

List of Abbreviations

$\alpha$	alpha
$^{\circ}$	degree
$^{\circ}\text{C}$	degree Celsius
$^{\circ}\text{F}$	degree Fahrenheit
$\Psi$	pseudo
%	percentage
<	less than
>	more than
$\pm$	more less
+	plus/add
:	is to
$-20^{\circ}\text{C}$	minus twenty degree Celsius
-----	over
-	not applicable
I	one
II	two
X 100	times hundred
$^1\text{H NMR}$	proton nuclear magnetic resonance
2,4-D	2,4-dichlorophenoxyacetic acid
60 F <sub>254</sub>	Merck precoated aluminum back thin layer chromatography sheets, aluminum oxide 60 Å (ångström) pore size with a F (fluorescent indicator) at 254 nm (nanometer) excitation wavelength
100x g	hundred times gravity force
400x	four hundred times magnification
$\mu\text{m}$	micrometer
ABA	abscisic acid
Ave	average
B <sub>5</sub>	pantothenic acid
BA	N-6-benzyladenine
BAP	N-6-benzylaminopurine
BSTFA	N,O-bis (trimethylsilyl) trifluoroacetamide
BuOH	butanol
cm	centimeter
cps	count per second
C	carbon
C	cotyledon
C <sup>+</sup>	with 250 mg/L carbenicilin
C <sup>-</sup>	without 250 mg/L carbenicilin
C <sub>2</sub> H <sub>5</sub> OH	absolute ethanol
C <sub>2</sub> H <sub>6</sub> <sup>+</sup>	ethane
C <sub>2</sub> H <sub>12</sub>	ethylene
C <sub>6</sub> H <sub>6</sub>	benzene
C <sub>7</sub> H <sub>7</sub> <sup>+</sup>	tropylium ion
C <sub>28</sub> H <sub>50</sub> N <sub>2</sub> O <sub>4</sub> and C <sub>28</sub> H <sub>52</sub> N <sub>2</sub> O <sub>4</sub> +2Br-H <sub>2</sub> O	carpaine and piperidine+hydrobromide

<b>CAS</b>	chemical abstracts service
<b>CDCl<sub>3</sub></b>	deuterium chloroform
<b>CHCH<sub>3</sub></b>	alkene
<b>CHCl<sub>3</sub></b>	chloroform
<b>CH<sub>2</sub></b>	methylene
<b>CH<sub>3</sub>COOH</b>	glacial acetic acid
<b>CI</b>	callus induction medium
<b>CO<sub>2</sub></b>	carbon dioxide
<b>COO<sup>-</sup>Na<sup>+</sup></b>	cobalt oxide reducing the electropositive sodium
<b>COOH</b>	carboxyl group
<b>CVS</b>	cell volume after sedimentation
<b>d</b>	duplet
<b>DNA</b>	deoxyribonucleic acid
<b>e.g.</b>	<i>exempli gratia</i> (for example)
<b>et al.</b>	<i>et alia</i> (and others)
<b>EC</b>	embryogenic callus
<b>ESC</b>	embryogenic cell suspension
<b>Et<sub>2</sub>O</b>	diethyl ether
<b>FAOSTAT</b>	Food and Agricultural Organization Statistic
<b>FDA</b>	fluorescence diacetate
<b>FGP</b>	Field grown plant
<b>FT-NMR</b>	Fourier transform - nuclear magnetic resonance
<b>FTICR</b>	Fourier transform ion cyclotron resonance
<b>FW</b>	fresh weight of cells
<b>g</b>	gramme
<b>g/L</b>	gramme per litre
<b>g/mol</b>	gramme per mol
<b>G</b>	germination medium
<b>GA<sub>3</sub></b>	gibberellic acid
<b>GC</b>	gas chromatography
<b>GC-MS</b>	gas chromatography-mass spectrometry
<b>GE</b>	globular embryo
<b>GLC</b>	gas-liquid chromatography
<b>hrs</b>	hours
<b>H</b>	hidrogen
<b>H<sub>2</sub>O</b>	water
<b>HCl</b>	hydrochloride
<b>HOAc</b>	acetic acid
<b>Hz</b>	hertz
<b>i/i/i</b>	isipadu/isipadu/isipadu
<b>i.e</b>	<i>id est</i> (that is)
<b>IAA</b>	indole-3-acetic acid
<b>IBA</b>	indole-3-butyric acid
<b>IvP</b>	<i>In vitro</i> Plantlets
<b>IZE</b>	immature zygotic embryos
<b>J</b>	coupling constant
<b>kg</b>	kilogramme
<b>kPa</b>	kilopascal
<b>K<sub>2</sub>CO<sub>3</sub></b>	potassium carbonate
<b>lux</b>	illuminance and luminous emittance

<b>LM</b>	liquid multiplication medium
<b>m</b>	multiplet
<b>m</b>	metres
<b>mg</b>	milligramme
<b>m/z</b>	mass-to-charge ratio
<b>mg/kg</b>	milligramme per kilogramme
<b>mg/L</b>	milligramme per litre
<b>mL</b>	millilitre
<b>mm</b>	millimetre
<b>m.p</b>	melting point
<b>M</b>	molar
<b>M<sup>+</sup></b>	molecular ion
<b>[M<sup>+</sup>]</b>	molecular ion peak
<b>MARDI</b>	Malaysian Agricultural Research and Development Institute
<b>Me</b>	methyl (CH <sub>3</sub> )
<b>MeOH</b>	methanol
<b>MHz</b>	megahertz
<b>MOX</b>	Malaysian Oxygen
<b>MS</b>	Murashige and Skoog
<b>MS</b>	mass spectrometry
<b>N</b>	Nitsch and Nitsch
<b>N</b>	nitrogen
<b>N<sub>2</sub></b>	nitrogen gas
<b>NAA</b>	naphthaleneacetic acid
<b>NaCl</b>	sodium chloride
<b>NaOH</b>	sodium hydroxide
<b>Na<sub>2</sub>SO<sub>4</sub></b>	sodium sulfate
<b>NH</b>	amino acids element
<b>NH<sub>2</sub></b>	amino group
<b>NH<sub>3</sub>Cl</b>	ammonium chloride
<b>NMR</b>	nuclear magnetic resonance
<b>No.</b>	number
<b>O</b>	oxygen
<b>O<sup>-Na+</sup></b>	oxygen reducing the electropositive sodium
<b>OE</b>	oblong embryo
<b>OH</b>	hydroxide
<b>pH</b>	$-\log_{10}$ proton concentration (activity), in mol per litre
<b>ppm</b>	part per million
<b>Pc</b>	critical pressure
<b>PCT</b>	pro-cambial traces
<b>PCV</b>	packed cell volume
<b>PE</b>	pro-embryo
<b>PEM</b>	pro-embryo mass
<b>PGR</b>	plant growth regulators
<b>PRSV</b>	Papaya Ring Spot Virus
<b>q</b>	quintet
<b>rpm</b>	range per minute
<b>R</b>	regeneration media
<b>R<sub>f</sub></b>	retention factor
<b>RAPD</b>	random amplification polymorphism DNA

<b>RM</b>	ringgit Malaysia
<b>RNA</b>	ribonucleic acid
<b>sec</b>	second
<b>SC CO<sub>2</sub></b>	supercritical carbon dioxide
<b>SCF</b>	supercritical fluid
<b>S.D</b>	±standard deviation
<b>SE</b>	somatic embryos
<b>SF</b>	supercritical fluid
<b>SFE</b>	supercritical fluid extraction
<b>SR</b>	suspensor region
<b>Tc</b>	critical temperature
<b>TFNet</b>	International Tropical Fruits Network
<b>TDZ</b>	thidiazuron
<b>TLC</b>	thin layer chromatography
<b>T magnet</b>	tesla magnetic
<b>TMCS</b>	trimethylchlorosilane
<b>TO</b>	torpedo embryo
<b>USD</b>	dollar of United State of America
<b>UV</b>	ultraviolet light
<b>v/v</b>	volume per volume
<b>v/v/v</b>	volume per volume per volume
<b>w/v</b>	weight per volume