



DEPARTMENT OF CHEMISTRY
INDIAN INSTITUTE OF TECHNOLOGY MADRAS



Sample requirements for VSM measurement.

| Measurement | Room temperature measurement | Low temperature Measurement | High temperature measurement |
|-------------|--|---|---|
| M-H | Temperature Range: 300K Applied Field Range +150000 Oe to -15000 | Temperature Range: 20 K to 300K Applied Field Range: +15000 Oe to -15000 Oe | Temperature Range: 300 K to 1000K Applied Field Range: +15000 Oe to -15000 Oe |
| M-T | Not applicable | Temperature Range (ZFC/FC): 20K to 300K Applied Field Range: 0 to 5000 Oe | Temperature Range (Only FC): 300K to 1000K Applied Field Range: 0 to 5000 Oe |

- Only Powder, Metal, Pellet, Thin film samples can be done. No liquid samples can be done.
- Either Low temperature (20K to 300K) or High temperature (300K to 1000K) can be done within the given range. No measurement can be done in a single stretch starting from 20K to 1000K.
- For Powder sample minimum sample required is 100 mg.
- For thin film samples the dimension should be 10 mm x 4 mm (length x breadth).
- For High temperature measurements only Pelletized form of samples can be done.
- The users should fill up the form (given below) and submit it with the sample
- Each sample has to be listed separately.
- External samples will be analyzed in que at a fixed rate.

Payments

- External users, please bring a draft in the name of **Registrar, IIT Madras** for the appropriate amount.
- Please note that if the account is not settled immediately it will not be possible to do further analysis.

The **VSM** is currently located in **ACB-124** and you are welcome to visit the room after prior appointment

Fees

VSM sample charges as follows

| S.No | Category | Rate per sample | |
|------|---|-----------------------------|---|
| | | Room Temperature (RT) (Rs.) | Low Temperature (LT) (Rs.) |
| 1. | Students from other departments of IIT Madras | 600/- | 1500/- M-T or M-H at any fixed temp@1200 per sample + 400 for every M-H measurement at various fixed temperature |
| 2. | Students from other educational and research institutions | 1000/- | 2500/- M-T or M-H at any fixed temp@ 2500 per sample 1000 for every M-H measurement at various fixed temperature |
| 3. | Users from industry | 2500/- | 10,000/- M-T or M-H at any fixed temp@5000 per sample 2500 for every M-H measurement at various fixed temperature |

* High Temperature (HT) measurements will be performed when sufficient number of samples are available.

Contact

In-Charge VSM
Department of Chemistry, IIT Madras
Chennai 600 036.

Ph: 044-2257 5243

Email: cyoffice@.iitm.ac.in

DEPARTMENT OF CHEMISTRY
Indian Institute of Technology, Madras
Chennai-600 036

Requisition for VSM measurements at Department of Chemistry (Maximum 2 Samples)

(Internal users)

Date:

| |
|-----------------------|
| Name of the Applicant |
|-----------------------|

| |
|-------------------|
| Name of the Guide |
|-------------------|

E-Mail:

Phone No:

| S. N | Sample code | Nature of the sample Powder/ Pellet/Metal | Melting point | Expected property Diamagnetic/ Paramagnetic/ Ferromagnetic | Measurement Required M-H@ Room Temperature M-H @LT/High Temperature M-T @ LT/HT (Mention Field) |
|------|-------------|---|---------------|---|---|
| | | | | | |
| | | | | | |

Purpose for which the measurement is requested:

This is to certify that the user is a bonafide student under my supervision.

Signature of the guide

signature of the Applicant

Signature of the co-ordinator

Received on:

Analysed on:

DEPARTMENT OF CHEMISTRY

Indian Institute of Technology,

Madras Chennai-600 036

Requisition for VSM measurements at Department of Chemistry (maximum 2 samples) (External users) Date:

| |
|------------------------------|
| Name of the Applicant |
|------------------------------|

| |
|--------------------------|
| Name of the Guide |
|--------------------------|

| |
|----------------------------------|
| Address for Communication |
| |
| Phone No: |

| |
|------------------------|
| Billing Address |
| |
| Email: |

DD.No:, Date:, Amount: ... Bank:

| S. N | Sample code | Nature of the sample Powder/ Pellet/Metal | Melting point | Expected property Diamagnetic/ Paramagnetic/ Ferromagnetic | Measurement Required M-H @ Room Temperature M-H @LT/High Temperature M-T @ LT/HT (Mention Field) |
|------|-------------|---|---------------|---|--|
| | | | | | |
| | | | | | |

Purpose for which the measurement is requested:

This is to certify that the user is a bonafide student under my supervision.

I hereby agree to acknowledge the data and results obtained from this machine in publications and thesis.

Signature of the Research Supervisor with seal
Applicant

Signature of the

NB: VSM measurement in person on an appointment basis is feasible. Charges for the measurement should be send through an advance demand draft in favour of “ The Registrar, I.I.T Madras” along with the samples, to the Head, Department of Chemistry, IIT Madras,Chennai-600036.