

Intracellular Electrophysiology (icephys) BIDS Dataset

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samples.tsv

Sample Information

sample_id	participant_id	sample_type	pathology	origin	thickness
cell1001	sub-20230615A	tissue	none	RegionA	300um
cell1002	sub-20230615A	tissue	none	RegionA	300um
cell1003	sub-20230615A	tissue	none	RegionB	350um

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samples.json

Sample Metadata

```
{
  "type": {
    "Description": "Sample type",
    "Levels": {
      "tissue": "Brain tissue slice"
    }
  },
  "pathology": {
    "Description": "Pathological state",
    "Levels": {
      "none": "No pathology"
    }
  }
}
```

*_probes.tsv

Pipette Specifications

probe_name	type	AP	ML	DV	AP_angle	hemisphere	electrode_count
pip01	patch-pipette	-1.8	0.5	-2.2	30	L	1

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*_electrodes.tsv

Electrode Properties

name	probe_name	x	y	z	impedance	pipette_solution	material
patch01	pip01	0	0	0	5.2	Internal	glass

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*_channels.tsv

Channel Properties

name	reference	type	units	sampling_frequency	recording_mode	ground	status
patch01	n/a	VM	mV	20000	I-clamp	AgCl	good

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*_events.tsv

Protocol Epochs

onset	duration	current_amp	current_units	protocol	epoch
0.0	0.5	-100	pA	hyper	1
1.0	0.5	-50	pA	hyper	2
2.0	0.5	0	pA	baseline	3
3.0	0.5	50	pA	depol	4
4.0	0.5	100	pA	depol	5

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*_icephys.json

Recording Metadata

```
{
  "TaskName": "IVcurve",
  "TaskDescription": "Current injection protocol to characterize intrinsic membrane properties",
  "SamplingFrequency": 20000,
  "PowerLineFrequency": 60,
  "HardwareFilters": "n/a",
  "SoftwareFilters": "n/a",
  "Manufacturer": "AmplifierManufacturer",
  "ManufacturersModelName": "AmplifierModel",
  "SoftwareName": "AcquisitionSoftware",
  "SoftwareVersions": "1.0.0",
  "RecordingType": "epoched",
  "BodyPart": "BRAIN",
  "BodyPartDetails": "TargetBrainRegion",
  "SampleEnvironment": "ex-vivo",
  "SliceThickness": 300,
  "SliceThicknessUnits": "um",
  "TissueOrigin": "TargetBrainRegion",
  "CellType": "cell_type"
}
```

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