line #	MIAPPE	ISA-Tab			BrAPI		
	MIAPPE Check list	ISA-Tab File	ISA-Tab Section (for Investigation file)	ISA-Tab Field	BrAPI Call	BrAPI Object(s)	BrAPI Field(s)
DM-1	**Investigation**						
DM-2	Investigation unique ID	Investigation	INVESTIGATION	Investigation Identifier	/trials/{trialDbId}	None	trialDbId
DM-3	Investigation title	Investigation	INVESTIGATION	Investigation Title	/trials/{trialDbId}	None	trialName
DM-4	Investigation description	Investigation	INVESTIGATION	Investigation Description	/trials/{trialDbId}	None	trialDescription
DM-5	Submission date	Investigation	INVESTIGATION	Investigation Submission Date	/trials/{trialDbId}	datasetAuthorships	submissionDate
DM-6	Public release date	Investigation	INVESTIGATION	Investigation Public Release Date	/trials/{trialDbId}	datasetAuthorships	publicReleaseDate
DM-7	License	Investigation	INVESTIGATION	Comment[License]	/trials/{trialDbId}	datasetAuthorships	license
DM-8	MIAPPE version	Investigation	INVESTIGATION	Comment[MIAPPE version]		out of scope	
DM-9	Associated publication	Investigation	INVESTIGATION PUBLICATIONS	Investigation Publication DOI	/trials/{trialDbId}	publications	publicationPUI
DM-10	**Study**						
DM-11	Study unique ID	Investigation	STUDY	Study Identifier	/studies/{studyDbId}	None	studyDbId
DM-12	Study title	Investigation	STUDY	Study Title	/studies/{studyDbId}	None	studyName
DM-13	Study description	Investigation	STUDY	Study Description	/studies/{studyDbId}	None	studyDescription
DM-14	Start date of study	Investigation	STUDY	Comment[Study Start Date]	/studies/{studyDbId}	None	startDate
DM-15	End date of study	Investigation	STUDY	Comment[Study End Date]	/studies/{studyDbId}	None	endDate
DM-16	Contact institution	Investigation	STUDY	Comment[Study Contact Institution]	/studies/{studyDbId}	None	instituteName
DM-17	Geographic location (country)	Investigation	STUDY	Comment[Study Country]	/studies/{studyDbId}	location	countryName / countryCode
DM-18	Experimental site name	Investigation	STUDY	Comment[Study Experimental Site]	/studies/{studyDbId}	location	name
DM-19	Geographic location (latitude)	Investigation	STUDY	Comment[Study Latitude]	/studies/{studyDbId}	location	latitude
DM-20	Geographic location (longitude)	Investigation	STUDY	Comment[Study Longitude]	/studies/{studyDbId}	location	longitude
DM-21	Geographic location (altitude)	Investigation	STUDY	Comment[Study Altitude]	/studies/{studyDbId}	location	altitude
DM-22	Description of the experimental design	Investigation	STUDY DESIGN DESCRIPTORS	Comment[Study Design Description]	/studies/{studyDbId}	experimentalDesign	description
DM-23	Type of experimental design	Investigation	STUDY DESIGN DESCRIPTORS	Study Design Type	/studies/{studyDbId}	experimentalDesign	PUI
DM-24	Observation unit level hierarchy	Investigation	STUDY DESIGN DESCRIPTORS	Comment[Observation Unit Level Hierarchy]	/studies/{studyDbId}	additionalInfo	observationUnitLevelHierarchy
DM-25	Observation unit description	Investigation	STUDY DESIGN DESCRIPTORS	Comment[Observation Unit Description]	/studies/{studyDbId}	None	observationUnitsDescription
DM-26	Description of growth facility	Investigation	STUDY DESIGN DESCRIPTORS	Comment[Description of Growth Facility]	/studies/{studyDbId}	growthFacility	description
DM-27	Type of growth facility	Investigation	STUDY DESIGN DESCRIPTORS	Comment[Type of Growth Facility]	/studies/{studyDbId}	growthFacility	PUI
DM-28	Cultural practices	Investigation	STUDY PROTOCOLS	Study Protocol Description (for Growth protocol)	/studies/{studyDbId}	None	culturalPractices
DM-29	Map of experimental design	Investigation	STUDY DESIGN DESCRIPTORS	Comment[Map of Experimental Design]	/studies/{studyDbId}	additionalInfo	mapOfExperimentalDesign
DM-30	**Person**						
DM-31	Person name	Investigation	INVESTIGATION CONTACTS / STUDY CONTACTS	Investigation Person Last Name - First Name - Mid Initials / Study Person Last Name - First Name - Mid Initials	/studies/{studyDbId}	contacts	name
DM-32	Person email	Investigation	INVESTIGATION CONTACTS / STUDY CONTACTS	Investigation Person Email / Study Person Email	/studies/{studyDbId}	contacts	email
DM-33	Person ID	Investigation	INVESTIGATION CONTACTS / STUDY CONTACTS	Comment[Person ID]	/studies/{studyDbId}	contacts	orcid / contactDbId
DM-34	Person role	Investigation	INVESTIGATION CONTACTS / STUDY CONTACTS	Investigation Person Roles / Study Person Roles	/studies/{studyDbId}	contacts	type
DM-35	Person affiliation	Investigation	INVESTIGATION CONTACTS / STUDY CONTACTS	Investigation Person Affiliation / Study Person Affiliation	/studies/{studyDbId}	contacts	instituteName
DM-36	**Data File**						
DM-37	Data file link	Investigation	STUDY	Comment[Study Data File Link]	/studies/{studyDbId}	dataLinks	type
DM-38	Data file description	Investigation	STUDY	Comment[Study Data File Description]	/studies/{studyDbId}	dataLinks	name / url
DM-39	Data file version	Investigation	STUDY	Comment[Study Data File Version]	/studies/{studyDbId}	dataLinks	version
DM-40	**Biological Material**						
DM-41	Biological material ID	Study	None	Source Name	/germplasm/{germplasmDbId}	None	accessionNumber
DM-42	Organism	Study	Source	Characteristics[Organism]	/germplasm/{germplasmDbId}	taxonIds	sourceName, taxonId
DM-43	Genus	Study	Source	Characteristics[Genus]	/germplasm/{germplasmDbId}	None	germplasmGenus
DM-44	Species	Study	Source	Characteristics[Species]	/germplasm/{germplasmDbId}	None	germplasmSpecies
DM-44	Infraspecific name	Study	Source	Characteristics[Infraspecific Name]	/germplasm/{germplasmDbId}	None	subtaxa
DM-45	Biological material latitude	Study	Source	Characteristics[Biological Material Latitude]	/germplasm/{germplasmDbId}	germplasmOrigin	latitudeDecimal

DM-46	Biological material longitude	Study	Source	Characteristics[Biological Material Longitude]	/germplasm/{germplasmDbId}	germplasmOrigin	longitudeDecimal
DM-47	Biological material altitude	Study	Source	Characteristics[Biological Material Altitude]	/germplasm/{germplasmDbId}	germplasmOrigin	altitude
DM-48	Biological material coordinates uncertainty	Study	Source	Characteristics[Biological Material Coordinates Uncertainty]	/germplasm/{germplasmDbId}	germplasmOrigin	coordinateUncertainty
DM-49	Biological material preprocessing	Study	Source	Characteristics[Biological Material Preprocessing]	/germplasm/{germplasmDbId}	None	germplasmPreprocessing
DM-50	Material source ID (Holding institute/stock centre, accession)	Study	Source	Characteristics[Material Source ID]	/germplasm/{germplasmDbId}/mcpd	donorInfo	donorAccessionNumber
DM-51	Material source DOI	Study	Source	Characteristics[Material Source DOI]	/germplasm/{germplasmDbId}/mcpd	donorInfo	donorAccessionPui
DM-52	Material source latitude	Study	Source	Characteristics[Material Source Latitude]	/germplasm/{germplasmDbId}/mcpd	collectingInfo.collectingSite	latitudeDecimal
DM-53	Material source longitude	Study	Source	Characteristics[Material Source Longitude]	/germplasm/{germplasmDbId}/mcpd	collectingInfo.collectingSite	longitudeDecimal
DM-54	Material source altitude	Study	Source	Characteristics[Material Source Altitude]	/germplasm/{germplasmDbId}/mcpd	collectingInfo.collectingSite	elevation
DM-55	Material source coordinates uncertainty	Study	Source	Characteristics[Material Source Coordinates Uncertainty]	/germplasm/{germplasmDbId}/mcpd	collectingInfo.collectingSite	coordinateUncertainty
DM-56	Material source description	Study	Source	Characteristics[Material Source Description]	/germplasm/{germplasmDbId}	None	seedSourceDescription
DM-57	**Environment**						
DM-58	Environment parameter	Investigation	STUDY PROTOCOLS	Study Protocol Parameters Name *(for Growth protocol)*	/studies/{studyDbId}	environmentParameters	parameterName
DM-59	Environment parameter value	Study	Growth protocol	Parameter Value[ ]	/studies/{studyDbId}	environmentParameters	description
DM-60	**Experimental Factor**						
DM-61	Experimental Factor type	Investigation	STUDY FACTORS	Study Factor Name	/observationunits	Treatment	Factor
DM-62	Experimental Factor description	Investigation	STUDY FACTORS	Comment[Study Factor Description]	None	None	None
DM-63	Experimental Factor values	Investigation	STUDY FACTORS	Comment[Study Factor Values]		out of scope	
DM-64	**Event**						
DM-65	Event type	Investigation	STUDY PROTOCOLS	Study Protocol Name *(for protocol of type Event)*	/events	None	eventTypeName
DM-66	Event accession number	Investigation	STUDY PROTOCOLS	Study Protocol URI *(for protocol of type Event)*	/events	None	eventTypeDbId
DM-67	Event description	Investigation	STUDY PROTOCOLS	Study Protocol Description *(for protocol of type Event)*	/events	None	description
DM-68	Event date	Event file	None	Event Date	/events	None	date
DM-69	**Observation Unit**						
DM-70	Observation unit ID	Study / Assay	None	Sample Name	/observationunits	None	observationUnitDbId
DM-71	Observation unit type	Study	Sample	Characteristics[Observation Unit Type]	/observationunits	None	observationLevel
DM-72	External ID	Study	Sample	Characteristics[External ID]	/observationunits	observationUnitXref	id/source
DM-73	Spatial distribution	Study	Sample	Characteristics[Spatial distribution]	/observationunits	None	observationLevels
DM-74	Observation Unit factor value	Study	Source / Sample	Factor Value[ ]	/observationunits	treatments	factor/modality
DM-75	**Sample**						
DM-76	Sample ID	Assay	None	Extract Name	/samples	None	sampleDbId
DM-77	Plant structure development stage	Assay	Extract	Characteristics[Plant Structure Development Stage]	/samples	additionalInfo	plantStructureDevelopmentStage
DM-78	Plant anatomical entity	Assay	Extract	Characteristics[Plant Anatomical Entity]	/samples	None	tissueType
DM-79	Sample description	Assay	Sampling protocol	Parameter Value[Sampling Description]	/samples	additionalInfo	samplingDescription
DM-80	Collection date	Assay	Sampling protocol	Parameter Value[Sampling Date]	/samples	None	sampleTimestamp
DM-81	External ID	Assay	Extract	Characteristics[External ID]	/samples	additionalInfo	externalId
DM-82	**Observed Variable**						
DM-83	Variable ID	Trait Definition File	None	Variable ID	/variables	None	observationVariableName
DM-84	Variable name	Trait Definition File	None	Variable name	/variables	None	observationVariableName, observationVariableDbId
DM-85	Variable accession number	Trait Definition File	None	Variable accession number	/variables	None	xref, (observationVariableDbId)
DM-86	Trait	Trait Definition File	None	Trait	/variables	trait	traitName, description
DM-87	Trait accession number	Trait Definition File	None	Trait accession number	/variables	trait	(traitDbId)
DM-88	Method	Trait Definition File	None	Method	/variables	method	methodName
DM-89	Method accession number	Trait Definition File	None	Method accession number	/variables	method	(methodDbId)
DM-90	Method description	Trait Definition File	None	Method description	/variables	method	description
DM-91	Reference associated to the method	Trait Definition File	None	Reference associated to the method	/variables	method	reference
DM-92	Scale	Trait Definition File	None	Scale	/variables	scale	scaleName
DM-93	Scale accession number	Trait Definition File	None	Scale accession number	/variables	scale	(scaleDbId)
DM-94	Time scale	Trait Definition File	None	Time scale	None	None	None