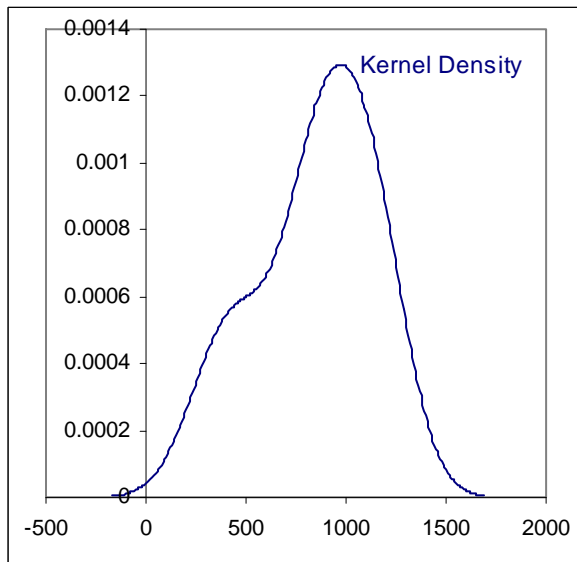
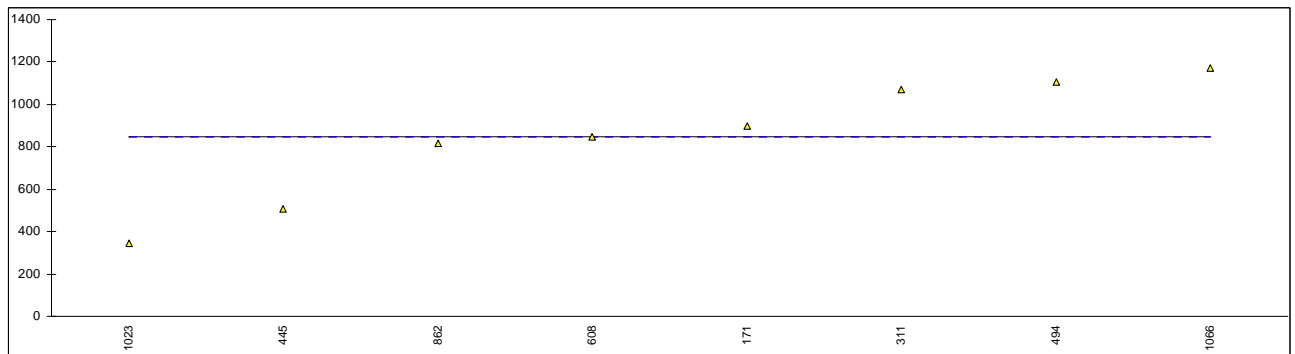


Determination of calculated theoretical nitrogen content on sample #0984; results in mg/kg

lab	method	value	mark	z(targ)	remarks	Meas. nitrogen	difference
171	calc.	896		----		873	+23
311	calc.	1068		----		910	+158
391		----		----	no data available	----	----
442		----		----	no data available	----	----
445	calc.	507		----		865	-358
494	calc.	1104		----		1048	+56
608	calc.	845		----		894	-49
862	calc.	817		----		823.4	-6.4
1023	calc.	347		----		325	+22
1065	calc.	----		----	no data available	----	----
1066	calc.	1173		----		1220	-47
1089		----		----	no data available	----	----
1109		----		----	not enough data available	929	----
1432		----		----	no data available	----	----
1720		----		----	not enough data available	----	----
1842		----		----	no data available	----	----
normality		OK					
n		8					
outliers		0					
mean (n)		844.6	(=93.2%)	Average:		906.1	-61.5
st.dev. (n)		290.33					
R(calc.)		812.9					
R(D5762)		224.7					

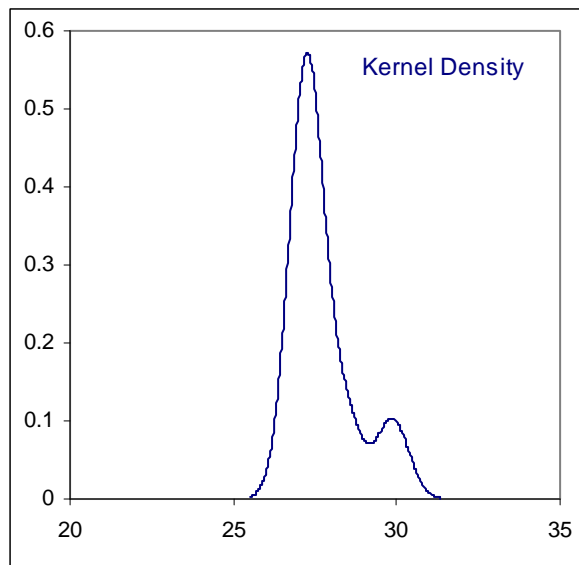


Determination of PNA on distillation fraction 3 (heavy naphtha); results in %V/V

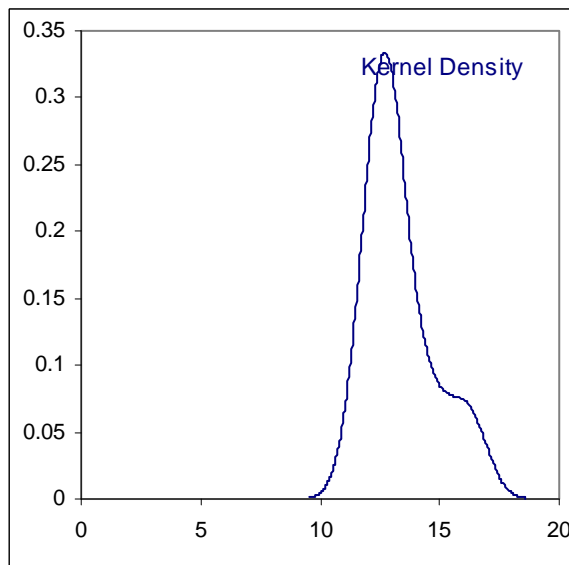
lab	method	total par*	C1-C4	n-par	i-par	naphth.	arom.	remarks
171	D5443	61.329	0.237 ex	<u>28.445</u>	32.884	<u>22.471</u>	<u>16.200</u>	
311	D5443	56.18	0.25 ex	27.33	28.85	31.27	12.56	
391		----	----	----	----	----	----	
442		----	----	----	----	----	----	
445	D5443	57.49	0.17 ex	26.99	30.50	28.85	11.93	
494	D6839	57.11	<0.01 nb	27.49	29.62	29.97	12.92	nb: used 0.005 in stat. calc.
608	D6730mod	58.1659	0.0000	<u>29.8800</u>	28.2859	28.2582	12.4052	
862	D6730	60.033	0.025	27.177	32.856	<u>24.778</u>	13.198	fr. 84.811
1023		----	----	----	----	----	----	
1065	in house	55.986	0.033	27.462	28.524	29.415	<u>14.600</u>	
1066	D5443	56.94	<0.01 nb	27.07	29.87	30.09	12.96	nb: used 0.005 in stat. calc.
1089		----	----	----	----	----	----	
1109		----	----	----	----	----	----	
1432		----	----	----	----	----	----	
1720		----	----	----	----	----	----	
1842		----	----	----	----	----	----	
normality	OK	OK	OK	OK	OK	OK	OK	
n	8	5	6	8	6	6	6	
outliers	0	0	2	0	2	2	2	
mean (n)	57.904	0.014	27.253	30.174	29.642	12.662		
st.dev. (n)	1.8790	0.0145	0.2070	1.8159	1.0538	0.4593		
R(calc.)	5.261	0.041	0.580	5.085	2.951	1.286		

NB. Bold, italic and underlined figures are statistical outliers (Grubbs and/or Dixon)

* C1-C4 was NOT included in the total paraffines content



n-paraffines



aromatics

Determination of Effective Cut Point (ECP) from the simdist data

Lab	Overlap cuts 4 and 5 in °C	ECP in °C	Difference with AET=215 °C	Conclusion*	remarks
171	196 - 224	211.3	-3.67	OK	
311	199 - 227	214.1	-0.85	OK	
391	205 - 224	215.1	+0.05	OK	
442	----	----	----	----	
445	191 – 232	216.8	+1.70	OK	
494	----	----	----	----	
608	184 – 237	216.0	+1.01	OK	
862	190 – 240	217.5	+2.55	OK	
1023	----	----	----	----	
1065	194 - 224	210.6	-4.41	OK	
1066	196 - 232	211.3	-3.39	OK	
1089	----	----	----	----	
1109	----	----	----	----	
1432	----	----	----	----	
1720	----	----	----	----	
1842	----	----	----	----	

* Acc. To ASTM D2892:05, Appendix X2.6.5.1 the difference between ECP and AET should not exceed $0.7R \text{ } ^\circ\text{C}$ ($0.7 \times 8 = 5.6^\circ\text{C}$)

Determination of Standard Efficiency N_{minimum} from the simdist data

Lab	N_{actual}	N_{minimum}	Requirement $5.4 < N_{\text{minimum}} < 6.8^*$	remarks
171	7.3	6.2	OK	
311	7.2	6.2	OK	
391	9.4	8.0	not OK	
442	----	----	----	
445	5.5	4.7	not OK	
494	----	----	----	
608	5.2	4.4	not OK	
862	6.2	5.3	not OK	simdist data reported per 5% rec. and per 10°C
1023	----	----	----	
1065	7.5	6.4	OK	
1066	6.4	5.5	OK	
1089	----	----	----	
1109	----	----	----	
1432	----	----	----	
1720	----	----	----	
1842	----	----	----	

* Acc. To ASTM D2892:05, Appendix X2.5.9.2 the acceptable upper and lower limits (14-18 theoretical plates) are 5.4, resp. 6.8