

## Understanding the Acronyms

### Some Technical Terms and Abbreviations Used in Pesticide Science

2-PAM	2-pralidoxime
Ach	acetylcholine
Ache	acetylcholinesterase
ADI	Acceptable Daily Intake
ADME	adsorption, distribution, metabolism and excretion
ADP	adenosine diphosphate
ADR	European agreement concerning the international carriage of dangerous goods by road
AE	acid equivalent
ai	active ingredient
ALARA	As Low As Reasonably Achievable
ALD50	approximate median lethal dose 50%
ANOVA	analysis of variance
AOEL	Acceptable Operator Exposure Level
AP	alkaline phosphatase
approx	approximate
ARC	anticipated residue contribution
ARfD	acute reference dose
as	active substance
AST	aspartate aminotransferase (SGOT)
ASV	air saturation value
ATP	adenosine triphosphate
BCF	bioconcentration factor
bfa	body fluid
BOD	biological oxygen demand
bp	boiling point
BSAF	biota-sediment accumulation factor
BSP	bromosulphophthalein
<i>Bt</i>	<i>Bacillus thuringiensis</i>
<i>Bti</i>	<i>Bacillus thuringiensis israelensis</i>
<i>Btk</i>	<i>Bacillus thuringiensis kurstaki</i>
<i>Btt</i>	<i>Bacillus thuringiensis tenebrionis</i>
BUN	blood urea nitrogen
bw	body weight
c	centi-(x 10 <sup>-2</sup> ) – Note: <u>not</u> SI
CA	controlled atmosphere
CAD	computer aided design
CADDY	computer aided dossier and data supply (an electronic dossier interchange and archiving format)
cd	candela
CDA	controlled droplet application
cDNA	complementary DNA
CEC	cation exchange capacity
<i>cf</i>	confer, compare to
CFU	colony forming units
ChE	cholinesterase

CI	confidence interval
CL	confidence limits
cm	centimetre – Note: <u>not</u> SI
CNS	central nervous system
COD	chemical oxygen demand
CPK	creatinine phosphatase
cv	coefficient of variation
Cv	ceiling value
CXL	Codex Maximum Residue Limit (Codex MRL)
d	day
DES	diethylstilboestrol
DFR	dislodgeable foliar residue
DMSO	dimethylsulfoxide
DNA	deoxyribonucleic Acid
dna	designated national authority
DO	dissolved oxygen
DOC	dissolved organic carbon
dpi	days pot inoculation
DRES	dietary risk evaluation system
DT	disappearance time
DT <sub>50</sub>	period required for 50 percent dissipation (define method of estimation)
DT <sub>90</sub>	period required for 90 percent dissipation (define method of estimation)
dw	dry weight
DWQG	drinking water quality guidelines
EC <sub>50</sub>	effective concentration
ECD	electron capture detector
ED <sub>50</sub>	median effective dose
EDI	estimated daily intake
EHC (#)	Environmental Health Criteria (number)
ELISA	enzyme lined immunosorbent assay
EMDI	estimated maximum daily intake
EPMA	electron probe micro analysis
ERC	environmentally relevant concentration
ERL	extraneous residue limit
F <sub>1</sub>	filial generation, first
F <sub>2</sub>	filial generation, second
FIA	fluorescence immuno assay
FID	flame ionization detector
F <sub>0</sub>	parental generation
FOB	functional observation battery
fp	freezing point
FPD	flame photometric detector
FPLC	fast protein liquid chromatography
g	gram
GAP	Good Agricultural Practice
GC	gas chromatography
GC-EC	gas chromatography with electron capture detector
GC-FID	gas chromatography with flame ionization detector
GC-MS	gas chromatography-mass spectrometry
GC-MSD	gas chromatography with mass-selective detection

GEP	good experimental practice
GFP	good field practice
GGT	gamma glutamyl transferase
GI	gastro-intestinal
GIS	Geographical Information system
GIT	gastro-intestinal tract
GL	guideline level
GLC	gas liquid chromatography
GLP	good laboratory practice
GM	geometric mean
GMM	genetically modified micro-organism
GMO	genetically modified organism
GPC	gel-permeation chromatography
GPPP	good plant protection practice
GPS	global positioning system
GSP	good storage practice
GV	granulosis virus
h	hour(s)
H	Henry's Law constant (calculated as a unitless value) (see also K)
ha	hectare ( $10^4 \text{ m}^2$ )
HACCP	Hazard Analysis Critical Control Point (usu. food processing)
Hb	haemoglobin
HCG	human chorionic gonadotropin
Hct; Ht	haematocrit
HDPE	high density polyethylene
HDT	highest dose tested
HEED	high energy electron diffraction
HID	helium ionization detector
hL	hectolitre ( $10^2$ ) – <u>not</u> SI
HPAEC	high performance anion exchange chromatography
HPLC	high performance liquid chromatography (sometimes high pressure ~)
HPLC-MS	high performance liquid chromatography - mass spectrometry
HPPLC	high pressure planar liquid chromatography
HPT	hypothalamus-pituitary-testicular
HPTLC	high performance thin layer chromatography
HRGC	high resolution gas chromatography
$H_s$	Shannon-Weaver index
HV	high volume
$I_{50}$	inhibitory dose, 50%
$IC_{50}$	median immobilisation concentration
ICM	integrated crop management
ID	ionization detector
IEDI	international estimated daily intake
IGR	insect growth regulator
im	intramuscular
inh	inhalation
ip	intraperitoneal
IPM	integrated pest management
IR	infrared
ISBN	international standard book number

ISSN	international standard serial number
iv	intravenous
IVF	<i>in vitro</i> fertilization
JMPR	Joint FAO/WHO Meeting on Pesticide Residues ( <i>Codex Alimentarius</i> )
k	kilo ( $10^3$ )
K	Kelvin or Henry's Law constant (in atmospheres per cubic meter per mole) (see also H) <sup>13</sup>
$K_{ads}$	adsorption constant
$K_{des}$	apparent desorption coefficient
$K_F$	freudlich coefficient
kg	kilogram
$K_{oc}$	organic carbon adsorption coefficient
$K_{OH}$	hydroxyl radical rate constant
$K_{om}$	organic matter adsorption coefficient
$K_{OW}$	octanol water partition coefficient
L	Litre
LAN	local area network
LASER	light amplification by stimulated emission of radiation
LBC	loosely bound capacity
LC	liquid chromatography
$LC_{50}$	lethal concentration, median
LCA	life cycle analysis
$LC_{Lo}$	lethal concentration low
LC-MS	liquid chromatography – mass spectrometry
LC-MS-MS	liquid chromatography with tandem mass spectrometry
$LD_{50}$	median lethal dose, median; <i>dosis letalis media</i>
LDH	lactate dehydrogenase
$LD_{Lo}$	lethal dose low
LH	luteinizing hormone
LOAEC	lowest observable adverse effect concentration
LOAEL	lowest observable adverse effect level
LOD	limit of determination - has also been used for “limit of detection” LOQ is now preferred by JMPR
LOEC	lowest observable effect concentration
LOEL	lowest observable effect level
LOQ	limit of quantification (was often considered to be approx. 2x Limit Of Detection)
LPLC	low pressure liquid chromatography
LSC	liquid scintillation counter
LSD	least squared denominator multiple range test; least significant difference
LSS	liquid scintillation spectrometry
LT	lethal threshold
LV	low volume
$\mu\text{g}$	microgram ( $10^{-6}$ g)
$\mu\text{m}$	micrometer (micron)
m	metre, milli~ ( $10^{-3}$ )
M	molar, mega~ ( $10^6$ )
MATC	Maximum Acceptable Toxic Concentration
Mbq	Mega Becquerels
MC	moisture content

MCH	mean corpuscular haemoglobin
MCHC	mean corpuscular haemoglobin concentration
MCV	mean corpuscular volume
MDL	method detection limit
MFO	mixed function oxidase
mg	milligram
MHC	moisture holding capacity
min	minute(s)
mL	millilitre
MLD	minimum lethal dose
MLT	median lethal time
mm	millimetre
mM	milimolar
MMAD	mass median aerodynamic diameter
MoA	mode of action
mol	mole (usu. Gram molecular weight)
MOS	margin of safety
mp	melting point
MRE	maximum residue expected
MRL	maximum residue level
mRNA	messenger ribonucleic acid
MS	mass spectrometry
MSDS	material safety data sheet
MTD	maximum tolerated dose
MV	medium volume
MWHC	maximum water holding capacity
n	normal (defining isomeric configuration); nano ~ (10 <sup>-9</sup> )
NAEL	no adverse effect level
nd	not detected
NEDI	national estimated daily intake
NEL	no effect level
NERL	no effect residue level
ng	nanogram
nm	nanometer
NMR	nuclear magnetic resonance
NMS	Northern Member State
no	number
NOAEC	no observed adverse effect concentration
NOAEL	no observed adverse effect level
NOEC	no observed effect concentration
NOED	no observed effect dose
NOEL	no observed effect level
NOIS	notice of intent to suspend
NPD	nitrogen-phosphorus detector or detection
NPV	nuclear polyhedrosis virus
NR	not reported
NTE	neurotoxic target esterase
OC	organic carbon content
OCR	optical character recognition
ODP	ozone-depleting potential

ODS	ozone-depleting substances
OM	organic matter
OP	organophosphorous pesticide
p	pico~ ( $10^{-12}$ )
P <sub>0</sub> / P <sub>1</sub>	parental generation, first (author dependent)
Pa	pascal (1 bar = 100 kPa)
PAD	pulsed amperometric detection
pc	paper chromatography
PC	personal computer
PCV	haematocrit (packed corpuscular volume)
PDE	potential dermal exposure
PEC	Predicted Environmental Concentration
PEC <sub>A</sub>	predicted environmental concentration in air
PEC <sub>a</sub>	predicted environmental exposure in air
PEC <sub>GW</sub>	predicted environmental concentration in ground water
PEC <sub>gw</sub>	predicted environmental exposure in ground water
PEC <sub>S</sub>	predicted environmental concentration in soil
PEC <sub>s</sub>	predicted environmental exposure in soil
PEC <sub>SW</sub>	predicted environmental concentration in surface water
PEC <sub>sw</sub>	predicted environmental exposure in surface water
PED	plasma-emissions-detector
PELMO	Pesticide Leaching Model
pH	pH-value ( $\approx -\log_{10}\{[H^+]/[1 \text{ M/L}]\}$ )
PHED	pesticide handler's exposure data
PHI	pre-harvest interval
PIC	prior informed consent
pic	phage inhibitory capacity
PIXE	proton induced X-ray emission
pKa	negative logarithm (to the base 10) of the dissociation constant)
pKa	dissociation constant
pL	picolitre ( $10^{-12}$ L)
PNEC	predicted no effect concentration
po	by mouth ( <i>per os</i> )
POEM	Predictive Operator Exposure Model
POP	persistent organic pollutants
P <sub>ow</sub>	partition coefficient between n-octanol and water
ppb	parts per billion ( $10^{-9}$ )
PPE	personal protective equipment
ppm	parts per million ( $10^{-6}$ )
ppp	plant protection product
ppq	parts per quadrillion ( $10^{-24}$ )
ppt	parts per trillion ( $10^{-12}$ )
PRL	practical residue limit
PrT	prothrombin time
PSA	particle size analyser
PSP	phenolsulfophthalein
PT	prothrombin time
PTDI	provisional tolerable daily intake
PTT	partial thromboplastin time
QPS	quarantine pre-shipment (fumigation)

QSAR	quantitative structure-activity relationship
r	correlation coefficient
r <sup>2</sup>	coefficient of determination
RBC	red blood cell
REI	restricted entry interval
Rf	retardation factor
RfD	reference dose
RH	relative humidity
RL <sub>50</sub>	median residual lifetime
RNA	ribonucleic acid
RP	reversed phase
RPE	respiratory protective equipment
rpm	rotations per minute
rRNA	ribosomal ribonucleic acid
RRT	relative retention time
RSD	relative standard deviation
s	second
SAC	strong adsorption capacity
SAP	serum alkaline phosphatase
SAR	structure/activity relationship
SBLC	shallow bed liquid chromatography
sc	subcutaneous
sce	sister chromatid exchange
SD	standard deviation
se	standard error
SEM	standard error of the mean
SEP	standard evaluation procedure
SF	safety factor
SFC	supercritical fluid chromatography
SFE	supercritical fluid extraction
SI	Système International – International standard units for measurement
SIMS	secondary ion mass spectroscopy
SOP	standard operating procedures
sp	species (only after a generic name)
SPE	solid phase extraction
SPF	specific pathogen free
spp	subspecies (also used for sp. plural)
SPS	Sanitary & Phyto-Sanitary (plant health, quarantine etc.)
sq	square(d)
SSD	sulphur specific detector
SSMS	spark source mass spectrometry
STEL	short term exposure limit
STMR	supervised trials median residue
t	tonne (metric ton)
t <sub>1/2</sub>	half-life (define method of estimation)
T <sub>3</sub>	tri-iodothyroxine
T <sub>4</sub>	thyroxine
TADI	temporary acceptable daily intake
TBC	tightly bound capacity
TCD	thermal conductivity detector

TC <sub>Lo</sub>	toxic concentration, low
TD <sub>Lo</sub>	toxic dose low
TDR	time domain reflectometry
TEP	typical end-use product
TER	toxicity exposure ratio
TER <sub>I</sub>	toxicity exposure ration for initial exposure
TER <sub>LT</sub>	toxicity exposure ration following chronic exposure
TER <sub>ST</sub>	toxicity exposure ration following repeated exposure
tert	tertiary (in a chemical name)
TGGE	temperature gradient gel electrophoresis
TID	thermionic detector, alkali flame detector
TIFF	tag image file format
TLC	thin layer chromatography
T <sub>lm</sub>	median tolerance limit
TLV	threshold limit value
TMDI	theoretical maximum daily intake
TMRC	theoretical maximum residue contribution
TMRL	temporary maximum residue limit
TOC	total organic carbon
Tremcard	transport emergency card
tRNA	transfer ribonucleic acid
TSH	thyroid stimulating hormone (thyrotropin)
TWA	time weighted average
UDS	unscheduled DNA synthesis
UF	uncertainty factor (safety factor)
ULV	ultra low volume
UV	ultraviolet
v/v	volume ratio (volume per volume)
VAR	volume application rate
VLV	very low volume
w/v	weight per volume
w/w	weight per weight
WBC	white blood cell
wk	week
wt	weight
XRFA	X-ray fluorescence analysis
yr	year
ζ	zeta potential (a measure of stability of colloidal suspensions or emulsions)
η	dynamic viscosity
ε	decadic molar extinction coefficient
<	less than
≤	less than or equal to
>	greater than
≥	greater than or equal to
°C	degree celsius (centigrade)