

PROPOSED NATIONAL WATER QUALITY STANDARDS FOR MALAYSIA

Parameters	Unit	Classes					
		I	IIA	IIB	III	IV	V
Ammoniacal-N.	mg/l	0.1	0.3	0.3	0.9	2.7	>2.7
BOD	mg/l	1	3	3	6	12	>12
COD	mg/l	10	25	25	50	100	>100
DO	mg/l	7	5-7	5-7	3-5	<3	<1
pH		6.5-8.5	6-9	6-9	5-9	5-9	-
Colour	TCU	15	150	150	-	-	-
Elec. Cond*	µmhos/cm	1000	1000	-	-	6000	-
Floatables		N	N	N	-	-	-
Odour		N	N	N	-	-	-
Salinity*	%	0.5	1	-	-	2	-
Taste		N	N	N	-	-	-
Tot. Diss. Sol.*	mg/l	500	1000	-	-	4000	-
Tot. Susp. Sol.	mg/l	25	50	50	150	300	>300
Temperature	°C	-	Normal± 2	-	Normal± 2	-	-
Turbidity	NTU	5	50	50	-	-	-
F. Coliform**	counts/100 ml	10	100	400	5000 (20000) ^ε	5000 (20000) ^ε	-
Total Coliform	counts/100 ml	100	5000	5000	50000	50000	>50000

N = No visible floatable material / debris,
or No objectionable odour,
or No objectionable taste.

* = Related parameters, only one recommended for use

** = Geometric mean

ε = Maximum not to be exceeded

Parameters	Unit	Classes					V
		I	IIA / IIB	III [@]	IV	V	
A1	mg/l		-	-	(0.06)	0.5	
As	mg/l		0.05	0.4	(0.05)	0.1	
Ba	mg/l		1	-	(0.001)	-	
Cd	mg/l		0.01	0.01	(0.05)	0.01	
Cr(VI)	mg/l		0.05	1.4		0.1	
Cr(III)	mg/l		-	2.5		-	
Cu	mg/l		1	-		0.2	
Hardness	mg/l		250	-		-	
Ca	mg/l		-	-		-	
Mg	mg/l		-	-		-	
Na	mg/l		-	-		3 SAR	
K	mg/l		-	-		-	
Fe	mg/l		0.3	1		1 (leaf) 5 (others)	
Pb	mg/l	N	0.05	0.02*	(0.01)	5	L
Mn	mg/l	A	0.1	0.1		0.2	E
Hg	mg/l	T	0.001	0.004	(0.0001)	0.002	V
Ni	mg/l	U	0.05	0.9*		0.2	E
Se	mg/l	R	0.01	0.25	(0.04)	0.02	L
Ag	mg/l	A	0.05	0.0002		-	S
Sn	mg/l	L	-	0.004		-	
U	mg/l		-	-		-	A
Zn	mg/l	L	5	0.4*		2	B
B	mg/l	E	1	-	(3.4)	0.8	O
Cl	mg/l	V	200	-		80	V
Cl ₂	mg/l	E	-	-	(0.02)	-	E
Cn	mg/l	L	0.02	0.06	(0.02)	-	
F	mg/l		1.5	10		1	IV
NO ₂	mg/l		0.4	0.4	(0.03)	-	
NO ₃	mg/l		7	-		5	
P	mg/l		0.2	0.1		-	
Si	mg/l		-50	-		-	
SO ₄	mg/l		250	-		-	
S	mg/l		0.05	-	(0.001)	-	
CO ₂	mg/l		-	-		-	
Gross-α	Bq/l		0.1	-		-	
Gross-β	Bq/l		1	-		-	
Ra-226	Bq/l		<0.1	-		-	
Sr-90	Bq/l		<1	-		-	

* = At hardness 50 mg/l CaCO₃
@ = Maximum (unbracketed) and 24-hr average (bracketed) concentrations

Parameters	Unit	Classes					
		I	IIA/IIB	III [@]	IV	V	
CCE	µg/l	N	500	-		-	-
MBAS/BAS	µg/l	A	500	5000	(200)	-	-
O & G (mineral)	µg/l	T	40;N	N		-	-
O & G (emulsified edible)	µg/l		7000;N	N		-	-
PCB	µg/l	L	0.1	6	(0.05)	-	-
Phenol	µg/l	E	10	-		-	-
Aldrin / Dieldrin	µg/l	V	0.02	0.2	(0.01)	-	-
BHC	µg/l		2	9	(0.1)	-	-
Chlordane	µg/l	O	0.08	2	(0.02)	-	-
t-DDT	µg/l	R	0.1	1	(0.01)	-	-
Endosulfan	µg/l		10	-		-	-
Heptachlor / Epoxide	µg/l	A	0.05	0.9	(0.06)	-	-
Lindane	µg/l	B	2	3	(0.4)	-	-
2,4-D	µg/l	S	70	450		-	-
2,4,5-T	µg/l	E	10	160		-	-
2,4,5-TP	µg/l	N	4	850		-	-
Paraquat	µg/l	T	10	1800		-	-

N = Free from visible film, sheen, discoloration and deposits

@ = Maximum (unbracketed) and 24-hr average (bracketed) concentrations

CLASS USES

I represents water body of excellent quality. Standards are set for the conservation of natural environment in its undisturbed state. Water bodies such as those in the national park areas, fountainheads, and in high land and undisturbed areas come under this category where strictly no discharge of any kind is permitted. Water bodies in this category meets the most stringent requirements for human health and aquatic life protection.

IIA/IIB represents water bodies of good quality. Most existing raw water supply sources come under this category. In practice, no body contact activity is allowed in this water for prevention of probable human pathogens. There is a need to introduce another class for water bodies not used for water supply but of similar quality which may be referred to as **Class IIB**. The determination of **Class IIB** standard is based on criteria for recreational use and protection of sensitive aquatic species.

III is defined with the primary objective of protecting common and moderately tolerant aquatic species of economic value. Water under this classification may be used for water supply with extensive / advance treatment. This class of water is also defined to suit livestock drinking needs.

IV defines water quality required for major agricultural irrigation activities which may not cover minor applications to sensitive crops.

V represents other waters which do not meet any of the above uses.