

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_E\Data\FE122322AL\
 Data File : FE039458.D
 Signal(s) : FID1B.ch
 Acq On : 23 Dec 2022 09:43
 Sample : N6151-05DL 2X
 Misc :
 ALS Vial : 7 Sample Multiplier: 1

Integration File: sample.E

Method : Z:\pestpcbsrv\HPCHEM1\FID_E\methods\Aliphatic EPH 121722.M
 Title : GC Extractables

Signal : FID1B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	3.281	3.255	3.301	BV	32	-162	-0.00%	-0.000%
2	3.326	3.301	3.365	PV	1601	18451	0.25%	0.029%
3	3.370	3.365	3.428	VV	92	1432	0.02%	0.002%
4	3.465	3.428	3.524	PV	213	7131	0.10%	0.011%
5	3.545	3.524	3.620	VV	212	5768	0.08%	0.009%
6	3.641	3.620	3.661	VV	223	3585	0.05%	0.006%
7	3.680	3.661	3.715	VV	1402	16659	0.22%	0.026%
8	3.723	3.715	3.753	VV	237	3334	0.04%	0.005%
9	3.773	3.753	3.784	VV	446	5757	0.08%	0.009%
10	3.802	3.784	3.846	VV	1083	18636	0.25%	0.029%
11	3.855	3.846	3.888	VV	226	3899	0.05%	0.006%
12	3.915	3.888	3.948	VV	949	14932	0.20%	0.024%
13	3.960	3.948	3.978	VV	260	2609	0.03%	0.004%
14	4.008	3.978	4.035	PV	561	8704	0.12%	0.014%
15	4.044	4.035	4.077	VV	183	2500	0.03%	0.004%
16	4.118	4.077	4.135	VV	564	8249	0.11%	0.013%
17	4.164	4.135	4.199	VV	769	14098	0.19%	0.022%
18	4.227	4.199	4.261	VV	314	5271	0.07%	0.008%
19	4.269	4.261	4.278	VV	114	965	0.01%	0.002%
20	4.301	4.278	4.331	VV	719	11171	0.15%	0.018%
21	4.347	4.331	4.421	VV	417	10397	0.14%	0.016%
22	4.432	4.421	4.451	VV	138	1675	0.02%	0.003%
23	4.468	4.451	4.486	VV	145	2000	0.03%	0.003%
24	4.508	4.486	4.547	VV	164	2955	0.04%	0.005%
25	4.576	4.547	4.598	VV	2283	23584	0.32%	0.037%
26	4.615	4.598	4.637	VV	395	4776	0.06%	0.008%
27	4.653	4.637	4.670	VV	222	2807	0.04%	0.004%
28	4.689	4.670	4.721	VV	269	3951	0.05%	0.006%
29	4.750	4.721	4.770	VV	284	4587	0.06%	0.007%
30	4.792	4.770	4.818	VV	257	5341	0.07%	0.008%
31	4.829	4.818	4.843	VV	157	2034	0.03%	0.003%
32	4.860	4.843	4.875	VV	520	5328	0.07%	0.008%
33	4.887	4.875	4.904	VV	205	2338	0.03%	0.004%
34	4.916	4.904	4.930	VV	133	1913	0.03%	0.003%
35	4.943	4.930	4.951	VV	208	2227	0.03%	0.004%
36	4.962	4.951	4.978	VV	297	4205	0.06%	0.007%

					rteres			
37	4.992	4.978	5.023	VV	527	8815	0.12%	0.014%
38	5.037	5.023	5.061	VV	342	5665	0.08%	0.009%
39	5.084	5.061	5.121	VV	351	6507	0.09%	0.010%
40	5.157	5.121	5.181	VV	239	3887	0.05%	0.006%
41	5.186	5.181	5.208	VV	132	1345	0.02%	0.002%
42	5.251	5.208	5.263	PV	285	4185	0.06%	0.007%
43	5.281	5.263	5.309	VV	412	6524	0.09%	0.010%
44	5.325	5.309	5.345	VV	365	4375	0.06%	0.007%
45	5.360	5.345	5.375	VV	399	4233	0.06%	0.007%
46	5.394	5.375	5.408	VV	311	5205	0.07%	0.008%
47	5.420	5.408	5.468	VV	485	7876	0.11%	0.012%
48	5.486	5.468	5.498	VV	158	2073	0.03%	0.003%
49	5.518	5.498	5.542	VV	553	7590	0.10%	0.012%
50	5.585	5.542	5.613	VV	311	7024	0.09%	0.011%
51	5.624	5.613	5.645	VV	111	1352	0.02%	0.002%
52	5.654	5.645	5.691	VV	83	1597	0.02%	0.003%
53	5.710	5.691	5.755	VV	2707	32764	0.44%	0.052%
54	5.771	5.755	5.813	VV	368	5794	0.08%	0.009%
55	5.830	5.813	5.866	VV	149	3099	0.04%	0.005%
56	5.903	5.866	5.936	VV	347	7605	0.10%	0.012%
57	5.959	5.936	5.981	VV	167	3549	0.05%	0.006%
58	6.019	5.981	6.045	VV	431	10314	0.14%	0.016%
59	6.059	6.045	6.091	VV	279	5804	0.08%	0.009%
60	6.099	6.091	6.112	VV	245	2028	0.03%	0.003%
61	6.131	6.112	6.166	VV	227	4175	0.06%	0.007%
62	6.188	6.166	6.210	VV	582	6875	0.09%	0.011%
63	6.241	6.210	6.257	PV	269	4278	0.06%	0.007%
64	6.283	6.257	6.366	VV	5644	81620	1.09%	0.129%
65	6.385	6.366	6.411	VV	445	7021	0.09%	0.011%
66	6.450	6.411	6.494	VV	528	12330	0.17%	0.019%
67	6.510	6.494	6.522	VV	196	2224	0.03%	0.004%
68	6.532	6.522	6.555	VV	225	2787	0.04%	0.004%
69	6.579	6.555	6.596	VV	243	4155	0.06%	0.007%
70	6.625	6.596	6.638	VV	257	4569	0.06%	0.007%
71	6.651	6.638	6.713	VV	244	6137	0.08%	0.010%
72	6.739	6.713	6.807	VV	2338	26150	0.35%	0.041%
73	6.822	6.807	6.833	VV	138	1601	0.02%	0.003%
74	6.860	6.833	6.873	VV	224	3039	0.04%	0.005%
75	6.892	6.873	6.928	VV	646	8112	0.11%	0.013%
76	6.938	6.928	6.952	VV	187	1651	0.02%	0.003%
77	6.968	6.952	6.986	VV	167	1621	0.02%	0.003%
78	6.995	6.986	7.015	VV	76	621	0.01%	0.001%
79	7.022	7.015	7.048	VV	180	1849	0.02%	0.003%
80	7.093	7.048	7.167	PV	587	17739	0.24%	0.028%
81	7.177	7.167	7.200	VV	177	2179	0.03%	0.003%
82	7.222	7.200	7.295	VV	589	17523	0.23%	0.028%
83	7.314	7.295	7.341	VV	346	6815	0.09%	0.011%
84	7.376	7.341	7.402	VV	2587	37710	0.51%	0.060%
85	7.412	7.402	7.435	VV	703	9643	0.13%	0.015%
86	7.458	7.435	7.488	VV	813	13796	0.19%	0.022%
87	7.513	7.488	7.542	VV	2185	27404	0.37%	0.043%
88	7.558	7.542	7.573	VV	429	5770	0.08%	0.009%
89	7.583	7.573	7.613	VV	423	6785	0.09%	0.011%

					rteres			
90	7.636	7.613	7.653	VV	251	5023	0.07%	0.008%
91	7.684	7.653	7.721	VV	2260	29451	0.39%	0.046%
92	7.728	7.721	7.785	VV	219	5802	0.08%	0.009%
93	7.809	7.785	7.832	PV	188	3278	0.04%	0.005%
94	7.861	7.832	7.890	VV	328	6184	0.08%	0.010%
95	7.912	7.890	7.928	VV	195	2979	0.04%	0.005%
96	7.937	7.928	7.961	PV	118	1649	0.02%	0.003%
97	8.114	8.088	8.200	VV	2114	74731	1.00%	0.118%
98	8.213	8.200	8.232	VV	645	10002	0.13%	0.016%
99	8.274	8.232	8.302	VV	952	27748	0.37%	0.044%
100	8.316	8.302	8.351	VV	598	11608	0.16%	0.018%
101	8.385	8.351	8.428	VV	1411	29848	0.40%	0.047%
102	8.489	8.428	8.508	VV	1989	36275	0.49%	0.057%
103	8.520	8.508	8.539	VV	1243	16256	0.22%	0.026%
104	8.565	8.539	8.624	VV	2580	42998	0.58%	0.068%
105	8.676	8.624	8.716	VV	4126	69416	0.93%	0.110%
106	8.724	8.716	8.744	VV	422	4971	0.07%	0.008%
107	8.765	8.744	8.801	VV	444	6292	0.08%	0.010%
108	8.813	8.801	8.848	VV	246	3256	0.04%	0.005%
109	8.948	8.934	8.962	VV	5136	72523	0.97%	0.114%
110	8.971	8.962	9.008	VV	4195	68082	0.91%	0.107%
111	9.022	9.008	9.075	VV	1376	41577	0.56%	0.066%
112	9.106	9.075	9.131	VV	1673	33852	0.45%	0.053%
113	9.179	9.131	9.203	VV	15199	171289	2.30%	0.270%
114	9.216	9.203	9.234	VV	986	13398	0.18%	0.021%
115	9.253	9.234	9.274	VV	1081	16547	0.22%	0.026%
116	9.304	9.274	9.328	VV	942	21610	0.29%	0.034%
117	9.338	9.328	9.365	VV	615	9467	0.13%	0.015%
118	9.391	9.365	9.413	VV	2905	39433	0.53%	0.062%
119	9.426	9.413	9.451	VV	999	13886	0.19%	0.022%
120	9.460	9.451	9.475	VV	294	3534	0.05%	0.006%
121	9.479	9.475	9.515	VV	268	3136	0.04%	0.005%
122	9.542	9.515	9.561	PV	896	10000	0.13%	0.016%
123	9.577	9.561	9.607	VV	632	8132	0.11%	0.013%
124	9.629	9.607	9.647	VV	442	5078	0.07%	0.008%
125	9.681	9.647	9.705	VV	673	10438	0.14%	0.016%
126	9.721	9.705	9.742	VV	991	13291	0.18%	0.021%
127	9.766	9.742	9.820	VV	2144	43024	0.58%	0.068%
128	9.842	9.820	9.875	VV	1020	20389	0.27%	0.032%
129	9.895	9.875	9.935	VV	1264	35076	0.47%	0.055%
130	9.972	9.935	10.015	VV	767	20641	0.28%	0.033%
131	10.045	10.015	10.070	VV	4089	56978	0.76%	0.090%
132	10.089	10.070	10.150	VV	1663	45312	0.61%	0.071%
133	10.173	10.150	10.226	VV	2501	48492	0.65%	0.077%
134	10.243	10.226	10.265	VV	511	9126	0.12%	0.014%
135	10.283	10.265	10.307	VV	613	9388	0.13%	0.015%
136	10.345	10.307	10.411	VV	1372	23604	0.32%	0.037%
137	10.418	10.411	10.431	PV	25	414	0.01%	0.001%
138	10.447	10.431	10.484	PV	292	4829	0.06%	0.008%
139	10.511	10.484	10.541	VV	728	13358	0.18%	0.021%
140	10.561	10.541	10.585	VV	1165	17374	0.23%	0.027%
141	10.620	10.585	10.631	VV	1029	20884	0.28%	0.033%

					rteres			
142	10.648	10.631	10.671	VV	1267	19098	0.26%	0.030%
143	10.691	10.671	10.721	VV	959	19736	0.26%	0.031%
144	10.732	10.721	10.745	VV	497	6446	0.09%	0.010%
145	10.762	10.745	10.790	VV	1147	20853	0.28%	0.033%
146	10.817	10.790	10.851	VV	2756	60652	0.81%	0.096%
147	10.866	10.851	10.883	VV	1353	20122	0.27%	0.032%
148	10.911	10.883	10.950	VV	2852	60230	0.81%	0.095%
149	10.980	10.950	11.052	VV	2459	58821	0.79%	0.093%
150	11.066	11.052	11.084	VV	490	5786	0.08%	0.009%
151	11.135	11.084	11.145	VV	2088	27146	0.36%	0.043%
152	11.168	11.145	11.221	VV	33254	456853	6.13%	0.721%
153	11.245	11.221	11.335	VV	7478	135262	1.81%	0.213%
154	11.363	11.335	11.398	VV	756	14622	0.20%	0.023%
155	11.423	11.398	11.435	PV	436	4645	0.06%	0.007%
156	11.468	11.435	11.505	VV	1574	30589	0.41%	0.048%
157	11.547	11.505	11.585	VV	1109	30688	0.41%	0.048%
158	11.615	11.585	11.649	VV	2910	49269	0.66%	0.078%
159	11.660	11.649	11.670	VV	669	7596	0.10%	0.012%
160	11.702	11.670	11.736	VV	3218	57625	0.77%	0.091%
161	11.768	11.736	11.784	VV	1144	16269	0.22%	0.026%
162	11.807	11.784	11.838	VV	5810	74112	0.99%	0.117%
163	11.861	11.838	11.895	VV	2560	41701	0.56%	0.066%
164	11.933	11.895	11.959	VV	195818	2120358	28.43%	3.346%
165	11.971	11.959	11.986	VV	6483	74179	0.99%	0.117%
166	12.003	11.986	12.041	VV	7542	107297	1.44%	0.169%
167	12.085	12.041	12.103	VV	5668	102374	1.37%	0.162%
168	12.119	12.103	12.134	VV	5865	70507	0.95%	0.111%
169	12.151	12.134	12.195	VV	6327	90557	1.21%	0.143%
170	12.225	12.195	12.247	PV	789	14037	0.19%	0.022%
171	12.285	12.247	12.313	VV	2920	57100	0.77%	0.090%
172	12.337	12.313	12.357	VV	2620	45830	0.61%	0.072%
173	12.376	12.357	12.421	VV	2094	44140	0.59%	0.070%
174	12.443	12.421	12.488	VV	4384	70587	0.95%	0.111%
175	12.534	12.488	12.575	VV	74418	906549	12.16%	1.430%
176	12.587	12.575	12.609	VV	2540	39199	0.53%	0.062%
177	12.623	12.609	12.638	VV	1187	19303	0.26%	0.030%
178	12.646	12.638	12.660	VV	1148	15291	0.21%	0.024%
179	12.694	12.660	12.731	VV	2353	63438	0.85%	0.100%
180	12.762	12.731	12.801	VV	2232	55288	0.74%	0.087%
181	12.826	12.801	12.850	VV	3253	57753	0.77%	0.091%
182	12.871	12.850	12.891	VV	6621	93819	1.26%	0.148%
183	12.927	12.891	12.960	VV	4539	117398	1.57%	0.185%
184	12.987	12.960	13.071	VV	59305	719460	9.65%	1.135%
185	13.088	13.071	13.101	VV	706	9033	0.12%	0.014%
186	13.124	13.101	13.136	VV	1821	25931	0.35%	0.041%
187	13.174	13.136	13.189	VV	2781	62343	0.84%	0.098%
188	13.202	13.189	13.257	VV	1920	48625	0.65%	0.077%
189	13.285	13.257	13.315	VV	65775	764132	10.25%	1.206%
190	13.370	13.315	13.405	VV	144101	1757360	23.57%	2.773%
191	13.431	13.405	13.449	VV	4607	70887	0.95%	0.112%
192	13.462	13.449	13.513	VV	3019	61778	0.83%	0.097%
193	13.551	13.513	13.586	PV	5572	125864	1.69%	0.199%
194	13.617	13.586	13.644	VV	2287	61162	0.82%	0.097%

					rteres			
195	13.662	13.644	13.672	VV	1841	22029	0.30%	0.035%
196	13.684	13.672	13.697	VV	1736	20893	0.28%	0.033%
197	13.710	13.697	13.723	VV	1521	19472	0.26%	0.031%
198	13.757	13.723	13.819	VV	5539	138400	1.86%	0.218%
199	13.876	13.819	13.931	VV	8408	177970	2.39%	0.281%
200	13.942	13.931	13.962	VV	1127	14583	0.20%	0.023%
201	13.986	13.962	14.003	VV	3679	47736	0.64%	0.075%
202	14.024	14.003	14.049	VV	6756	93875	1.26%	0.148%
203	14.065	14.049	14.093	VV	2010	37501	0.50%	0.059%
204	14.125	14.093	14.134	VV	4060	59196	0.79%	0.093%
205	14.153	14.134	14.175	VV	7917	112753	1.51%	0.178%
206	14.194	14.175	14.237	VV	6113	91165	1.22%	0.144%
207	14.268	14.237	14.298	VV	1305	30229	0.41%	0.048%
208	14.319	14.298	14.335	VV	784	10449	0.14%	0.016%
209	14.355	14.335	14.381	VV	916	18555	0.25%	0.029%
210	14.404	14.381	14.445	VV	468	10790	0.14%	0.017%
211	14.463	14.445	14.502	PV	706	14985	0.20%	0.024%
212	14.512	14.502	14.525	VV	421	4765	0.06%	0.008%
213	14.574	14.525	14.595	VV	2391	64404	0.86%	0.102%
214	14.616	14.595	14.657	VV	5142	100238	1.34%	0.158%
215	14.687	14.657	14.706	VV	4213	70558	0.95%	0.111%
216	14.716	14.706	14.760	VV	2180	47101	0.63%	0.074%
217	14.788	14.760	14.830	VV	10554	185308	2.48%	0.292%
218	14.854	14.830	14.885	VV	11740	173385	2.33%	0.274%
219	14.921	14.885	14.956	VV	4310	100348	1.35%	0.158%
220	14.977	14.956	14.997	VV	1656	30972	0.42%	0.049%
221	15.014	14.997	15.028	VV	1370	23579	0.32%	0.037%
222	15.044	15.028	15.095	VV	1821	43084	0.58%	0.068%
223	15.121	15.095	15.141	VV	2498	43679	0.59%	0.069%
224	15.166	15.141	15.186	VV	28166	369827	4.96%	0.584%
225	15.207	15.186	15.249	VV	43584	645975	8.66%	1.019%
226	15.269	15.249	15.295	VV	2664	58720	0.79%	0.093%
227	15.328	15.295	15.385	VV	10275	201787	2.71%	0.318%
228	15.398	15.385	15.441	VV	2324	58334	0.78%	0.092%
229	15.479	15.441	15.499	VV	3126	69446	0.93%	0.110%
230	15.507	15.499	15.568	VV	2528	74698	1.00%	0.118%
231	15.645	15.568	15.695	VV	8867	324996	4.36%	0.513%
232	15.703	15.695	15.720	VV	2536	33008	0.44%	0.052%
233	15.747	15.720	15.773	VV	7983	140894	1.89%	0.222%
234	15.796	15.773	15.812	VV	4493	78372	1.05%	0.124%
235	15.840	15.812	15.863	VV	10023	174402	2.34%	0.275%
236	15.880	15.863	15.911	VV	5092	95362	1.28%	0.150%
237	15.926	15.911	15.935	VV	2635	32709	0.44%	0.052%
238	16.001	15.935	16.038	VV	6377	253773	3.40%	0.400%
239	16.079	16.038	16.101	VV	3723	107835	1.45%	0.170%
240	16.122	16.101	16.145	VV	2943	63643	0.85%	0.100%
241	16.165	16.145	16.191	VV	3804	77960	1.05%	0.123%
242	16.210	16.191	16.223	VV	3329	55752	0.75%	0.088%
243	16.248	16.223	16.289	VV	6848	164351	2.20%	0.259%
244	16.310	16.289	16.359	VV	5590	138648	1.86%	0.219%
245	16.442	16.359	16.496	VV	4161	240574	3.23%	0.380%
246	16.519	16.496	16.528	VV	4393	68623	0.92%	0.108%

					rteres			
247	16.542	16.528	16.568	VV	4460	94118	1.26%	0.149%
248	16.601	16.568	16.621	VV	4081	117546	1.58%	0.185%
249	16.660	16.621	16.691	VV	8449	279248	3.74%	0.441%
250	16.728	16.691	16.788	VV	54748	1138864	15.27%	1.797%
251	16.798	16.788	16.832	VV	5254	123846	1.66%	0.195%
252	16.857	16.832	16.881	VV	10859	203936	2.73%	0.322%
253	16.891	16.881	16.934	VV	4965	142681	1.91%	0.225%
254	16.949	16.934	16.965	VV	4776	81488	1.09%	0.129%
255	16.982	16.965	16.990	VV	4777	67202	0.90%	0.106%
256	17.048	16.990	17.081	VV	38093	708321	9.50%	1.118%
257	17.105	17.081	17.148	VV	34557	611928	8.21%	0.966%
258	17.166	17.148	17.180	VV	8688	160179	2.15%	0.253%
259	17.205	17.180	17.233	VV	16403	355355	4.77%	0.561%
260	17.274	17.233	17.301	VV	19574	449686	6.03%	0.710%
261	17.346	17.301	17.398	VV	8049	399944	5.36%	0.631%
262	17.437	17.398	17.448	VV	7986	226614	3.04%	0.358%
263	17.480	17.448	17.521	VV	11716	389683	5.23%	0.615%
264	17.538	17.521	17.556	VV	7928	153737	2.06%	0.243%
265	17.601	17.556	17.624	VV	21953	682712	9.16%	1.077%
266	17.650	17.624	17.678	VV	43441	787128	10.56%	1.242%
267	17.703	17.678	17.746	VV	9856	371805	4.99%	0.587%
268	17.772	17.746	17.795	VV	11429	288840	3.87%	0.456%
269	17.811	17.795	17.843	VV	10785	264590	3.55%	0.417%
270	17.862	17.843	17.901	VV	9819	293354	3.93%	0.463%
271	17.940	17.901	17.962	VV	8040	275282	3.69%	0.434%
272	17.989	17.962	18.001	VV	9385	197131	2.64%	0.311%
273	18.021	18.001	18.030	VV	9666	159118	2.13%	0.251%
274	18.086	18.030	18.101	VV	15455	490215	6.57%	0.773%
275	18.124	18.101	18.148	VV	31889	585438	7.85%	0.924%
276	18.179	18.148	18.220	VV	37671	943295	12.65%	1.488%
277	18.264	18.220	18.277	VV	19334	518417	6.95%	0.818%
278	18.304	18.277	18.364	VV	39813	1392960	18.68%	2.198%
279	18.407	18.364	18.454	VV	40357	1538467	20.63%	2.428%
280	18.480	18.454	18.495	VV	37451	701586	9.41%	1.107%
281	18.510	18.495	18.548	VV	35678	799844	10.73%	1.262%
282	18.588	18.548	18.680	VV	28019	1510530	20.26%	2.383%
283	18.731	18.680	18.798	VV	48836	1439727	19.31%	2.272%
284	18.820	18.798	18.841	VV	11966	296495	3.98%	0.468%
285	18.867	18.841	18.889	VV	14539	372684	5.00%	0.588%
286	18.919	18.889	18.985	VV	17150	708042	9.49%	1.117%
287	19.021	18.985	19.048	VV	28592	641710	8.61%	1.013%
288	19.085	19.048	19.144	VV	15818	774081	10.38%	1.221%
289	19.165	19.144	19.198	VV	12944	388670	5.21%	0.613%
290	19.290	19.198	19.360	VV	57142	2479710	33.25%	3.913%
291	19.402	19.360	19.437	VV	185706	4045559	54.25%	6.383%
292	19.446	19.437	19.531	VV	70324	1886970	25.30%	2.977%
293	19.569	19.531	19.681	VV	307145	7457154	100.00%	11.766%
294	19.698	19.681	19.737	VV	18001	545736	7.32%	0.861%
295	19.767	19.737	19.788	VV	20008	511703	6.86%	0.807%
296	19.814	19.788	19.854	VV	23222	716810	9.61%	1.131%
297	19.884	19.854	19.941	VV	18213	861514	11.55%	1.359%
298	19.967	19.941	20.031	VV	18337	850469	11.40%	1.342%
299	20.053	20.031	20.090	VV	17188	576526	7.73%	0.910%

					rteres			
300	20.180	20.145	20.215	VV	15367	634660	8.51%	1.001%
301	20.309	20.215	20.368	VV	20497	1634420	21.92%	2.579%
302	20.442	20.368	20.503	VV	22701	1579238	21.18%	2.492%
303	20.559	20.503	20.587	VV	21902	1021637	13.70%	1.612%
					Sum of corrected areas:	63376420		

Aliphatic EPH 121722.M Fri Dec 23 12:46:41 2022