| iSamplesSchemaCore1.0 | iSamples notes | **OpenDS** | **openDS notes** |
| --- | --- | --- | --- |
| X-- digital object create date | No mapping | ods:created | The timestamp that the object version was created in DiSSCo |
| X-- digital object identifier | identifier for the metadata record | ods:id | identifier for digital object |
| X-- digital object type | correspond to JSON-LD @type; something like 'metadata record'. This should be a determinant for the schema of the digitalObject, but midsLevel property is more granular schema determinant. | ods:type |  |
| X-- digital object version | No mapping | ods:version | The version of the object, each change generates a new version |
| X-- has Media | could be determined by looking at the related\_resource content | ods:hasMedia | boolean flag, Indicates if there are any media objects attached to this specimen |
| X-- keywords/scheme\_name = TypeStatus | included in MIDS-2. implement as keyword in iSamples | ods:markedAsType | The specimen is marked as a type specimen |
| X-- living or preserved | map to keyword, schemeName=’livingOrPreserved’ | ods:livingOrPreserved | Whether the specimen is living or preserved, enum "living', "preserved". Seems to overlap with Basis of record, for which relevant terms for material samples are 'living', 'preserved' and 'fossil'. |
| X-- material entity | Need to clarify OpenDS semantics to determine mapping | ods:materialEntity | links to material entity object that seems to duplicate the properties in the host record; perhaps it is to build child sample descriptions into a record for a compound sample? [use iSample related resource] |
| X-- metadata license | all iSamples metadata is currently CC0. Have to review if we will harvest licensed metadata. | dcterms:license | License for the metadata of the physical specimen |
| X-- metadata source | Source of metadata record harvest; could map to registrant. | ods:sourceSystem | The handle to the source system object which retrieved the data from the CMS |
| X-- metadata update date | Update date not currently included in iSamples | dcterms:modified | Modification date for specimen information |
| X-- topic origin | could map from isamples sampled feature/material type/material sample type to these terms, but likely not vice-versa... | ods:topicOrigin | "The topic origin of the specimen", "enum": [ "Natural", "Human-made", "Mixed origin", "Unclassified"]. |
| $schema | identifier for the schema for this metadata ('digital sample' document). iSamples sample descriptions are implemented with a JSON serialization, so this should be an identifier for a JSON schema | ods:midsLevel | The MIDS level of the object, see https://www.tdwg.org/community/cd/mids/. [interpret this to denote the schema for the 'digital object'] |
| alternate\_identifiers | other identifiers can be provided with label, scheme\_name (authority), and identifier string. | identifiers | no explanation, assume is for alternate identifiers for the sample; include identifier string, lose scheme\_name |
| curation/access\_constraints | cultural, legal or other policy issues that bear on access to view, borrow, or subsample a sample (Curation) | dcterms:accessRights |  |
| curation/curation\_location | Information about where and how the sample is currently stored. | dwc:disposition | dwc:institutionName | Examples: in collection, missing, on loan, used up, destroyed, deaccessioned. Could go in curation descriptions? Prefix on location place name? |
| curation/responsibility/ identifier | Identifier for person or organization. only one identifier in iSamples. An identifier for the institution having custody of the object(s) | dwc:institutionId | ROR or Wikidata identifier, identifier for the institution having custody of the object(s) |
| curation/responsibility/name | Person or organization name | dwc:institutionCode | dwc:institutionName | name (or acronym) in use by the institution having custody of the object(s) |
| curation/responsibility[role= 'owner'] | if this is different from the institution that has custody | dwc:ownerInstitutionId | ROR or Wikidata identifier for the owning institution |
| curation/responsibility[role= 'rightsHolder'] | if this is different from the institution that has custody | dcterms:rightsHolder |  |
| curation/responsibility[role='classification'] | unique identifier for the person, people, groups, or organizations responsible for assigning the scientific name to the subject. Include this as a curation/responsibility | dwc:identification, dwc:identifiedBy, dwc:identifiedById | openDS allows multiple identifications to be attached to the samples, with a bunch of metadata; simple iSample record with one identifier agent can be handled like this. if there is a full identification object, attach as a related resource. See <https://github.com/DiSSCo/openDS/blob/master/data-model/digitalobjects/0.1.0/digital-specimens/schema/identifications.json> |
| has\_context\_category | Top level context, based on the kind of feature sampled. Specific identification of the sampled feature of interest is done through the SamplingEvent/Feature of Interest property. At least one value a skos:Concept from the iSamples sampledFeature vocabulary. | ods:topicDomain | The topic domain of the specimen", "enum": [ "Life", "Environment", "Earth System", "Extraterrestrial", "Cultural Artefacts", "Archive Material", "Unclassified"]. Map to appropriate sampled feature class. |
| has\_material\_sample\_object\_type/label | repeat label and uri. Use labels from iSamples Material\_Sample\_Object\_Type vocabulary. | dwc:basisOfRecord | dwc: preparations | relevant 'basis of record' terms are 'living', 'preserved' or 'fossil'. preparations is a list of "preparations and preservation methods" for the sample. For isamples preservation methods would be in curation. In the dwc documentation, most of the examples correspond to isamples material sample types; would need a vocabulary mapping to map dwc strings to iSamples concepts. |
| keywords/keyword | An identifier for the nomenclatural (not taxonomic) details of a scientific name. | ods:topicDiscipline | The topic discipline of the specimen","enum": ["Anthropology", "Botany", "Astrogeology","Geology", "Microbiology", "Palaeontology", "Zoology", "Ecology", "Other Biodiversity", "Other Geodiversity", "Unclassified" ], |
| label | a human intelligible string used to identify the sample; i.e. the name to use for the sample; should be unique in the scope of a sample collection. This will typically be a sample identifier or label assigned by the original collector | ods:specimenName | The accepted specimen name of the digital specimen |
| produced\_by/SamplingEvent/sampling\_site/sample\_location/obfuscated | Flag to indicate that accuracy of provided coordinate location has been reduced (obfuscated) because the exact location is restricted information. Default is 'false' | dwc:informationWithheld | dwc:dataGeneralizations | location information not given for endangered species |
| registrant [role=registrant]/name/ | identification of the agent that registered the sample, with contact information. Role = 'registrant' | dwc:recordedBy | ???:recordedByAgent | name or possibly a name/role/identifier |
| registrant/identifier |  | dwc:recordedById |  |
| related\_resource[relationship= 'hasAgeDetermination'] | link to sample 'age' determination detail object | chronometric age | OpenDS has object with details about an age estimation for temporal extent of sample origin, link to that |
| related\_resource[relationship= 'hasAssertionObject'] | link to related assertion/observation result | ods:assertion | link to openDS assertion object that ?reports some observation result about the sample. See https://github.com/DiSSCo/openDS/blob/master/data-model/digitalobjects/0.1.0/shared-models/schema/assertions.json |
| related\_resource[relationship= 'isCitedBy' or 'isDocumentedBy'] | link to publications | ods:citations | target is a draft object in OpenDS json. Assume the intention is link to publications that reference the sample |
| related\_resource[relationship= 'isRelatedTo'] | generic resource link | ods:entityRelationships | openDS entityRelationship object mapping is pretty clear |
| related\_resource[relationship='isMemberOf']/label |  | dwc:collectionCode | name, acronym, coden, or initialism identifying the collection that includes the sample |
| related\_resource[relationship='isMemberOf']/target | identifier for the target resource in the relationship. Should be a resolvable URI. | dwc:collectionId |  |
| sample\_identifier | unique identifier for the physical object, ideally a URI that is physically attached to the material sample object, an IGSN or ARK | ods:normalisedPhysicalSpecimenId | ods:physicalSpecimenId | ods:physicalSpecimenIdType | physical specimen id might be a local identifier; normalized id has namespace (source-system-id) qualifier to make globally unique; The IdType indicate if the physical identifier is globally unique or locally unique, values are enum ["Resolvable", "Global", "Local"], applies to physicalSpecimenID; since iSamples sample\_identifier is expected to be globally unique, provide the normalized id, thus the IdType is not relevant. |

Mapping from iSamples core sample description metadata to OpenDS scheme. Note that OpenDS term ‘specimen’ is interpreted to be equivalent to iSamples ‘material sample’. Fields on the left with the prefix ‘X--' do not map to iSamples scheme, or are soft-types as keywords in iSamples.