

Acronyms and Abbreviations

A	adenine	FANC	Fanconi anemia complementation group proteins
AA	aristolochic acid	FDA	Food and Drug Administration, United States
AAN	aristolochic acid nephropathy	G	guanine
ACGIH	American Conference of Governmental Industrial Hygienists	GERD	gastro-esophageal reflux disease
ADH	alcohol dehydrogenase	GSH	glutathione
AIDS	acquired immunodeficiency syndrome	GST	glutathione S-transferase
ALT	alanine transaminase	GST-P+	glutathione S-transferase placental form positive
ANSI	American National Standards Institute	GSTT1	glutathione S-transferase theta 1
AP1	activator protein 1	h	hour(s)
AST	American Society of Transplantation	HAA5	five common haloacetic acids (bromoacetic acid, chloroacetic acid, dibromoacetic acid, dichloroacetic acid, and trichloroacetic acid)
ATLL	adult T-cell leukemia/lymphoma	HAA9	nine common haloacetic acids (bromoacetic acid, bromochloroacetic acid, bromodichloroacetic acid, chloroacetic acid, dibromoacetic acid, dibromochloroacetic acid, dichloroacetic acid, tribromoacetic acid, and trichloroacetic acid)
ATSDR	Agency for Toxic Substances and Disease Registry	HAART	highly active antiretroviral therapy
BEI	biological exposure index	HAM/TSP	HTLV-1-associated myelopathy/tropical spastic paraparesis
BEN	Balkan endemic nephropathy	HBeAg	hepatitis B e antigen
BOP	Bureau of Prisons	HBsAg	hepatitis B surface antigen
BRCA	breast cancer susceptibility proteins	HBV	hepatitis B virus
b.w.	body weight	HBZ	HTLV-1 basic leucine zipper factor
C	cytosine	HCA	heterocyclic amine
cART	combined antiretroviral therapy	HCT/Ps	human cells, tissues, and cellular and tissue-based products
CAS	Chemical Abstracts Service	HCV	hepatitis C virus
CAS No.	Chemical Abstracts Service Registry number	HHE	Health Hazard Evaluation
CDC	Centers for Disease Control and Prevention	HHV	human herpesvirus
CFR	Code of Federal Regulations	HHS	Health and Human Services
CHO	Chinese hamster ovary	HIF-1 α	hypoxia-inducible factor 1 alpha
CI	confidence interval	HIV	human immunodeficiency virus
CIN	cervical intraepithelial neoplasia	HIVMA	HIV Medicine Association
C.I.	Colour Index	HpCDD	heptachlorodibenzo- <i>p</i> -dioxin
CoCrMo	cobalt-chromium-molybdenum	HPLC	high performance liquid chromatography
COX	cyclooxygenase	HPV	human papillomavirus
CPSC	Consumer Product Safety Commission	HR	hazard ratio
CYP	cytochrome P450	HRSA	Health Resources and Services Administration
2,4-D	2,4-dichlorophenoxyacetic acid	HTLV-1	human T-cell lymphotropic virus type 1
dA-AAI	7-(deoxyadenosin- <i>N</i> 6-yl)-aristolactam I	HUD	Housing and Urban Development
dA-AAII	7-(deoxyadenosin- <i>N</i> 6-yl)-aristolactam II	HxCDD	hexachlorodibenzo- <i>p</i> -dioxin
DDD	1,1-dichloro-2,2-bis(<i>p</i> -chlorophenyl)ethane	IARC	International Agency for Research on Cancer
DDE	1,1-dichloro-2,2-bis(<i>p</i> -chlorophenyl)ethylene	IDLH	immediately dangerous to life and health
DDT	dichlorodiphenyltrichloroethane	IDSA	Infectious Diseases Society of America
dec	decomposes	IgA	immunoglobulin A
dG	deoxyguanosine	IgG	immunoglobulin G
dG-AAI	7-(deoxyguanosin- <i>N</i> 2-yl)-aristolactam I	IL	interleukin
dG-AAII	7-(deoxyguanosin- <i>N</i> 2-yl)-aristolactam II	IRIS	Integrated Risk Information System
DHHS	Department of Health and Human Services	ISO	International Organization for Standardization
DHP	dihydropyrrrolizine	JAK/STAT	Janus kinase/signal transducers and activators of transcription
DHS	Department of Homeland Security	JM	Johns Manville
DMDTC	dimethyldithiocarbamate	K_{dis}	dissolution rate
DNA	deoxyribonucleic acid	K_{ow}	octanol-water partition coefficient
DNase	deoxyribonuclease	KSHV	Kaposi sarcoma-associated herpesviruses
DNT	dinitrotoluene	LET	linear energy transfer
DOE	Department of Energy	LMP	latent membrane protein
DoD	Department of Defense,	LOD	limit of detection
DOT	Department of Transportation	LT	large T antigen
DVA	Department of Veterans Affairs	MALT	mitogen-associated lymphoid tissue
EBNA	Epstein-Barr nuclear antigen	MAP	mitogen-activated protein
EBV	Epstein-Barr virus		
ed.	edition, editor(s)		
ELISA	enzyme-linked immunosorbent assay		
E_{LUMO}	energy of the lowest unoccupied molecular orbital		
EPA	Environmental Protection Agency, United States		
F344	Fischer 344 (rats)		

Report on Carcinogens, Fifteenth Edition

MCA 38	murine colon adenocarcinoma cell line	S-DHP	S-dihydropyrrolizine
MCL	maximum contaminant level	SIR	standardized incidence ratio
MCPyV	Merkel cell polyomavirus	SMR	standardized mortality ratio
MCV	Merkel cell polyomavirus	spp.	species (plural)
min	minute(s)	ssRNA	single-stranded RNA
MMVF	man-made (or machine-made) vitreous fibers	sT	small T antigen
mol wt	molecular weight	STEL	short-term exposure limit
mRR	meta–relative risk	suppl.	supplement
N/A	not applicable	T	thymine
NAC/AEGL	National Advisory Committee for Acute Exposure Guideline Levels for Hazardous Substances	TCBQ	tetrachlorobenzoquinone
NADPH	nicotinamide adenine dinucleotide phosphate, reduced form	TCDD	tetrachlorodibenzo- <i>p</i> -dioxin
NAICS	North American Industrial Classification System	TCE	trichloroethylene
NCI	National Cancer Institute	TCHQ	tetrachlorohydroquinone
ND	not detected	TCLP	toxicity characteristic leaching procedure
NextGen	Advancing the Next Generation of Risk Assessment	TLV	threshold-limit value
NF	nuclear factor	TNT	trinitrotoluene
NF- κ B	nuclear factor kappa-light-chain-enhancer of activated B cells	Tox21	Toxicology in the 21st Century
NHANES	National Health and Nutrition Examination Survey	TPQ	threshold planning quantity
NHL	non-Hodgkin lymphoma	TRI	Toxics Release Inventory
NIEHS	National Institute of Environmental Health Sciences	TSCA	Toxic Substances Control Act
NIH	National Institutes of Health	TSNA	tobacco-specific nitrosamine(s)
NIOSH	National Institute for Occupational Safety and Health	TURA	Toxics Use Reduction Act
NK	natural killer	TWA	time-weighted average
NNK	4-(<i>N</i> -nitrosomethylamino)-1-(3-pyridyl)-1-butanone	USAI	United States of America Standards Institute
NNN	<i>N</i> -nitrososornicotine	USDA	United States Department of Agriculture
No.	number	UV	ultraviolet
NOHS	National Occupational Hazard Survey	UVR	ultraviolet radiation
NR	not reported	VCA	viral capsid antigen
NRC	Nuclear Regulatory Commission	VOC	volatile organic chemical
Nrf2	nuclear respiratory factor 2	vol.	volume
NTP	National Toxicology Program	v/v	volume-volume ratio
OCDD	octachlorodibenzo- <i>p</i> -dioxin	WC	tungsten carbide
OPTN	Organ Procurement and Transplantation Network	WHO	World Health Organization
OR	odds ratio	wt.	weight
OSHA	Occupational Safety and Health Administration	XPA	xeroderma pigmentosum complementation group A
PAH	polycyclic aromatic hydrocarbon	yr	year
PCDD	polychlorinated dibenzodioxin		
PCDF	polychlorinated dibenzofuran		
PCP	pentachlorophenol		
PCR	polymerase chain reaction		
PEL	permissible exposure limit		
PET	polyethylene terephthalate		
PHS	Public Health Service		
PI3	phosphoinositide 3		
pK_b	dissociation constant		
PVC	polyvinyl chloride		
<i>r</i>	correlation coefficient		
r^2	coefficient of determination		
<i>R</i> -DHP	<i>R</i> -dihydropyrrolizine		
REL	recommended exposure limit		
RfC	inhalation reference concentration		
RfD	oral reference dose		
RNA	ribonucleic acid		
RoC	Report on Carcinogens		
ROS	reactive oxygen species		
RQ	reportable quantity		
RR	relative risk (risk ratio or rate ratio)		
s	second		
S&S	Schleicher & Schuell		