



3.11 Analysis of Paint Resin - GCMS

■ Explanation

Polymers and solvents coexist in the resin used in paint. Solvents remain in the paint after application. For this reason, in paint resin analysis, components generated at the thermal decomposition temperature change vastly. Introduced here are examples at thermal decomposition temperatures of 450 °C and 700 °C.

■ Analytical Conditions

Instrument : GCMS-QP1100EX PYR-4A
Column : SE30 2.6mm × 3m 10%
Col.Temp. : 60 °C-250 °C (5 °C/min)
Inj.Temp. : 300 °C
I/F Temp. : 250 °C
Carrier Gas : 30mL/min

References

Application News No. M78

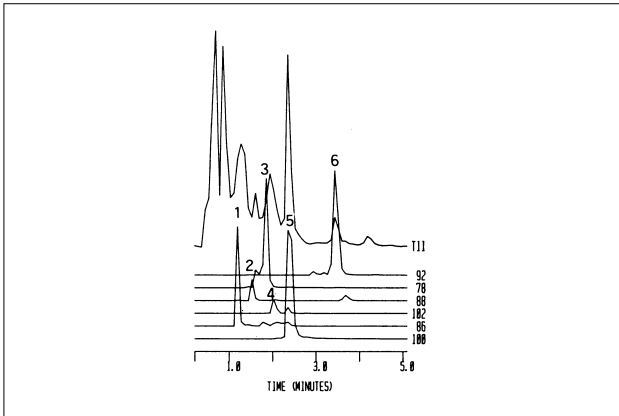


Fig. 3.11.1 Paint resin MC (450 °C)

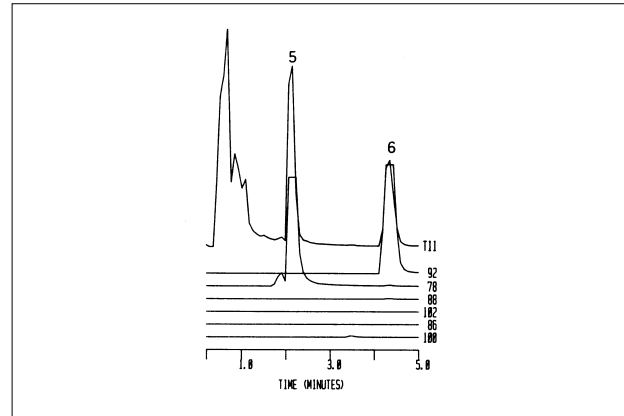


Fig. 3.11.2 Paint resin MC (700 °C)

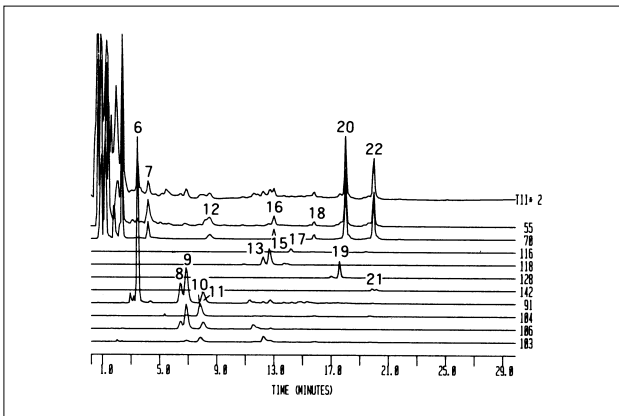


Fig. 3.11.3 Paint resin MC (450 °C)

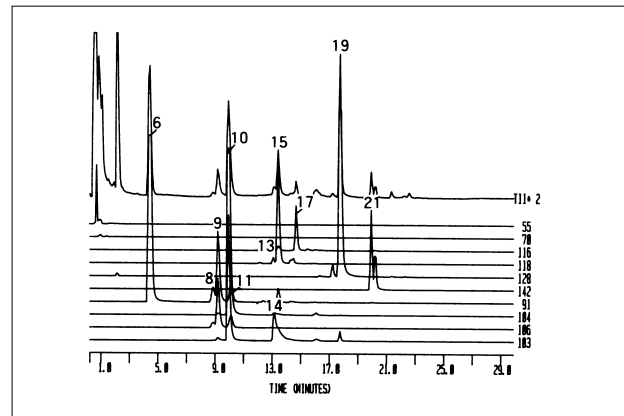


Fig. 3.11.4 Paint resin MC (700 °C)

1. Methyl acrylate
2. Methyl propanate
3. Benzene
4. Methyl isobutylate
5. Methyl meta acrylate
6. Toluene
7. 1-Octene
8. Ethyl benzene
9. m-, p-Xylene
10. Styrene
11. o-Xylene
12. 1-Nonene
13. α -Methylstyrene
14. Cyanobenzene
15. β -Methylstyrene
16. 1-Decene
17. Indene
18. 1-Undecene
19. Naphthalene
20. 1-Dodecene
21. Methyl naphthalene
22. 1-Tridecene