

# Purity Test of Cyclohexane - with Reference to Japanese Industrial Standards (JIS)

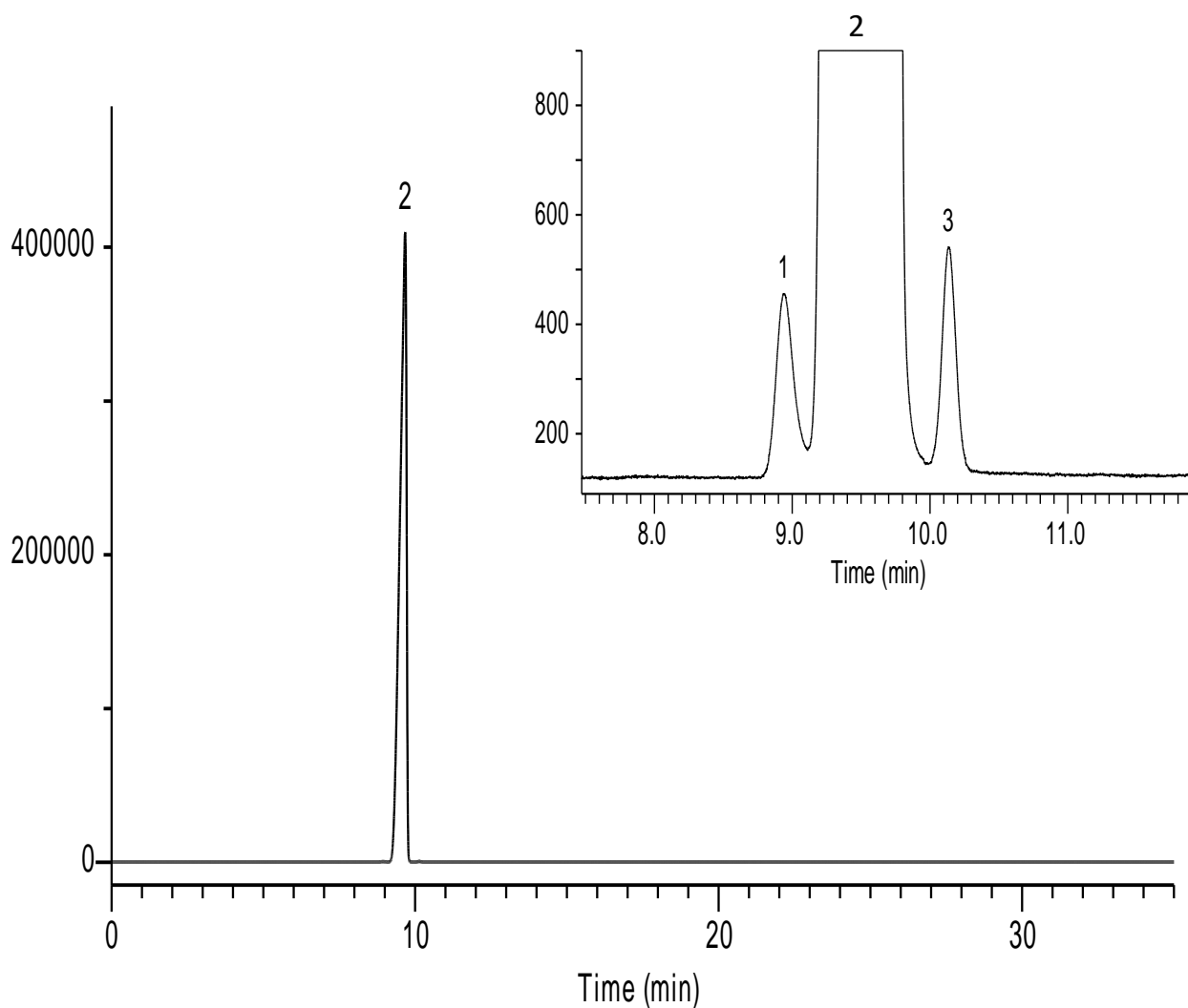
Cyclohexane is cycloalkane produced by the hydrogenation of benzene.

The JIS test method uses a capillary column to measure the purity of cyclohexane, with the standard values for cyclohexene and benzene defined as a mass fraction of 0.05 % or less.

In this application, benzene and cyclohexene were prepared in cyclohexane at a mass fraction of 0.05 % and measured.

The area percentage of benzene and cyclohexene was calculated, and excellent results were obtained.

## Example: Measurement of standard



**Analyte** : 1. Benzene  
2. Cyclohexane  
3. Cyclohexene

## Conditions

<b>System</b>	: GC - FID
<b>Column</b>	: InertCap 1 0.53 mm I.D. x 30 m df = 5.00 $\mu$ m
<b>Col. Temp.</b>	: 40 °C (5 min hold) - 5 °C/min - 190 °C
<b>Carrier Gas</b>	: He 25 kPa (5.0 mL/min)
<b>Injection</b>	: Splitless 1 min Vent flow 50 mL/min 200 °C
<b>Detection</b>	: FID Range 10 <sup>3</sup> 200 °C
<b>Sample Size</b>	: 0.2 $\mu$ L

## Area percentages

	Area	Area (%)
Benzene	3073	0.050
Cyclohexane	3038	0.050
Cyclohexane	6091108	99.90

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