

NIOSH Recommendations for Occupational Safety and Health Standards (ต่อจากฉบับที่ 11; Vol.17 No. 11)

NIOSH Recommendations				
Potential Hazard*	OSHA Standard	NIOSH Recommended Exposure Limit(s) [†]	Health Effect(s) Considered	Comments
Glycidyl ethers (June 1978, revised in CIB October 1978)	All values in ppm (mg/m ³): allyl glycidyl ether (AGE): 10 (45) ceiling; n-butyl glycidyl ether (BGE): 50 (270), 8-hr TWA; di-2,3-epoxypropyl ether (DGE): 0.5 (2.8), 8-hr TWA; isopropyl glycidyl ether (IGE): 50 (240), 8-hr TWA; phenyl glycidyl ether (PGE): 10 (60), 8-hr TWA	All are ceiling values (15 min) in ppm (mg/m ³): AGE: 9.8 (45) BGE: 4.4 (30) DGE: 0.2 (1) IGE: 50 (240) PGE: 1 (5)	Cancer for DGE; skin and mucous membrane effects; sensitization potential; tumorigenesis and mutagenesis; possible hemopoietic and reproductive effects	Possible additive effects with mixtures; medical surveillance
Glycol ethers (CIB May 1983)	2-Methoxyethanol: 25 ppm (80 mg/m ³), 8-hr TWA (Skin); 2-Ethoxyethanol: 200 ppm (740 mg/m ³), 8-hr TWA (Skin)	Reduce exposure to lowest feasible level	Reproductive effects; teratogenicity	Skin contact to be prevented
Grain elevators and feed mills, occupational safety in (Technical Guideline September 1983; reaffirmed June 1984 as part of NIOSH testimony at OSHA hearing)	Many general aspects (e.g., protective equipment, dust control, etc.) covered under the numerous OSHA regulations for General Industry (29 CFR 1910)	Various recommendations for control of combustible dusts and ignition sources, machine guarding, isolation and lockouts, bin entry, training, and personal protective equipment	Injury and death	Health hazards from exposure to fumigants, pesticides, and grain dust
Hexachloroethane (CIB August 1978)	1 ppm (10 mg/m ³), 8-hr TWA (Skin)	Reduce exposure to lowest feasible level	Cancer	None

NIOSH Recommendations

Potential Hazard*	OSHA Standard	NIOSH Recommended Exposure Limit(s) [†]	Health Effect(s) Considered	Comments
Hot environments (June 1972)	None	Action levels: 79°F WBGT (men) 76°F WBGT (women); sliding-scale limits for unimpaired mental function	Heat-induced illnesses	Recommendations include acclimatization, strict work practices, and protective equipment
Hydrazines (June 1978)	All values in ppm (mg/m ³): hydrazine: 1 (1.3), 8-hr TWA; 1,1-dimethylhydrazine: 0.5 (1.0), 8-hr TWA; phenyl hydrazine: 5 (22), 8-hr TWA; methyl hydrazine: 0.2 (0.35) ceiling	All are ceiling values (120 min) in ppm (mg/m ³): hydrazine: 0.03 (0.04); 1,1-dimethylhydrazine: 0.06 (0.15); phenyl hydrazine: 0.14 (0.6); methyl hydrazine: 0.04 (0.08)	Liver, blood, eye, and skin effects; cancer	Blood and urine monitoring and chest X-ray required; bowel examination for some workers
Hydrogen fluoride (March 1976)	3 ppm, 8-hr TWA	3 ppm (2.5 mg F/m ³) TWA; 6 ppm (5.0 mg F/m ³) ceiling (15 min)	Skin, eye, and airway irritation; bone effects	Pelvic X-ray (male workers only) and urine testing required
Hydrogen sulfide (May 1977)	20 ppm acceptable ceiling; 50 ppm maximum ceiling (10 min)	10 ppm (15 mg/m ³) ceiling (10 min)	Irritation; severe acute effects involving nervous and respiratory systems	Continuous monitoring required if potential exists for exposure to ≥ 70 mg/m ³ ; evacuation required at this level
Hydroquinone (April 1978)	2 mg/m ³ , 8-hr TWA	0.44 ppm (2 mg/m ³) ceiling (15 min)	Eye and skin effects	Special provisions for darkroom use
Identification system for occupationally hazardous materials (December 1974)	Sections of Hazard Communication and Carcinogen Standards may be applicable	Complete designation system for occupationally hazardous materials	None	Includes definition, safety data sheets, alert symbols, and label statements
Isopropyl alcohol (March 1976)	400 ppm (980 mg/m ³) 8-hr TWA	400 ppm (984 mg/m ³) TWA; 800 ppm (1,968 mg/m ³) ceiling (15 min)	Mucous membrane irritation; possible cancer threat in manufacturing process	More stringent work practices and medical surveillance required for manufacturing workers

*Date recommendation was transmitted to OSHA is in parentheses.

[†]NIOSH TWA recommendations are based on exposures up to 10 hours unless otherwise noted.

Table 1 Summary-case of specified notifiable diseases, Thailand

DISEASES-NAME	13th WEEK ENDING		10th WEEK		ENDING		10 WEEKS		TOTAL
	Mar. 29, 1986	1986 CUM	Mar. 8, 1986	Mar. 7, 1985	MEDIAN 1981-85	Mar. 8, 1986	Mar. 7, 1985	MEDIAN 1981-85	
Cholera	-	-	-	60	16	-	360	150	700
Acute diarrhoea	69	44568	613	9837	7913	44218	105154	86326	235542
Food poisoning	6	3560	38	843	724	3547	6550	3613	39302
Dysentery	12	6606	127	1348	1422	6541	11478	10673	63341
Enteric Fever	-	1204	6	296	184	1199	2798	1693	17848
Hepatitis	-	1363	18	290	203	1356	2928	1707	17082
H. conjunctivitis	4	5852	77	905	623	5817	10107	6380	116814
Influenza	3	4257	73	982	975	4239	11406	10311	37676
Rubeola	-	186	6	106	7	186	617	102	3086
P.U.U.	5	13021	127	3508	3366	12900	34604	29577	94677
Meningococcal M.	-	2	-	2	1	2	13	5	75
Poliovirus	-	11	-	1	4	10	7	27	67
Measles	-	2581	27	685	1110	2568	6454	6695	30827
Diphtheria	-	31	-	8	8	31	70	111	763
Pertussis	-	133	-	52	54	133	697	216	2478
tetanus exc. neo. tet.	1	83	1	12	20	82	162	243	904
Dengue Haem Fever	-	483	7	566	141	482	4357	7665	77594
Encephalitis	-	66	1	24	24	85	193	183	1937
Malaria	1	6326	59	1587	2026	6300	16761	21250	45190
Pneumonia	4	7484	136	1677	1660	7447	15735	10977	93846
Tuberculosis	-	1987	57	442	334	1976	5327	3607	22752
Leprosy	-	66	-	18	18	64	210	144	676
Veneral Disease	2	10469	102	1037	766	10447	12535	7414	65507
Rabies	-	41	1	4	4	40	37	43	207
Leptospirosis	-	15	-	1	1	15	12	3	119
Scrub typhus	-	19	1	1	-	17	20	4	231
Occupational Hazards	-	245	1	72	72	242	538	486	2583
Mumps	-	1358	17	223	121	1352	1910	1017	7667
E. neonatorum	-	57	-	7	7	57	72	74	547

** REMARKS ** - = nil

Table 1I Case of specified notifiable disease, Thailand
Week ending Mar 29, 1986 and Mar 30, 1985 (Week 13th)

	CHOLERA	A. DIARRH	FO. POIS.	DYS	ENT	HEPATITIS	DHF	ENCEPH	MALAR	INFLU
	CUM	CUM	CUM	CUM	CUM	CUM	CUM	CUM	CUM	CUM
	86 1986	86 1986	86 86	86 86	86 86	86 1986	86 1986	86 1986	1986	1986
CENTRAL										
1. Bangkok	-	292	16	78	4	61	42	-	10	5
2. Samut Sakon	-	769	37	39	4	4	4	-	4	117
3. Samut Prakan	-	511	44	29	3	19	22	1	6	21
4. Samut Songkhram	-	476	12	43	3	9	-	1	7	71
5. Nonthaburi	-	623	30	55	15	24	5	-	3	117
6. Pathum Thani	-	260	18	25	7	10	2	-	3	48
7. Nakhon Pathom	-	1006	113	133	19	23	31	2	9	103
8. Katchaburi	-	1042	122	83	5	21	8	1	103	86
9. Kanchanaburi	-	63	19	31	2	6	5	-	10	2
10. Phetchaburi	-	339	24	29	6	5	4	-	66	131
11. Prachuap Khiri Khan	-	5	2	3	-	1	1	-	5	-
12. Suphan Buri	-	286	35	12	2	4	20	-	74	12
13. Sing Buri	-	298	36	31	3	2	-	-	4	139
14. Avuthaya	-	585	95	108	10	20	-	2	-	71
15. Saraburi	-	48	32	16	1	3	-	-	1	2
16. Lop Buri	-	838	68	45	12	17	-	-	21	67
17. Chai Nat	-	346	28	50	1	3	3	-	11	102
18. Ang Thong	-	15	9	2	1	3	1	-	-	4
19. Nakhon Nayok	-	7	-	2	-	-	-	-	1	-
20. Chon Buri	-	333	12	12	3	18	7	1	28	14
21. Chachoengsao	-	710	26	94	30	55	9	-	50	126
22. Rayong	-	648	93	113	4	11	-	2	308	55
23. Chanthaburi	-	1013	95	252	6	27	9	2	1722	50
24. Trat	-	363	13	21	7	-	2	-	1259	10
25. Prachin Buri	-	925	91	83	40	15	2	-	247	70
xx TOTAL xx	-	11801	1070	1389	188	370	212	12	3952	1423
NORTHERN										
1. Chiang Mai	-	29	50	219	48	42	4	3	89	108
2. Phayao	-	329	15	34	6	24	2	6	25	35
3. Chiang Rai	-	2028	71	698	53	46	-	2	3	1
4. Mae Hong Son	-	230	11	52	5	2	-	1	107	22
5. Lampang	-	1451	59	208	7	34	1	4	100	81
6. Lamphun	-	734	51	152	9	16	-	2	84	70
7. Nan	-	558	38	47	8	40	-	-	113	83
8. Phrae	-	748	74	68	18	21	-	-	147	123
9. Uttaradit	-	552	47	72	2	24	4	2	52	38
10. Sak	-	2	2	1	1	6	-	-	3	-
11. Sukhothai	-	728	55	51	45	12	5	-	46	94
12. Phitsanulok	-	1393	75	184	5	15	5	2	134	37
13. Phetchabun	-	707	37	27	14	17	1	2	53	26
14. Phichit	-	194	8	35	14	10	-	2	11	45
15. Uthai Thani	-	620	25	25	3	12	2	1	73	28
16. Kamphaeng Phet	-	271	11	9	2	9	-	4	24	10
17. Nakhon Sawan	-	829	74	86	39	8	10	4	29	56
xx TOTAL xx	-	36	12483	703	1968	279	338	35	1093	857
NORTHEAST										
1. Nakhon Ratchasima	-	1669	340	256	12	11	12	7	41	129
2. Khon Kaen	-	842	124	129	9	34	30	-	9	43
3. Chaiyaphum	-	1086	53	145	23	37	8	2	21	75
4. Sakon Nakhon	-	1157	34	111	10	28	5	-	34	8
5. Nakhon Phanom	-	51	4	5	-	5	1	-	4	5
6. Kalasin	-	439	42	99	2	26	3	2	5	3
7. Mondul Khai	-	450	45	69	9	19	4	2	13	39
8. Maha Sarakham	-	601	151	165	12	14	2	2	8	59
9. Roi Et	-	1915	168	408	4	55	2	1	7	127
10. Burirum	-	453	54	103	1	7	13	1	9	5
11. Loei	-	797	28	166	23	36	-	-	28	90
12. Si Sa Ket	-	1290	139	355	8	28	15	3	26	107
13. Burin	-	18	6	4	-	2	-	1	2	-
14. Udon Thani	-	631	49	111	43	9	9	6	11	25
15. Ubon Ratchathani	-	1684	129	360	39	95	14	3	262	21
16. Yasothon	-	790	62	121	12	20	-	-	30	11
17. Mukdahan	-	587	20	78	1	14	-	-	64	13
xx TOTAL xx	-	26	14460	1448	2685	208	440	30	574	760
SOUTHERN										
1. Chumphon	-	2	13	20	2	-	-	-	1	-
2. Krabi	-	156	7	17	10	10	-	-	52	7
3. Surat Thani	-	9	1	1	4	-	-	-	5	2
4. Phang Nga	-	352	27	31	71	10	4	1	107	77
5. Phuket	-	165	16	12	8	4	6	-	2	9
6. Krabi	-	292	9	40	3	6	4	-	13	123
7. Phatthalung	-	488	22	49	55	18	4	5	5	121
8. Nakhon Si Thammarat	-	1063	28	98	185	24	42	-	45	333
9. Trang	-	315	27	41	7	11	-	-	4	144
10. Songkhla	-	996	49	39	52	34	40	1	61	197
11. Satun	-	300	13	11	25	6	1	1	6	44
12. Pattani	-	270	40	33	17	20	1	-	30	21
13. Yala	-	597	53	90	45	29	1	-	317	45
14. Narathiwat	-	919	54	82	45	43	2	1	61	96
xx TOTAL xx	-	7	5824	459	564	529	415	112	709	1219

86 = this week CUM 1986 = Cumulative 1986

Table II. Continued

	MUMPS CUM 1986	RUBELLA CUM 1986	MEASLES CUM 1986	POLIO MYELITIS CUM 86 CUM 85	DIPHTHERIA CUM 86 CUM 85	PERI CUM 86 CUM 85	TEI CUM 86 CUM 85	TETANUS CUM 86 CUM 85	RABI CUM 86 CUM 85	INSEL POLIO CUM 86 CUM 85
CENTRAL										
1. Bangkok	20	-	107	-	-	17	-	-	1	-
2. Samut Sakhon	34	10	97	-	-	-	-	-	-	10
3. Samut Prakan	33	10	76	-	-	2	2	2	3	8
4. Samut Songkhram	17	25	37	-	-	-	-	-	1	4
5. Nonthaburi	132	7	100	-	-	3	1	-	-	10
6. Pathum Thani	11	3	32	1	1	-	-	-	-	11
7. Nakhon Pathom	76	48	130	-	-	3	1	-	4	29
8. Ratchaburi	37	6	84	1	-	2	2	-	4	7
9. Kanchanaburi	7	-	9	-	-	1	2	1	6	-
10. Phetchaburi	3	-	17	-	-	-	-	-	1	4
11. Prachuap Khiri Khan	-	-	1	-	-	-	-	-	1	-
12. Suphan Buri	5	3	22	-	-	2	-	1	2	2
13. Sing Buri	3	-	24	-	-	-	-	1	2	2
14. Avuthaya	27	4	45	-	-	-	1	-	2	4
15. Saraburi	1	-	8	-	-	-	-	-	1	-
16. Lop Buri	14	-	16	1	-	-	1	2	1	2
17. Chai Nat	10	-	20	-	-	-	-	1	3	2
18. Ang Thong	2	-	3	-	1	1	1	-	1	-
19. Nakhon Navok	1	-	1	-	-	-	-	-	-	1
20. Chon Buri	20	4	17	-	-	1	5	-	3	2
21. Chachoengsao	34	5	49	-	-	1	2	-	2	31
22. Kevong	15	15	68	-	1	1	2	-	1	6
23. Chanthaburi	28	15	214	1	-	1	1	1	2	15
24. Trat	4	2	6	-	-	-	-	-	-	-
25. Prachin Buri	34	-	16	-	-	-	4	1	2	1
xx TOTAL xx	568	157	1181	4	4	6	34	23	5	144
NORTHERN										
1. Chiang Mai	136	1	76	1	-	-	2	2	1	1
2. Phayao	5	-	27	1	-	-	1	-	1	-
3. Chiang Rai	25	2	45	2	1	-	-	3	2	11
4. Mae Hong Son	-	-	1	-	-	-	1	-	-	-
5. Lampang	45	-	36	-	-	3	1	1	5	1
6. Lamphun	8	1	36	-	-	-	-	1	2	1
7. Nan	27	-	4	-	-	-	1	1	2	2
8. Phrae	37	-	24	-	-	-	-	2	6	3
9. Uttaradit	6	-	12	-	-	2	-	5	5	4
10. Tak	-	-	-	-	-	-	-	-	-	-
11. Sukhothai	16	-	14	-	-	1	5	3	1	25
12. Phitsanulok	35	1	45	-	-	1	1	2	6	3
13. Phetchabun	13	1	16	-	-	2	-	-	-	1
14. Phichit	12	-	9	-	-	-	1	3	4	3
15. Uthai Thani	3	2	11	-	-	-	-	-	1	-
16. Kamphaeng Phet	4	1	2	-	-	-	13	1	3	2
17. Nakhon Sawan	19	-	2	-	-	1	5	1	4	1
xx TOTAL xx	391	9	366	4	1	2	14	29	7	59
NORTHEAST										
1. Nakhon Khatasima	43	-	104	-	-	2	2	6	10	1
2. Khon Kaen	12	2	58	-	-	3	2	1	4	2
3. Chaisapum	12	1	38	1	-	-	2	8	5	-
4. Sakon Nakhon	6	-	35	-	-	2	1	1	2	1
5. Nakhon Phanom	5	-	56	-	-	-	-	-	1	-
6. Kalasin	18	-	26	-	-	1	-	1	1	1
7. Nong Khai	10	-	34	-	-	3	1	2	2	1
8. Maha Sarakham	17	-	51	-	-	-	1	-	2	1
9. Roi Et	56	1	27	-	-	3	2	1	2	3
10. Burirum	3	-	9	-	-	2	-	2	8	-
11. Loei	8	-	29	-	1	-	2	1	3	4
12. Si Sa Ket	24	-	26	-	-	-	2	1	12	1
13. Surin	7	-	1	1	-	-	-	-	6	-
14. Udon Thani	4	1	20	-	1	2	6	1	3	2
15. Ubon Ratchathani	36	1	43	1	-	2	4	19	5	4
16. Yasothon	10	-	15	-	-	-	-	1	1	5
17. Mukdahan	6	-	7	-	-	2	-	-	-	-
xx TOTAL xx	270	6	579	3	2	14	26	37	16	30
SOUTHERN										
1. Chumphon	-	-	7	-	-	-	-	-	-	-
2. Krabi	3	1	9	-	-	-	-	-	-	-
3. Surat Thani	-	-	-	-	1	-	-	-	1	-
4. Phang Nga	14	1	7	-	-	-	1	-	3	1
5. Phuket	13	-	7	-	-	2	-	-	1	-
6. Krabi	3	-	30	-	-	1	-	3	2	-
7. Phatthalung	7	-	57	-	-	-	-	1	2	-
8. Nakhon Si Thammarat	12	1	82	-	-	2	-	4	2	3
9. Trang	4	1	93	-	-	-	-	4	5	-
10. Songkhla	43	1	84	-	-	3	33	3	5	-
11. Satun	-	2	3	-	-	-	-	1	2	-
12. Pattani	5	-	24	-	-	-	1	-	1	-
13. Yala	3	1	36	-	-	-	6	-	1	-
14. Narathiwat	18	2	19	-	-	-	2	1	-	-
xx TOTAL xx	129	14	461	-	1	14	44	15	28	-

86 = This week CUM1986/86 = Cumulative 1986 CUM85 = CUMULATIVE 1985

Table III Summary-Identifications of specified bacterial and viral pathogens Thailand, week ending March 22, 1986 (12th week)

<u>Organism*</u>	<u>Identification(numbers)</u> <u>Culture gram stain/smear</u>	<u>Province</u>
<u>V.cholerae</u> El Tor, Inaba	-	-
<u>V.cholerae</u> El Tor, Ogawa	-	-
<u>Salmonella typhi</u>	-	-
<u>Salmonella</u> spp. (Other serotype)	33	16
<u>E. Coli</u> (enteroinvasive, enterotoxigenic)	65	19
<u>Shigella</u> spp.	63	24
<u>E. histolytica</u>	16	4
<u>V. parahaemolyticus</u>	23	10
<u>Staph. aureus</u>	148	31
<u>Streptococcus</u> spp.	33	12
<u>Corynebacterium diphtheriae</u>	-	-
<u>Bordetella pertussis</u>	-	-
<u>Plasmodium falciparum</u> , vivax, unspecified	418,109,47	25,23,5
<u>Bacillus anthraxis</u>	-	-
<u>Trichinella spiralis</u>	-	-
Rabies(fluorescent antibody technique)	37	4

**Culture serologic test

Recent Dengue	-
Chikungunya	-
Dengue + Chikungunya	-
Encephalitis	-

* กองมาตรฐานชั้นสูงตรสารณลุ่ม (ได้รับรายงานจากหน่วยชั้นสูงตรสารณลุ่ม 47 แห่ง

** คณณนวิชัยไวรัส กรมวิทยาการคณณนการณลุ่ม

Total rectal swabs done 1582

Total throat swabs and sputum done 2284

Total blood specimens for malarial parasite 8859

NIOSH Recommendations

Potential Hazard*	OSHA Standard	NIOSH Recommended Exposure Limit(s) [†]	Health Effect(s) Considered	Comments
Ketone (January 1976)	None	1 $\mu\text{g}/\text{m}^3$ TWA	Nervous system effects; liver cancer	Liver function testing required
Ketones (June 1978)	All are 8-hr TWA values in ppm (mg/m^3): acetone: 1,000 (2,400); methyl ethyl ketone: 200 (590); methyl n-propyl ketone: 200 (700); methyl n-butyl ketone: 100 (410); methyl n-amyl ketone: 100 (465); methyl isobutyl ketone: 100 (410); methyl isoamyl ketone: none; diisobutyl ketone: 50 (290); cyclohexanone: 50 (200); mesityl oxide: 25 (100); diacetone alcohol: 50 (240); isophorone: 25 (140)	All are TWA values in ppm (mg/m^3): acetone: 250 (590); methyl ethyl ketone: 200 (590); methyl n-propyl ketone: 150 (530); methyl n-butyl ketone: 1 (4); methyl n-amyl ketone: 100 (465); methyl isobutyl ketone: 50 (200); methyl isoamyl ketone: 50 (230); diisobutyl ketone: 25 (140); cyclohexanone: 25 (100); mesityl oxide: 10 (40); diacetone alcohol: 50 (240); isophorone: 4 (23)	Irritation; liver, kidney, and nervous system effects	Urinalysis required; workers exposed to methyl n-butyl ketone to be warned of nervous system effects
Land-based oil and gas well drilling, comprehensive safety recommendations for (Technical Guideline September 1983; reaffirmed March 1984 as part of NIOSH testimony at OSHA hearing)	Many aspects covered under the numerous OSHA regulations for General Industry (29 CFR 1910)	Various recommendations for safe work practices and technologic improvements	Injury and death	Many tasks, types of equipment, and conditions are not covered by existing regulations

ออกแล้ว *****

หนังสือ Preventive Medicine Series 001
เรื่อง " ไข้รูห์มาติก "

ผู้จัดพิมพ์

ผู้พิมพ์

ชมรมเวชศาสตร์ป้องกันแห่งประเทศไทย

รองศาสตราจารย์นายแพทย์ไพโรจน์ อุ่นสมบัติ

ภาควิชาเวชศาสตร์ป้องกัน

คณะแพทยศาสตร์ศิริราชพยาบาล

บรรณาธิการ

ผู้ช่วยศาสตราจารย์นายแพทย์สุรเกียรติ์ อาชานานุภาพ

นายแพทย์ศุภชัย ฤกษ์งาม

นายแพทย์ครรชิต ลิ้มปกาญจนารัตน์

เนื้อหา ประกอบด้วย

- Clinical manifestation
- พยาธิวิทยา
- การวินิจฉัย
- การรักษา
- การป้องกันไข้รูห์มาติก และโรคหัวใจรูห์มาติก
(Primary prevention, secondary prevention,
prevention of bacterial endocarditis)
- ระบาดวิทยาทั้งในประเทศและต่างประเทศ
- การป้องกันและควบคุมไข้รูห์มาติกในชุมชน
ขนาด 16 หน้ายกพิเศษ พิมพ์ด้วยกระดาษปอนด์
ปก 4 สี หนา 82 หน้า
เล่มละ 25 บาท (ถ้าส่งทางไปรษณีย์บวกค่าส่งอีก
เล่มละ 3 บาท)

ขนาด

สั่งจ่าย ปณ.ศิริราชในนาม

นายแพทย์บรรจบ พุฒสวัสดิกุล

สำนักพิมพ์เมดิคัลมีเดีย

228 ถนนอรุณอมรินทร์

บางกอกน้อย

กรุงเทพมหานคร 10700