

Report Sheet: Gas Chromatography of a Hydrocarbon Mixture (GC)

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Component Retention Time (t_r) Resolution (from nearest peak)

Cyclohexane	<u>96s</u>	<u>0.333</u>
Heptane	<u>86s</u>	<u>0.333</u>
Toluene	<u>—</u>	<u>—</u>
p-Xylene	<u>182s</u>	<u>2.146</u>
Unknown Number	<u>2</u>	

For unknown

Run 1

	Height Area (known)	Height Area (unknown)	Amt. (%v/v) for unknown
Cyclohexane	<u>32.5</u>	<u>47.5</u>	<u>35.10</u>
Heptane	<u>33.5</u>	<u>40.0</u>	<u>30.22</u>
Toluene	<u>16.5</u>	<u>—</u>	<u>—</u>
p-Xylene	<u>16.0</u>	<u>25.0</u>	<u>34.69</u>

Run 2

	Height Area (known)	Height Area (unknown)	Amt. (%v/v) for unknown
Cyclohexane	<u>—</u>	<u>42.0</u>	<u>35.14</u>
Heptane	<u>—</u>	<u>34.5</u>	<u>29.51</u>
Toluene	<u>—</u>	<u>—</u>	<u>—</u>
p-Xylene	<u>—</u>	<u>22.5</u>	<u>35.35</u>

* Run 2 of known is discarded since the values obtained did not pass the "mean $\pm 1\sigma$ " test (not consistent with the other two's data).

Run 3

	Weight Area (known)	Height Area (unknown)	Amt. (%v/v) unknown
Cyclohexane	<u>30.0</u>	<u>39.5</u>	<u>34.49</u>
Heptane	<u>31.0</u>	<u>33.0</u>	<u>29.45</u>
Toluene	<u>17.0</u>	<u>—</u>	<u>—</u>
p-Xylene	<u>16.5</u>	<u>22.0</u>	<u>36.06</u>

Average

	Weight Area (known)	Height Area (unknown)	Amt. (%v/v) ^{of unknown} std. dev.(%)
Cyclohexane	<u>31.37</u>	<u>43.00</u>	<u>34.91 ± 0.69</u>
Heptane	<u>32.3</u>	<u>35.83</u>	<u>29.73 ± 0.43</u>
Toluene	<u>116.8</u>	<u>—</u>	<u>—</u>
p-Xylene	<u>116.3</u>	<u>23.17</u>	<u>35.37 ± 0.69</u>

Submit your chromatographic run data with your summary report.