

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

Prof.Dr. Salvador Rivas-Martinez

(Adapted to Synoptical Table 30/08/2017)

NAGASAKI (JAPAN)

Altitude: 27 m.

Latitude: 32°44'N Longitude: 129°52'E

Temperature observation period.: 1937-1980 (44)

Rainfall observation period....: 1950-1980 (31)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	EPI
Jan.	6.40	9.40	2.20	21.30	-3.20	70.0	9.83
Feb.	7.60	10.00	2.20	22.60	-3.20	83.0	12.98
Mar.	10.20	13.90	5.00	24.40	-2.00	116.0	26.03
Apr.	14.70	18.90	10.00	27.70	2.60	182.0	52.26
May.	18.50	22.80	13.90	30.00	7.70	207.0	85.35
Jun.	21.90	25.60	18.30	34.30	12.00	294.0	114.70
Jul.	26.30	29.40	22.80	36.30	18.30	288.0	160.72
Aug.	27.40	31.10	23.30	37.50	18.80	189.0	164.11
Sep.	23.90	27.20	20.00	34.60	12.20	253.0	115.70
Oct.	18.60	22.20	14.40	31.60	5.50	106.0	70.23
Nov.	13.80	17.20	9.40	27.40	1.30	83.0	37.34
Dec.	9.00	11.70	4.40	23.80	-2.60	87.0	17.46
Year	16.52	19.95	12.16	29.29	5.62	1958	866.71

BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	281
Compensated thermicity index.....(Itc):	296
Simple continentality index.....(Ic):	21.0
Diurnality index.....(Id):	8.9
Annual ombrothermic index.....(Io):	9.87
Monthly estival ombrothermic index.....(Ios1):	6.90
Bimonthly estival ombrothermic index.....(Ios2):	8.88
Threemonthly estival ombrothermic index.....(Ios3):	10.20
Fourmonthly estival ombrothermic index.....(Ios4):	10.39
Annual ombro-evaporation index.....(Ioe):	2.15
Annual positive temperature.....(Tp):	1983
Annual negative temperature.....(Tn):	0
Estival temperature.....(Ts):	756
Positive precipitation.....(Pp):	1958

N. of	P>4T	P:2T-4T	PT-2T	P<T	T<0
Months	12	0	0	0	0

Latitudinal Belt...: Subtropical

Continentalty.....: Oceanic - High Semicontinental

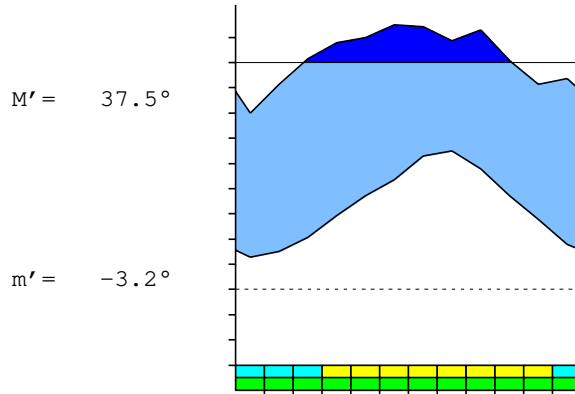
Bioclimate.....: TEMPERATE OCEANIC

Bioclimatic Belt...: UPPER THERMOTEMPERATE UPPER HUMID

NAGASAKI (JAPAN)

27 m

P= 1958 32° 44'N 129° 52'E 44/31 y.
 T= 16.5° Ic= 21.0 Tp= 1983 Tn= 0
 m= 2.2° M= 9.4° Itc= 296 Io= 9.9



TEMPERATE OCEANIC
 UPPER THERMOTEMPERATE UPPER HUMID

WATER INDEX CARD NAGASAKI (JAPAN)
 Altitude: 27 m. Latitude: 32° 44'N

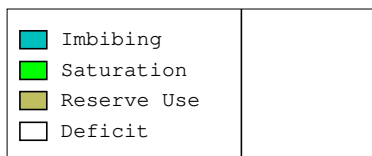
(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jan.	6.4	10	70	0	100	10	0	60	62	6.1
Feb.	7.6	13	83	0	100	13	0	70	66	5.3
Mar.	10.2	26	116	0	100	26	0	90	78	3.4
Apr.	14.7	52	182	0	100	52	0	130	104	2.4
May.	18.5	85	207	0	100	85	0	122	113	1.4
Jun.	21.9	115	294	0	100	115	0	179	146	1.5
Jul.	26.3	161	288	0	100	161	0	127	137	0.7
Aug.	27.4	164	189	0	100	164	0	25	81	0.1
Sep.	23.9	116	253	0	100	116	0	137	109	1.1
Oct.	18.6	70	106	0	100	70	0	36	72	0.5
Nov.	13.8	37	83	0	100	37	0	46	59	1.2
Dec.	9.0	17	87	0	100	17	0	70	64	3.9
Year	16.5	867	1958	*	*	867	0	1091	1091	*

R = Reserve VR = Variation of the reserve RE = Real evapotranspiration
 DR = Drainage HC = Humidity coefficient DF = Deficit SP = Superavit

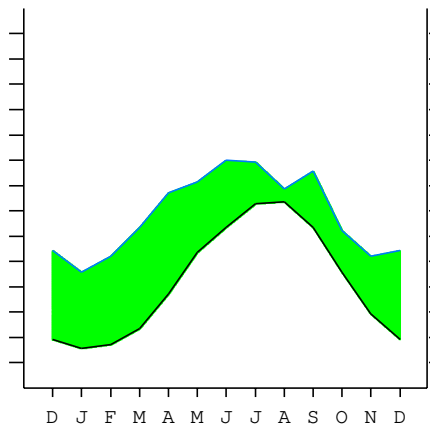
NAGASAKI (JAPAN)

32°44'N 129°52'E 27 m 44/31 y.

T= 16.5 Ic= 21.0 TEMPERATE OCEANIC
 m= 2.2 Tp= 1983 UPPER THERMOTEMPERATE
 M= 9.4 Tn= 0 UPPER HUMID
 M' = 37.5 Itc= 296
 m' = -3.2 Io= 9.9
 P= 1958 mm ———
 PE= 867 mm ———



All over the year,
 there is no hydric deficit



NAGASAKI (JAPAN)

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SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continental Index [B1b]
 + Type: B. Oceanic
 + Subtype: 1. Semicontinental
 + Variant: b. High

Thermic types [A3.A3]
 + Latitudinal zone: A. Warm
 + Latitudinal belt: 3. Subtropical
 + Thermic type: A. Warm
 + Thermic subtype: 3. Subwarm

Bioclimatic types [C3.2a.7a]
 + Macrobioclimate: C. TEMPERATE
 + Bioclimate: 3. OCEANIC
 + Bioclimatic variant ..:
 + Thermic type.....: 2. THERMOTEMPERATE
 + Thermic subtype.....: a. UPPER
 + Ombrothermic type ...: 7. HUMID
 + Ombrothermic subtype : a. UPPER
 Bioclimatic Classification: Teco.Tte.Hum

NAGASAKI (JAPAN)

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 1337
 Coldest semester of the year.....(Psw): 621
 Warmest four months period of the year.....(Pcm1): 1024
 Following warmest four months period.....(Pcm2): 346
 Positive precipitation dryest 3 months.....(Ppd): 240
 Positive precipitation dryest 2 months.....(Ppd2): 153
 Positive precipitation dryest 1 month.....(Ppd1): 70
 Positive precipitation warmest 3 months.....(Pps): 730
 Positive precipitation warmest 2 months.....(Pps2): 477
 Positive precipitation warmest 1 month.....(Pps1): 189
 Positive precipitation coldest 3 months.....(Ppw): 240
 Positive precipitation coldest 2 months.....(Ppw2): 153
 Positive precipitation coldest 1 month.....(Ppw1): 70

Seasons	Winter Tr1-W	Spring Tr2-P	Summer Tr3-S	Automn Tr4-F
Rainfall	240	505	771	442

Seasonal rainfall rhythms: S > P > F > W

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 27.4
 Average coldest month [T].....(Tmin): 6.4
 Maximum temp. warmest month [M].....(Tmmax): 31.1
 Minimum temp. coldest month [m].....(Tmmin): 2.2
 Absolute Max.temp. warmest month [M'].....(Tamax): 37.5
 Absolute Min.temp. coldest month [m'].....(Tamin): -3.2
 First warmest contrasted month [M].....(Tcmax): 13.9 (3)
 First coldest contrasted month [m].....(Tcmin): 5.0 (3)
 Estival temperature.....(Ts): 756
 Positive temperature dryest 3 months.....(Tpd): 292
 Positive temperature dryest 2 months.....(Tpd2): 140
 Positive temperature dryest 1 month.....(Tpd1): 64
 Positive temperature warmest 3 months.....(Tps): 776
 Positive temperature warmest 2 months.....(Tps2): 537
 Positive temperature warmest 1 month.....(Tps1): 274
 Positive temperature coldest 3 months.....(Tpw): 230
 Positive temperature coldest 2 months.....(Tpw2): 140
 Positive temperature coldest 1 month.....(Tpw1): 64

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SEASONAL PARAMETERS

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Warmest semester...(Sms)					o	o	o	o	o	o		
Dryest semester....(Smd)	o	o	o							o	o	o
Warmest 4 months...(Cm1)						o	o	o	o			
Dryest 4 months....(Cmd)	o	o									o	o
Vegetation Activity(Pav)	o	o	o	o	o	o	o	o	o	o	o	o
Ultragelid...[M' <=0] (Pf)												
Hypergelid...[M <=0] (Pf)												
Gelid.....[T <=0] (Pf)												
Subgelid.....[m <=0] (Pf)												
Pregelid.....[m' <=0] (Pf)	o	o	o									o
Agelid.....[m' > 0] (Pf)				o	o	o	o	o	o	o	o	
HiperAgelid..[all>0] (Pf)				o	o	o	o	o	o	o	o	

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OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 0.44
 Mediterranean index of July.[PE/P].....(Im1): 0.56
 Mediterranean index of July & August.....(Im2): 0.68
 Mediterranean index of June, July & August....(Im3): 0.57

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp(x10)	870	700	830	1160	1820	2070	2940	2880	1890	2530	1060	830
Tp	90	64	76	102	147	185	219	263	274	239	186	138
Io (Iom)	9.67	10.9	10.9	11.4	12.4	11.2	13.4	11.0	6.90	10.6	5.70	6.01
Seasons	Winter			Spring			Summer			Autumn		
Pp(x10)/Tp	2400 / 230			5050 / 434			7710 / 756			4420 / 563		
Io (Iot)	10.43			11.64			10.20			7.851		
Semesters	December-May						June-November					
Pp(x10)/Tp	7450 / 664						12130 / 1319					
Io (Iosm)	11.22						9.196					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 19580/1983=9.87 **There is No Yearly Aridity**

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	870	700	830	1160	1820	2070	2940	2880	1890	2530	1060	830
Tp [T*10]	90	64	76	102	147	185	219	263	274	239	186	138
Iom [Pp/Tp]	967	\$\$	\$\$	\$\$	\$\$	\$\$	\$\$	\$\$	690	\$\$	570	601
Avm [200-Iom]	***	***	***	***	***	***	***	***	***	***	***	***
Seasons	Winter			Spring			Summer			Autumn		
Pp / Tp	2400 / 230			5050 / 434			7710 / 756			4420 / 563		
Iot [Pp/Tp]	1043			1164			1020			785		
Avs E[Avm<200]	***			***			***			***		

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin](Sp): 21.00
 CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]: 45.62
 CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]: 38.61
 + Oceanic (20<CI<40)
 CI of Currey (1974) [CI=Sp/(1+Lat/3)]: 1.76
 + Continental (1.7<CI<2.3)
 Rainfall Index of Lang (1925) [R=P/T]: 118.49
 + Temperate humid (160>R>100)
 Aridity Index of Martonne (1926) [Ia=P/(T+10)]: 73.82
 + Perhumid (Ia>60)
 I of Emberger (1930) [Q=100*P/(Tmax²-Tmin²)]: 203.46
 + Humid (Q>90)
 I of Dantin & Revenga (1940) [DR=100*T/P]: 0.84
 + Humid (2>DR>0)
 Aridity Index of UNEP [I=P/PE]: 2.26
 + Humid (I>0.65)
 Potential Erosion I of Fournier (1960) [K=Pi²/P].....: 44.15
 + Very low (K<60)

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BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)
 + Climate: A. Warm and temperate warm
 + Region: 7. Mesoaxeric (Axeric temperate)
 + Thermic type: 3. Macro-mesothermic

Thornthwaite (1948)												
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	0.43	0.49	0.65	0.94	0.97	1.32	1.16	0.71	1.06	0.46	0.40	0.49
T-E ratio	2.88	3.42	4.59	6.61	8.32	9.85	11.83	12.33	10.75	8.37	6.21	4.05
Precipitation-effectiveness: 90.85						Temperature-efficiency: 89.23						
Moisture Index [MI=100*(P-PE)/PE]: 125.91 + A.Extremely humid (MI>100)												
Index of dryness [DI=100*d/PE]: 0.00 + No deficit (0<DI<16.7)												
Index of humidity [HI=100*s/PE]: 125.90 + Strong surplus (20<HI)												
Potential Evapotranspiration PE: 866.71 + Third mesothermic (855<PE<997)												

