

KES

**Analysis of Qualitative
and Quantitative method
for Acryl Resin**

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Contents

1. Scope of Application

2. Apparatus

3. Method A

4. Method B

5. Method C

6. Method D

7. Method E

8. Method F

Additional Rule



1. Scope of Application

This standard shall specify a test method for an analysis of a grade and an analysis of ingredient of an acryl rubber and resin by a chromatography.

2. Apparatus

Use a gas chromatography.

3. Method A

3.1 Summary : This method is a method of an analysis of Hycar 1042 grade and

$\text{CH}_2 = \text{CH CN}$.

3.2 Condition

(1) Column : 15% Ucon oil LB 550 X / Chromosorb W / 3mm ϕ $\times$ 4m, temperature 140°C

(2) Carrier gas : N_2 35 ml / min

(3) Detector : FID Att 16 ~ 128 $\times$ 10

(4) Pyrolysis temperature : 590°C 3 seconds

3.3 Method

(1) Obtain proper amount of specimen, put it in a pyrolysis rod, and pyrolysize at 590°C for 3 seconds.

(2) After the pyrolysis, immediately open a valve that inducts to the column, and start to run the device.

(3) If the device creates a chromatogram, compare with Figure 1, check whether it is same as the chromatogram for the hycar 1042, and report.

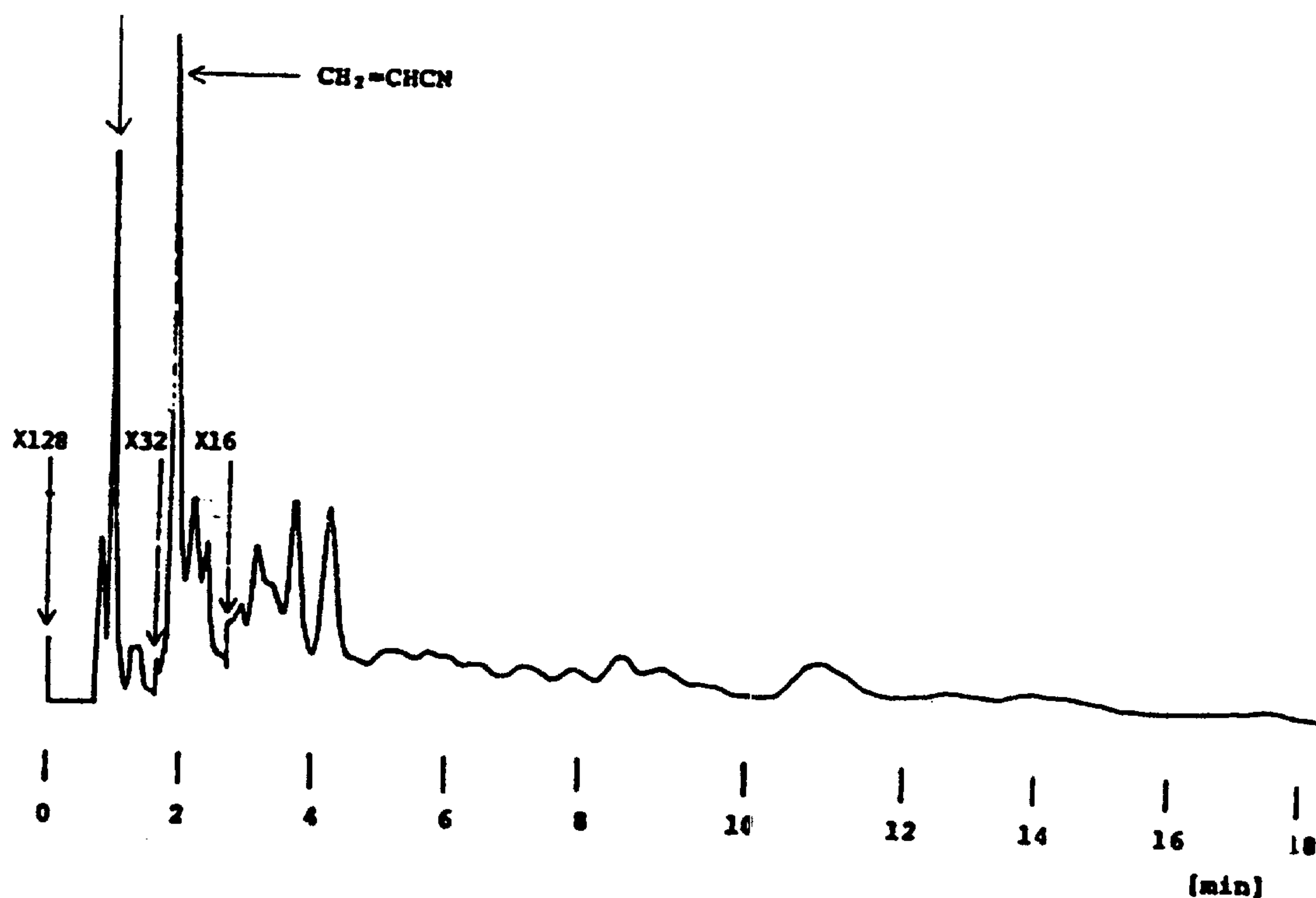


Figure 1. Chromatogram of Hycar 1042

4. Method B

4.1 Summary : This method is an analysis method for acrylonitrile in a nitrile rubber.

4.2 Analysis condition

(1) Column : 10% PEG20M / 3mm ϕ $\times$ 4m

Temperature 50°C ~ 220°C increasing 15°C/min

(2) Carrier gas : Helium(He) 50 mL / min

(3) Detector : FID Att 32 $\times 10^2$

(4) Pyrolysis temperature : 590°C 3 seconds

4.3 Creation of measuring line

(1) Obtain 4 ~ 5 specimens for analysis each, measure its weight accurately.

(2) Obtain the acrylonitrile, add to each specimen in steps, and take it as the specimen for

the measuring line.

- (3) Analyze each specimen for the measuring line for the acrylonitrile according to the analysis condition in item 4.2.
- (4) Indicate the added amount of the acrylonitrile on X-axis of concentration of analysis result of the acrylonitrile on Y-axis, and create the measuring line.

At this time, calculate the content of the acrylonitrile of X-axis by the following equation.

$$\text{Content of acrylonitrile (\%)} = \frac{\text{Added acrylonitrile}}{\text{Specimen} + \text{Acrylonitrile}} \times 100 \dots\dots\dots (1)$$

4.4 Method : After analyzing according to item 3.3, obtain the content of acrylonitrile from the chromatogram, and report the content of the acrylonitrile in the specimen from the measuring line.

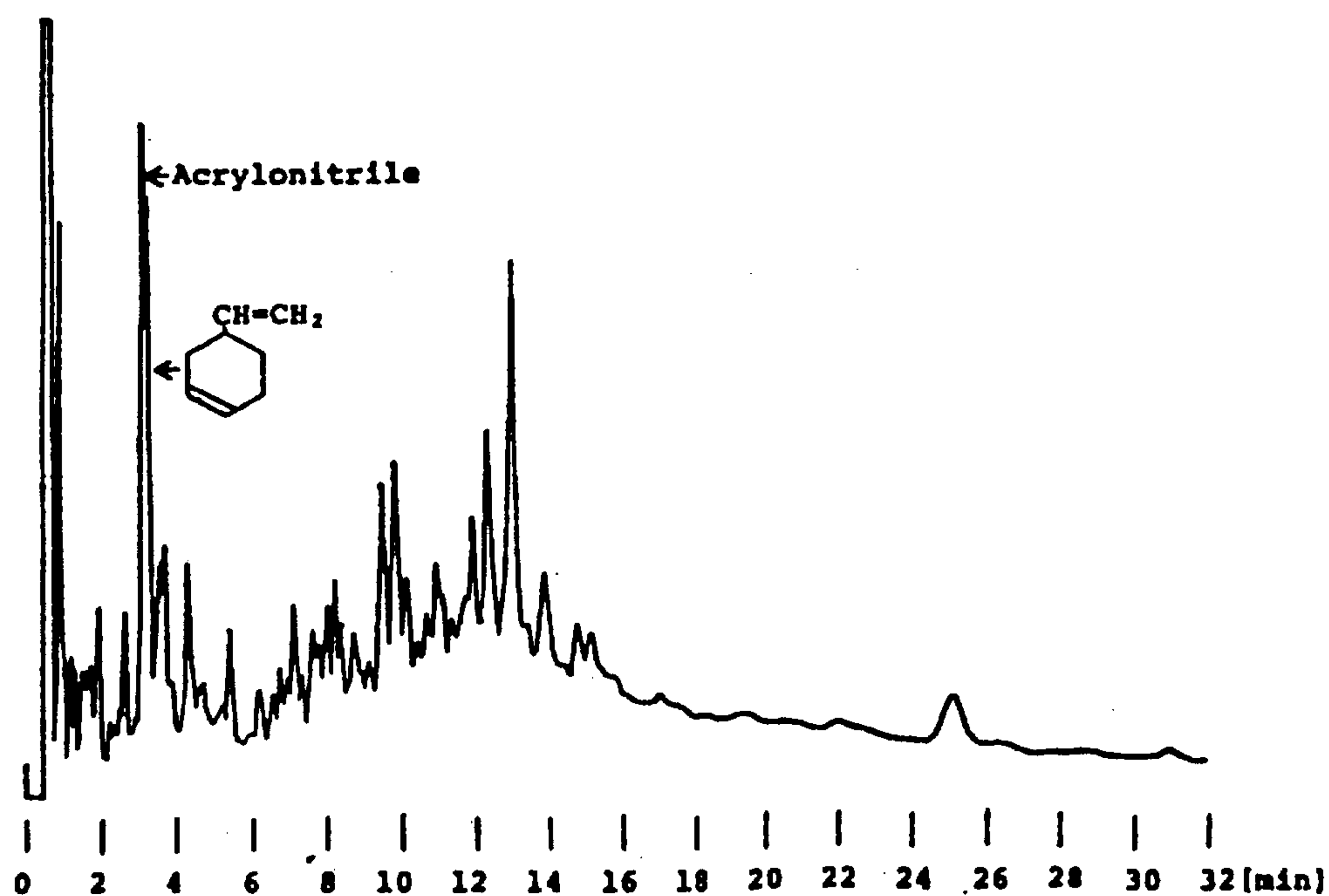


Figure 2. Chromatogram of nitrile rubber