What is metadata?

Metadata is the data that describes your data.

For the LIMS, metadata comes in the form of JSON (JavaScript Object Notation) files. These files are collections of key: value pairs that contain the information required in order to incorporate a piece of data into the LIMS system.

Each metadata file captures inputs (from the researcher) about the component(s), polymer(s), and/or composite in the sample; the instrument used in characterization; the type of data captured (i.e. data category); veracity of data (does it describe a sample whose identity & composition is confirmed?); and other parameters.

An example metadata file is shown below:

metadata.json

```
{
    "acquired_by": "bpm_admin",
    "components": [
        "valine",
        "isoleucine"
    ],
    "component_classes": [
        "Monomer",
        "Monomer"
    ],
    "polymers": [
        "poly-VI"
    ],
    "polymer_props": {
        "polymer_components": [
            "valine",
            "isoleucine"
        ],
        "ratios": [
            "50:50"
        ],
        "ratio_types": [
            "MoleRatio"
        ],
        "formulae": [
            "(C11H24N2O4)n"
        ],
        "molec_weights": [
            250.0
        ],
        "tgs": [],
        "pdis": [],
        "SMILES": [],
```

```json
            "bigSMILES": []
        },
        "polymer_mechs": [
            "StepGrowth"
        ],
        "composite": [],
        "composite_props": {
            "ratio": [],
            "ratio_type": [
                "MoleRatio"
            ],
            "pdi": []
        },
        // Note: synthesis ID and experimental ID are used
        // interchangeably in conversation. However, the
        // system expects a parameter named synthesis_ID.
        "synthesis_ID": [
            "BPM-2023-03-13-46a32bf6-1c89-402e-b214-eb40a30dd45b"
        ],
        "synthesis_date": [
            "2023-03-08 21:12:00"
        ],
        "exp_data_date": [
            "2023-03-07 08:19:00"
        ],
        "synopsis": [
            "The fifth test of the group",
            "Testing the fifth thing."
        ],
        "platform": [
            "LBF"
        ],
        "instrument": [
            "ht_rheo_zeiss_axio_obs_7"
        ],
        "data_files": [
            "SRI-PEC_v2_mth_20220912_223358_0GLE9.asc"
        ],
        "data_category": [
            "msd"
        ],
        "is_verified": [
            "unverified"
        ],
        "data_availability": [
            "all"
        ],
        "context_files": []
}
```