

10.1071/FP18008\_AC

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Supplementary Material: *Functional Plant Biology*, 2018, 45(10), 1000–1008.

## Supplementary Material

### **Fructan dynamics and antioxidant capacity of 4-day-old seedlings of wheat (*Triticum aestivum*) cultivars during drought stress and recovery**

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# ClarityChrom - Chromatography SW

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(a)

### Chromatogram Info:

File Name	: C:\CLARITYCHROM\WORK1\NEMATI\MIX TOTAL 4 --07_06_2016.PRM	File Created	: 6/7/2016 2:10:22 PM
Origin	: Acquired, Acquisition started 6/7/2016 1:35:22 PM	Acquired Date	: 6/7/2016 2:10:22 PM
Project	: C:\ClarityChrom\Projects\Work1.PRJ	By	: Administrator

### Printed Version Info:

Printed Version	: 6/26/2016 3:07:09 PM	Printed Date	: 6/26/2016 3:36:20 PM
Report Style	: C:\ClarityChrom\Common\Chromatogram.sty	By	: Administrator
Calibration File	: None		

### Sample Info:

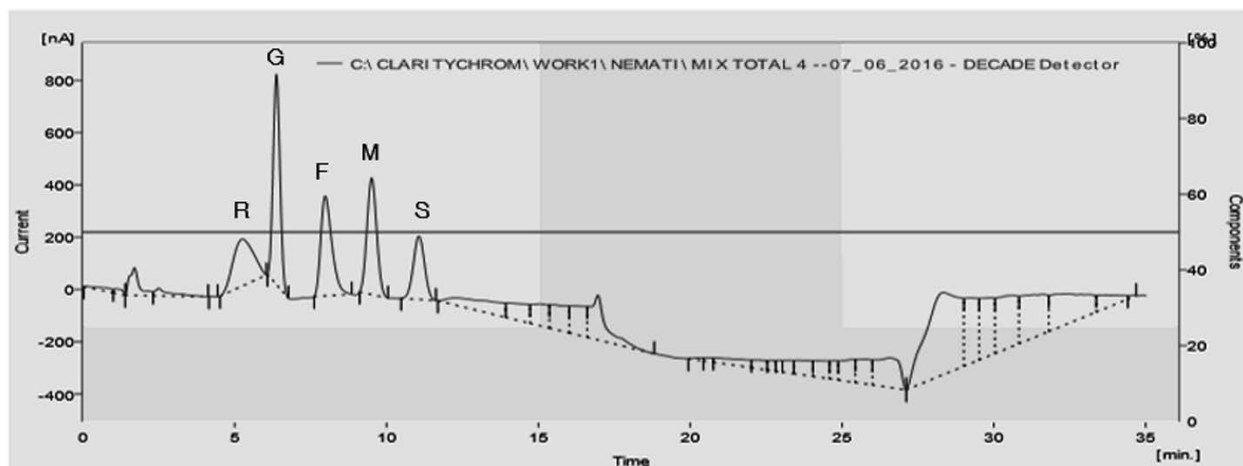
Sample ID	: MIX total 4	Amount	: 2.5
Sample	:	ISTD Amount	: 1.5
Inj. Volume [mL]	: 0.02	Dilution	: 1

Method	: Final Method Gradient RGFSM	By	: Administrator
Description	:		
Created	: 5/1/2016 11:30 AM	Modified	: 6/26/2016 3:07 PM

Column	:	Detection	:
Mobile Phase	:	Temperature	:
Flow Rate	:	Pressure	:
Note	:		

Autostop	: 35.00 min	External Start	: Start - Restart, Down
Detector 1	: DECADE Detector	Range 1	: Bipolar, 5000 nA, 1.333 Samp. per Sec.
Subtraction Chromatogram	: (None)	Matching	: No Change

Base	: Not Used	Calibration File	: None	Calculation	: Uncal
Scale Factor	: Not Used	Units After Scaling	: Not Used	Uncal. Response	: 0
Unretained Time	: 0.00 min	Column Length	: 50.00 mm	Column Calc.	: From Width at 50% of Height
Result Table Reports	: All Peaks	Hide ISTD Peak	: Enabled		



Result Table (Uncal - C:\CLARITYCHROM\WORK1\NEMATI\MIX TOTAL 4 --07\_06\_2016 - DECADE Detector )

	Reten. Time [min]	Area [nA.s]	Height [nA]	Area [%]	Height [%]	W05 [min]	Compound Name
1	0.138	537.928	4.473	0.3	0.1	0.24	
2	1.100	358.924	17.070	0.2	0.4	0.33	
3	1.700	2361.734	105.673	1.4	2.2	0.34	
4	2.487	987.280	28.694	0.6	0.6	0.38	
5	4.300	9.090	0.983	0.0	0.0	0.16	
6	5.263	8344.489	178.513	4.9	3.8	0.85	R
7	6.375	12800.599	804.807	7.5	17.0	0.26	G
8	7.975	9747.729	381.628	5.7	8.1	0.40	F
9	9.512	9951.921	446.456	5.9	9.4	0.36	M
10	11.063	6208.515	242.284	3.7	5.1	0.41	S
11	12.288	4561.241	27.909	2.7	0.6	1.73	
12	14.012	3063.702	57.156	1.8	1.2	0.80	
13	15.050	3124.157	83.359	1.8	1.8	0.64	
14	15.463	3754.629	92.197	2.2	1.9	0.65	
15	16.125	3998.215	106.759	2.4	2.3	0.60	
16	16.962	6297.672	171.576	3.7	3.6	0.51	
17	20.337	185.365	9.756	0.1	0.2	0.50	
18	20.587	276.858	14.546	0.2	0.3	0.33	
19	20.863	1731.781	18.446	1.0	0.4	1.25	
20	22.200	1045.389	32.901	0.6	0.7	0.53	
21	22.650	637.574	38.686	0.4	0.8	0.28	
22	22.950	577.931	43.617	0.3	0.9	0.23	
23	23.238	1083.373	48.630	0.6	1.0	0.38	
24	23.550	2095.001	53.688	1.2	1.1	0.63	
25	24.188	2123.148	62.776	1.3	1.3	0.55	
26	24.712	1228.071	71.277	0.7	1.5	0.29	
27	25.363	2733.205	87.018	1.6	1.8	0.56	
28	25.712	3142.591	93.973	1.9	2.0	0.56	
29	26.563	6260.110	113.539	3.7	2.4	0.96	
30	28.337	24634.520	313.598	14.5	6.6	1.26	
31	29.225	7449.967	251.144	4.4	5.3	0.50	
32	29.900	7071.226	219.882	4.2	4.6	0.53	
33	30.637	9434.169	193.313	5.6	4.1	0.79	
34	31.637	9627.959	150.292	5.7	3.2	0.99	
35	32.425	9781.934	114.887	5.8	2.4	1.56	
36	33.700	2445.152	49.397	1.4	1.0	1.04	
37	34.563	119.072	7.282	0.1	0.2	0.28	
	Total	169792.222	4738.182	100.0	100.0		



Chromatogram Info:

File Name : C:\CLARITYCHROM\WORK1\NEMAT1\SST\MIX 1K, 1,1 KT 6 PPM.PRM File Created : 6/25/2016 2:46:01 PM  
Origin : Acquired, Acquisition started 6/25/2016 2:15:01 PM Acquired Date : 6/25/2016 2:46:01 PM  
Project : C:\ClarityChrom\Projects\Work1.PRJ By : Administrator

Printed Version Info:

Printed Version : 6/25/2016 3:11:58 PM Printed Date : 6/26/2016 2:25:08 PM  
Report Style : C:\ClarityChrom\Common\Chromatogram.sty By : Administrator  
Calibration File : None

Sample Info:

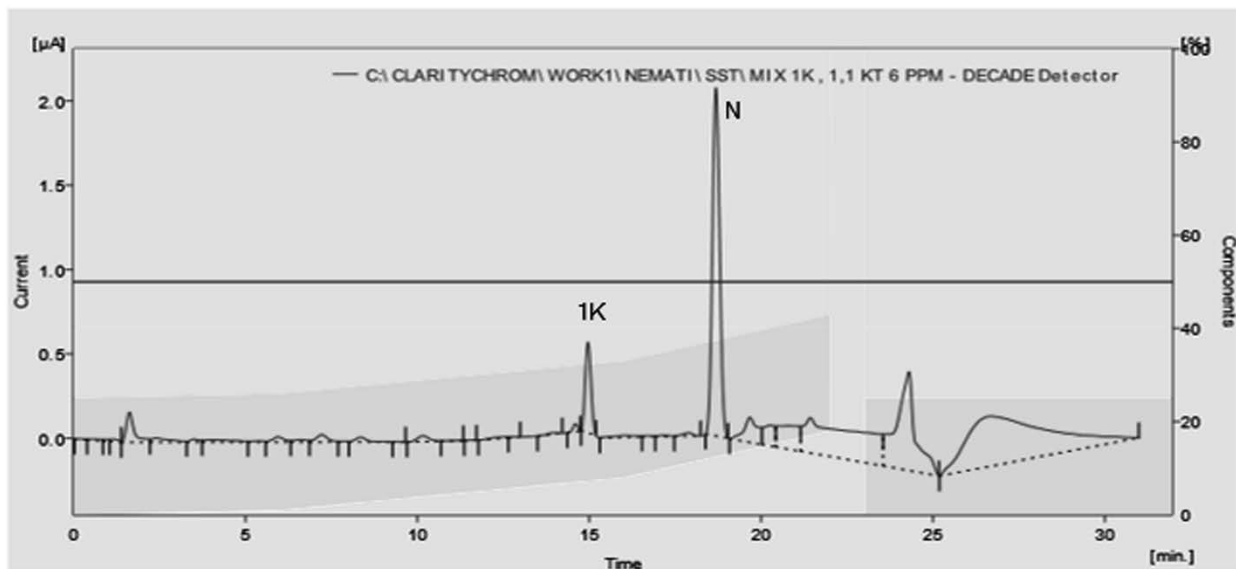
Sample ID : mix 1k, 1,1 kt 6 ppm Amount : 0  
Sample : ISTD Amount : 0  
Inj. Volume [mL] : 0 Dilution : 1

Method : Fructan Enzyme Final By : Administrator  
Description :  
Created : 5/1/2016 11:30 AM Modified : 6/25/2016 3:11 PM

Column : Detection :  
Mobile Phase : Temperature :  
Flow Rate : Pressure :  
Note :

Autostop : 31.00 min External Start : Start - Restart, Down  
Detector 1 : DECADE Detector Range 1 : Bipolar, 5000 nA, 1.333 Samp. per Sec.  
Subtraction Chromatogram : (None) Matching : No Change

Base : Not Used Calibration File : None Calculation : Uncal  
Scale Factor : Not Used Units After Scaling : Not Used Uncal. Response : 0  
Unretained Time : 0.00 min Column Length : 50.00 mm Column Calc. : From Width at 50% of Height  
Result Table Reports : All Peaks Hide ISTD Peak : Enabled



Result Table (Uncal - C:\CLARITYCHROM\WORK1\NEMATI\SST\MIX 1K , 1,1 KT 6 PPM - DECADE Detector )

	Reten. Time [min]	Area [nA.s]	Height [nA]	Area [%]	Height [%]	W05 [min]	Compound Name
1	0.175	58.484	2.820	0.0	0.1	0.36	
2	0.500	202.050	6.437	0.1	0.1	0.46	
3	0.938	131.749	11.009	0.1	0.2	0.20	
4	1.150	244.503	14.746	0.2	0.3	0.28	
5	1.625	2897.034	178.363	1.9	3.8	0.23	
6	2.400	924.666	24.862	0.6	0.5	0.64	
7	3.500	325.199	18.039	0.2	0.4	0.36	
8	4.037	809.112	12.954	0.5	0.3	1.19	
9	5.425	190.676	7.100	0.1	0.2	0.51	
10	5.938	740.434	31.005	0.5	0.7	0.38	
11	6.600	371.475	14.763	0.2	0.3	0.55	
12	7.213	1054.963	44.131	0.7	0.9	0.36	
13	7.875	100.980	5.639	0.1	0.1	0.31	
14	8.350	692.889	28.276	0.4	0.6	0.35	
15	9.425	16.812	1.157	0.0	0.0	0.26	
16	10.163	820.918	34.190	0.5	0.7	0.39	
17	11.188	57.566	1.697	0.0	0.0	0.34	
18	11.613	12.272	1.071	0.0	0.0	0.19	
19	12.550	284.590	6.901	0.2	0.1	0.44	
20	12.788	60.041	3.937	0.0	0.1	0.34	
21	13.963	166.804	8.272	0.1	0.2	0.39	
22	14.600	427.264	46.770	0.3	1.0	0.15	
23	14.963	6164.732	537.652	3.9	11.6	0.20	1K
24	16.012	517.085	10.972	0.3	0.2	0.89	
25	16.688	130.404	6.351	0.1	0.1	0.39	
26	17.163	165.963	7.086	0.1	0.2	0.45	
27	17.887	427.715	19.976	0.3	0.4	0.35	
28	18.688	30102.390	2064.998	19.3	44.4	0.25	N
29	19.675	4157.748	147.917	2.7	3.2	0.53	
30	20.250	2773.577	122.046	1.8	2.6	0.40	
31	20.788	5954.139	138.121	3.8	3.0	0.72	
32	21.425	25068.140	208.857	16.1	4.5	2.40	
33	24.300	22394.352	587.137	14.3	12.6	0.45	
34	26.675	47739.550	295.518	30.6	6.4	5.05	
	Total	156186.276	4650.772	100.0	100.0		



### ClarityChrom - Chromatography SW

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#### Chromatogram Info:

File Name	: C:\CLARITYCHROM\WORK1\NEMATI\DS MARVDASHT HYDRO 100_-1--06_06_2016.PRM	File Created	: 6/6/2016 3:03:35 PM
Origin	: Acquired, Acquisition started 6/6/2016 2:25:55 PM	Acquired Date	: 6/6/2016 3:00:56 PM
Project	: C:\ClarityChrom\Projects\Work1.PRJ	By	: Administrator

#### Printed Version Info:

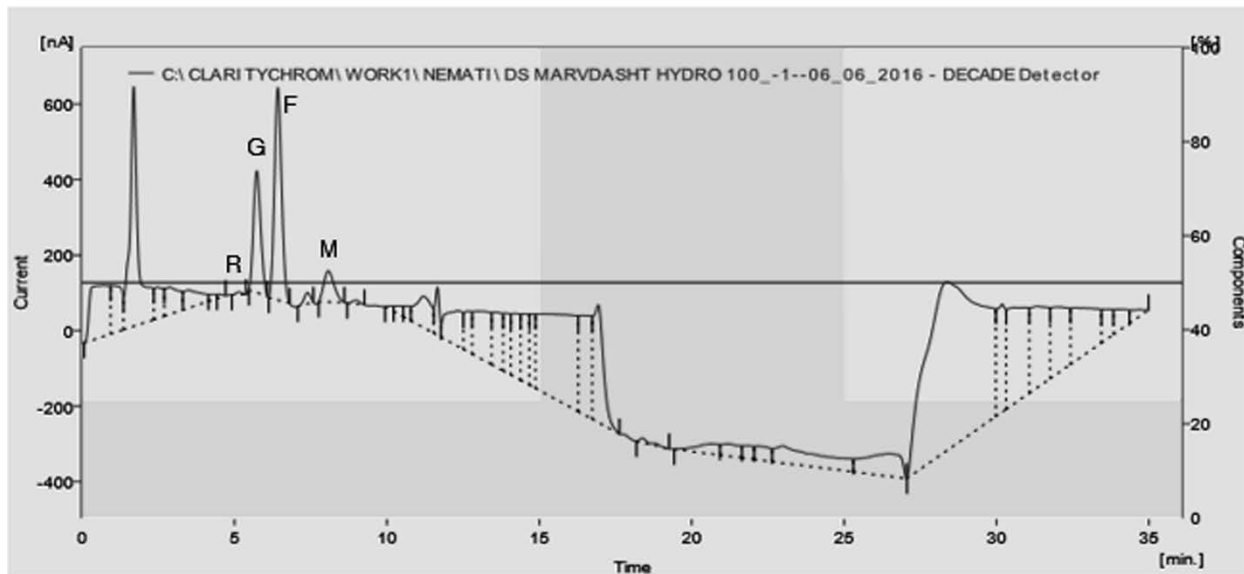
Printed Version	: 6/26/2016 2:57:35 PM	Printed Date	: 6/26/2016 3:30:21 PM
Report Style	: C:\ClarityChrom\Common\Chromatogram.sty	By	: Administrator
Calibration File	: None		

#### Sample Info:

Sample ID	: DS marvdasht hydro 100 <sup>g</sup> -1	Amount	: 2.5
Sample	:	ISTD Amount	: 1.5
Inj. Volume [mL]	: 0.02	Dilution	: 1

Method	: Final Method Gradient RGFSM	By	: Administrator
Description	:		
Created	: 5/1/2016 11:30 AM	Modified	: 6/26/2016 2:57 PM
Column	:	Detection	:
Mobile Phase	:	Temperature	:
Flow Rate	:	Pressure	:
Note	:		
Autostop	: 35.00 min	External Start	: Start - Restart, Down
Detector 1	: DECADE Detector	Range 1	: Bipolar, 5000 nA, 1.333 Samp. per Sec.
Subtraction Chromatogram	: (None)	Matching	: No Change

Base	: Not Used	Calibration File	: None	Calculation	: Uncal
Scale Factor	: Not Used	Units After Scaling	: Not Used	Uncal. Response	: 0
Unretained Time	: 0.00 min	Column Length	: 50.00 mm	Column Calc.	: From Width at 50% of Height
Result Table Reports	: All Peaks	Hide ISTD Peak	: Enabled		



Result Table (Uncal - C:\CLARITYCHROM\WORK1\NEMATI\DS MARVDASHT HYDRO 100\_-1--06\_06\_2016 - DECADE Detector )

	Reten. Time [min]	Area [nA.s]	Height [nA]	Area [%]	Height [%]	W05 [min]	Compound Name
1	0.700	5884.172	134.891	2.6	2.2	0.72	
2	1.025	3012.651	125.615	1.3	2.0	0.42	
3	1.688	12199.755	634.851	5.5	10.1	0.21	
4	2.475	1666.441	82.698	0.7	1.3	0.35	
5	2.875	2274.411	71.852	1.0	1.1	0.60	
6	3.500	1811.262	47.003	0.8	0.7	0.85	
7	4.350	239.727	12.977	0.1	0.2	0.28	
8	4.513	103.750	8.808	0.0	0.1	0.29	
9	5.150	91.026	6.702	0.0	0.1	0.24	
10	5.725	5336.524	322.947	2.4	5.2	0.28	
11	6.425	9221.618	563.335	4.1	9.0	0.28	
12	7.400	417.902	29.450	0.2	0.5	0.25	
13	8.075	1941.868	82.610	0.9	1.3	0.39	
14	8.988	170.134	9.801	0.1	0.2	0.30	
15	10.113	127.543	9.537	0.1	0.2	0.29	
16	10.400	390.183	21.965	0.2	0.4	0.31	
17	10.637	492.577	32.089	0.2	0.5	0.25	
18	11.200	2982.367	83.018	1.3	1.3	0.75	
19	11.663	1248.097	127.188	0.6	2.0	0.19	
20	12.325	3508.982	94.100	1.6	1.5	0.74	
21	12.650	1825.230	106.660	0.8	1.7	0.29	
22	13.000	4828.761	122.130	2.2	1.9	0.64	
23	13.563	3277.726	144.119	1.5	2.3	0.38	
24	13.913	2357.733	156.598	1.1	2.5	0.25	
25	14.200	3296.736	168.826	1.5	2.7	0.33	
26	14.575	3133.296	183.810	1.4	2.9	0.29	
27	14.788	2308.008	193.159	1.0	3.1	0.20	
28	15.050	18984.443	204.543	8.5	3.3	1.40	
29	16.425	7318.874	260.866	3.3	4.2	0.46	
30	16.938	7267.531	311.281	3.2	5.0	0.38	
31	18.375	298.013	11.886	0.1	0.2	0.24	
32	20.600	1364.611	26.378	0.6	0.4	1.31	
33	21.188	1345.774	32.175	0.6	0.5	0.72	
34	21.850	799.402	34.070	0.4	0.5	0.40	
35	22.188	1265.884	36.622	0.6	0.6	0.59	
36	22.988	5575.043	45.017	2.5	0.7	1.40	
37	26.450	5011.889	59.861	2.2	1.0	1.65	
38	28.387	56527.690	446.047	25.3	7.1	2.40	
39	30.188	5669.749	285.433	2.5	4.6	0.34	
40	30.600	11314.771	253.696	5.1	4.0	0.76	
41	31.325	8606.387	215.603	3.8	3.4	0.69	
42	31.962	6743.591	178.261	3.0	2.8	0.66	
43	32.600	7298.532	140.275	3.3	2.2	1.01	
44	33.625	1861.418	78.609	0.8	1.3	0.40	
45	34.125	1613.217	50.681	0.7	0.8	0.53	
46	34.663	659.626	19.065	0.3	0.3	0.63	
	Total	223674.925	6267.109	100.0	100.0		

R  
G  
F  
M

## Drought sensitive (nonhydrolyzed)



## ClarityChrom - Chromatography SW

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## Chromatogram Info:

File Name	: C:\CLARITYCHROM\WORK1\NEMATI\DS MARVDASHT NON HYDRO 100_-2--05_06_2016.PRM	File Created	: 6/5/2016 5:09:48 PM
Origin	: Acquired, Acquisition started 6/5/2016 4:34:47 PM	Acquired Date	: 6/5/2016 5:09:48 PM
Project	: C:\ClarityChrom\Projects\Work 1.PRJ	By	: Administrator

## Printed Version Info:

Printed Version	: 6/26/2016 3:00:28 PM	Printed Date	: 6/26/2016 3:30:55 PM
Report Style	: C:\ClarityChrom\Common\Chromatogram.sty	By	: Administrator
Calibration File	: None		

## Sample Info:

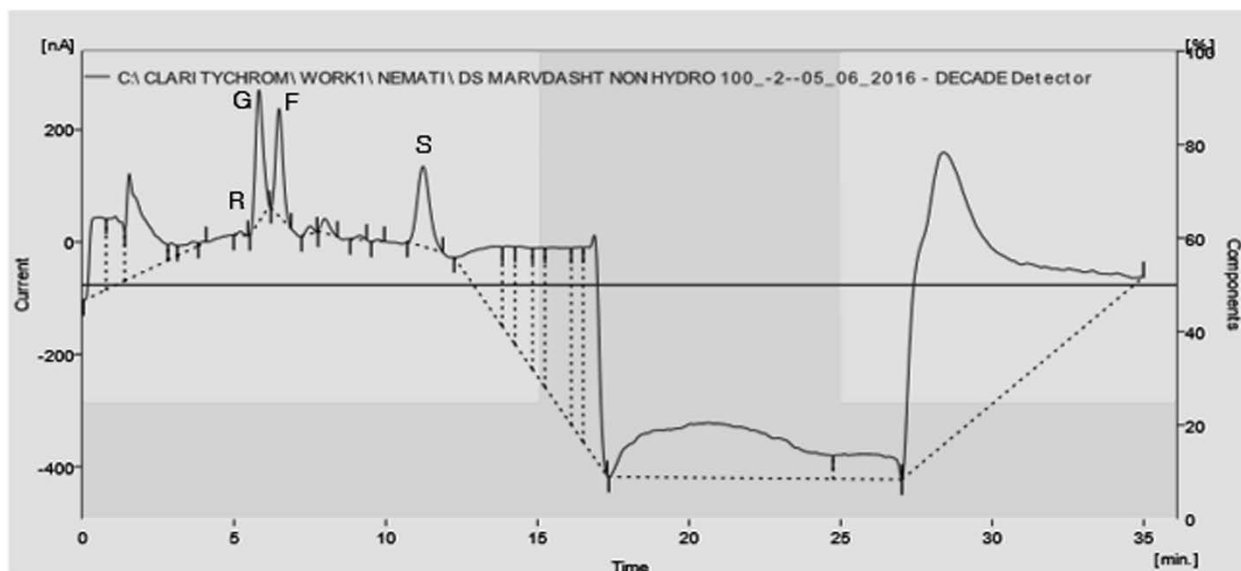
Sample ID	: DS marvdasht 100 <sup>o</sup> -2	Amount	: 2.5
Sample	:	ISTD Amount	: 1.5
Inj. Volume [mL]	: 0.02	Dilution	: 1

Method	: Final Method Gradient RGFSM	By	: Administrator
Description	:		
Created	: 5/1/2016 11:30 AM	Modified	: 6/26/2016 3:00 PM

Column	:	Detection	:
Mobile Phase	:	Temperature	:
Flow Rate	:	Pressure	:
Note	:		

Autostop	: 35.00 min	External Start	: Start - Restart, Down
Detector 1	: DECADE Detector	Range 1	: Bipolar, 5000 nA, 1.333 Samp. per Sec.
Subtraction Chromatogram	: (None)	Matching	: No Change

Base	: Not Used	Calibration File	: None	Calculation	: Uncal
Scale Factor	: Not Used	Units After Scaling	: Not Used	Uncal. Response	: 0
Unretained Time	: 0.00 min	Column Length	: 50.00 mm	Column Calc.	: From Width at 50% of Height
Result Table Reports	: All Peaks	Hide ISTD Peak	: Enabled		





6/26/2016 3:30 PM

Chromatogram C:\CLARITYCHROM\WORK1\NEMATI\DS MARVDASHT NON HYDRO 100\_-2--05\_06\_2016.PRM

Result Table (Uncal - C:\CLARITYCHROM\WORK1\NEMATI\DS MARVDASHT NON HYDRO 100\_-2--05\_06\_2016 - DECADE Detector )

	Reten. Time [min]	Area [nA.s]	Height [nA]	Area [%]	Height [%]	W05 [min]	Compound Name
1	0.550	4489.863	134.898	1.9	3.9	0.56	
2	1.075	4263.805	122.561	1.8	3.5	0.61	
3	1.538	7799.385	186.363	3.4	5.3	0.79	
4	2.925	454.378	27.121	0.2	0.8	0.31	
5	3.638	496.455	11.051	0.2	0.3	0.53	
6	3.975	48.207	2.968	0.0	0.1	0.21	
7	5.213	85.219	6.221	0.0	0.2	0.23	R
8	5.813	4051.144	234.447	1.7	6.7	0.29	G
9	6.475	3141.954	191.793	1.4	5.5	0.26	F
10	7.500	215.595	13.904	0.1	0.4	0.28	
11	7.987	483.712	25.642	0.2	0.7	0.31	
12	9.150	113.814	6.757	0.0	0.2	0.29	
13	9.725	45.426	3.081	0.0	0.1	0.25	
14	11.225	4083.534	142.683	1.8	4.1	0.46	S
15	13.725	6964.075	133.216	3.0	3.8	1.59	
16	14.000	4026.930	155.056	1.7	4.4	0.42	
17	14.400	6736.708	185.168	2.9	5.3	0.57	
18	15.125	5743.431	238.940	2.5	6.9	0.41	
19	15.488	14571.751	267.441	6.3	7.7	0.86	
20	16.413	7938.484	339.331	3.4	9.7	0.40	
21	16.875	12224.955	395.896	5.3	11.4	0.53	
22	20.600	32276.293	97.955	13.9	2.8	5.94	
23	25.762	5534.854	44.510	2.4	1.3	2.17	
24	28.400	106003.649	520.307	45.7	14.9	7.63	
	Total	231793.621	3487.309	100.0	100.0		

Drought tolerant (hydrolyzed)



ClarityChrom - Chromatography SW  
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Chromatogram Info:

File Name	: C:\CLARITYCHROM\WORK1\NEMATI\DS SIRVAN HYDRO 100_-2--07_06_2016.PRM	File Created	: 6/7/2016 11:45:26 AM
Origin	: Acquired, Acquisition started 6/7/2016 11:10:26 AM	Acquired Date	: 6/7/2016 11:45:26 AM
Project	: C:\ClarityChrom\Projects\Work1.PRJ	By	: Administrator

Printed Version Info:

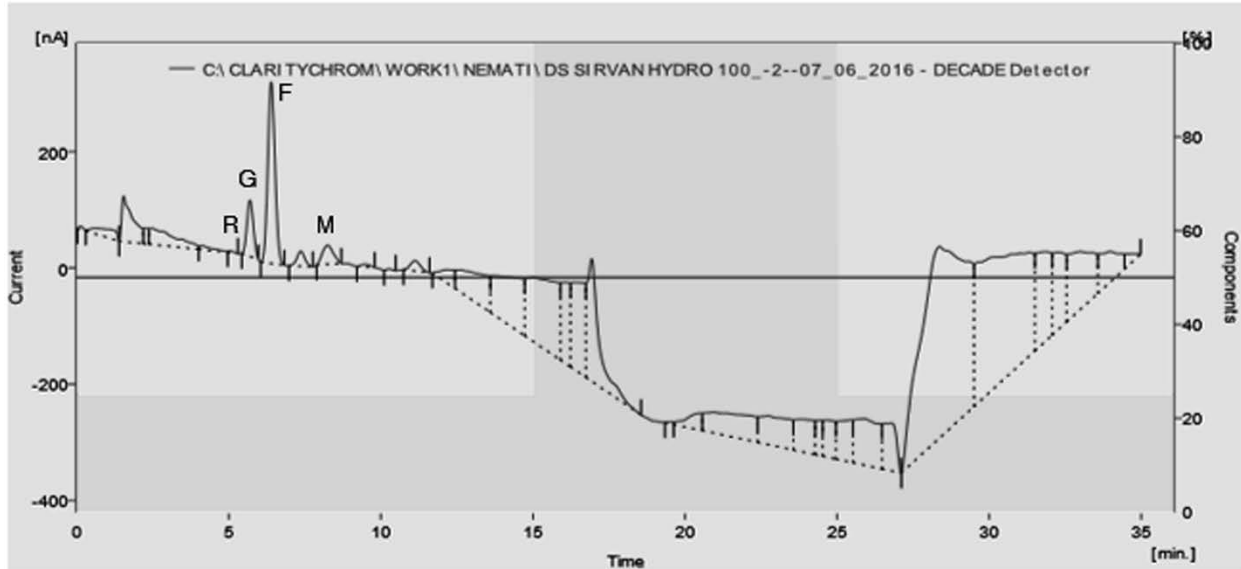
Printed Version	: 6/26/2016 3:02:21 PM	Printed Date	: 6/26/2016 3:31:17 PM
Report Style	: C:\ClarityChrom\Common\Chromatogram.sty	By	: Administrator
Calibration File	: None		

Sample Info:

Sample ID	: DS sirvan hydro 100 <sup>F</sup> -2	Amount	: 2.5
Sample	:	ISTD Amount	: 1.5
Inj. Volume [mL]	: 0.02	Dilution	: 1

Method	: Final Method Gradient RGFSM	By	: Administrator
Description	:		
Created	: 5/1/2016 11:30 AM	Modified	: 6/26/2016 3:02 PM
Column	:	Detection	:
Mobile Phase	:	Temperature	:
Flow Rate	:	Pressure	:
Note	:		
Autostop	: 35.00 min	External Start	: Start - Restart, Down
Detector 1	: DECADE Detector	Range 1	: Bipolar, 5000 nA, 1.333 Samp. per Sec.
Subtraction Chromatogram	: (None)	Matching	: No Change

Base	: Not Used	Calibration File	: None	Calculation	: Uncal
Scale Factor	: Not Used	Units After Scaling	: Not Used	Uncal. Response	: 0
Unretained Time	: 0.00 min	Column Length	: 50.00 mm	Column Calc.	: From Width at 50% of Height
Result Table Reports	: All Peaks	Hide ISTD Peak	: Enabled		



Result Table (Uncal - C:\CLARITYCHROM\WORK1\NEMATI\DS SIRVAN HYDRO 100\_-2--07\_06\_2016 - DECADE Detector )

	Reten. Time [min]	Area [nA.s]	Height [nA]	Area [%]	Height [%]	W05 [min]	Compound Name
1	0.125	55.709	5.046	0.0	0.2	0.19	
2	0.575	718.601	8.896	0.5	0.3	1.00	
3	1.538	2044.804	78.236	1.4	2.7	0.38	
4	2.263	299.019	26.774	0.2	0.9	0.19	
5	2.475	1720.205	27.662	1.2	1.0	0.75	
6	4.112	216.491	6.961	0.2	0.2	0.33	
7	5.075	34.143	2.985	0.0	0.1	0.20	R
8	5.700	1424.468	97.118	1.0	3.4	0.25	G
9	6.388	5128.631	311.812	3.6	10.8	0.28	F
10	7.362	471.502	25.936	0.3	0.9	0.29	
11	8.250	809.677	32.585	0.6	1.1	0.42	M
12	9.500	93.097	4.422	0.1	0.2	0.36	
13	10.275	22.440	2.065	0.0	0.1	0.19	
14	11.125	410.798	17.861	0.3	0.6	0.38	
15	12.150	760.680	21.917	0.5	0.8	0.75	
16	12.563	3343.098	36.220	2.3	1.3	1.16	
17	13.713	5450.539	67.102	3.8	2.3	1.13	
18	15.000	8267.192	110.216	5.7	3.8	1.18	
19	16.063	2823.957	139.601	2.0	4.9	0.34	
20	16.363	4625.403	150.102	3.2	5.2	0.50	
21	16.938	5768.945	210.776	4.0	7.3	0.36	
22	19.538	40.157	3.465	0.0	0.1	0.29	
23	20.475	938.922	28.595	0.7	1.0	0.85	
24	20.975	4199.860	35.697	2.9	1.2	1.83	
25	22.725	3467.164	49.331	2.4	1.7	1.18	
26	23.900	2391.172	56.380	1.7	2.0	0.71	
27	24.438	903.046	60.920	0.6	2.1	0.25	
28	24.650	1675.356	63.690	1.2	2.2	0.44	
29	25.450	2332.321	72.829	1.6	2.5	0.56	
30	25.875	4405.094	79.967	3.1	2.8	0.95	
31	26.788	2474.230	82.053	1.7	2.9	0.51	
32	28.363	33905.936	329.447	23.5	11.5	1.77	
33	31.300	25201.653	179.176	17.5	6.2	2.00	
34	31.887	5376.644	152.344	3.7	5.3	0.57	
35	32.325	3698.563	130.401	2.6	4.5	0.47	
36	33.013	5788.646	98.764	4.0	3.4	1.02	
37	33.975	2540.515	52.871	1.8	1.8	0.88	
38	34.700	425.680	14.447	0.3	0.5	0.53	
	Total	144254.356	2874.668	100.0	100.0		

Drought tolerant (nonhydrolyzed)



ClarityChrom - Chromatography SW

www.knauer.net

Chromatogram Info:

File Name : C:\CLARITYCHROM\WORK1\NEMATI\DS SIRVAN NONHYDRO1-100\_--06\_06\_2016.PRM File Created : 6/6/2016 11:25:13 AM  
 Origin : Acquired, Acquisition started 6/6/2016 10:50:12 AM Acquired Date : 6/6/2016 11:25:13 AM  
 Project : C:\ClarityChrom\Projects\Work1.PRJ By : Administrator

Printed Version Info:

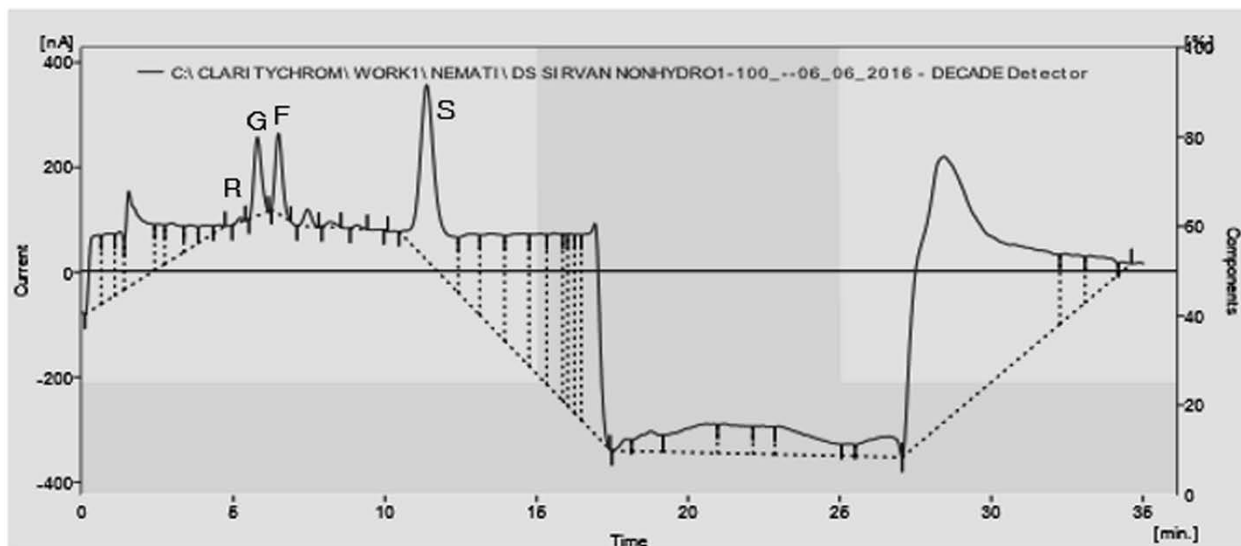
Printed Version : 6/26/2016 3:04:19 PM Printed Date : 6/26/2016 3:31:27 PM  
 Report Style : C:\ClarityChrom\Common\Chromatogram.sty By : Administrator  
 Calibration File : None

Sample Info:

Sample ID : DS sirvan nonhydro1-100\* Amount : 2.5  
 Sample : ISTD Amount : 1.5  
 Inj. Volume [mL] : 0.02 Dilution : 1

Method : Final Method Gradient RGF5M By : Administrator  
 Description :  
 Created : 5/1/2016 11:30 AM Modified : 6/26/2016 3:04 PM  
 Column :  
 Mobile Phase :  
 Flow Rate :  
 Note :  
 Detection :  
 Temperature :  
 Pressure :  
 Autostop : 35.00 min External Start : Start - Restart, Down  
 Detector 1 : DECADE Detector Range 1 : Bipolar, 5000 nA, 1.333 Samp. per Sec.  
 Subtraction Chromatogram : (None) Matching : No Change

Base : Not Used Calibration File : None Calculation : Uncal  
 Scale Factor : Not Used Units After Scaling : Not Used Uncal. Response : 0  
 Unretained Time : 0.00 min Column Length : 50.00 mm Column Calc. : From Width at 50% of Height  
 Result Table Reports : All Peaks Hide ISTD Peak : Enabled



Result Table (Uncal - C:\CLARITYCHROM\WORK1\NEMATI\DS SIRVAN NONHYDRO 1-100\_--06\_06\_2016 - DECADE Detector )

	Reten. Time [min]	Area [nA.s]	Height [nA]	Area [%]	Height [%]	W05 [min]	Compound Name
1	0.550	3343.318	134.542	1.4	2.6	0.41	
2	0.950	3373.333	122.869	1.4	2.4	0.45	
3	1.263	2083.793	115.233	0.9	2.3	0.31	
4	1.550	7291.258	182.060	3.1	3.6	0.99	
5	2.513	1649.906	84.229	0.7	1.7	0.34	
6	2.975	2378.901	69.187	1.0	1.4	0.63	
7	3.563	1175.659	43.957	0.5	0.9	0.47	
8	3.987	705.652	27.776	0.3	0.5	0.50	
9	4.550	193.383	8.689	0.1	0.2	0.39	
10	5.237	98.014	8.138	0.0	0.2	0.23	R
11	5.787	2552.417	149.388	1.1	2.9	0.29	G
12	6.487	2474.651	153.334	1.0	3.0	0.28	F
13	7.450	555.705	32.567	0.2	0.6	0.29	
14	8.175	201.879	9.174	0.1	0.2	0.39	
15	9.063	117.414	6.644	0.0	0.1	0.28	
16	9.988	1.639	0.141	0.0	0.0	0.04	
17	11.375	14588.860	334.386	6.1	6.6	0.51	S
18	12.875	5602.640	139.292	2.4	2.7	0.71	
19	13.438	8817.255	173.738	3.7	3.4	0.82	
20	14.525	10888.611	238.431	4.6	4.7	0.80	
21	15.125	9467.393	274.654	4.0	5.4	0.59	
22	15.575	9521.571	302.588	4.0	5.9	0.53	
23	15.950	3142.499	322.929	1.3	6.3	0.16	
24	16.125	4508.641	333.891	1.9	6.6	0.23	
25	16.363	4681.961	347.321	2.0	6.8	0.23	
26	16.925	14545.412	401.261	6.1	7.9	0.63	
27	17.938	519.553	22.181	0.2	0.4	0.39	
28	18.775	1954.292	38.570	0.8	0.8	1.04	
29	20.613	4938.632	55.336	2.1	1.1	1.80	
30	21.212	3750.072	56.123	1.6	1.1	1.16	
31	22.462	2300.794	53.894	1.0	1.1	0.72	
32	22.975	4947.138	53.796	2.1	1.1	1.58	
33	25.375	609.338	23.251	0.3	0.5	0.45	
34	26.625	2896.032	38.966	1.2	0.8	1.46	
35	28.450	92376.619	505.483	38.8	9.9	4.84	
36	32.425	5583.386	125.918	2.3	2.5	0.84	
37	33.263	3831.084	81.646	1.6	1.6	1.09	
38	34.325	317.258	17.279	0.1	0.3	0.44	
	Total	237985.963	5088.860	100.0	100.0		


**ClarityChrom - Chromatography SW**  
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**Chromatogram Info:**

File Name	: C:\CLARITYCHROM\WORK1\NEMATI\FINAL SST\SST DS MARVDASHT 1.PRM	File Created	: 1/5/2012 5:14:44 AM
Origin	: Acquired, Acquisition started 1/5/2012 4:44:42 AM	Acquired Date	: 1/5/2012 5:14:43 AM
Project	: C:\ClarityChrom\Projects\Work1.PRJ	By	: Administrator

**Printed Version Info:**

Printed Version	: 1/5/2012 11:20:45 PM	Printed Date	: 1/8/2012 5:41:18 AM
Report Style	: C:\ClarityChrom\Common\Chromatogram.sty	By	: Administrator
Calibration File	: None		

**Sample Info:**

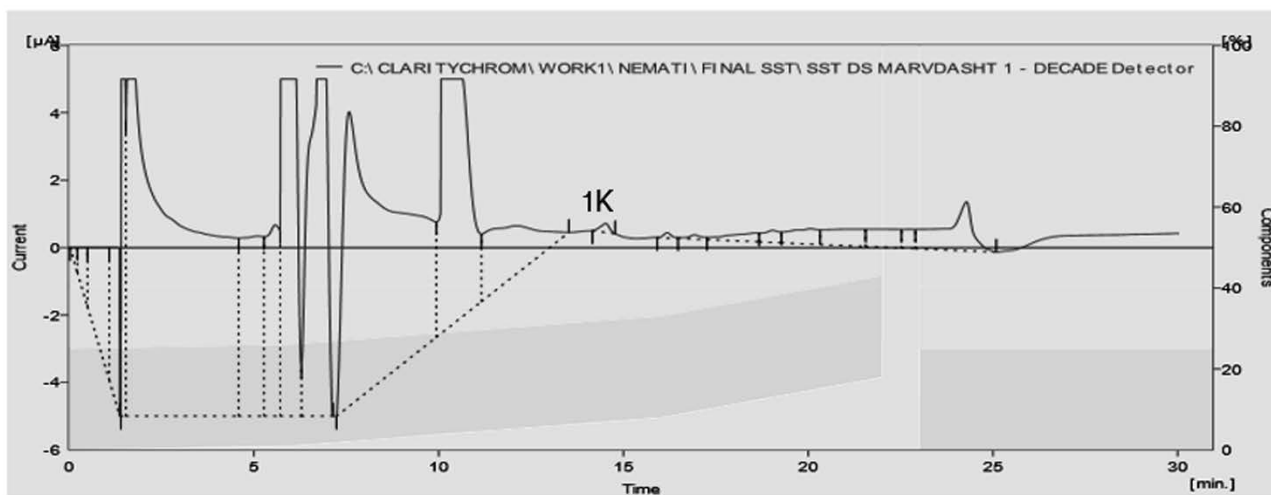
Sample ID	: SST DS MARVDASHT 1	Amount	: 0
Sample	:	ISTD Amount	: 0
Inj. Volume [mL]	: 0	Dilution	: 1

Method	: Fructan Enzyme Final	By	: Administrator
Description	:		
Created	: 5/1/2016 11:30 AM	Modified	: 1/8/2012 5:40 AM

Column	:	Detection	:
Mobile Phase	:	Temperature	:
Flow Rate	:	Pressure	:
Note	:		

Autostop	: 30.00 min	External Start	: Start - Restart, Down
Detector 1	: DECADE Detector	Range 1	: Bipolar, 5000 nA, 1.333 Samp. per Sec.
Subtraction Chromatogram	: (None)	Matching	: No Change

Base	: Not Used	Calibration File	: None	Calculation	: Uncal
Scale Factor	: Not Used	Units After Scaling	: Not Used	Uncal. Response	: 0
Unretained Time	: 0.00 min	Column Length	: 50.00 mm	Column Calc.	: From Width at 50% of Height
Result Table Reports	: All Peaks	Hide ISTD Peak	: Enabled		



1/8/2012 5:41 AM

Chromatogram C:\CLARITYCHROM\WORK1\NEMATI\FINAL SST\SST DS MARVDASHT 1.PRM

Result Table (Uncal - C:\CLARITYCHROM\WORK1\NEMATI\FINAL SST\SST DS MARVDASHT 1 - DECADE Detector )

	Reten. Time [min]	Area [nA.s]	Height [nA]	Area [%]	Height [%]	W05 [min]	Compound Name
1	0.125	4453.678	371.580	0.1	0.4	0.20	
2	0.412	20651.902	1437.355	0.5	1.7	0.28	
3	0.887	100482.686	3198.580	2.5	3.9	0.59	
4	1.238	77102.144	4495.407	1.9	5.4	0.29	
5	1.413	75000.000	10000.000	1.8	12.1	0.14	
6	1.563	1151603.381	10000.000	28.3	12.1	3.05	
7	5.100	219151.909	5340.895	5.4	6.4	0.69	
8	5.575	144368.554	5673.650	3.6	6.8	0.44	
9	5.725	302406.323	10000.000	7.4	12.1	0.50	
10	6.700	370557.131	10000.000	9.1	12.1	0.66	
11	7.575	820013.657	8737.854	20.2	10.5	2.56	
12	10.063	403160.005	7550.441	9.9	9.1	0.89	
13	12.100	156680.294	1431.588	3.9	1.7	2.36	
14	14.525	4621.333	272.129	0.1	0.3	0.30	1K
15	16.188	2238.041	155.612	0.1	0.2	0.23	
16	16.925	3276.907	127.839	0.1	0.2	0.38	
17	18.563	14081.237	255.290	0.3	0.3	1.38	
18	19.038	11251.806	357.544	0.3	0.4	0.60	
19	20.063	25144.496	452.832	0.6	0.5	1.05	
20	21.125	34968.447	490.752	0.9	0.6	1.23	
21	21.788	31068.619	521.756	0.8	0.6	0.97	
22	22.712	12619.618	561.912	0.3	0.7	0.38	
23	24.275	77735.875	1453.729	1.9	1.8	0.47	
	Total	4062638.041	82886.744	100.0	100.0		

# Drought tolerant

1/8/2012 5:13 AM

Chromatogram C:\CLARITYCHROM\WORK1\NEMAT1\FINAL SST\SST DS SIRVAN 1.PRM

Page 1 of 2



## ClarityChrom - Chromatography SW

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### Chromatogram Info:

File Name	: C:\CLARITYCHROM\WORK1\NEMAT1\FINAL SST\SST DS SIRVAN 1.PRM	File Created	: 1/6/2012 4:55:52 AM
Origin	: Acquired, Acquisition started 1/6/2012 4:25:51 AM	Acquired Date	: 1/6/2012 4:55:52 AM
Project	: C:\ClarityChrom\Projects\Work1.PRJ	By	: Administrator

### Printed Version Info:

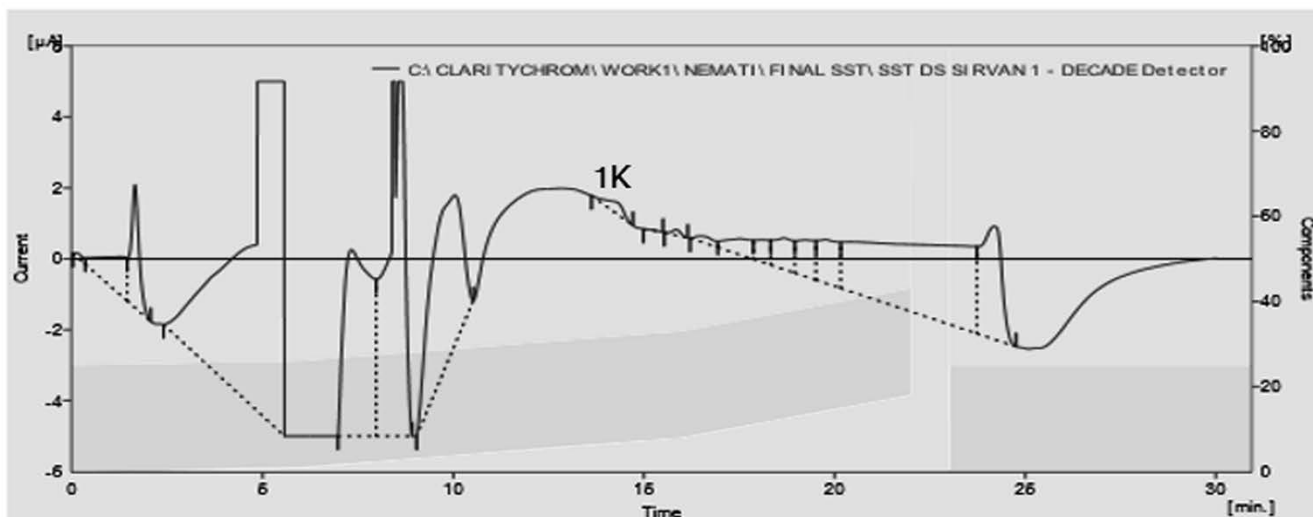
Printed Version	: 1/6/2012 5:16:02 AM	Printed Date	: 1/8/2012 5:13:17 AM
Report Style	: C:\ClarityChrom\Common\Chromatogram.sty	By	: Administrator
Calibration File	: None		

### Sample Info:

Sample ID	: SST DS SIRVAN 1	Amount	: 0
Sample	:	ISTD Amount	: 0
Inj. Volume [mL]	: 0	Dilution	: 1

Method	: Fructan Enzyme Final	By	: Administrator
Description	:		
Created	: 5/1/2016 11:30 AM	Modified	: 1/8/2012 5:13 AM
Column	:	Detection	:
Mobile Phase	:	Temperature	:
Flow Rate	:	Pressure	:
Note	:		
Autostop	: 30.00 min	External Start	: Start - Restart, Down
Detector 1	: DECADE Detector	Range 1	: Bipolar, 5000 nA, 1.333 Samp. per Sec.
Subtraction Chromatogram	: (None)	Matching	: No Change

Base	: Not Used	Calibration File	: None	Calculation	: Uncal
Scale Factor	: Not Used	Units After Scaling	: Not Used	Uncal. Response	: 0
Unretained Time	: 0.00 min	Column Length	: 50.00 mm	Column Calc.	: From Width at 50% of Height
Result Table Reports	: All Peaks	Hide ISTD Peak	: Enabled		





1/8/2012 5:13 AM

Chromatogram C:\CLARITYCHROM\WORK1\NEMATI\FINAL SST\SST DS SIRVAN 1.PRM

Result Table (Uncal - C:\CLARITYCHROM\WORK1\NEMATI\FINAL SST\SST DS SIRVAN 1 - DECADE Detector )

	Reten. Time [min]	Area [nA.s]	Height [nA]	Area [%]	Height [%]	W05 [min]	Compound Name
1	0.113	2145.314	89.888	0.1	0.2	0.19	
2	1.313	47122.650	1117.899	1.9	2.6	1.10	
3	1.650	51652.588	3465.127	2.1	8.1	0.24	
4	4.862	772063.780	9292.742	31.8	21.8	0.90	
5	7.325	258015.056	5255.545	10.6	12.4	0.90	
6	8.400	334264.916	10000.000	13.8	23.5	0.45	
7	10.038	264558.564	4221.578	10.9	9.9	0.94	
8	13.650	10521.879	8.146	0.4	0.0	0.04	1K
9	15.000	399.441	0.111	0.0	0.0	0.03	
10	15.838	2508.184	159.013	0.1	0.4	0.28	
11	16.462	6067.146	146.977	0.3	0.3	0.54	
12	17.525	21451.549	453.251	0.9	1.1	0.94	
13	18.087	16830.276	622.215	0.7	1.5	0.45	
14	18.675	31827.612	882.738	1.3	2.1	0.64	
15	19.225	33627.638	1026.863	1.4	2.4	0.55	
16	19.762	47688.946	1227.035	2.0	2.9	0.65	
17	20.413	403541.159	1396.558	16.6	3.3	3.58	
18	24.188	121393.986	3183.581	5.0	7.5	0.68	
	Total	2425680.685	42549.268	100.0	100.0		



### ClarityChrom - Chromatography SW

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#### Chromatogram Info:

File Name	: C:\CLARITYCHROM\WORK1\NEMATI\FINAL FFT\FFT DS MARVDASHT 2.PRM	File Created	: 1/7/2012 2:36:06 AM
Origin	: Acquired, Acquisition started 1/7/2012 2:06:05 AM	Acquired Date	: 1/7/2012 2:36:06 AM
Project	: C:\ClarityChrom\Projects\Work1.PRJ	By	: Administrator

#### Printed Version Info:

Printed Version	: 1/7/2012 2:39:09 AM	Printed Date	: 1/8/2012 12:14:43 AM
Report Style	: C:\ClarityChrom\Common\Chromatogram.sty	By	: Administrator
Calibration File	: None		

#### Sample Info:

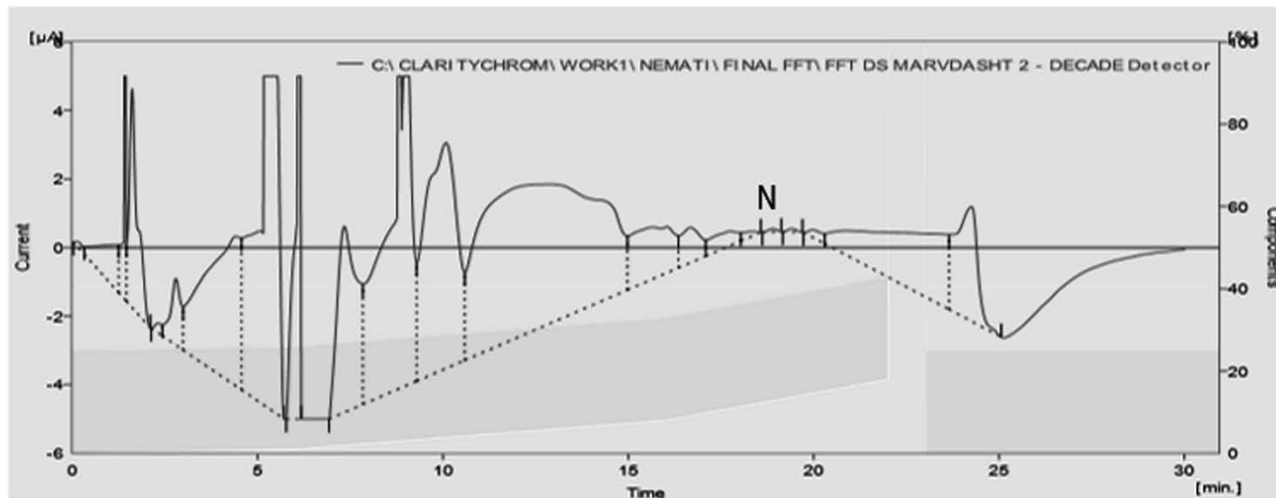
Sample ID	: FFT DS MARVDASHT 2	Amount	: 0
Sample	:	ISTD Amount	: 0
Inj. Volume [mL]	: 0	Dilution	: 1

Method	: Fructan Enzyme Final	By	: Administrator
Description	:		
Created	: 5/1/2016 11:30 AM	Modified	: 1/8/2012 12:14 AM

Column	:	Detection	:
Mobile Phase	:	Temperature	:
Flow Rate	:	Pressure	:
Note	:		

Autostop	: 30.00 min	External Start	: Start - Restart, Down
Detector 1	: DECADE Detector	Range 1	: Bipolar, 5000 nA, 1.333 Samp. per Sec.
Subtraction Chromatogram	: (None)	Matching	: No Change

Base	: Not Used	Calibration File	: None	Calculation	: Uncal
Scale Factor	: Not Used	Units After Scaling	: Not Used	Uncl. Response	: 0
Unretained Time	: 0.00 min	Column Length	: 50.00 mm	Column Calc.	: From Width at 50% of Height
Result Table Reports	: All Peaks	Hide ISTD Peak	: Enabled		



1/8/2012 12:14 AM

Chromatogram C:\CLARITYCHROM\WORK1\NEMAT1\FINAL FFT\FFT DS MARVDASHT 2.PRM

Result Table (Uncal - C:\CLARITYCHROM\WORK1\NEMAT1\FINAL FFT\FFT DS MARVDASHT 2 - DECADE Detector )

	Reten. Time [min]	Area [nA.s]	Height [nA]	Area [%]	Height [%]	W05 [min]	Compound Name
1	0.138	2595.383	149.165	0.1	0.2	0.20	
2	1.163	45189.686	1291.364	1.2	1.8	0.93	
3	1.400	37988.354	6495.666	1.0	8.9	0.07	
4	1.613	97478.549	6389.342	2.7	8.7	0.19	
5	2.313	3614.363	282.599	0.1	0.4	0.29	
6	2.788	37359.525	1941.342	1.0	2.7	0.34	
7	4.400	282029.351	4357.959	7.7	6.0	1.58	
8	5.162	439046.293	9594.219	11.9	13.1	1.05	
9	6.075	121215.330	10000.000	3.3	13.7	0.19	
10	7.338	197929.182	5425.562	5.4	7.4	0.72	
11	8.775	470490.300	9134.903	12.8	12.5	0.69	
12	10.075	398701.632	6584.663	10.9	9.0	1.14	
13	12.863	952488.074	4070.858	25.9	5.6	4.24	
14	16.038	117132.391	1343.765	3.2	1.8	1.38	
15	16.675	37611.848	1023.307	1.0	1.4	0.74	
16	17.750	23378.280	414.031	0.6	0.6	0.82	
17	18.313	4226.386	143.380	0.1	0.2	0.54	
18	18.900	1409.762	92.314	0.0	0.1	0.26	N
19	19.413	1554.115	96.229	0.0	0.1	0.28	
20	19.975	6499.010	215.625	0.2	0.3	0.57	
21	20.837	257985.751	688.229	7.0	0.9	3.35	
22	24.250	138192.485	3340.094	3.8	4.6	0.78	
	Total	3674116.048	73074.617	100.0	100.0		

# Drought tolerant



## ClarityChrom - Chromatography SW

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### Chromatogram Info:

File Name	: C:\ClarityChrom\WORK1\Nemat\FINAL FFT\FFT DS SIRVAN 3.PRM	File Created	: 1/8/2012 3:29:10 AM
Origin	: Acquired, Acquisition started 1/8/2012 2:59:09 AM	Acquired Date	: 1/8/2012 3:29:10 AM
Project	: C:\ClarityChrom\Projects\Work 1.PRJ	By	: Administrator

### Printed Version Info:

Printed Version	: 1/8/2012 3:29:10 AM	Printed Date	: 1/8/2012 3:32:01 AM
Report Style	: C:\ClarityChrom\Common\Chromatogram.sty	By	: Administrator
Calibration File	: None		

### Sample Info:

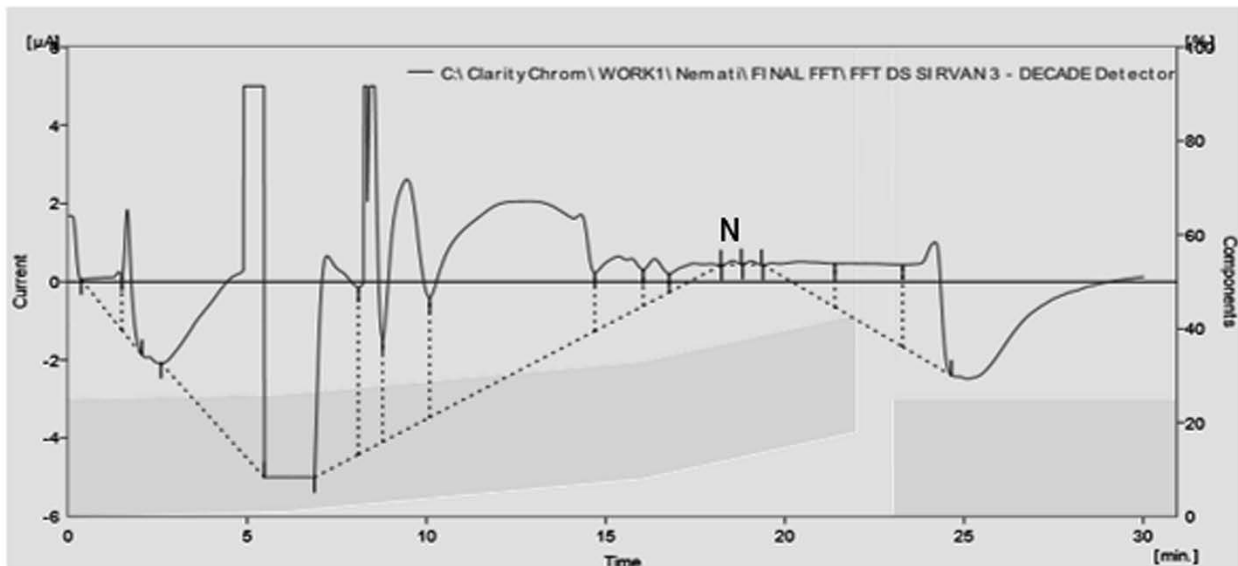
Sample ID	: FFT DS SIRVAN 3	Amount	: 0
Sample	:	ISTD Amount	: 0
Inj. Volume [mL]	: 0	Dilution	: 1

Method	: Fructan Enzyme Final	By	: Administrator
Description	:		
Created	: 5/1/2016 11:30 AM	Modified	: 1/8/2012 3:31 AM

Column	:	Detection	:
Mobile Phase	:	Temperature	:
Flow Rate	:	Pressure	:
Note	:		

Autostop	: 30.00 min	External Start	: Start - Restart, Down
Detector 1	: DECADE Detector	Range 1	: Bipolar, 5000 nA, 1.333 Samp. per Sec.
Subtraction Chromatogram	: (None)	Matching	: No Change

Base	: Not Used	Calibration File	: None	Calculation	: Uncal
Scale Factor	: Not Used	Units After Scaling	: Not Used	Uncal. Response	: 0
Unretained Time	: 0.00 min	Column Length	: 50.00 mm	Column Calc.	: From Width at 50% of Height
Result Table Reports	: All Peaks	Hide ISTD Peak	: Enabled		



1/8/2012 3:32 AM

Chromatogram C:\ClarityChrom\WORK1\Nemati\FINAL FFT\FFT DS SIRVAN 3.PRM

Result Table (Uncal - C:\ClarityChrom\WORK1\Nemati\FINAL FFT\FFT DS SIRVAN 3 - DECADE Detector )

	Reten. Time [min]	Area [nA.s]	Height [nA]	Area [%]	Height [%]	W05 [min]	Compound Name
1	1.413	47803.838	1388.984	1.4	2.9	1.14	
2	1.650	45126.411	3247.809	1.3	6.8	0.23	
3	4.900	665731.714	9418.607	19.4	19.7	0.59	
4	7.225	333116.225	5491.670	9.7	11.5	1.14	
5	8.250	267189.513	9342.732	7.8	19.5	0.42	
6	9.450	388453.516	6387.516	11.3	13.3	1.21	
7	12.850	1075173.396	4197.256	31.3	8.8	4.45	
8	15.350	116296.649	1594.143	3.4	3.3	1.35	
9	16.363	37125.387	1047.880	1.1	2.2	0.72	
10	17.462	28166.070	406.855	0.8	0.9	1.31	
11	18.550	1557.450	96.073	0.0	0.2	0.28	N
12	19.063	1331.238	81.382	0.0	0.2	0.28	
13	20.462	71476.126	656.584	2.1	1.4	2.01	
14	21.813	182892.791	1339.645	5.3	2.8	1.89	
15	24.188	173550.009	3154.597	5.1	6.6	1.10	
	Total	3434990.334	47851.733	100.0	100.0		

7/31/2016 8:29 PM

Chromatogram C:\ClarityChrom\WORK1\Nemat\FEH\DS MARV 1-10000.PRM

Page 1 of 2



## ClarityChrom - Chromatography SW

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## Chromatogram Info:

File Name : C:\ClarityChrom\WORK1\Nemat\FEH\DS MARV 1-10000.PRM File Created : 7/31/2016 7:47:54 PM  
 Origin : Acquired, Acquisition started 7/31/2016 7:12:53 PM Acquired Date : 7/31/2016 7:47:53 PM  
 Project : C:\ClarityChrom\Projects\Work1.PRJ By : Administrator

## Printed Version Info:

Printed Version : 7/31/2016 7:57:16 PM Printed Date : 7/31/2016 8:29:58 PM  
 Report Style : C:\ClarityChrom\Common\Chromatogram.sty By : Administrator  
 Calibration File : None

## Sample Info:

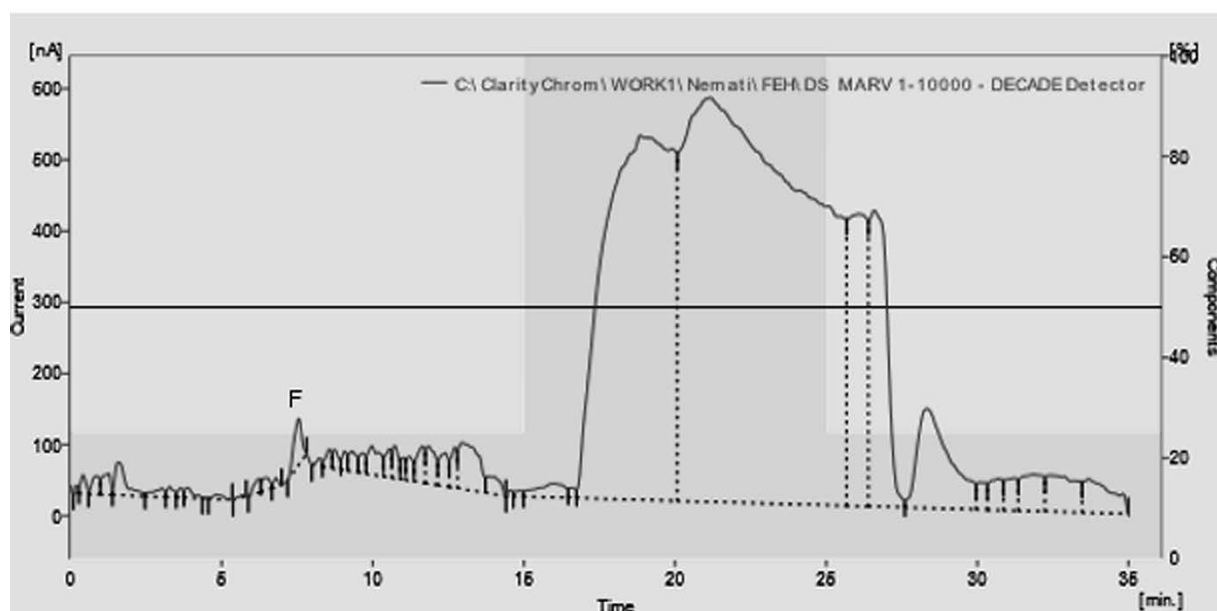
Sample ID : DS MARV 1-10000 Amount : 0  
 Sample : ISTD Amount : 0  
 Inj. Volume [mL] : 0 Dilution : 1

Method : Final Method Gradient RGFPM By : Administrator  
 Description :  
 Created : 5/1/2016 11:30 AM Modified : 7/31/2016 8:29 PM

Column : Detection :  
 Mobile Phase : Temperature :  
 Flow Rate : Pressure :  
 Note :

Autostop : 35.00 min External Start : Start - Restart, Down  
 Detector 1 : DECADE Detector Range 1 : Bipolar, 5000 nA, 1.333 Samp. per Sec.  
 Subtraction Chromatogram : (None) Matching : No Change

Base : Not Used Calibration File : None Calculation : Uncal  
 Scale Factor : Not Used Units After Scaling : Not Used Uncal. Response : 0  
 Unretained Time : 0.00 min Column Length : 50.00 mm Column Calc. : From Width at 50% of Height  
 Result Table Reports : All Peaks Hide ISTD Peak : Enabled



Result Table (Uncal - C:\ClarityChrom\WORK1\Nemat\FEH\DS MARV 1-10000 - DECADE Detector )

	Reten. Time [min]	Area [nA.s]	Height [nA]	Area [%]	Height [%]	W05 [min]	Compound Name
1	0.200	84.193	12.060	0.0	0.4	0.14	
2	0.412	324.264	26.259	0.1	0.8	0.21	
3	0.863	450.972	25.650	0.1	0.8	0.31	
4	1.263	590.559	30.126	0.2	0.9	0.36	
5	1.587	1186.473	46.165	0.4	1.4	0.34	
6	3.025	327.406	12.080	0.1	0.4	0.66	
7	3.275	229.100	14.823	0.1	0.4	0.35	
8	3.638	166.958	13.490	0.1	0.4	0.25	
9	3.875	277.307	14.462	0.1	0.4	0.26	
10	4.450	15.962	1.644	0.0	0.0	0.20	
11	4.838	150.724	6.494	0.0	0.2	0.39	
12	5.700	44.083	3.585	0.0	0.1	0.14	
13	6.225	294.025	19.537	0.1	0.6	0.25	
14	6.487	328.186	17.060	0.1	0.5	0.35	
15	6.813	139.826	12.315	0.0	0.4	0.19	
16	7.550	1172.145	64.831	0.4	1.9	0.30	F
17	8.238	134.201	11.474	0.0	0.3	0.21	
18	8.563	342.581	26.080	0.1	0.8	0.24	
19	8.738	373.382	26.898	0.1	0.8	0.26	
20	9.075	312.534	26.773	0.1	0.8	0.24	
21	9.313	511.037	28.608	0.2	0.9	0.34	
22	9.662	406.707	28.258	0.1	0.8	0.26	
23	9.963	1123.546	40.190	0.3	1.2	0.57	
24	10.550	574.145	40.045	0.2	1.2	0.28	
25	10.725	638.094	45.888	0.2	1.4	0.28	
26	11.012	334.878	30.890	0.1	0.9	0.19	
27	11.200	516.702	33.517	0.2	1.0	0.28	
28	11.637	948.200	51.288	0.3	1.5	0.38	
29	11.838	1145.061	52.645	0.4	1.6	0.41	
30	12.400	945.115	46.966	0.3	1.4	0.38	
31	12.713	806.564	56.807	0.3	1.7	0.28	
32	12.950	3018.930	64.957	0.9	2.0	0.80	
33	13.825	773.664	23.605	0.2	0.7	0.54	
34	14.538	83.349	8.073	0.0	0.2	0.20	
35	14.863	145.503	7.939	0.0	0.2	0.34	
36	15.988	1246.492	19.170	0.4	0.6	1.39	
37	16.600	219.053	14.291	0.1	0.4	0.28	
38	18.837	79982.457	511.108	24.9	15.4	2.76	
39	21.163	162865.697	567.041	50.7	17.1	5.60	
40	26.075	17699.293	409.958	5.5	12.3	0.72	
41	26.587	17138.543	415.533	5.3	12.5	0.68	
42	28.337	10531.700	139.376	3.3	4.2	1.13	
43	30.087	849.380	38.298	0.3	1.2	0.38	
44	30.700	1315.090	44.060	0.4	1.3	0.53	
45	31.250	1290.901	45.745	0.4	1.4	0.49	
46	31.837	2628.095	51.136	0.8	1.5	0.89	
47	32.462	3495.883	50.893	1.1	1.5	1.23	
48	33.675	3150.353	47.240	1.0	1.4	1.41	
	Total	321329.314	3325.334	100.0	100.0		

Drought tolerant



## ClarityChrom - Chromatography SW

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### Chromatogram Info:

File Name	: C:\ClarityChrom\WORK1\Nemat\FEH\DS SIRVAN 1 -10000.PRM	File Created	: 7/31/2016 11:22:02 PM
Origin	: Acquired, Acquisition started 7/31/2016 10:47:01 PM	Acquired Date	: 7/31/2016 11:22:02 PM
Project	: C:\ClarityChrom\Projects\Work1.PRJ	By	: Administrator

### Printed Version Info:

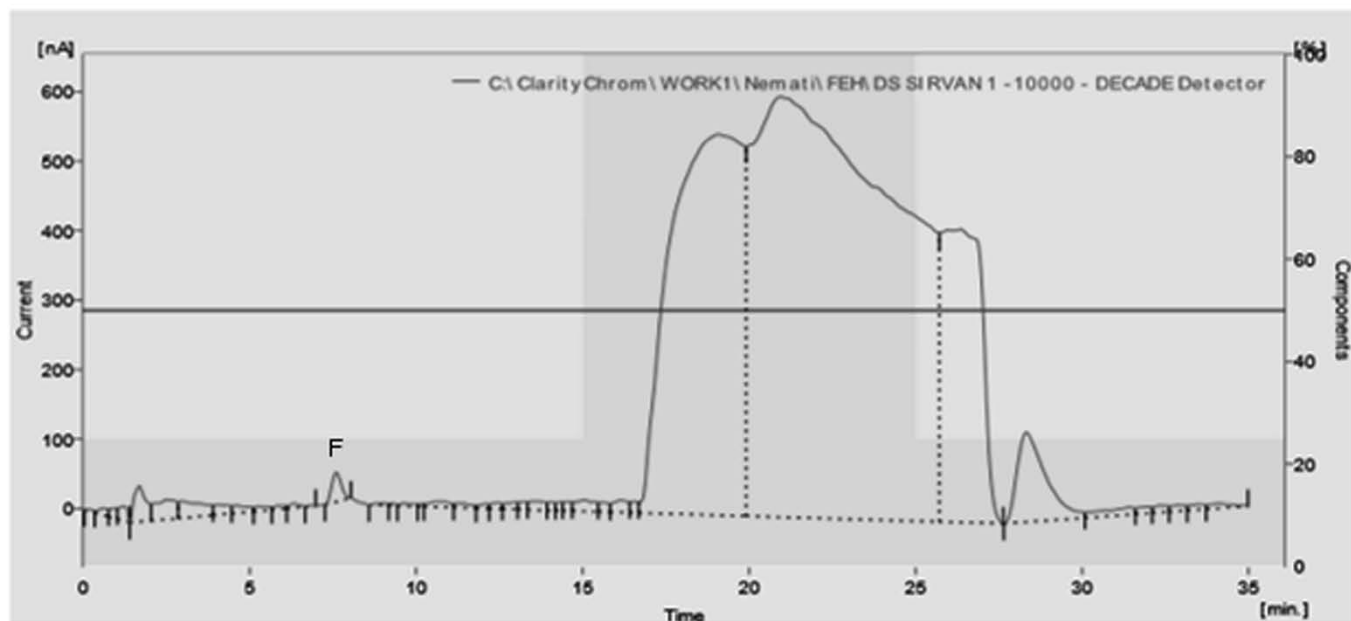
Printed Version	: 7/31/2016 11:22:02 PM	Printed Date	: 7/31/2016 11:26:20 PM
Report Style	: C:\ClarityChrom\Common\Chromatogram.sty	By	: Administrator
Calibration File	: None		

### Sample Info:

Sample ID	: DS SIRVAN 1 -10000	Amount	: 0
Sample	:	ISTD Amount	: 0
Inj. Volume [mL]	: 0	Dilution	: 1

Method	: Final Method Gradient RGF5M	By	: Administrator
Description	:		
Created	: 5/1/2016 11:30 AM	Modified	: 7/31/2016 11:26 PM
Column	:	Detection	:
Mobile Phase	:	Temperature	:
Flow Rate	:	Pressure	:
Note	:		
Autostop	: 35.00 min	External Start	: Start - Restart, Down
Detector 1	: DECADE Detector	Range 1	: Bipolar, 5000 nA, 1.333 Samp. per Sec.
Subtraction Chromatogram	: (None)	Matching	: No Change

Base	: Not Used	Calibration File	: None	Calculation	: Uncal
Scale Factor	: Not Used	Units After Scaling	: Not Used	Uncal. Response	: 0
Unretained Time	: 0.00 min	Column Length	: 50.00 mm	Column Calc.	: From Width at 50% of Height
Result Table Reports	: All Peaks	Hide ISTD Peak	: Enabled		





Result Table (Uncal - C:\ClarityChrom\WORK1\Nemati\FEH\DS SIRVAN 1 -10000 - DECADE Detector )

	Reten. Time [min]	Area [nA.s]	Height [nA]	Area [%]	Height [%]	W05 [min]	Compound Name
1	0.188	41.358	2.781	0.0	0.1	0.26	
2	0.588	195.571	9.896	0.1	0.5	0.41	
3	0.950	212.109	14.823	0.1	0.7	0.26	
4	1.238	379.697	21.471	0.1	1.0	0.33	
5	1.675	1271.879	51.452	0.4	2.4	0.53	
6	2.500	1258.576	28.402	0.4	1.3	0.81	
7	2.962	1221.757	24.361	0.4	1.1	1.05	
8	4.088	439.629	14.306	0.1	0.7	0.56	
9	4.638	338.407	10.545	0.1	0.5	0.65	
10	5.263	189.127	6.812	0.1	0.3	0.55	
11	6.000	121.452	4.472	0.0	0.2	0.45	
12	6.325	132.926	6.295	0.0	0.3	0.40	
13	6.838	15.657	1.389	0.0	0.1	0.19	
14	7.600	835.410	42.139	0.3	1.9	0.34	F
15	8.963	79.414	3.651	0.0	0.2	0.47	
16	9.287	40.712	3.187	0.0	0.1	0.24	
17	9.637	110.627	3.759	0.0	0.2	0.61	
18	10.175	40.354	3.913	0.0	0.2	0.19	
19	10.675	355.542	8.055	0.1	0.4	0.89	
20	11.238	210.037	6.104	0.1	0.3	0.63	
21	12.088	119.997	6.477	0.0	0.3	0.39	
22	12.450	189.735	9.161	0.1	0.4	0.40	
23	12.963	249.966	10.135	0.1	0.5	0.46	
24	13.275	193.667	11.183	0.1	0.5	0.30	
25	13.650	424.220	12.745	0.1	0.6	0.59	
26	14.063	172.488	11.874	0.1	0.5	0.25	
27	14.338	150.236	12.220	0.0	0.6	0.21	
28	14.588	220.690	13.190	0.1	0.6	0.29	
29	15.038	682.410	16.147	0.2	0.7	0.79	
30	15.588	277.106	13.669	0.1	0.6	0.35	
31	16.150	551.516	17.683	0.2	0.8	0.59	
32	16.538	262.847	16.432	0.1	0.8	0.28	
33	19.063	81296.887	548.231	25.6	25.2	2.61	
34	20.925	179975.956	604.790	56.7	27.8	5.80	
35	26.363	35336.418	421.981	11.1	19.4	1.40	
36	28.325	7726.228	129.103	2.4	5.9	0.93	
37	31.413	776.796	10.660	0.2	0.5	1.09	
38	31.962	274.269	9.038	0.1	0.4	0.51	
39	32.325	265.817	9.760	0.1	0.4	0.50	
40	32.875	255.954	8.623	0.1	0.4	0.55	
41	33.487	237.242	7.556	0.1	0.3	0.57	
42	34.075	309.558	6.889	0.1	0.3	1.21	
	Total	317440.243	2175.358	100.0	100.0		

**Fig. S1.** Raw HPAEC-PAD chromatograms. Qualitative profile of carbohydrate standards (a-b), sugars in hydrolyzed and nonhydrolyzed extracts of samples (c), product of sucrose: sucrose 1-fructosyltransferase (1-SST) (d), product of fructan: fructan 1-fructosyltransferase (1-FFT) (e), and product of fructan exohydrolase (FEH) (f) of 4 -day old seedlings of sensitive (Marvdasht) and tolerant (Sirvan) wheat cultivars after 7 days of drought stress (DS). Legends: rhamnose (R),

glucose (G), fructose (F), melibiose (M), sucrose (S), 1-kestotriose (1K), and 1,1- kestotetraose (N).