



Heavy Metals and Other Pollutants in the Environment

Biological Aspects

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Eugene M. Lisitsyn | Sarra A. Bekuzarova

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LIST OF ABBREVIATIONS

AAC	approximately allowable concentrations
AgNO ₃	silver nitrate
Al	aluminum, is a chemical element in the boron group with atomic number 13
Al ⁺⁺⁺	ion of aluminum
ALT	alanin aminotransferase
As	arsenic
AST	aspartat aminotransferase
ATP-ase	adenosine 5'-triphosphatase (ATP hydrolase)
B	subsoil horizon: subsurface layer reflecting chemical or physical alteration of parent material
Bq/kg	the indicator of the specific activity of natural radionuclides in Becquerel's per 1 kg of dry mass
C-mitosis	metaphase
c/ha	center/hectare
Ca ⁺⁺	ion of calcium
CAT	catalase
Cd	cadmium is a chemical element with atomic number 48.
CDNB	1-chloro-2,4-dinitrobenzene
CINAO	Pryanishnikov All-Russian Scientific Research Institute of Agrochemistry
CL	cardiolipin
C _{lab}	labile part of total carbon
cm	centimeter
CO	carbon monoxide
Co	cobalt
CO ₂	carbon dioxide
Cr	chromium, chrome
Cs	cesium
C _{tot}	total organic carbon
Cu	copper
DAG	diacylglycerol

DNA	deoxyribonucleic acid
E_a	activation energy of ion transport
EAC	eluvial accumulative coefficient
EC	enzyme commission number
EDTA	ethylenediaminetetraacetate
ETC	electron transport chain
Fe	iron
g/ha	gram/hectare
GPx	glutathione peroxidase
GR	glutathione reductase
GSH	reduced glutathione
GST	glutathione-S-transferase
H^+	hydrogen ion
HCl	hydrogen chloride
Hg	mercury, quicksilver
HM	heavy metals
IARC	International Agency for Research on Cancer
IchL	inducible chemiluminescence
K	potassium
$K_3Fe(CN)_6$	potassium ferricyanide, potassium hexacyanoferrate, Gmelin salt, red blood salt
KCl	potassium chloride
KH_2PO_4	potassium dihydrogen phosphate
K_m	Michaelis (Michaelis-Menten) constant
LPC	lysoforms of phospholipids
LPL	lysophospholipids
LPO	lipid peroxidation
LSD	Least Significant Difference
lx-(lux)	the SI unit of illuminance and luminous emittance, measuring luminous flux per unit area
MAC	maximum allowable concentration
mg/kg	milligram/kilogram
MI	mitotic index
mm	millimeter
MMCs	melanomacrophage centers
Mn	manganese
Mo	molybdenum

MPC	maximum permissible concentration
N	nitrogen
NADPH	nicotinamide adenine dinucleotide phosphate
NADPH-GDH	nicotinamide adenine dinucleotide phosphate-glutamate dehydrogenase
NaOCl	sodium hypochlorite
NaS ₂ CN(C ₂ H ₅) ₂	sodium diethyldithiocarbamate
NaSO ₃	sodium sulfite
NBT	nitroblue tetrasolium
NEFA	nonetherified fatty acids
NH ₄ NO ₃	ammonium nitrate
Ni	nickel
Nis	network information services
NLMK	Novolipetsk metallurgical complex
NPK	complex fertilizer: nitrogen-phosphorus-potassium
P	phosphorus
PA	phosphatidic acid
Pb	lead
PC	phosphatidylcholine
PE	phosphatidylethanolamine
PER	peroxidase
pH _{kcl}	the negative logarithm of the hydrogen ion in KCl extract
PI	phosphatidylinositol
PL	phospholipid and/or phospholipids
PM	pathological mitoses
PMS	phenazine methosulfate
PN	persistent nucleoli
PS	phosphatidylserine
<i>r</i>	coefficient of pair correlation
ROS	reactive oxygen species
rpm	revolution per minute
SanReg	Sanitary Regulations and Norms
SChL	spontaneous hemiluminescence
SDH	succinate dehydrogenase
Se	selenium
SM	sphingomyelin

SOD	superoxide dismutase
Sr	strontium
STRAZ	Software program
t/ha	ton/hectare
TAG	triacylglycerol
TBA	tiobarbituric acid
TBA-RS	TBA-reactive substances
TCA	trichloroacetic acid
U.S. EPA	United States Environmental Protection Agency
UFA	unesterified fatty acids
V_{\max}	maximum speed of penetration
Zn	zinc
$\Sigma\text{EOPL}/\Sigma\text{POPL}$	ratio of the sums of the more easily to the more poorly oxidizable fractions of phospholipids

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