

**Table II-1.** Occupational exposure limits based on biological monitoring

Substance	Assay material	Parameter	OEL-B	Sampling time	Year of proposal
Acetone	urine	Acetone	40 mg/l	Within 2 h prior to end of shift	'01
2-Butoxyethanol and 2-Butoxyethyl acetate	urine	Butoxyacetic acid	200 mg/g·Cr	End of shift	'08
Cadmium and its compounds	blood	Cadmium	5 µg/l	Not critical	'21
	urine	Cadmium	5 µg/g·Cr	Not critical	'21
Carbon disulfide	urine	2-Thiothiazolidine-4-carboxylic acid	0.5 mg/g·Cr	End of shift (Avoid sizable intake of brassica vegetables)	'15
Cobalt and inorganic compounds (Except cobalt oxides)	blood	Cobalt	3 µg/l	Within 2 h prior to end of shift at end of work week	'05
	urine	Cobalt	35 µg/l	Within 2 h prior to end of shift at end of work week	'05
Chlorobenzene	urine	4-Chlorocatechol (hydrolysis)	120 mg/g·Cr	End of shift	'08
3,3'-Dichloro-4,4'-diaminodiphenyl-methane (MBOCA)	urine	total MBOCA	50 µg/g·Cr	End of shift at end of workweek	'94
Dichloromethane	urine	Dichloromethane	0.2 mg/l	End of shift	'05
Ethylbenzene	urine	Mandelic acid	150 mg/g·Cr	End of shift	'21
	urine	Mandelic acid + Phenylglyoxylic acid	200 mg/g·Cr	End of shift at end of workweek	'21
	urine	Ethylbenzene	15 µg/l	End of shift	'21
Hexane	urine	2,5-Hexanedione	3 mg/g·Cr	End of shift at end of workweek	'94
	urine	2,5-Hexanedione (After acid hydrolysis)	0.3 mg/g·Cr	End of shift at end of workweek	'94
	urine	2,5-Hexanedione (Without acid hydrolysis)	0.3 mg/g·Cr	End of shift at end of workweek	'94
Indium and compounds	serum	Indium	3 µg/l	Not critical	'07
Lead and compounds (Except alkyl lead compounds)	blood	Lead	15 µg/100 ml	Not critical	'13
	blood	Protoporphyrin	200 µg/100 ml·RBC	Not critical	'94
	urine	δ-Aminolevulinic acid	80 µg/100 ml·blood	(After one month or more since consecutive exposure)	'94
	urine	δ-Aminolevulinic acid	5 mg/l	Not critical (After one month or more since consecutive exposure)	'94
Mercury and compounds (Except alkyl mercury compounds)	urine	total inorganic mercury	35 µg/g·Cr	Not critical	'93
Methanol	urine	Methanol	20 mg/l	End of shift	'10
Methylethylketone	urine	Methylethylketone	5 mg/l	End of shift or a few hours after high exposure	'06
Methyl isobutyl ketone	urine	Methyl isobutyl ketone	1.7 mg/l	End of shift	'07
Phenol	urine	Phenol	250 mg/g·Cr	End of shift	'08
Polychlorobiphenyls (PCBs)	blood	total PCB	25 µg/l	Not critical	'06
Styrene	urine	Styrene	20 µg/l <sup>†</sup>	End of shift at end of workweek	'22
	urine	Mandelic acid + Phenylglyoxylic acid	160 mg/g·Cr <sup>†</sup>	End of shift at end of workweek	'22
Tetrahydrofuran	urine	Tetrahydrofuran	2 mg/l	End of shift	('15)
Toluene	blood	Toluene	0.6 mg/l	} Within 2 h prior to end of shift at end of work week	'99
	urine	Toluene	0.06 mg/l		'99
Trichloroethylene	urine	Trichloroacetic acid	10 mg/l <sup>†</sup>	End of shift at end of workweek	'22
	blood	Trichloroethylene	Semi-quantitative <sup>†</sup>	End of shift at end of workweek	'22
	end-exhaled air	Trichloroethylene	Semi-quantitative <sup>†</sup>	End of shift at end of workweek	'22
Xylene	urine	total (o-, m-, p-) methylhippuric acid	800 mg/l	End of shift at end of work week	'06

<sup>†</sup>: Provisional

See the JSOH website for brief summary of OEL documentation at <https://www.sanei.or.jp/english/oels/index.html>