 Chemical Analysis Facility THERMAL Sample Submission Form.

Technical Services

Email: [caf.thermal@reading.ac.uk](mailto:caf.thermal@reading.ac.uk)

**Please complete all parts and clearly label samples.**

Forms missing essential information will result in delayed analysis

### Requester’s information.

- GIVEN NAME:

- FAMILY NAME:

- DATE:

- POSITION:

Internal chargeable:

Please include project code: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

PhD student

MSc reseacher

Postdoc,

Staff,

Internal non-chargeable:

Undergraduate student

MSc taught

- DEPARTMENT AND SCHOOL:

- SUPERVISOR PI:

- EMAIL:

### Sample information. You can attach a sample table if you prefer.

- Number of samples:

- names: (please correctly labelled the samples with a printed number or name)

- PHYSICAL NATURE OF SAMPLE: (solid -powder, dispersion, film…-, liquid/solution…)

- AMOUNT (concentration and solvent if needed):

- chemical formula (if known):

 - Attach a COSHH Assessment for the sample analysis. Please take into account likely degradation products if pertinent.

- Special Instructions:

- Room TEMP./Fridge/Freezer Location?

- IS THE SAMPLE REQUIRED TO BE RETURNED?

**Instrument selection.**

Thermogravimetric Analyser (TA, TGA Q50).

Differential scanning calorimeter (TA, DSC Q2000).

Simultaneous thermogravimetric analyser- differential scanning calorimeter (TA, SDTQ600).

Hot Stage Microscope (Mettler Toledo FP90).

Solution Differential Scanning Microcalorimeter (TA-Nano DSC).

### Method information.

PLEASE FILL IN ONLY the method information of the instrument you previously selected.

TGA Q50

- scope of your analysis:

- Describe the method: and the method name in case you want to use a saved one. Minimum information needed:

Atmosphere: N2 (pure, cylinder) or air (room air)

Initial Temperature:

Final Temperature:

Heating rate:

Please indicate if you want to perform any special method segments:

- SAMPLE PAN: There are several pans available and several recommendations depending on the sample. For more information please check the instrument SOP.

- NUMBER OF REPLICATES PER SAMPLE:

- SAMPLE PREPARATION: sample preparation is the responsibility of the user. For more information please check the instrument SOP, sections “*What is the best way to prepare a sample?”* and the Appendix*.*

DSCQ2000.

- SCOPE OF YOUR ANALYSIS:

- DESCRIBE THE METHOD: and the method name in case you want to use a saved one. Minimum information needed:

Initial Temperature

Final Temperature (always below the decomposition T of your sample, if you do not know it, then first of all a TGA run will be needed)

Heating rate

Please indicate if you want to perform any cycles or special method segments

- NUMBER OF REPLICATES per sample:

- SAMPLE PAN: There are several pans available and several recommendations depending on the sample. For the selection of the PANS please see the document: “MOST COMMON DSC PANS”.

- SAMPLE PREPARATION: sample encapsulation is the responsibility of the user. For basic sample preparation steps see the SOP (including the appendix). For more information on sample preparation see the ppt document: “Basic info for training. DSCQ2000”. If you need further help, please look for technical assistance.

SDTQ600.

- scope of your analysis

- SIGNAL of interest:

TGA  DSC  DTA

- Describe the method: and the method name in case you want to use a saved one. Minimum information needed:

Initial Temperature:

Final Temperature:

Heating rate:

Please indicate if you want to perform any special method segments:

- SAMPLE PAN: There are several pans available and several recommendations depending on the sample. For more information please check the instrument SOP.

- NUMBER OF REPLICATES PER SAMPLE:

- SAMPLE PREPARATION: sample preparation is the responsibility of the user. For more information please check the instrument SOP, sections “*What is the best way to prepare a sample?”* and the Appendix*.*

HOT STAGE MICROSCOPE.

- scope of your analysis: (and any special area/feature you would like to focus on)

- Describe the method: and the method name in case you want to use a saved one. Minimum information needed:

Initial Temperature:

Final Temperature: (always below the decomposition T of your sample, if you do not know it, then first of all a TGA run will be needed. Common range: from room T to 250ºC, although it may be used at higher T if you need it)

Heating rate:

Do you wish to hold the method at specific temperature? For how long?

Please indicate if you want to perform any special method segments that might be available:

Do you want an additional cooling ramp (the minimum T is room T)?

Objective to be used: x5, x10, x20. Select anyone if you have a preference.

Recording characteristics different than the default method: (for more information see the SOP)

- NUMBER OF REPLICATES PER SAMPLE:

- SAMPLE PREPARATION: sample preparation is the responsibility of the user. For more information please check the instrument SOP.

NANO DSC.

- SCOPE OF YOUR ANALYSIS:

- BUFFER TO BE USED (solvent, concentration, pH…):

- DESCRIBE THE METHOD: and the method name in case you want to use a saved one. Minimum information needed:

Initial Temperature

Final Temperature (always below the decomposition T of your sample)

Heating rate

Number of scans

Any special feature

- Any SPECIAL CLEANING needed between samples and after all the analysis:

- NUMBER OF REPLICATES per sample:

- SAMPLE PREPARATION: sample encapsulation is the responsibility of the user. For more information on sample preparation please see the instrument SOP.