Province of British Columbia

Ministry of Forests

R.H. TABLES

0 - 305 METRES ELEVATION

FS 229 HPR 91/8

USE OF SLING PSYCHROMETERS

1. Moisten wick with clean water, making sure that water penetrates the wicking and does not cling in drops on the surface.

2. Rotate the sling in the shade wherever possible. Keeping the instrument shaded from direct sunshine, read the wet-bulb temperature and the dry-bulb temperature, *in that order,* to an accuracy of 1/2 degree.

3. Continue swinging the instrument as above, checking the temperatures at about 10-second intervals, until the wet bulb has dropped as low as it will go.

4. Check these values against the tables to determine the relative humidity.

NOTE: Under very dry conditions, all the moisture may evaporate from the wicking before the true wet bulb is reached. Under these conditions, it will be necessary to rewet the wick and start again. Under these conditions, excessive swinging should be avoided.

Wicking should be clean and fit snugly over the wet bulb. It should be tied firmly, *both above and below the bulb,* with a fine thread such as sewing cotton. **Never use coarse string for this.** If proper wicking is not available, use a piece of white shoe lace from which all dressing has been removed by washing in soap and water.

RELATIVE HUMIDITY

VENTILATED THERMOMETERS

STATION ELEVATION
0 - 305 metres

Wet Bulb Temperature (°C)	Dry Bulb Temperature (°C)																			
	0	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5
- 6	4																			
- 5.5	11	6	2																	
- 5	19	14	9	4																
- 4.5	26	21	16	11	7	2														
- 4	34	28	23	18	13	9	5	1												
- 3.5	42	36	30	25	20	15	11	7	3											
- 3	50	43	38	32	27	22	17	13	9	5	2									
- 2.5	58	51	45	39	34	29	24	19	15	11	8	4	1							
- 2	66	59	53	47	41	35	30	26	21	17	13	10	6	3						
- 1.5	74	67	60	54	48	42	37	32	28	23	19	15	12	8	5	2				
- 1	83	75	68	62	55	49	44	39	34	29	25	21	17	14	10	7	4	2		
- 0.5	91	83	76	69	63	57	51	45	40	36	31	27	23	19	16	12	9	6	4	1
0	100	91	83	75	68	61	55	49	43	38	33	28	24	19	16	12	8	5	2	
0.5		100	92	84	76	69	62	56	50	44	39	34	30	25	21	17	14	10	7	4
1			100	92	84	76	70	63	57	51	46	40	36	31	27	23	19	15	12	9
1.5				100	92	84	77	70	64	58	52	47	42	37	32	28	24	20	17	14
2					100	92	85	77	71	64	59	53	48	43	38	34	29	26	22	18
2.5						100	92	85	78	71	65	59	54	49	44	39	35	31	27	23
3							100	92	85	78	72	66	60	55	50	45	40	36	32	28
3.5								100	93	85	79	73	67	61	56	51	46	41	37	33
4									100	93	86	79	73	67	62	57	52	47	43	38
4.5										100	93	86	80	74	68	62	57	52	48	44
5											100	93	86	80	74	68	63	58	53	49
5.5												100	93	87	80	75	69	64	59	54
6													100	93	87	81	75	70	64	60
6.5														100	93	87	81	76	70	65
7															100	93	87	81	76	71
7.5																100	94	88	82	76
8																	100	94	88	82
8.5																		100	94	88
9																			100	94
9.5																				100

EXAMPLE
(≤305 metres)

Temperature		RH
(° C) Wet Bulb	(° C) Dry Bulb	% Relative Humidity
9	9	100
12.5	16	67
10	18.5	32

Wet Bulb Temperature (°C)	Dry Bulb Temperature (°C)																			
	10	10.5	11	11.5	12	12.5	13	13.5	14	14.5	15	15.5	16	16.5	17	17.5	18	18.5	19	19.5
0.5	1																			
1	6	3	1																	
1.5	10	8	5	2																
2	15	12	9	7	4	2														
2.5	20	17	14	11	8	6	3	1												
3	25	21	18	15	12	10	7	5	3	1										
3.5	30	26	23	20	17	14	11	9	6	4	2									
4	34	31	27	24	21	18	15	13	10	8	6	4	2							
4.5	39	36	32	29	25	22	19	17	14	12	9	7	5	3	2					
5	45	41	37	33	30	27	24	21	18	15	13	11	9	7	5	3	1			
5.5	50	46	42	38	34	31	28	25	22	19	17	14	12	10	8	6	4	3	1	
6	55	51	46	43	39	35	32	29	26	23	21	18	16	13	11	9	8	6	4	3
6.5	60	56	51	47	44	40	36	33	30	27	24	22	19	17	15	13	11	9	7	5
7	66	61	57	52	48	44	41	37	34	31	28	26	23	20	18	16	14	12	10	8
7.5	71	66	62	57	53	49	45	42	38	35	32	29	27	24	22	19	17	15	13	11
8	77	72	67	62	58	54	50	46	43	39	36	33	30	28	25	23	20	18	16	14
8.5	82	77	72	67	63	59	55	51	47	44	40	37	34	31	29	26	24	22	19	17
9	88	83	78	73	68	64	59	55	51	48	44	41	38	35	32	30	27	25	23	21
9.5	94	88	83	78	73	68	64	60	56	52	49	45	42	39	36	33	31	28	26	24
10	100	94	89	83	78	74	69	65	61	57	53	49	46	43	40	37	34	32	29	27
10.5		100	94	89	84	79	74	69	65	61	57	54	50	47	44	41	38	35	33	30
11			100	94	89	84	79	74	70	66	62	58	54	51	48	45	42	39	36	34
11.5				100	94	89	84	79	75	70	66	62	59	55	52	48	45	42	40	37
12					100	95	89	84	80	75	71	67	63	59	56	52	49	46	43	40
12.5						100	95	89	85	80	75	71	67	63	60	56	53	50	47	44
13							100	95	90	85	80	76	72	68	64	60	57	54	50	47
13.5								100	95	90	85	80	76	72	68	64	61	57	54	51
14									100	95	90	85	81	76	72	69	65	61	58	55
14.5										100	95	90	85	81	77	73	69	65	62	58
15											100	95	90	86	81	77	73	69	66	62
15.5												100	95	90	86	82	77	74	70	66
16													100	95	90	86	82	78	74	70
16.5														100	95	91	86	82	78	74
17															100	95	91	86	82	78
17.5																100	95	91	87	82
18																	100	95	91	87
18.5																		100	95	91
19																			100	95
19.5																				100

Wet Bulb Temperature (°C)	Dry Bulb Temperature (°C)																			
	20	20.5	21	21.5	22	22.5	23	23.5	24	24.5	25	25.5	26	26.5	27	27.5	28	28.5	29	29.5
6	1																			
6.5	4	2	1																	
7	7	5	4	2	1															
7.5	10	8	6	5	4	2	1													
8	13	11	9	8	6	5	3	2	1											
8.5	15	14	12	10	9	7	6	5	3	2	1									
8	19	17	15	13	11	10	8	7	6	5	3	2	1							
9.5	22	20	18	16	14	13	11	10	8	7	6	5	3	2	1					
10	25	23	21	19	17	15	14	12	11	9	8	7	6	4	3	2	2	1		
10.5	28	26	24	22	20	18	16	15	13	12	10	9	8	7	6	4	3	3	2	1
11	31	29	27	25	23	21	19	17	16	14	13	11	10	9	8	7	5	5	4	3
11.5	34	32	30	28	26	24	22	20	18	17	15	14	12	11	10	9	8	6	5	5
12	38	35	33	31	28	26	24	23	21	19	18	16	15	13	12	11	10	8	7	6
12.5	41	39	36	34	31	29	27	25	24	22	20	19	17	16	14	13	12	11	9	8
13	45	42	39	37	35	32	30	28	26	24	23	21	19	18	16	15	14	13	11	10
13.5	48	45	43	40	38	35	33	31	29	27	25	24	22	20	19	17	16	15	13	12
14	52	49	46	43	41	38	36	34	32	30	28	26	24	23	21	20	18	17	16	14
14.5	55	52	49	47	44	41	39	37	35	33	31	29	27	25	24	22	20	19	18	16
15	59	56	53	50	47	45	42	40	38	35	33	31	29	28	26	24	23	21	20	18
15.5	63	60	56	53	51	48	45	43	40	38	36	34	32	30	28	27	25	24	22	21
16	67	63	60	57	54	51	49	46	43	41	39	37	35	33	31	29	27	26	24	23
16.5	71	67	64	61	57	55	52	49	47	44	42	40	37	35	33	32	30	28	27	25
17	75	71	67	64	61	58	55	52	50	47	45	42	40	38	36	34	32	31	29	27
17.5	79	75	71	68	65	61	58	56	53	50	48	45	43	41	39	37	35	33	31	30
18	83	79	75	72	68	65	62	59	56	53	51	48	46	44	41	39	37	35	34	32
18.5	87	83	79	75	72	69	65	62	59	57	54	51	49	46	44	42	40	38	36	34
19	91	87	83	79	76	72	69	66	63	60	57	54	52	49	47	45	43	41	39	37
19.5	96	91	87	83	80	76	73	69	66	63	60	58	55	52	50	48	45	43	41	39
20	100	96	91	87	84	80	76	73	70	67	64	61	58	55	53	50	48	46	44	42
20.5		100	96	92	88	84	80	77	73	70	67	64	61	58	56	53	51	49	46	44
21			100	96	92	88	84	80	77	73	70	67	64	61	59	56	54	51	49	47
21.5				100	96	92	88	84	80	77	74	71	68	65	62	59	57	54	52	50
22					100	96	92	88	84	81	77	74	71	68	65	62	60	57	55	52
22.5						100	96	92	88	84	81	78	74	71	68	65	63	60	57	55
23							100	96	92	88	85	81	78	75	71	69	66	63	60	58
23.5								100	96	92	88	85	81	78	75	72	69	66	63	61
24									100	96	92	88	85	81	78	75	72	69	66	64
24.5										100	96	92	89	85	82	78	75	72	69	67
25											100	96	92	89	85	82	79	76	73	70
25.5												100	96	92	89	85	82	79	76	73
26													100	96	92	89	85	82	79	76
26.5														100	96	93	89	86	82	79
27															100	96	93	89	86	83
27.5																100	96	93	89	86
28																	100	96	93	89
28.5																		100	96	93
29																			100	96
29.5																				100

EXAMPLE
(≤305 metres)

Temperature		RH
(° C) Wet Bulb	(° C) Dry Bulb	% Relative Humidity
21	21	100
22	26.5	68
19.5	32	31