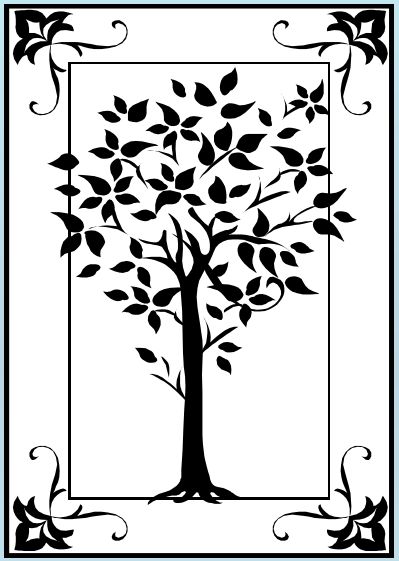
# METADATA AND NUMERICAL DATA CAPTURE:
# $SL_1L_2G$ – Quadruple Point Temperature

## Guided Data Capture (GDC)



**This tutorial describes**
**METADATA AND NUMERICAL DATA CAPTURE:**
for :
**$SL_1L_2G$ – Quadruple Point Temperature**
**with the Guided Data Capture (GDC) software.**

**NOTE:**

**The tutorials proceed sequentially to ease the descriptions. It is not necessary to enter *all* compounds before entering *all* samples, etc.**

**Compounds, samples, properties, etc., can be added or modified at any time.**

**However, the hierarchy must be maintained (i.e., a property cannot be entered, if there is no associated sample or compound.)**

The experimental data used in this example is from:

**Solubility of Imidazoles in Ethers**

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# Quadruple Point – (Solid-Liquid$_1$-Liquid$_2$-Vapor)

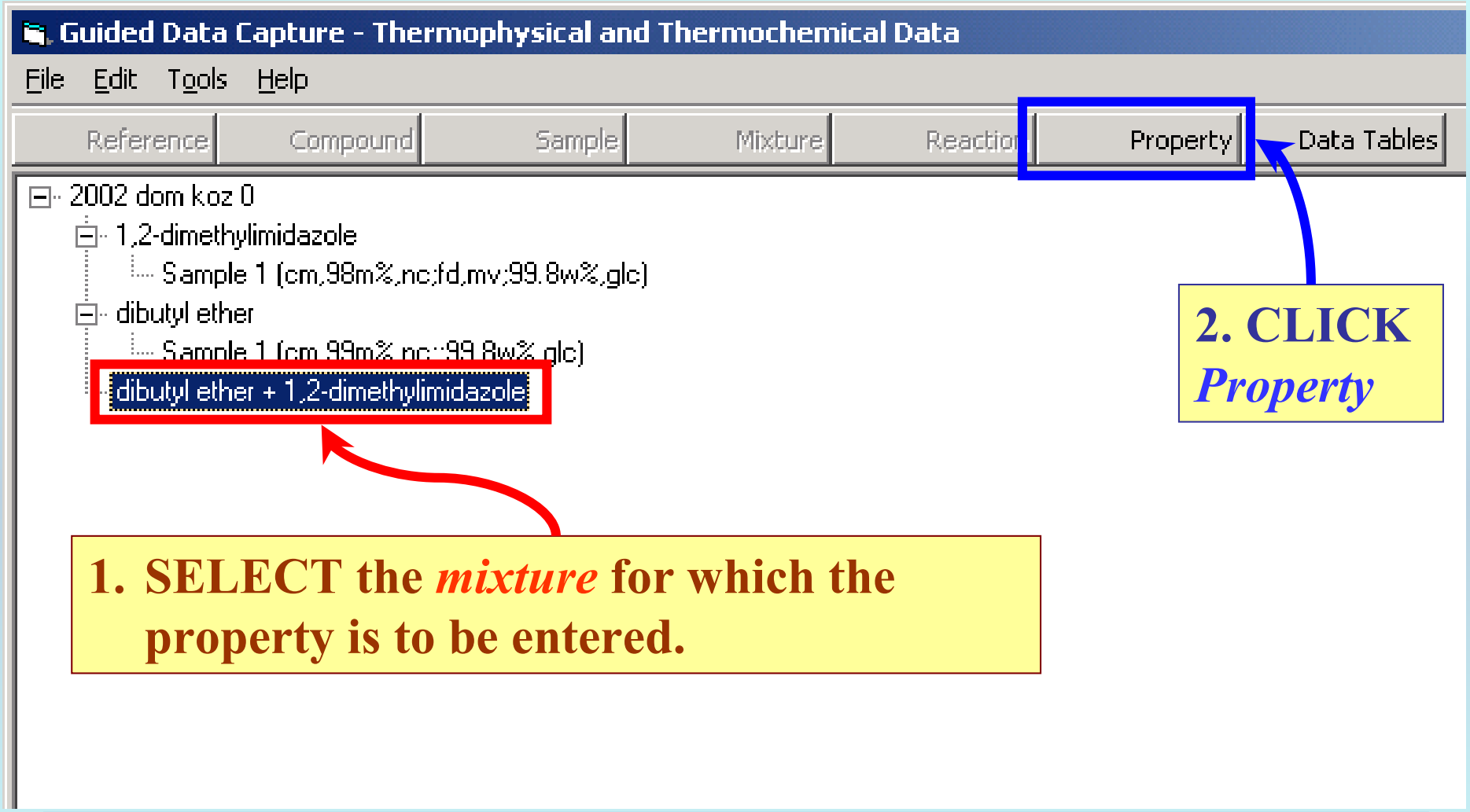
## Quadruple Point for 1,2-Dimethylimidazole (1) + Dibutyl ether (2)

Table 5. Experimental Solid-Liquid Equilibrium Temperatures, $T$ and Liquid-Liquid Equilibrium temperatures, $T_{LLE}$ for {1,2-Dimethylimidazole (1) + an Ether (2)} Systems; $\gamma_1$, Experimental Activity Coefficient of Solute

| $x_1$ | $T$/K | $T_{LLE}$/K | $\gamma_1$ | $x_1$ | $T$/K | $T_{LLE}$/K | $\gamma_1$ | $x_1$ | $T$/K | $T_{LLE}$/K | $\gamma_1$ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dibutyl ether | | | | | | | | | | | |
| 0.1521 | 290.63 | | 5.2 | 0.3555 | 303.17 | 307.77 | 2.6 | 0.6150 | 303.17 | 303.35 | 1.5 |
| 0.1809 | 292.65 | | 4.5 | 0.3907 | 303.17 | 307.18 | 2.3 | 0.6675 | 303.17 | 303.27 | 1.4 |
| 0.2052 | 294.65 | | 4.1 | 0.4392 | 303.17 | 306.42 | 2.1 | 0.7342 | 303.83 | | 1.3 |
| 0.2410 | 298.23 | | 3.6 | 0.4853 | 303.17 | 305.31 | 1.9 | 0.7889 | 304.37 | | 1.2 |
| 0.2823 | 303.17 | 305.40 | 3.3 | 0.5288 | 303.17 | 304.23 | 1.7 | 0.8690 | 306.04 | | 1.1 |
| 0.3221 | 303.17 | 307.33 | 2.8 | 0.5687 | 303.17 | 303.44 | 1.6 | 1.0000 | 311.50 | | 1.0 |

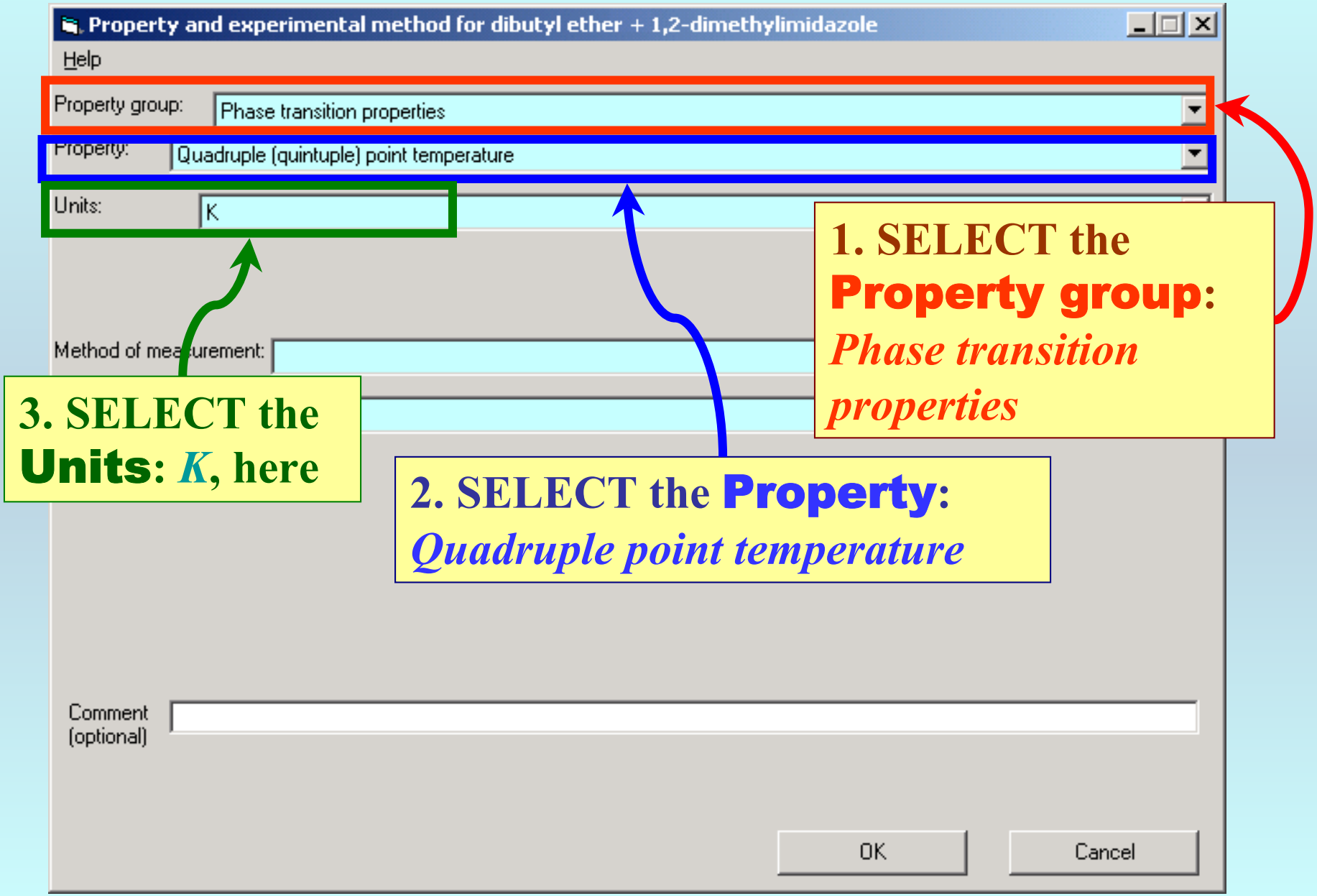
**The data considered here.**

**Method:** Dynamic Method / Visual Observation
**Precision:** 0.1 K

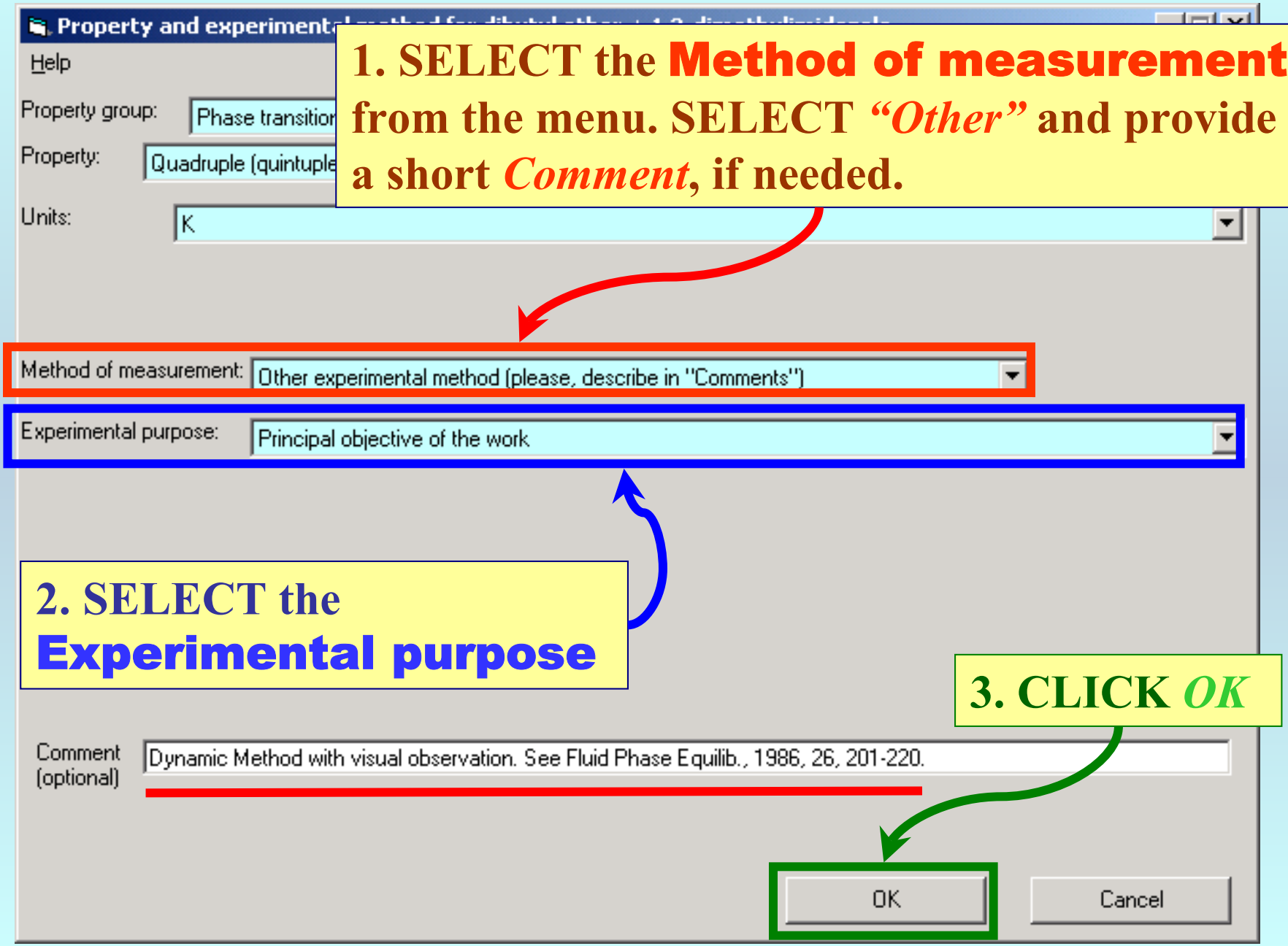



**NOTE:** The **bibliographic information**, **compound identities**, **sample descriptions**, and **mixture** were entered previously. (There are separate tutorials related to capture of this information.)

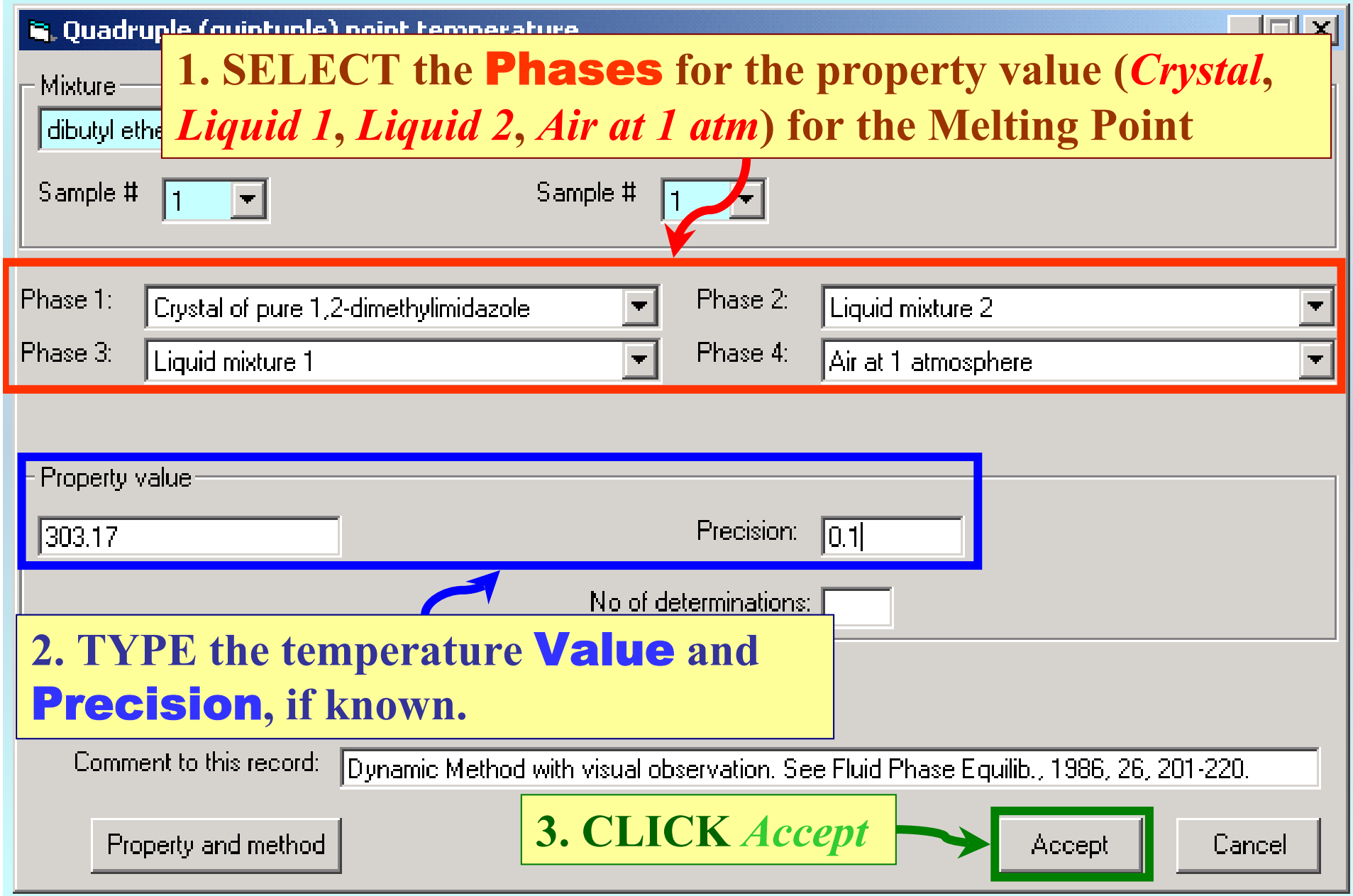
# Property & Units selection

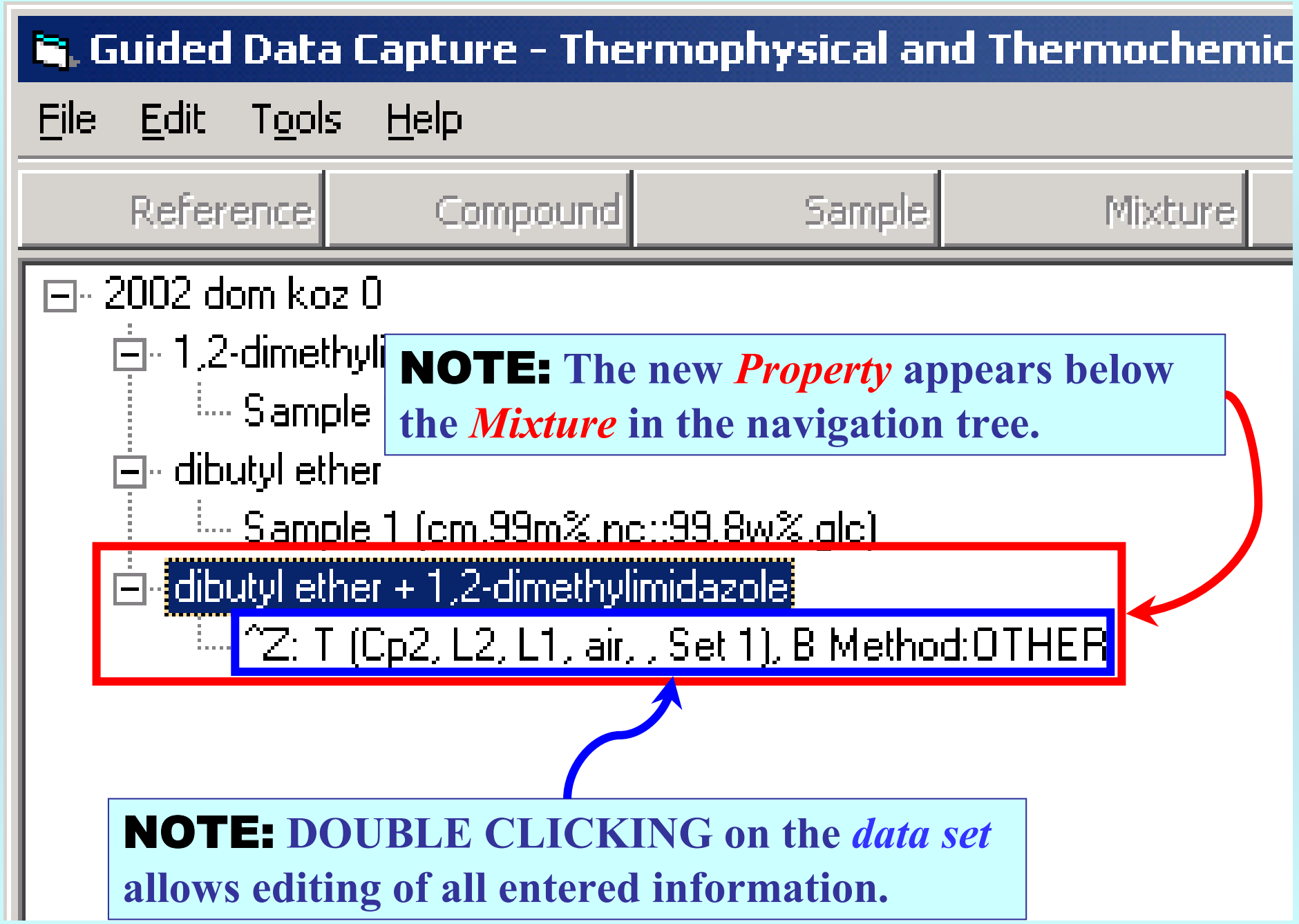


# Method selection



# Specification of phases and value




Guided Data Capture - Thermophysical and Thermochemic
File Edit Tools Help
Reference Compound Sample Mixture
2002 dom koz 0
1,2-dimethyli
Sample
dibutyl ether
Sample 1 [cm,99m%,nc::99.8w%,glc]
dibutyl ether + 1,2-dimethylimidazole
^Z: T (Cp2, L2, L1, air, , Set 1), B Method:OTHER
NOTE: The new Property appears below the Mixture in the navigation tree.
NOTE: DOUBLE CLICKING on the data set allows editing of all entered information.

# END

**Continue with other compounds, samples, properties, reactions, etc...**

***or* save your file and exit the program.**