

Mapping from iSamples Core v1.0 to Schema.org vocabulary. See note about schema.org implementation at end of table.

iSamplesSchemaCore1.0	iSamples notes	Schema.org	Schema.org note
X-- affiliation identifier	Add in iSamples Agent/affiliation value string.	subjectOf/sdpublisher/ identifier	
X-- digital object identifier	identifier for the metadata record	subjectOf/@id	
X-- metadata license		subjectOf/sdLicense	if dc_rights statement is about the metadata
\$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	subjectOf/dcterm:conformsTo	
alternate_identifiers	other identifiers can be provided with label, scheme_name (authority), and identifier string.	identifier	alternate identifiers for the sample described by this record. Note that about/id is the URI for the sample.
alternate_identifiers/ identifier		identifier/value	
alternate_identifiers/label		identifier/ description	
alternate_identifiers/scheme_name		identifier/ propertyID	
complies_with	a list of policies, recommendations, best practices (etc.) that have been followed in the collection and curation of the sample. If any special protocols were followed in the sampling procedure, they should be documented here, with prefix 'Sampling protocol:'.	ethicsPolicy	
X-- curation	Information about the current storage of sample, access to sample, and events in curation history. Curation as used here starts when the sample is removed from its original context, and might include various processing steps for preservation. Processing related to analysis preparation such as crushing, dissolution, evaporation, filtering are considered part of the sampling method for the derived child sample.	curation	No schema.org property; Use iSamples curation property with value that is typed as schema:Event.

iSamplesSchemaCore1.0	iSamples notes	Schema.org	Schema.org note
X-- curation/access_constraints	cultural, legal or other policy issues that bear on access to view, borrow, or subsample a sample (Curation)	curation/ conditionsOfAccess	
X-- curation/curation_location	Information about where and how the sample is currently stored.	curation/location	
X-- curation/description		curation/ description	If the schema.org curation event includes subEvents, concatenate information from those into isample:curation/description
X-- curation/label		curation/name	
X-- 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	curation/ maintainer[roleName = classification]	
X-- curation/responsibility.Agent	Agents associated with sample curation, Need mapping from iSample roles to DataCite contributorType	curation/ maintainer/Role	person or organization, implemented as sdo:Role
X-- curation/responsibility/ affiliation	If a person, can have an organization affiliation	curation/ maintainer/participant/ affiliation	if the participant is a Person.
X-- curation/responsibility/ contact_information		curation/ maintainer/participant/ pointOfContact	
X-- curation/responsibility/ identifier	Identifier for person or organization. only one identifier in iSamples. An identifier for the institution having custody of the object(s)	curation/ maintainer/participant/ identifier	
X-- curation/responsibility/name	Person or organization name	curation/ maintainer/participant/ name	
X-- curation/responsibility/role	roles should be restricted to those relevant to sample curation	curation/ maintainer/roleName	
dc_rights	A statement about various property rights associated with the resource, including intellectual property rights. Recommended practice is to refer to a rights statement with a URI. If this is not possible or feasible, a literal value (name, label, or short text) may be provided.	curation/ conditionsOfAccess or /sdLicense	if the rights pertain to the sample, goes in conditionsOfAccess; if the rights pertain to the sample metadata record, put in sdLicense.

iSamplesSchemaCore1.0	iSamples notes	Schema.org	Schema.org note
description	free text description of the physical sample, and any related information. Include as much detail as will be useful for users to find the sample and understand its context.	description	
has_context_category/ scheme_name	https://w3id.org/isample/vocabulary/sampledfeature/1.0/sampledfeaturevocabulary	category[inDefinedTermSet/name = iSamples SampledFeature type]	
has_context_category/ identifier	use URI from isamples sampledFeature vocabulary	category[inDefinedTermSet/ name = iSamples SampledFeature type]/id	
has_context_category/label	For context using controlled vocabulary, the dataCite subject is the identifier/label, for keywords, it is the keyword	category[inDefinedTermSet/ name = iSamples SampledFeature type]/name	
has_material_category/ identifier	use URI from iSamples material type vocabular	category[inDefinedTermSet/ name = iSamples Material type]/id	
has_material_category/ scheme_name	use https://w3id.org/isample/vocabulary/material/1.0/materialsvocabulary	category[inDefinedTermSet/name = iSamples material type]	
has_material_category/label	For material using controlled vocabulary, the dataCite subject is the identifier/label, for keywords, it is the keyword	category[inDefinedTermSet/ name = iSamples Material type]/name	
has_material_sample_object_type	specify the kind of object that the material sample is, use iSamples Material Sample Object Type Vocabulary, with ResourceTypeGeneral = PhysicalObject. the label for the Material Sample Object Type is the text value for dataCite ResourceType	additionalType	implement with schema:additionalType
has_material_sample_object_type / identifier		additionalType	The URI for term. At least one URI from iSamples vocabulary is expected
has_material_sample_object_type /label	repeat label and uri in subjects for datacite	additionalType	Label associated with material sample object type.
keywords/keyword	An identifier for the nomenclatural (not taxonomic) details of a scientific name.	keywords/{string} or keywords/name	
keywords/keyword_uri		keywords/identifier	
keywords/scheme_name		keywords/ inDefinedTermSet/name	

iSamplesSchemaCore1.0	iSamples notes	Schema.org	Schema.org note
keywords/scheme_uri	not included for controlled vocabulary terms	keywords/ inDefinedTermSet/ identifier	
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	name	
produced_by/SamplingEvent	object that documents the sampling event--who, where, when the material sample was obtained	event	object that documents the sampling event--who, where, when the material sample was obtained. Implements iSamples SamplingEvent
produced_by/SamplingEvent/responsibility/affiliation		event/participant [roleName={role}]/affiliation	
produced_by/SamplingEvent/responsibility/contact_information	any agent can have an e-mail or telephone number for contacting	event/participant [roleName={role}]/contactPoint	
produced_by/SamplingEvent/responsibility/identifier		event/participant [roleName={role}]/identifier	
produced_by/SamplingEvent/responsibility/name		event/participant [roleName={role}]/name	
produced_by/SamplingEvent/responsibility/role		event/participant [roleName={role}]	
produced_by/SamplingEvent/responsibility[roles other than 'collector', 'funder'],	Agents associated with sampling event, agent/role is subclass of 'contributor'. Need mapping from iSample roles to DataCite contributorType	event/participant	
X-- produced_by/ SamplingEvent/ authorized_by	a list of permits or other formal permission documents under which the sample was collected. Use to cite legal documents authorizing sample collection.	http://resource.isamples.org/schema/1.0/ authorized_by	no schema.org property
produced_by/SamplingEvent/description		event/description	
produced_by/SamplingEvent/has_feature_of_interest	The specific thing that was sampled; should be an instance of the type identified by the has_context_category property	event/about	What was sampled. implements iSample has_feature_of_interest. string or scopedName

iSamplesSchemaCore1.0	iSamples notes	Schema.org	Schema.org note
produced_by/SamplingEvent/identifier		event/@id	A string that identifies the samplingEvent. Use to gather all samples from a single sampling event.
produced_by/SamplingEvent/label		event/name	
produced_by/SamplingEvent/project	the name or identifier for a project that is the sponsor for a samplingEvent. Use to link samples collected in the context of a particular project. Property value should be a name or a resolvable URI. If funding was through an identified grant/award/contract instrument, this is the label associated with that instrument, If a grant/contract/award was the instrument, this would be the award title.	event/organizer	string or scopedName
produced_by/SamplingEvent/responsibility	the responsibility is an agent-- could be person or organization, with role = 'collector'. Other agents associated with the sampling event could be included, e.g. with roles like 'sponsor', 'funder'....	event/participant	Agent with person name and affiliation, or organization name, and their role relative to the sampling event.
produced_by/SamplingEvent/responsibility[role=collector]/ identifier	only one identifier associated with person in this role. iSamples identifier value is a string.	event/participant [roleName=collector]/identifier	
produced_by/SamplingEvent/responsibility[role=collector]/affiliation	only one affiliation associated with person in this role.	event/participant [roleName=collector]/affiliation/name	
produced_by/SamplingEvent/responsibility[role=collector]/name	string, name of a person. Format: {firstName MI lastName}.	event/participant [roleName=collector]/name	participant has a Role, Agent can be person or organization
produced_by/SamplingEvent/responsibility[Role=funder]/ identifier	identifier for funding agent	event/participant [roleName=funder]/identifier	
produced_by/SamplingEvent/responsibility[Role=funder]/ name	Name person or organization that supported the activity;	event/participant [roleName=funder]/name	
produced_by/SamplingEvent/result_time	Date on which the sample was collected.	event/endDate	when the sampling event was done.

iSamplesSchemaCore1.0	iSamples notes	Schema.org	Schema.org note
produced_by/SamplingEvent/sampling_site	one WGS 84 Decimal Degree lat /long point location is required. Schema doesn't accomodate other coordinate locations. This corresponds to DataCite geoLocationPoint. Multiple places might be specified; iSamples is limited to a single point location -- doesn't make sense for a sample to come from more than one point location...	event/location	
produced_by/SamplingEvent/sampling_site/sample_location/latitude	sample location point coordinate	event/location/geo/latitude	
produced_by/SamplingEvent/sampling_site/sample_location/longitude	sample location point coordinate	event/location/geo/longitude	
produced_by/SamplingEvent/sampling_site/description	description of location	event/location/ description	
produced_by/SamplingEvent/sampling_site/label	text to identify a location for human users;	event/location/ name	
produced_by/SamplingEvent/sampling_site/sample_location/elevation	Should be a number and Unit of measure, and the vertical reference system. e.g. 401 m above mean sea level.	event/location/geo/elevation	
produced_by/SamplingEvent/sampling_site/sample_location/is_part_of	A link from a SamplingSite to a larger sampling site that spatially contains the source SamplingSite. The container site is specified by its identifier.	event/location/ containedInPlace/ identifier or name	
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'	--	no schema.org property
registrant [role=registrant]/name/	identification of the agent that registered the sample, with contact information. Role = 'registrant'	sdpublisher/name	

iSamplesSchemaCore1.0	iSamples notes	Schema.org	Schema.org note
registrant/ contact_information		sdpublisher/affiliation/ contactPoint	
registrant/affiliation		sdpublisher/affiliation/ name	
registrant/identifier		sdpublisher/identifier	
related_resource	link to another resource via identifier for the target resource, with a relationship type, label, and description. Label and description do not have matching properties in DataCite.	relatedLink	
related_resource/description		relatedLink/ description	
related_resource/label	a human intelligible string used to identify a thing, i.e. the name to use for the thing; should be unique in the scope of a sample collection or dataset.	relatedLink/name	
related_resource/relationship	nature of relationship between sample and resource that is the target of the relationship. See vocabulary in development: https://docs.google.com/spreadsheets/d/1yk3ZEWzEc1cXBOWb-foCtq3isaBBa95Rv8eA6TlyieM	relatedLink/ linkRelationship/name	string or scopedName
related_resource/target		relatedLink/ linkRelationship/target/url	
sample_identifier	unique identifier for the physical object, ideally a URI that is physically attached to the material sample object, an IGSN or ARK	@id	@id identifies the subject of the triples; should be a resolvable URI.

The mapping assumes a structure for the Schema.org JSON-LD like this:

```
{
  "@context": {
    "@vocab": "https://schema.org/", "dcterms": "http://purl.org/dc/terms/", "id": "@id", "type": "@type",
    "curation": "http://resource.isamples.org/schema/1.0/MaterialSampleCuration" },
    "type": "Thing",
    "id": "https://igsn.org/slk222-046537",
    "additionalType": ["https://w3id.org/isample/vocabulary/materialsampleobjecttype/1.0/solidmaterialsample"],
    "name": "name for the material sample",
    "description": "description of material sample.",
  }
```

```

    "identifier": [
      {
        "type": "PropertyValue",
        "name": "other identifiers for sample",
        "value": "smr2010-398"
      }
    ],
    ..... rest of record omitted.
    "subjectOf": {
      "type": "DigitalDocument",
      "id": "https://isamples.org/igsn-id/metadata",
      "dcterms:conformsTo": "http://resource.isamples.org/schema/1.0/schema.org",
      "sdPublisher": {
        "type": "Organization",
        "id": "https://ror.org/someorg7523824",
        "name": "This is the metadata publisher—where the record was published",
        "contactPoint": {
          "type": "ContactPoint",
          "email": "curator@gsample.org"
        }
      }
    }
  }

```

In the main body of the record, the subject of the statements is the sample with identifier in the 'id' property; this is the material sample description. Since schema.org does not include a type for material object, the type 'Thing' is assigned, and the actual sample type is assigned from the iSamples Material Sample Object Type vocabulary in the 'additionalType' property.

In the 'subjectOf' object, the subject of the statements (type, dcterms:conformsTo, sdPublisher) is the metadata record, which as a type 'Digital Document'. In some implementations this part of the record about the metadata object is omitted.