WASSON - ECE INSTRUMENTATION

Paraffin, Naphthene, and Aromatic (PNA) Analyzer

The new Wasson-ECE Paraffin, Naphthene, and Aromatic analyzer is a valuable tool for any refinery or petrochemical lab.

In order to determine favorable operating conditions, reformers require an N + 2A calculation. The industry solution was most often PIONA or DHA. PIONA instruments tend to be complex and expensive, while DHA does not provide a good N + 2A calculation. The Wasson-ECE PNA analyzer is the superior alternative.

Compliant with ASTM D5443

Using an Agilent Technologies 7890A with custom Wasson-ECE hardware, this instrument determines paraffin, naphthene, and aromatic percentages by carbon number for feedstocks up to a boiling point of 270°C. Paraffins and naphthenes boiling below 200°C are reported by carbon number with the remaining reported as a single group. Any olefins present in the sample are hydrogenated and reported with their corresponding paraffin by carbon number. Benzene and Toluene are individually characterized while all higher boiling aromatics are reported as aromatic groups by carbon number.

Optimal reformer modeling

Unlike other D5443 instruments, the molecular sieve column is located in the 7890A programmable oven. This allows the temperature ramp to be specifically tailored to your sample. In addition, it does not suffer from coelutions that result in inaccurate N + 2A calculations as in DHA and PIONA instruments. An accurate calculation provides reformers with the very best data possible to determine ideal operating conditions.

Weight % and Volume %

Carbon No.	Naphthenes	Paraffins	Aromatics	Total
4	---	0.19	---	0.19
5	0.21	4.47	---	4.68
6	2.50	7.17	0.28	9.96
7	5.61	8.25	0.79	14.65
8	8.38	9.11	4.37	21.87
9	7.12	13.00	6.05	26.17
10	4.41	11.48	0.56	16.45
11	2.55	0.89	0.49	3.93
Totals	30.79	54.58	12.54	97.91

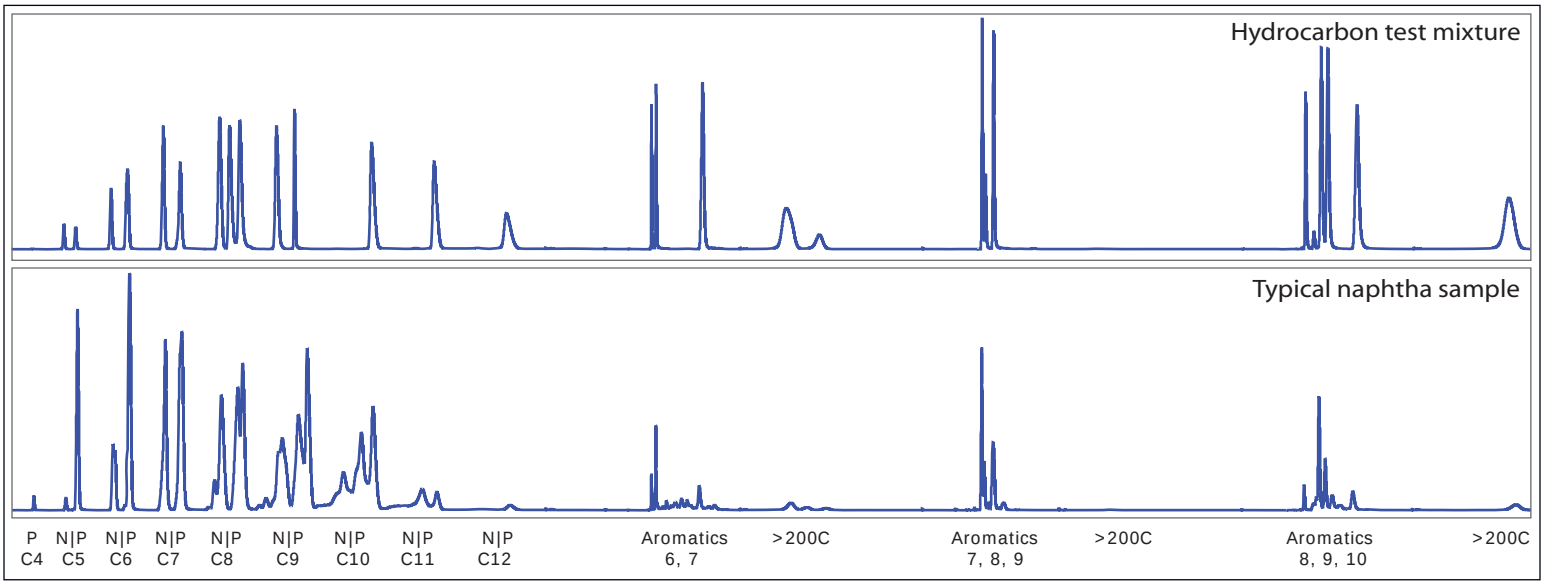
C11+ Paraffins: 1.08 %

Poly-Naphthenes: 1.02 %

N+2A: 56.88 %

Benefits

- Costs less than the typical PIONA analyzer.
- Less complicated - cheaper and easier to maintain and operate.
- Temperature programming and valve event times are completely customizable.



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