

DISTILLATION : PURIFICATION OF A MIXTURE OF MISCIBLE LIQUIDS**OTHER DOCUMENTS**

[Gas chromatography](#) (T 13)

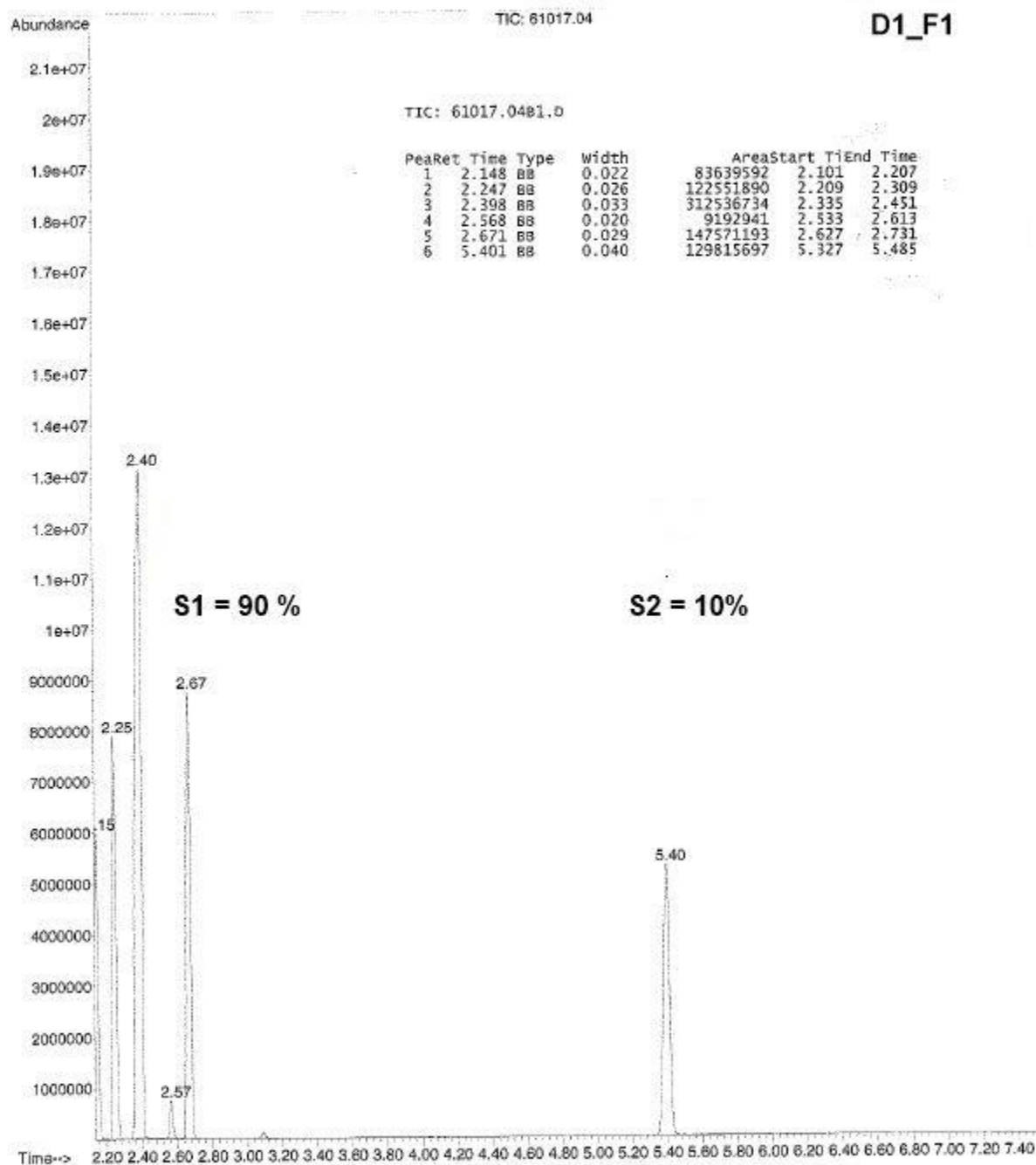
GAS CHROMATOGRAPHY TRACES

The background to gas chromatography (GC) is discussed in the [gas chromatography techniques document](#) (T13). GC was mentioned in CHEM351 during the spectroscopy section. You may need to review the GC method before attempting to analyse the GC traces.

Four GC traces are provided below. These represent the two fractions (F1 and F2) collected from two different student distillations (D1 and D2) of solvents that we will just refer to in general terms as S1 and S2. On the GC traces, D1_F1 is the first fraction from distillation “D1” and D1_F2 is the second fraction from distillation “D1 *etc.*

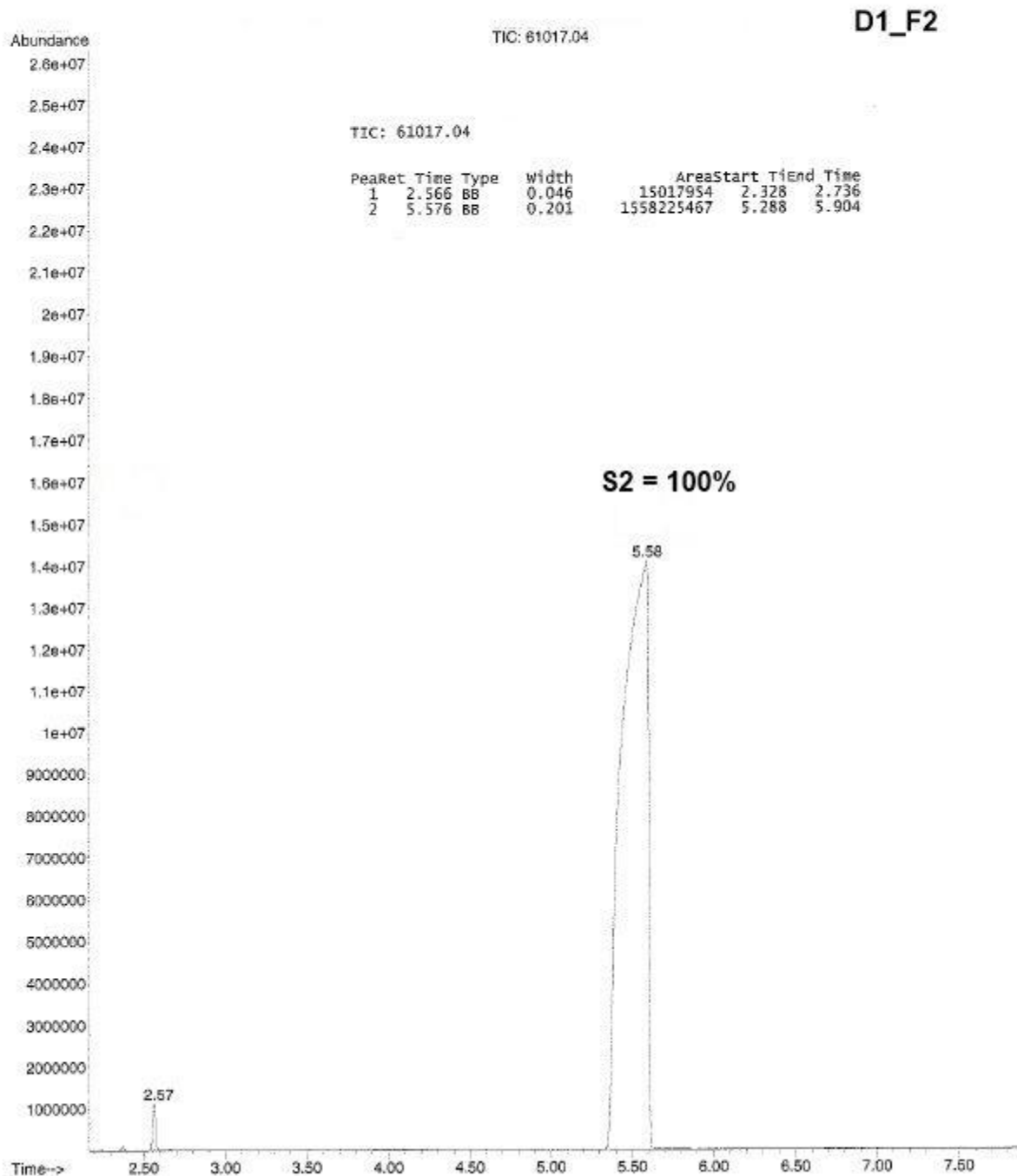
The samples were collected from students, diluted with a volatile solvent and then injected into the GC. In the GC method used, added volatile solvent gives a peak at about 2.57 minutes. This peak can be ignored in the analysis of the sample. The GC instrument collects and reports the areas of each of the peaks and this information has been used to calculate the relative ratio of each of the components in the mixture. These values are expressed as a relative ratio in the form of a percentage and ignoring the added volatile solvent.

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Instrument : ug-ms
Sample Name:
Misc Info :
Vial Number: 3



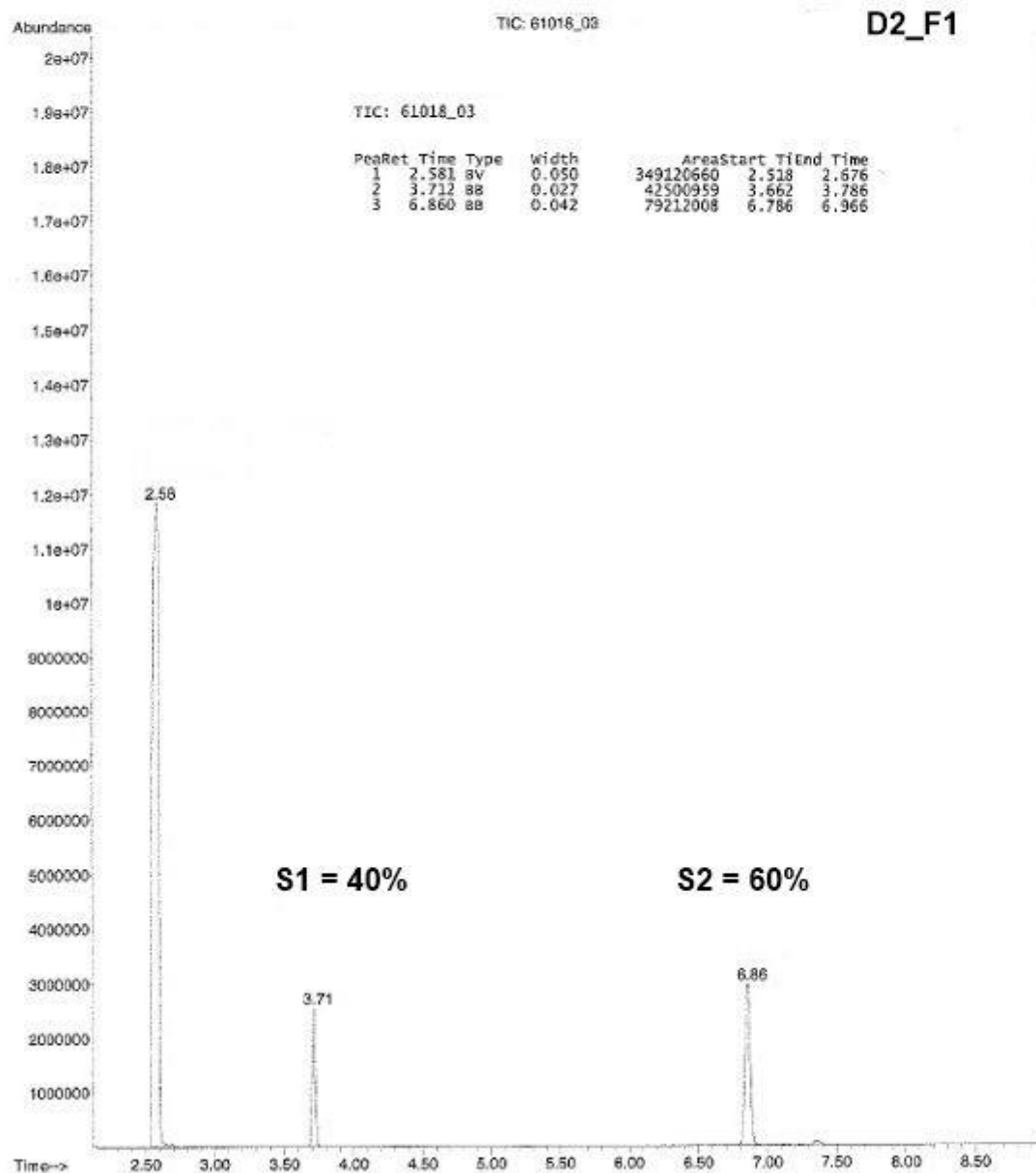
GC trace for sample D1_F1

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Sample Name:
Misc Info :
Vial Number: 4



GC trace for sample D1_F2

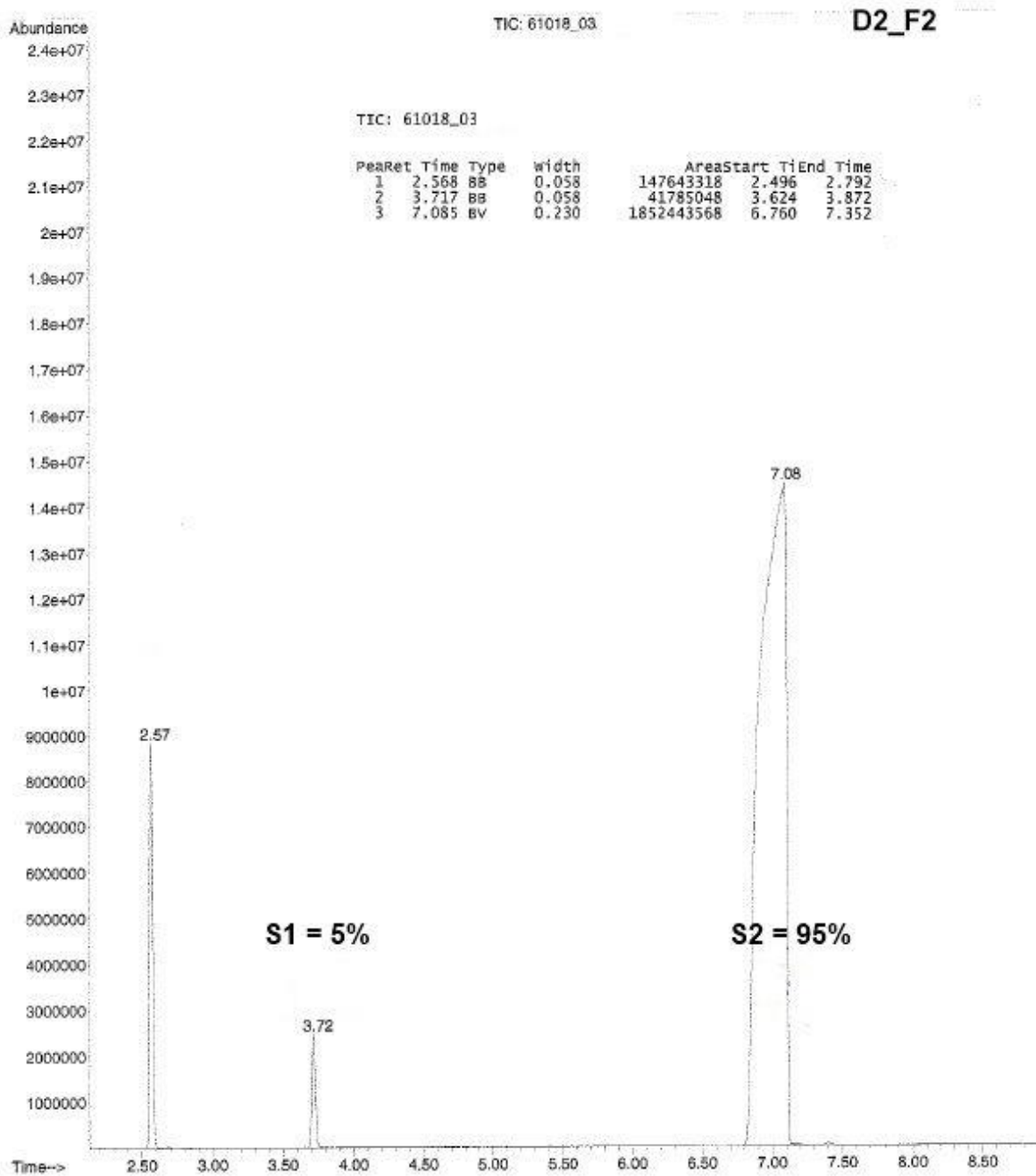
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Instrument : ug-ms
Sample Name:
Misc Info :
Vial Number: 1



GC trace for sample D2 F1

GC.5

File :C:\MSDCHEM\1\DATA\2006 Data\C351\fall06\61018_03A2.D
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Instrument : ug-ms
Sample Name:
Misc Info :
Vial Number: 2



GC trace for sample D2_F2