

IDPHY: MOLECULAR AND MORPHOLOGICAL IDENTIFICATION OF PHYTOPHTHORA BASED ON THE TYPES

TABULAR KEY: Legends for morphological characters, and colony morphology.

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MORPHOLOGICAL CHARACTERS	DEFINITION OF CODES
PA = PAPILLAE	P = papillate (3.5 µm or more)
	SP = semipapillate (less than 3.5 µm)
	NP = nonpapillate
SSH = SPORANGIA SHAPE	G = globose
	SG = subglobose
	E = elipsoid
	El= elongate
	L = limoniform
	O = ovoid
	Ob = obovoid
	P = pyriform
	Op = obpyriform
	R = reniform
	T = turbinate
	Ot = obturbinate
	Obc = obclavate
	S = sickle -shaped
	I = irregular
	D = distorted shapes
	WC = with constricted middle
	tp = tapered base
	en =elongated neck
	In red = species that require special methods
CA = CADUCITY	C = Caducous
	- = non caducous
	C/- = occasionally caducous
PE = PEDICEL	S = short (5 µm long or less)
	M = medium (between 5 - 20 µm long)
	L = long (20 µm or more)
	M/L = medium and long pedicels
	S/M = short and medium pedicels
	- = no pedicel
PR = INTERNAL PROLIFERATION	I = Internal proliferation
	N = nested
	E = extended
	NE = nested and extended
	EX = external

	- = no proliferation
SPO = SPORANGIOPHORE	UN = unbranched
	CLS = close sympodium
	SS = symple sympodial
	CS = compound sympodial
	U = umbellate
	IB = irregularly branched
	E = erected. Downy mildew like.
	IS = Intercalary sporangia
	GS = globose swellings
CH = CHLAMYDOSPORE	CH = present
	CH/- = occasionally
	- = absent
	G = globose
	SG = subglobose
	I = individual
	L = lateral
	T = terminal
	IT = intercalary
HS = HYPHAL SWELLINGS	HS = present
	HS/- = occasionally
	- = absent
	G = globose
	SG = subglobose
	E = elongate
	Op = obpyriform
	Obv = obovate
	TL = toruloid, lobate
	D = distorted shapes = Irregular
	S = simple with slight swellings
	I = Individual
	T = terminal
	IT = intercalary
	C = catenulate
	CR = coralloid
	R = radiate
CL = clustered	
H = HOMOTHALLISM	HO = homothallic
	HE = heterothallic
	S = sterile
	S = smooth wall
	S/tb = smooth wall, tapered base

OOG = OOGONIUM	SW = slight wavy
	O = ornamented
	O/tb = ornamented wall/tapered base
	O/S = variable, ornamented and smooth
AN = ANTHERIDIA	P = paragynous
	A = amphigynous
	P/A = predominantly paragynous
	P/A = predominantly amphigynous
OOS = OOSPORE	P = plerotic
	A = aplerotic
	SA = slightly aplerotic
	P/A = plerotic and aplerotic
C= COLONY PATTERN	V8 = Clarified V8 juice agar
	PDA = Potato Dextrose Agar (30gr Difco)
	CMA = Corn Meal Agar
	CH = Chrysanthemum
	RO = Rozette or petaloid
	RA = Radiate
	ST = Stellate
	ND = No distinctive pattern
	sg = slow growth
	U = undetermined
T = TEMPERATURE	MIN = minimum temperature
	OPT = optimum temperature
	MAX = maximum temperature
	U = undetermined