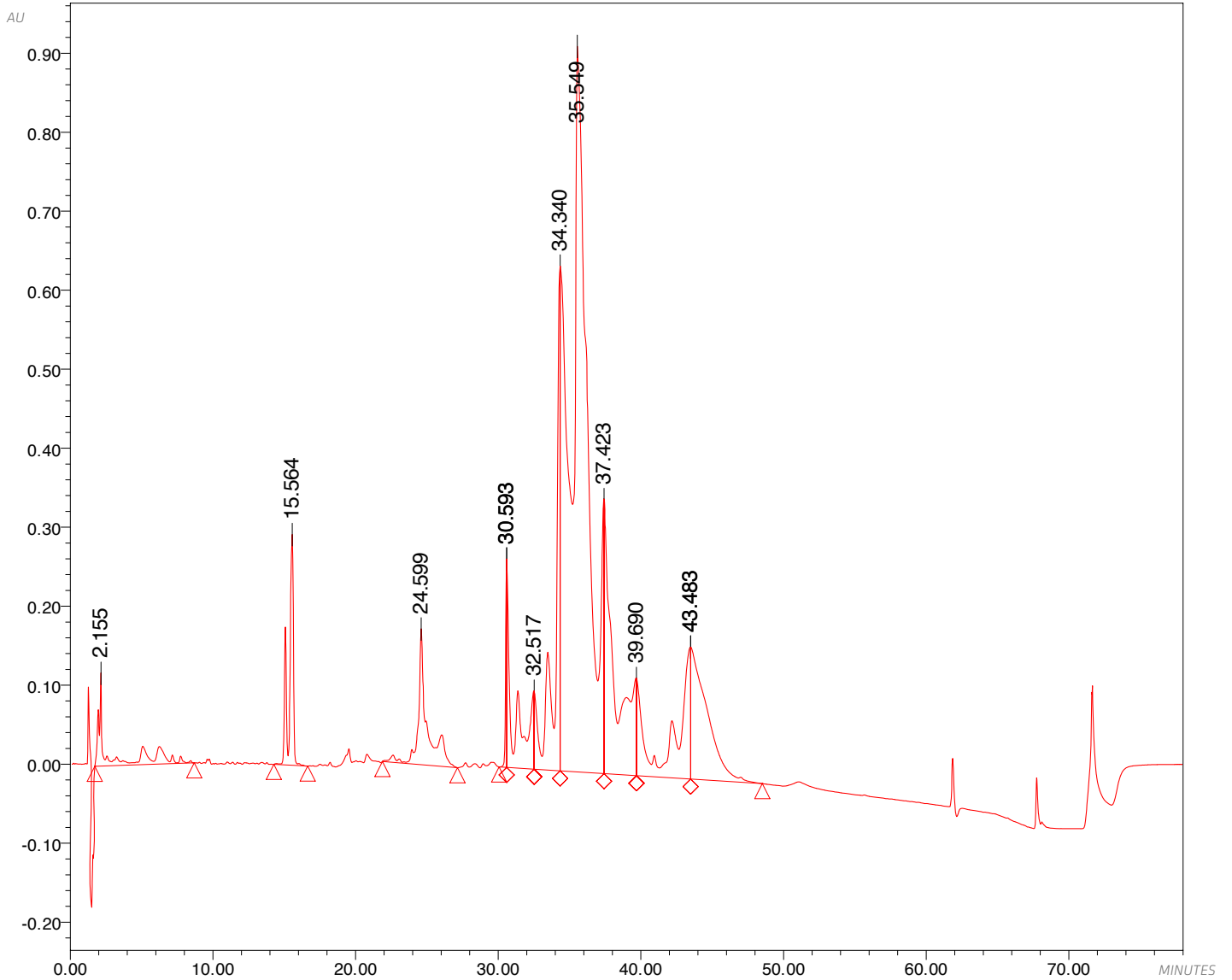


— AL\_LC\_CROPS3359 705.010; Vial 51; Injection 1; Channel 2998 Ch1 214nm@1.2nm; Date Acquired 02/12/2010 02:32:20 GMT

**PEAK RESULTS**

	VIAL	RETENTION TIME (MIN.)	AREA	HEIGHT	% AREA	% HEIGHT
01	51	27.753	12930324	1114307	9.92	46.12
02	51	30.922	117449138	1301756	90.08	53.88

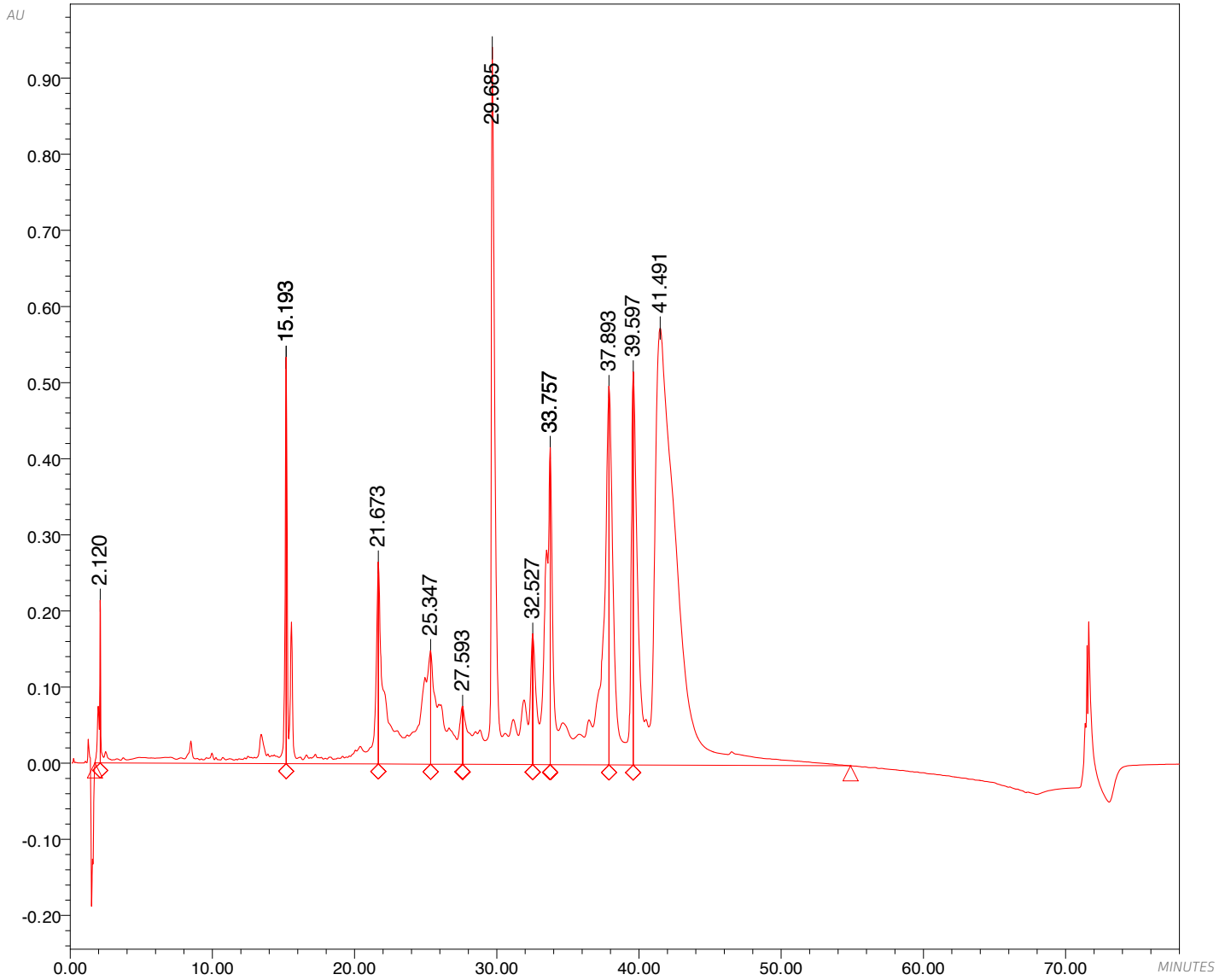




— AL\_LC\_CROPS3322 101.030; Vial 31; Injection 1; Channel 2998 Ch1 214nm@1.2nm; Date Acquired 27/11/2010 02:47:23 GMT

**PEAK RESULTS**

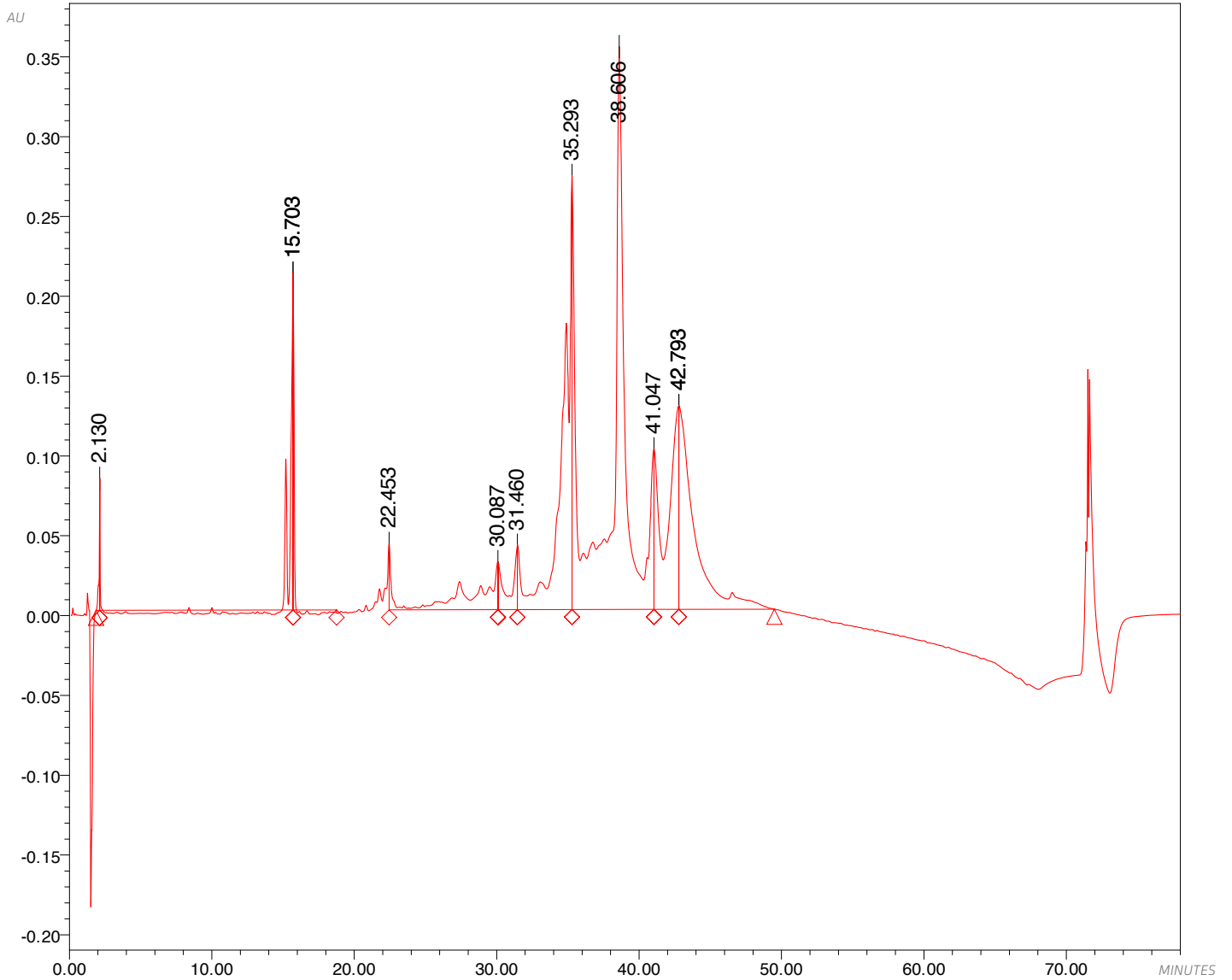
	VIAL	RETENTION TIME (MIN.)	AREA	HEIGHT	% AREA	% HEIGHT
01	31	2.155	4181213	118102	2.56	3.31
02	31	15.564	5888523	292207	3.61	8.18
03	31	24.599	7127922	172151	4.37	4.82
04	31	30.593	1358976	263868	0.83	7.39
05	31	30.593	7686338	263868	4.71	7.39
06	31	32.517	19738	98765	0.01	2.77
07	31	34.340	13889601	638843	8.51	17.89
08	31	35.549	80014904	918525	49.00	25.72
09	31	37.423	17615919	347374	10.79	9.73
10	31	39.690	24603	123079	0.02	3.45
11	31	43.483	12093847	167217	7.41	4.68
12	31	43.483	13394331	167217	8.20	4.68



— AL\_LC\_CROPS3179 111.040; Vial 25; Injection 1; Channel 2998 Ch1 214nm@1.2nm; Date Acquired 10/11/2010 21:31:49 GMT

**PEAK RESULTS**

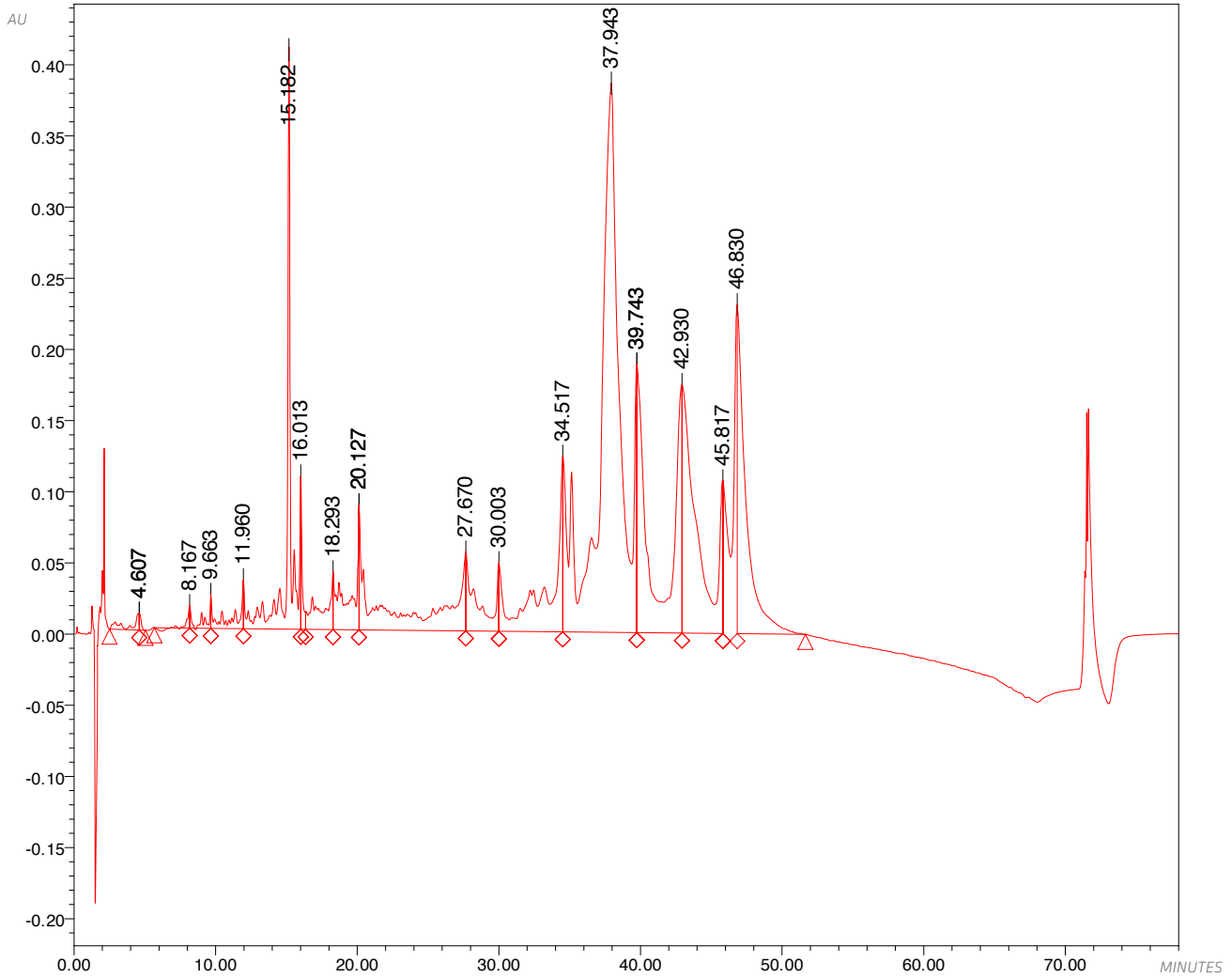
	VIAL	RETENTION TIME (MIN.)	AREA	HEIGHT	% AREA	% HEIGHT
01	25	2.120	1080154	213631	0.55	4.03
02	25	15.193	9205209	533875	4.68	10.06
03	25	15.193	10722076	533875	5.45	10.06
04	25	21.673	15422072	265203	7.84	5.00
05	25	25.347	8519549	149164	4.33	2.81
06	25	27.593	15215	76124	0.01	1.43
07	25	29.685	28576999	942479	14.53	17.76
08	25	32.527	34274	171428	0.02	3.23
09	25	33.757	11872546	416600	6.04	7.85
10	25	33.757	83301	416600	0.04	7.85
11	25	37.893	23463075	497541	11.93	9.38
12	25	39.597	15766418	516344	8.02	9.73
13	25	41.491	71929001	574166	36.57	10.82



— AL\_LC\_CROPS3186 801.040; Vial 32; Injection 1; Channel 2998 Ch1 214nm@1.2nm; Date Acquired 11/11/2010 06:48:48 GMT

**PEAK RESULTS**

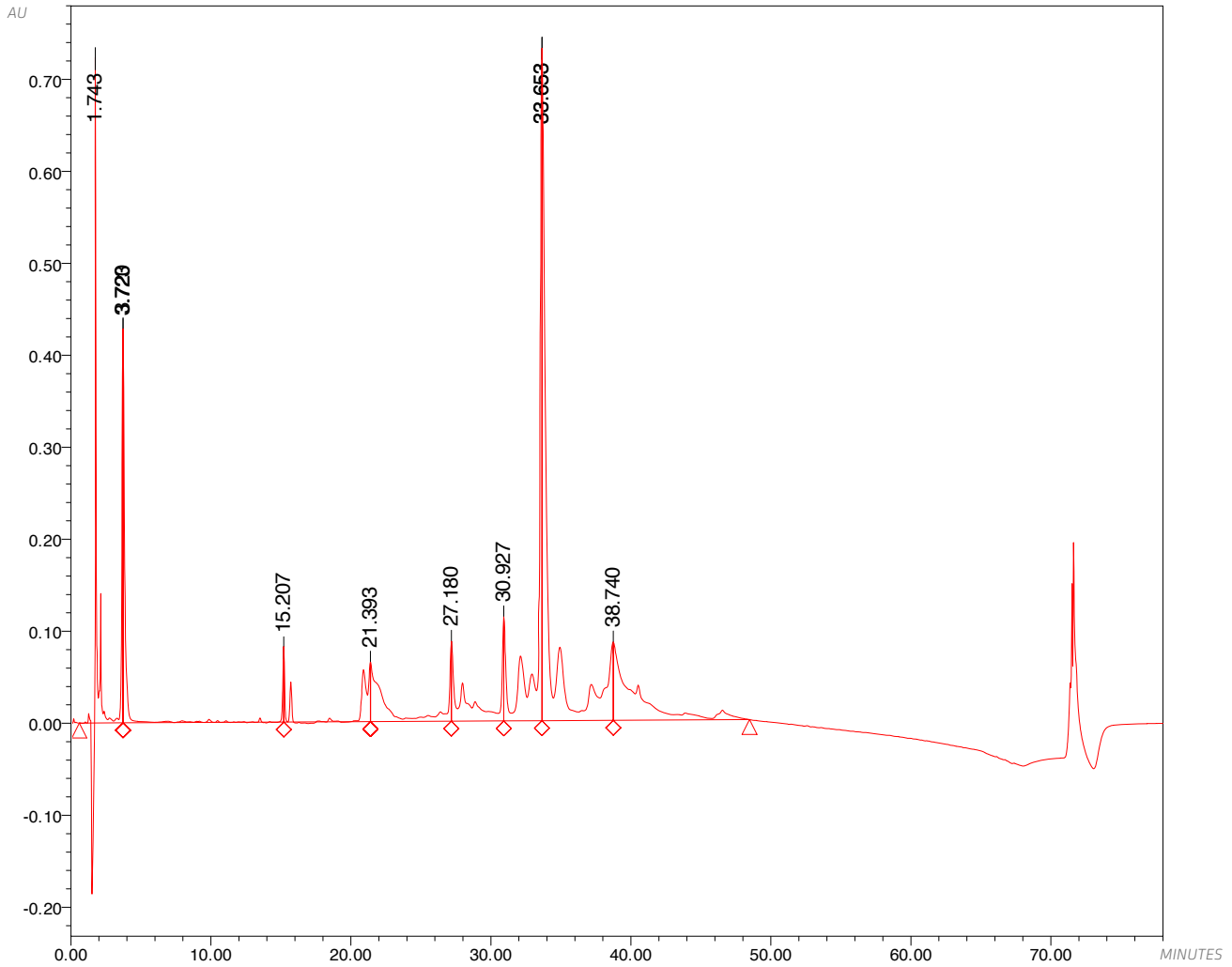
	VIAL	RETENTION TIME (MIN.)	AREA	HEIGHT	% AREA	% HEIGHT
01	32	2.130	227188	82702	0.36	5.18
02	32	15.703	4091090	211063	6.56	13.21
03	32	15.703	1321084	211063	2.12	13.21
04	32	22.453	3243110	41633	5.20	2.61
05	32	30.087	6004	30024	0.01	1.88
06	32	31.460	1337885	40555	2.14	2.54
07	32	35.293	11209392	271908	17.96	17.02
08	32	38.606	24132508	352626	38.67	22.07
09	32	41.047	20118	100598	0.03	6.30
10	32	42.793	7349926	127619	11.78	7.99
11	32	42.793	9465441	127619	15.17	7.99



— AL\_LC\_CROPS3191 512.070; Vial 37; Injection 1; Channel 2998 Ch1 214nm@1.2nm; Date Acquired 11/11/2010 13:26:34 GMT

**PEAK RESULTS**

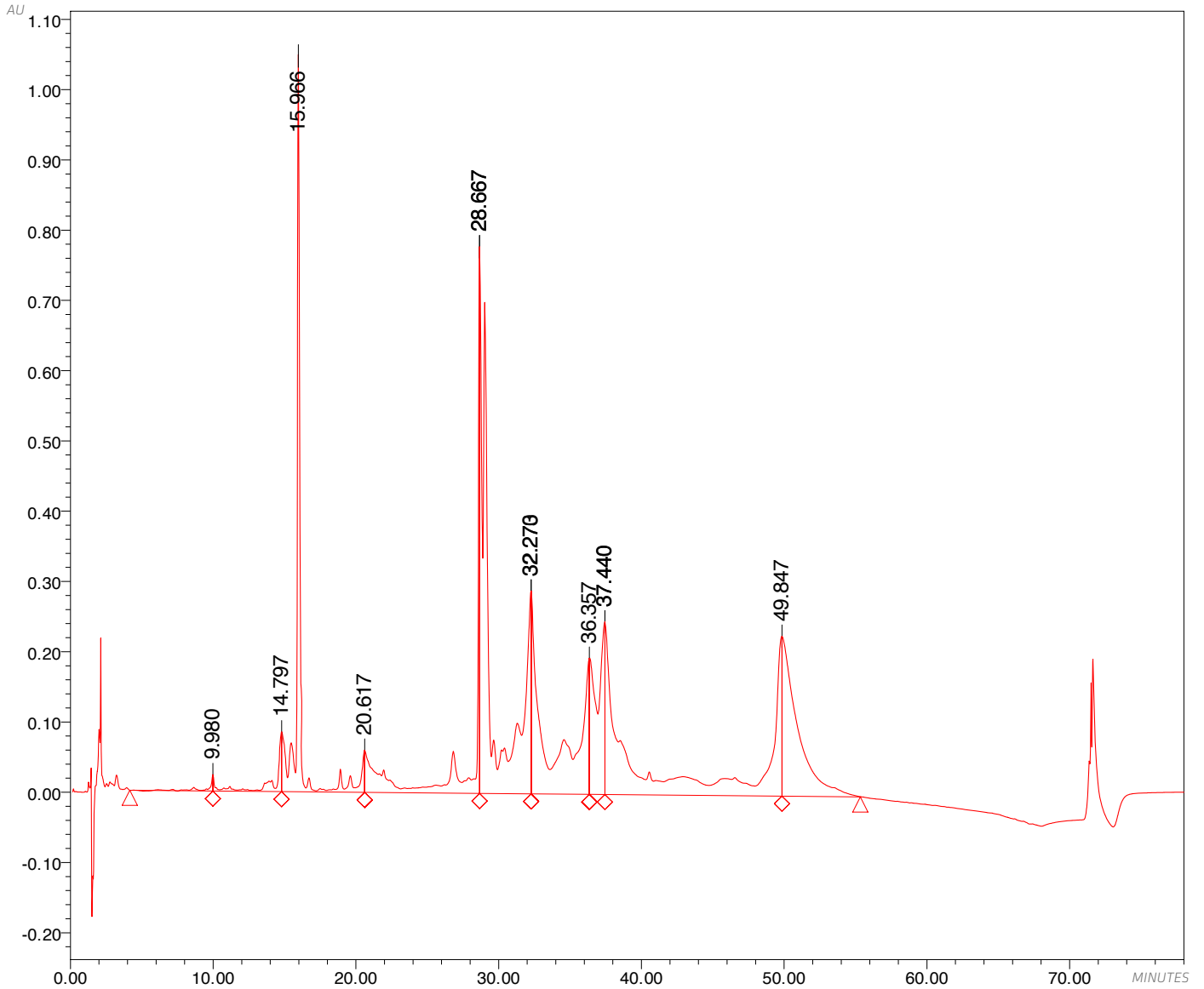
	VIAL	RETENTION TIME (MIN.)	AREA	HEIGHT	% AREA	% HEIGHT
01	37	4.607	408633	11812	0.39	0.51
02	37	4.607	106887	11812	0.10	0.51
03	37	8.167	270435	15756	0.26	0.68
04	37	9.663	436669	23821	0.42	1.02
05	37	11.960	1003464	34312	0.96	1.47
06	37	15.182	7397540	409180	7.07	17.53
07	37	16.013	711868	107745	0.68	4.62
08	37	18.293	1777679	40507	1.70	1.74
09	37	20.127	2728624	87784	2.61	3.76
10	37	20.127	7280912	87784	6.96	3.76
11	37	27.670	2842252	55390	2.72	2.37
12	37	30.003	9618	48104	0.01	2.06
13	37	34.517	6719136	123479	6.42	5.29
14	37	37.943	37819684	385873	36.14	16.53
15	37	39.743	37751	188765	0.04	8.09
16	37	39.743	12746500	188765	12.18	8.09
17	37	42.930	12457808	174543	11.91	7.48
18	37	45.817	42962	107490	0.04	4.61
19	37	46.830	9840174	231149	9.40	9.90



— AL\_LC\_CROPS3184 701.070; Vial 30; Injection 1; Channel 2998 Ch1 214nm@1.2nm; Date Acquired 11/11/2010 04:09:40 GMT

**PEAK RESULTS**

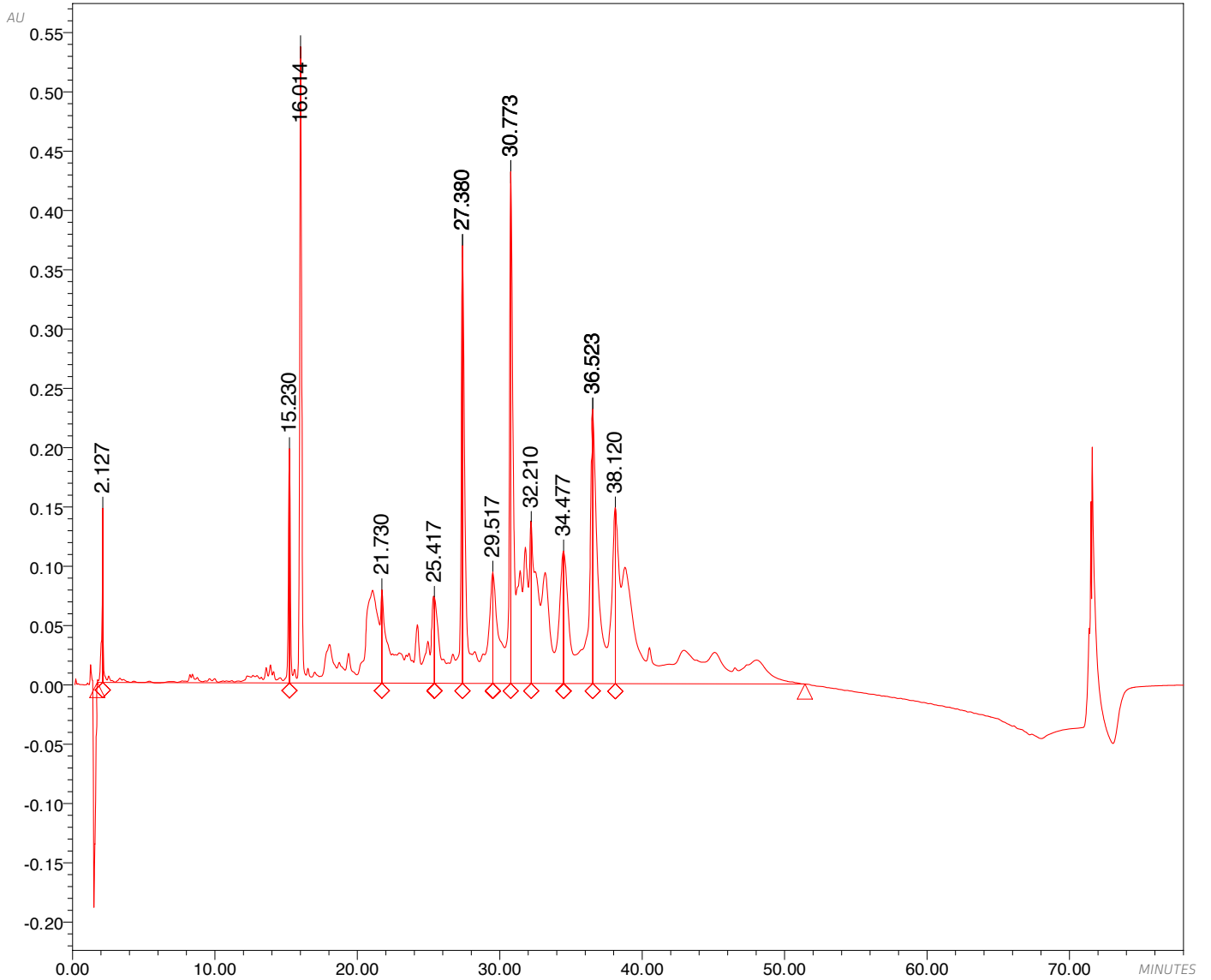
	VIAL	RETENTION TIME (MIN.)	AREA	HEIGHT	% AREA	% HEIGHT
01	30	1.743	8316751	723418	12.93	20.83
02	30	3.720	85592	428316	0.13	12.34
03	30	3.723	4248206	427605	6.60	12.32
04	30	15.207	2773694	81752	4.31	2.35
05	30	21.393	38710	64547	0.06	1.86
06	30	27.180	4661685	86776	7.25	2.50
07	30	30.927	4652395	112964	7.23	3.25
08	30	33.653	11618085	730897	18.06	21.05
09	30	33.653	19636024	730897	30.52	21.05
10	30	38.740	8307026	84976	12.91	2.45



— AL\_LC\_CROPS3193 033.070; Vial 39; Injection 1; Channel 2998 Ch1 214nm@1.2nm; Date Acquired 11/11/2010 16:05:45 GMT

**PEAK RESULTS**

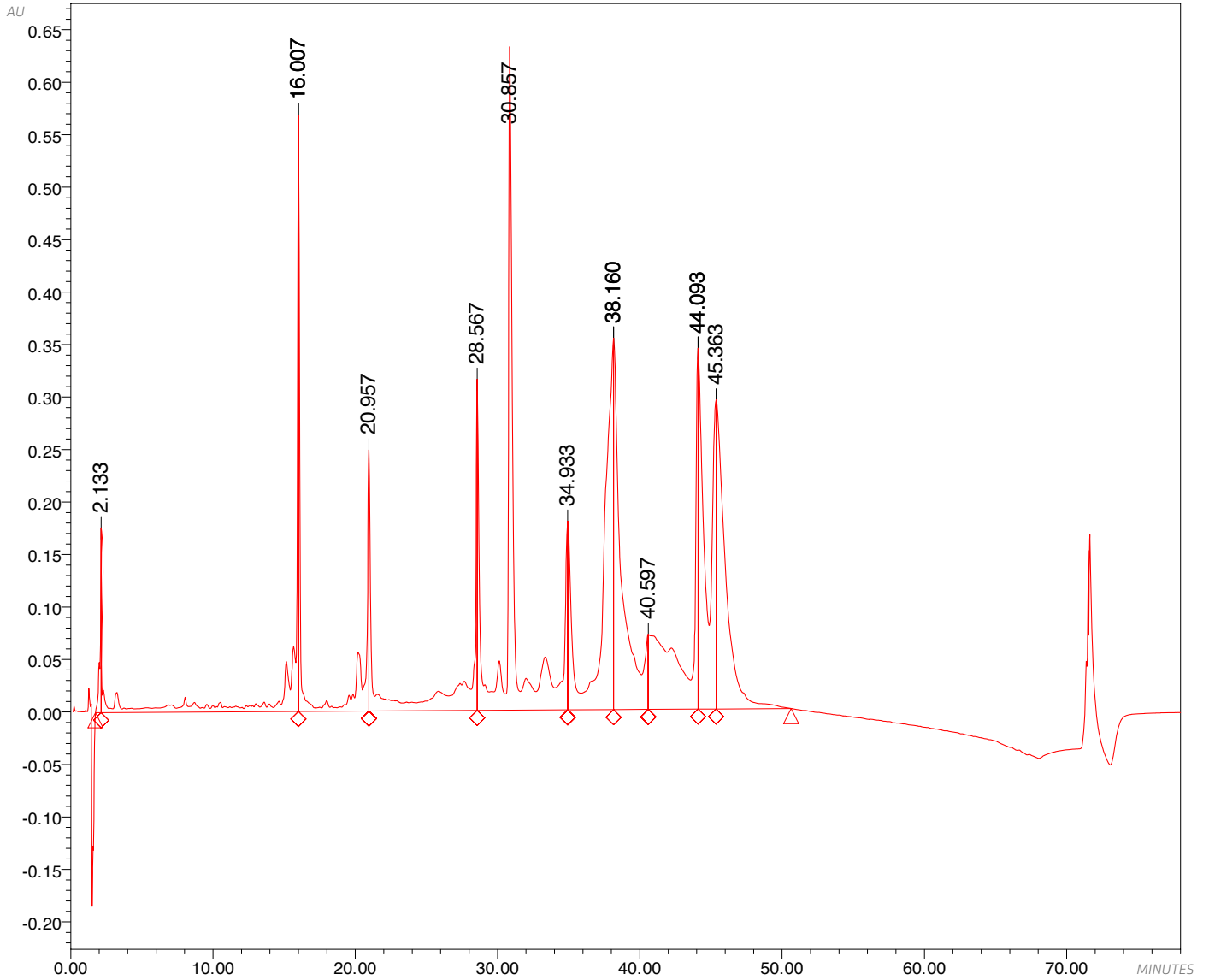
	VIAL	RETENTION TIME (MIN.)	AREA	HEIGHT	% AREA	% HEIGHT
01	39	9.980	500877	23222	0.35	0.54
02	39	14.797	2172033	84978	1.50	1.99
03	39	15.966	16396059	1049465	11.34	24.61
04	39	20.617	11976	59883	0.01	1.40
05	39	28.667	12500867	778141	8.64	18.25
06	39	28.667	34611094	778141	23.93	18.25
07	39	32.270	57768	288863	0.04	6.77
08	39	32.273	20694570	288813	14.31	6.77
09	39	36.357	38756	193841	0.03	4.55
10	39	37.440	10757611	245792	7.44	5.76
11	39	37.440	29792510	245792	20.60	5.76
12	39	49.847	17114600	227593	11.83	5.34



— AL\_LC\_CROPS3181 203.090; Vial 27; Injection 1; Channel 2998 Ch1 214nm@1.2nm; Date Acquired 11/11/2010 00:10:55 GMT

**PEAK RESULTS**

	VIAL	RETENTION TIME (MIN.)	AREA	HEIGHT	% AREA	% HEIGHT
01	27	2.127	561772	146822	0.59	4.10
02	27	15.230	3002300	197274	3.14	5.50
03	27	16.014	14066181	536540	14.70	14.97
04	27	21.730	6679757	78542	6.98	2.19
05	27	25.417	14436	72245	0.02	2.02
06	27	27.380	4959540	368943	5.18	10.30
07	27	27.380	7286537	368943	7.62	10.30
08	27	29.517	18718	93593	0.02	2.61
09	27	30.773	5431767	431360	5.68	12.04
10	27	30.773	10626703	431360	11.11	12.04
11	27	32.210	9573699	135749	10.01	3.79
12	27	34.477	22319	111611	0.02	3.11
13	27	36.523	6966965	231249	7.28	6.45
14	27	36.523	8146496	231249	8.52	6.45
15	27	38.120	18303097	148150	19.13	4.13



— AL\_LC\_CROPS3180 623.070; Vial 26; Injection 1; Channel 2998 Ch1 214nm@1.2nm; Date Acquired 10/11/2010 22:51:22 GMT

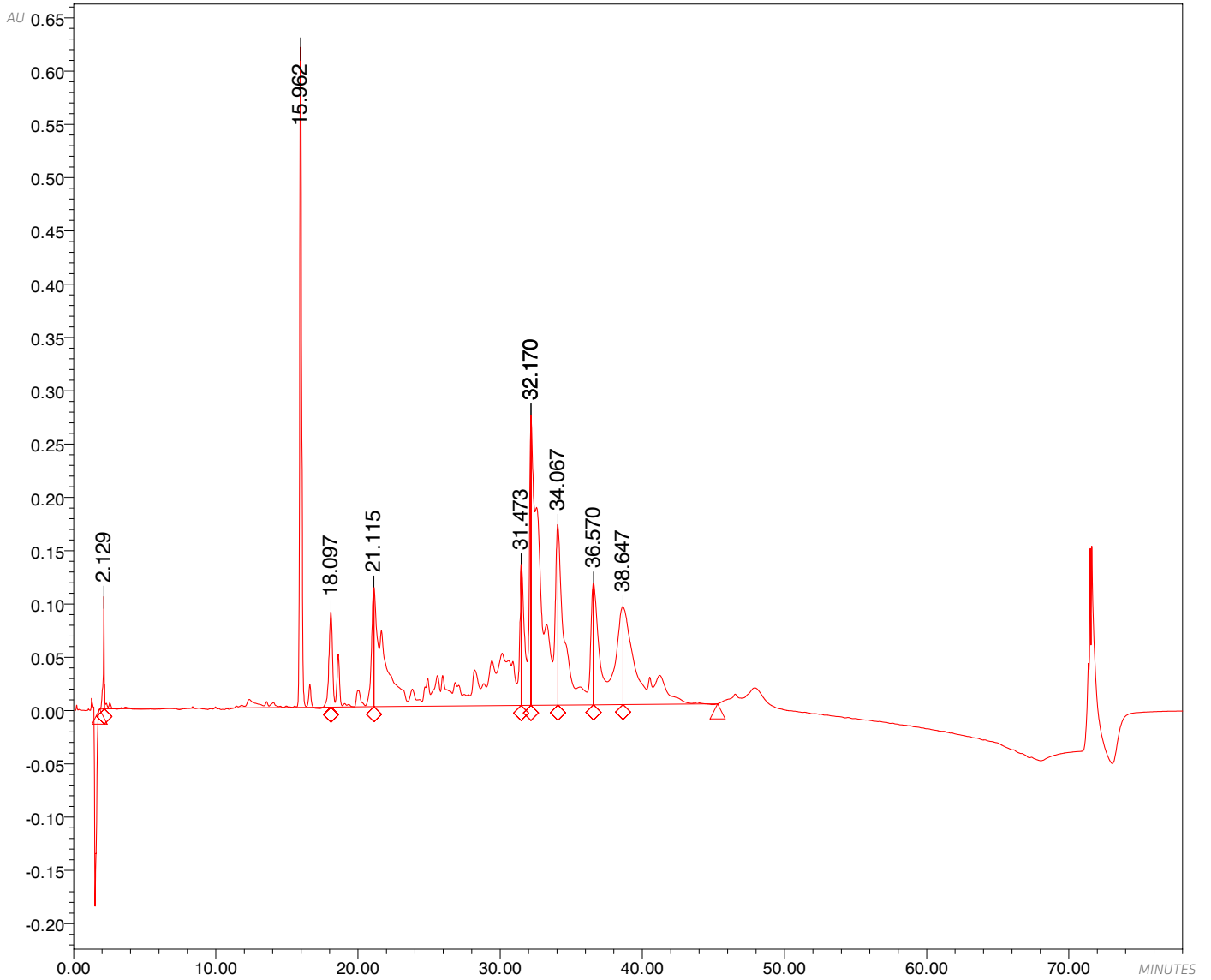
**PEAK RESULTS**

	VIAL	RETENTION TIME (MIN.)	AREA	HEIGHT	% AREA	% HEIGHT
01	26	2.133	808411	176014	0.66	3.95
02	26	16.007	9104942	568213	7.39	12.77
03	26	16.007	7732567	568213	6.28	12.77
04	26	20.957	49791	248957	0.04	5.59
05	26	28.567	9442333	315455	7.67	7.09
06	26	30.857	23154080	632290	18.80	14.21
07	26	34.933	35949	179765	0.03	4.04
08	26	38.160	17531844	353986	14.24	7.95
09	26	38.160	14250521	353986	11.57	7.95
10	26	40.597	14328	71645	0.01	1.61
11	26	44.093	13264776	343876	10.77	7.73
12	26	44.093	14222775	343876	11.55	7.73
13	26	45.363	13521393	294396	10.98	6.61



# CERTIFICATE OF ANALYSIS

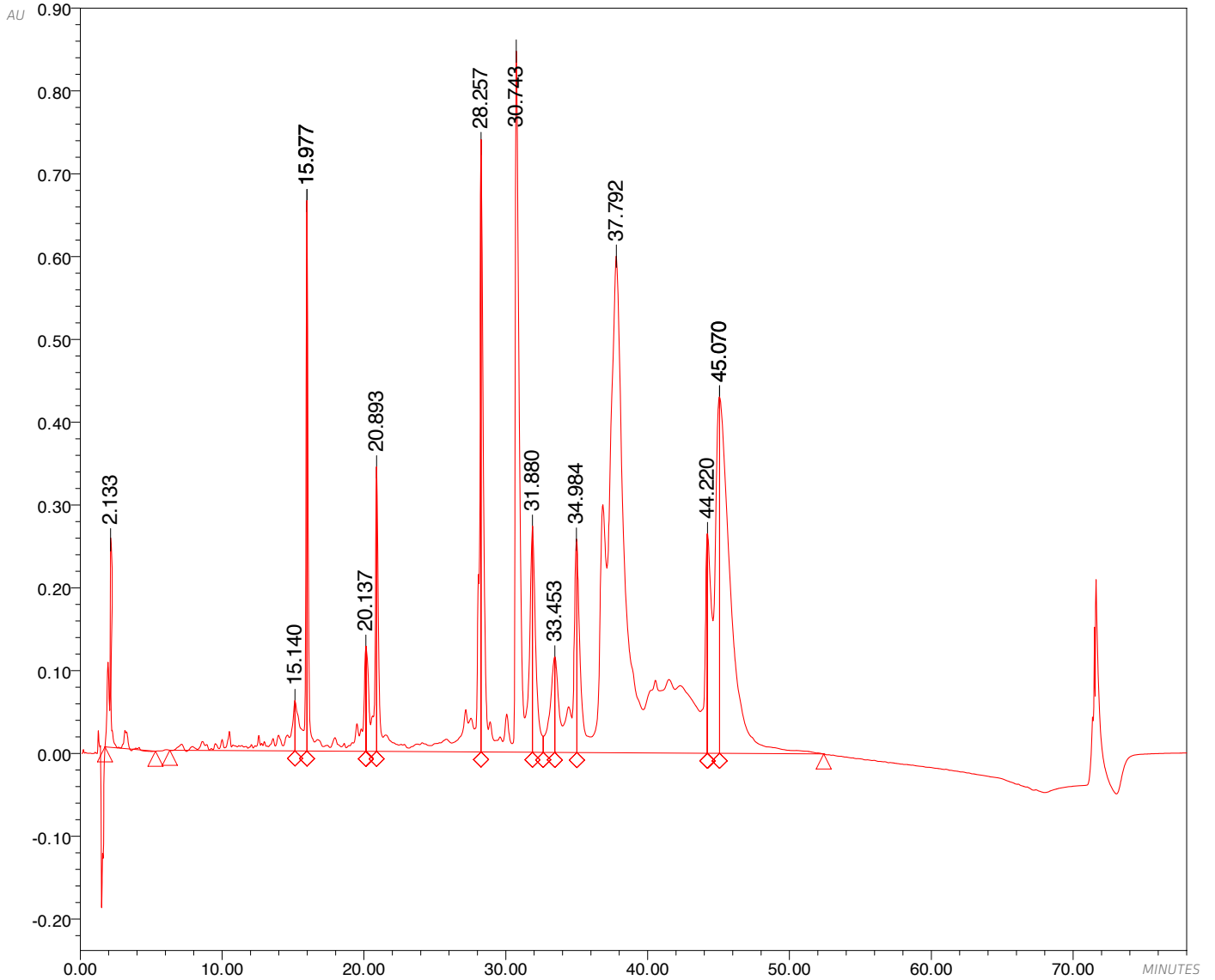
Venom: *Vipera aspis aspis*  
Batch: 601.070



— AL\_LC\_CROPS3185 601.070; Vial 31; Injection 1; Channel 2998 Ch1 214nm@1.2nm; Date Acquired 11/11/2010 05:29:14 GMT

## PEAK RESULTS

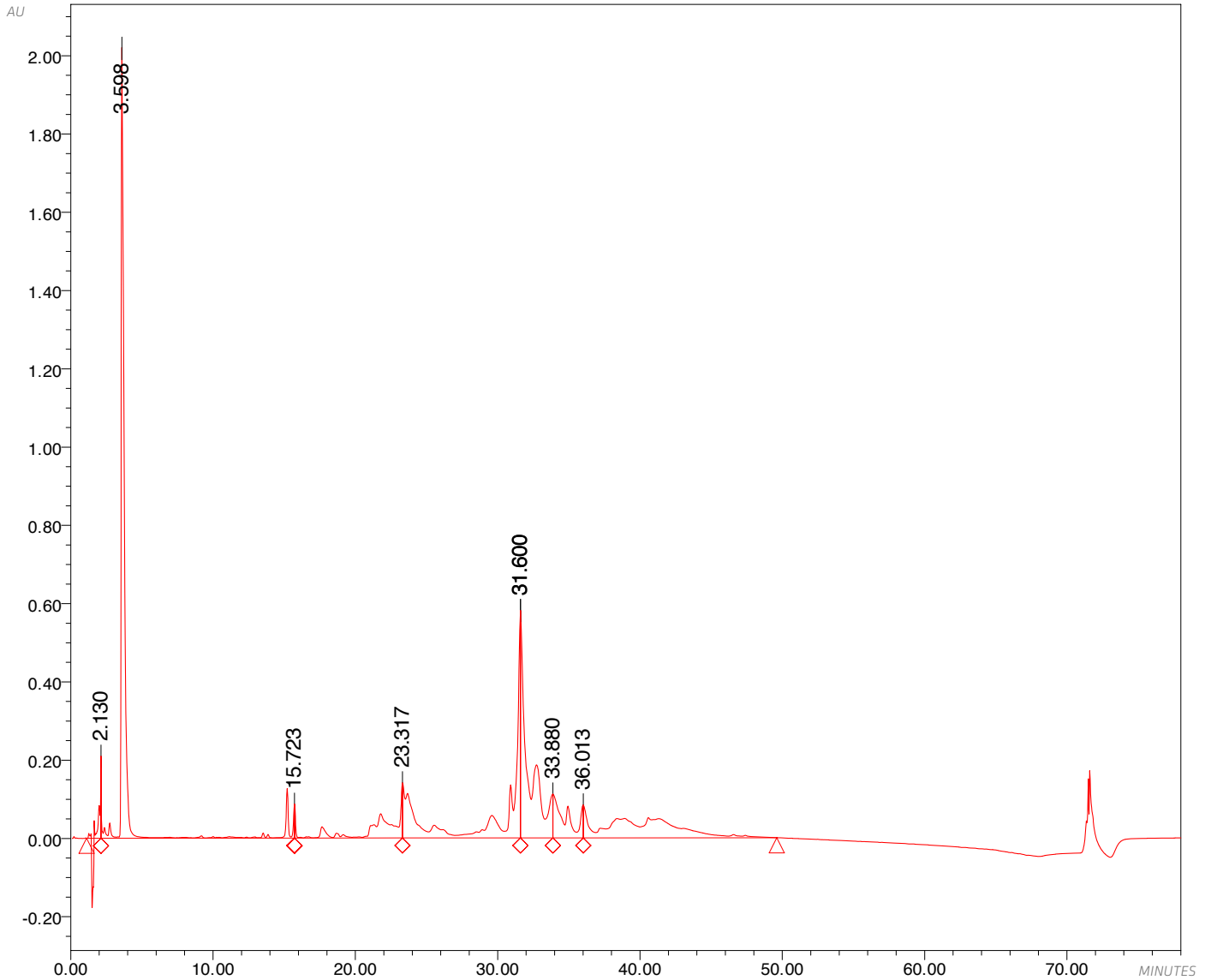
	VIAL	RETENTION TIME (MIN.)	AREA	HEIGHT	% AREA	% HEIGHT
01	31	2.129	441900	105622	0.68	5.34
02	31	15.962	8034434	619546	12.40	31.30
03	31	18.097	17894	89499	0.03	4.52
04	31	21.115	3068099	112235	4.74	5.67
05	31	31.473	16060570	132166	24.79	6.68
06	31	32.170	4168975	272311	6.44	13.76
07	31	32.170	13279183	272311	20.50	13.76
08	31	34.067	6793858	169254	10.49	8.55
09	31	36.570	6232379	114225	9.62	5.77
10	31	38.647	6677470	91897	10.31	4.64



— AL\_LC\_CROPS3190 523.070; Vial 36; Injection 1; Channel 2998 Ch1 214nm@1.2nm; Date Acquired 11/11/2010 12:07:01 GMT

**PEAK RESULTS**

	VIAL	RETENTION TIME (MIN.)	AREA	HEIGHT	% AREA	% HEIGHT
01	36	2.133	2593281	253073	1.36	4.17
02	36	15.140	3997496	60704	2.10	1.00
03	36	15.977	4181496	664631	2.19	10.95
04	36	15.977	7268364	664631	3.81	10.95
05	36	20.137	25387	126946	0.01	2.09
06	36	20.893	4146984	343442	2.18	5.66
07	36	28.257	14012098	739305	7.35	12.18
08	36	30.743	30151372	846536	15.82	13.95
09	36	31.880	4421682	272859	2.32	4.49
10	36	33.453	2638420	115272	1.38	1.90
11	36	34.984	7028855	257682	3.69	4.24
12	36	37.792	73189871	599541	38.40	9.88
13	36	44.220	106016	265127	0.06	4.37
14	36	45.070	13316093	430368	6.99	7.09
15	36	45.070	23545944	430368	12.35	7.09



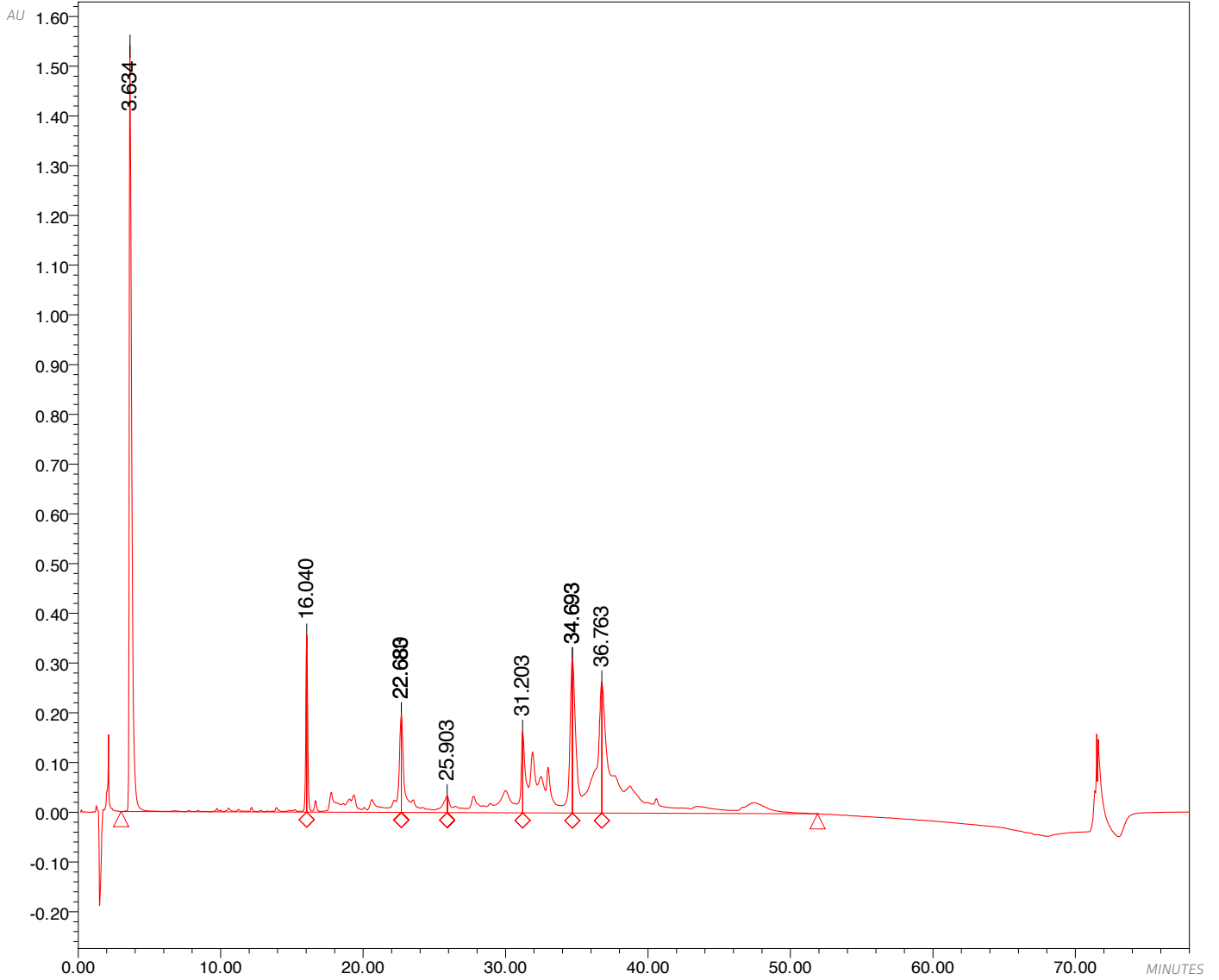
— AL\_LC\_CROPS3187 604.010; Vial 33; Injection 1; Channel 2998 Ch1 214nm@1.2nm; Date Acquired 11/11/2010 08:08:14 GMT

**PEAK RESULTS**

	VIAL	RETENTION TIME (MIN.)	AREA	HEIGHT	% AREA	% HEIGHT
01	33	2.130	2755834	209384	2.48	5.49
02	33	3.598	31895043	2020654	28.74	52.97
03	33	15.723	17212	86116	0.02	2.26
04	33	23.317	7735654	140967	6.97	3.70
05	33	31.600	22494364	580683	20.27	15.22
06	33	31.600	21301841	580683	19.19	15.22
07	33	33.880	6692647	111896	6.03	2.93
08	33	36.013	18088537	84044	16.30	2.20

# CERTIFICATE OF ANALYSIS

Venom: *Eristicophis macmahonii*  
Batch: 116.050



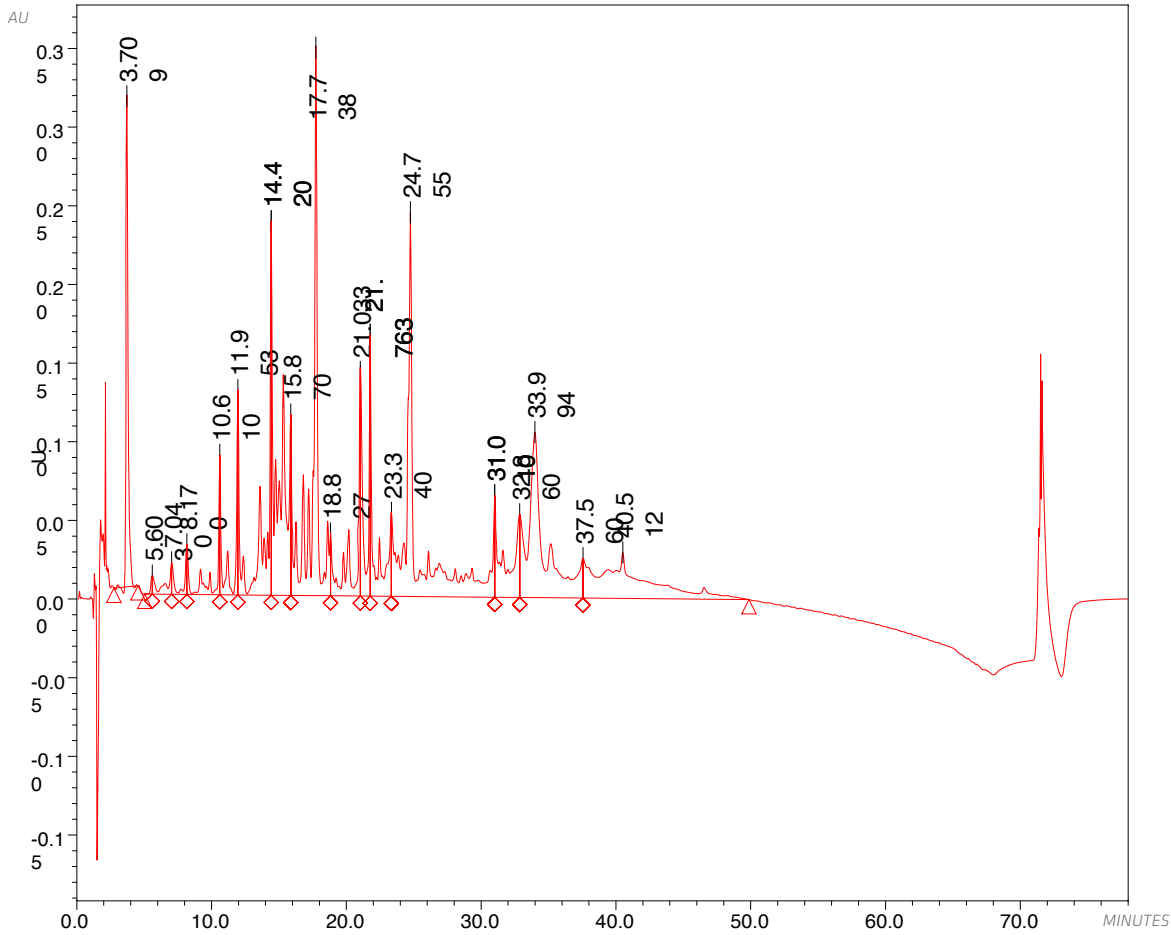
— AL\_LC\_CROPS3196 116.050; Vial 42; Injection 1; Channel 2998 Ch1 214nm@1.2nm; Date Acquired 11/11/2010 20:04:35 GMT

## PEAK RESULTS

	VIAL	RETENTION TIME (MIN.)	AREA	HEIGHT	% AREA	% HEIGHT
01	42	3.634	21072417	1541069	24.31	45.67
02	42	16.040	8610113	355556	9.93	10.54
03	42	22.680	39622	198194	0.05	5.87
04	42	22.683	4247014	198023	4.90	5.87
05	42	25.903	6693	33472	0.01	0.99
06	42	31.203	6763754	164034	7.80	4.86
07	42	34.693	13684217	310161	15.78	9.19
08	42	34.693	12476774	310161	14.39	9.19
09	42	36.763	19791000	263636	22.83	7.81

# CERTIFICATE OF ANALYSIS

Venom: *Hadogenes zuluanus*  
Batch: 812.040



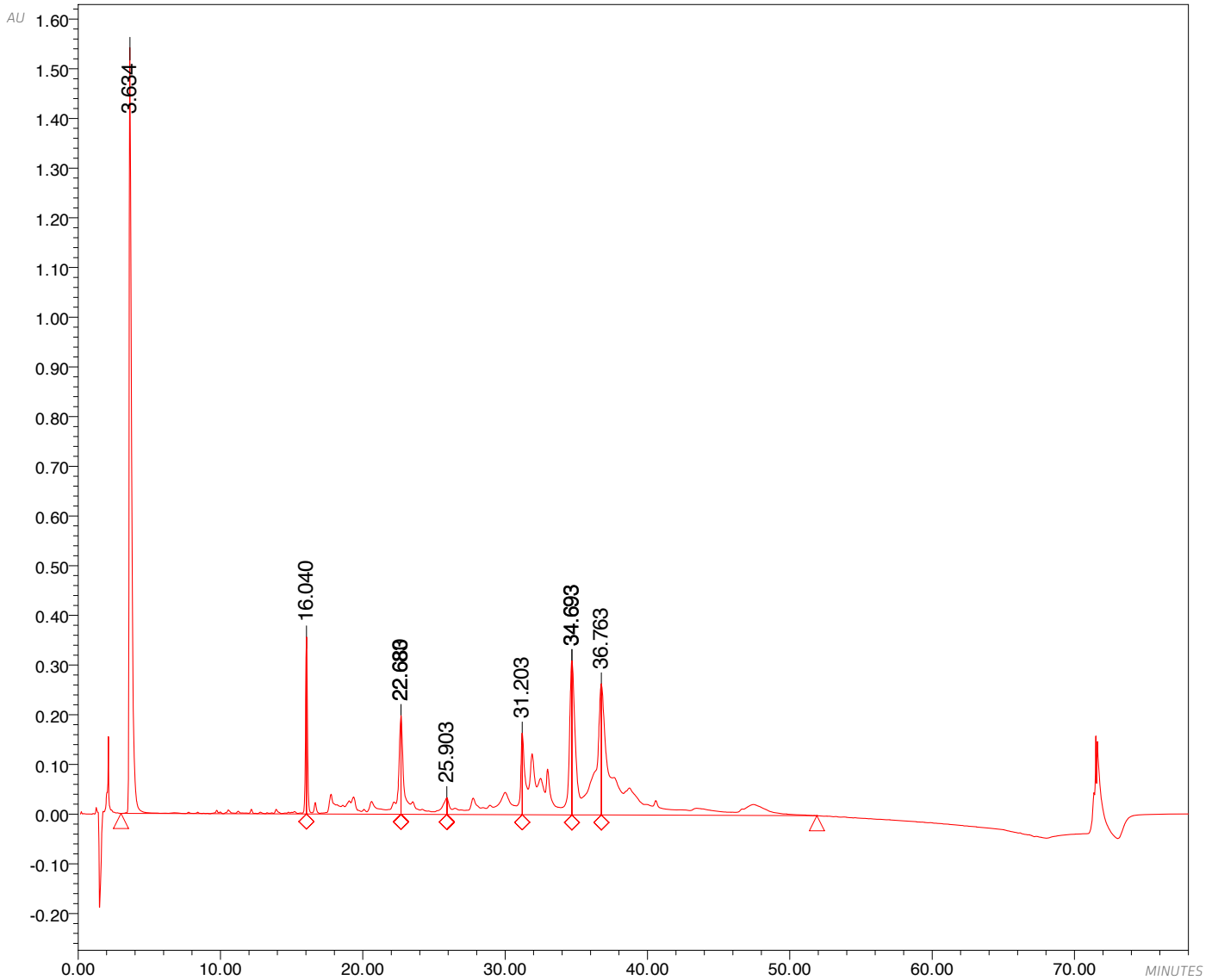
— AL\_LC\_CROPS3192 812.040; Vial 38; Injection 1; Channel 2998 Ch1 214nm@1.2nm; Date Acquired 11/11/2010 14:46:10 GMT

## PEAK RESULTS

	VIAL	RETENTION TIME (MIN.)	AREA	HEIGHT	% AREA	% HEIGHT
01	38	3.709	3460534	312651	5.47	11.61
02	38	5.603	86481	11732	0.14	0.44
03	38	7.040	523596	20295	0.83	0.75
04	38	8.170	482519	31814	0.76	1.18
05	38	10.610	1187465	88967	1.88	3.30
06	38	11.953	1650839	130190	2.61	4.84
07	38	14.420	4235414	237757	6.69	8.83
08	38	14.420	6626202	237757	10.47	8.83
09	38	15.870	22974	114933	0.04	4.27
10	38	17.738	8709197	349571	13.77	12.98
11	38	18.827	7896	39505	0.01	1.47
12	38	21.033	2375266	145049	3.75	5.39
13	38	21.763	2407611	166129	3.81	6.17
14	38	21.763	2555002	166129	4.04	6.17
15	38	23.340	10654	53309	0.02	1.98
16	38	24.755	10815610	244441	17.09	9.08
17	38	31.010	12937	64726	0.02	2.40
18	38	31.010	2811786	64726	4.44	2.40
19	38	32.860	10578	52892	0.02	1.96
20	38	33.994	8579303	105220	13.56	3.91
21	38	37.560	35391	25350	0.06	0.94
22	38	40.512	6662290	29221	10.53	1.09

# CERTIFICATE OF ANALYSIS

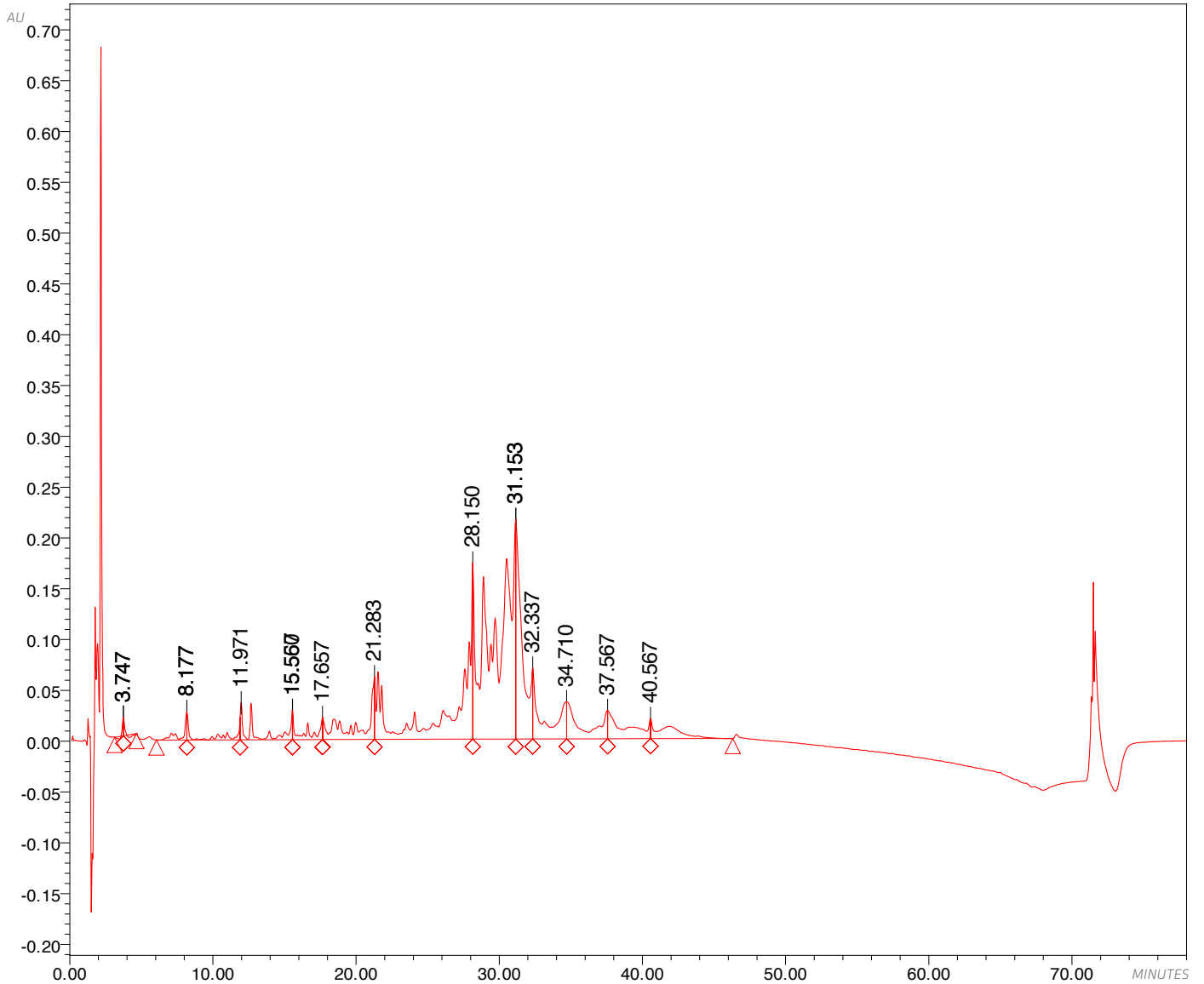
Venom: *Opisthophthalmus carinatus*  
Batch: 021.040



— AL\_LC\_CROPS3432 021.040; Vial 21; Injection 1; Channel 2998 Ch1 214nm@1.2nm; Date Acquired 27/12/2010 20:40:44 GMT

## PEAK RESULTS

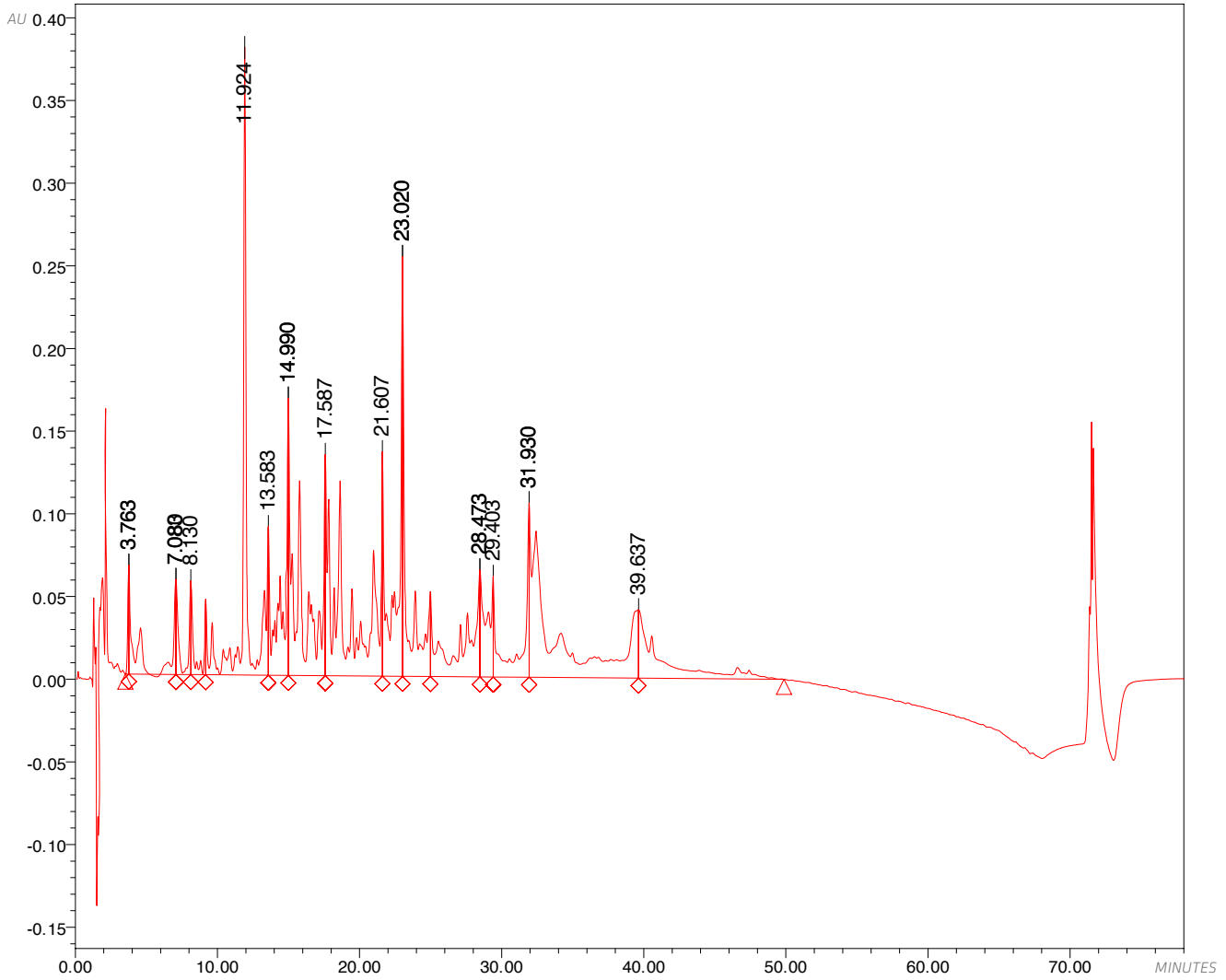
	VIAL	RETENTION TIME (MIN.)	AREA	HEIGHT	% AREA	% HEIGHT
01	21	3.556	942870	155053	1.14	7.22
02	21	11.679	7504827	200769	9.09	9.35
03	21	13.383	78426	99741	0.10	4.64
04	21	14.893	3845133	129893	4.66	6.05
05	21	16.963	6224983	223841	7.54	10.42
06	21	18.073	11341197	247728	13.74	11.53
07	21	20.247	38888	97413	0.05	4.54
08	21	23.257	5568535	183826	6.75	8.56
09	21	25.713	15919692	209252	19.29	9.74
10	21	26.660	1326317	139411	1.61	6.49
11	21	29.056	3136579	58781	3.80	2.74
12	21	32.767	7582838	149024	9.19	6.94
13	21	35.958	15094343	177794	18.29	8.28
14	21	42.302	3936711	75237	4.77	3.50



— AL\_LC\_CROPS3195 920.130; Vial 41; Injection 1; Channel 2998 Ch1 214nm@1.2nm; Date Acquired 11/11/2010 18:44:58 GMT

**PEAK RESULTS**

	VIAL	RETENTION TIME (MIN.)	AREA	HEIGHT	% AREA	% HEIGHT
01	41	3.747	129351	18395	0.25	1.79
02	41	3.747	169085	18395	0.33	1.79
03	41	8.177	443819	27765	0.87	2.70
04	41	8.177	663580	27765	1.30	2.70
05	41	11.971	1343027	36394	2.64	3.54
06	41	15.557	5746	28757	0.01	2.80
07	41	15.560	845398	28706	1.66	2.79
08	41	17.657	4347	21738	0.01	2.11
09	41	21.283	2751120	61615	5.40	5.99
10	41	28.150	9509220	173339	18.66	16.85
11	41	31.153	19215639	216028	37.71	21.00
12	41	31.153	6480700	216028	12.72	21.00
13	41	32.337	3067884	69747	6.02	6.78
14	41	34.710	2523172	36408	4.95	3.54
15	41	37.567	2230126	27889	4.38	2.71
16	41	40.567	1567534	19832	3.08	1.93



— AL\_LC\_CROPS3195 920.130; Vial 41; Injection 1; Channel 2998 Ch1 214nm@1.2nm; Date Acquired 11/11/2010 18:44:58 GMT

**PEAK RESULTS**

	VIAL	RETENTION TIME (MIN.)	AREA	HEIGHT	% AREA	% HEIGHT
01	40	3.763	328926	65842	0.52	2.83
02	40	3.763	2054072	65842	3.25	2.83
03	40	7.080	11490	57494	0.02	2.47
04	40	7.083	1011286	57406	1.60	2.47
05	40	8.130	835255	56692	1.32	2.44
06	40	11.924	7492769	379741	11.86	16.31
07	40	13.583	17955	89807	0.03	3.86
08	40	14.990	3456009	167600	5.47	7.20
09	40	14.990	6770756	167600	10.72	7.20
10	40	17.587	53429	133708	0.08	5.74
11	40	21.607	8873780	135706	14.05	5.83
12	40	23.020	4703779	253866	7.45	10.91
13	40	23.020	4329713	253866	6.85	10.91
14	40	28.473	4048482	64700	6.41	2.78
15	40	28.473	2211485	64700	3.50	2.78
16	40	29.403	12160	60855	0.02	2.61
17	40	31.930	2688829	105423	4.26	4.53
18	40	31.930	10246986	105423	16.22	4.53
19	40	39.637	4018413	41365	6.36	1.78