

# Phytosociological Research Center

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## Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 30/08/2017)

DIAMANTINO (BRAZIL)

Altitude: 286 m.

Latitude: 14°24'S Longitude: 56°27'W

Temperature observation period.: 1962-1990 (29)

Rainfall observation period....: 1962-1990 (29)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	EPi
Jan.	24.00	32.30	20.40	37.80	18.80	268.0	108.11
Feb.	27.00	31.60	21.20	38.00	17.80	236.0	136.71
Mar.	24.30	31.40	20.40	36.40	14.40	203.0	106.55
Apr.	27.70	33.60	20.40	36.80	11.60	138.0	142.20
May.	24.40	31.50	19.10	36.70	6.20	56.0	101.84
Jun.	25.40	32.10	15.10	37.50	4.40	10.0	110.41
Jul.	24.50	32.80	16.40	36.30	4.00	7.0	102.18
Aug.	24.70	34.90	19.10	41.00	1.20	27.0	109.24
Sep.	25.30	32.50	19.50	39.90	6.30	72.0	115.94
Oct.	24.50	32.20	20.80	40.00	14.20	151.0	111.56
Nov.	25.00	32.90	21.80	38.90	14.20	205.0	118.15
Dec.	25.50	32.90	19.90	38.70	7.60	248.0	133.27
Year	25.19	32.56	19.51	38.17	10.06	1621	1396.2

### BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	779
Compensated thermicity index.....(Itc):	779
Simple continentality index.....(Ic):	3.7
Diurnality index.....(Id):	17.0
Annual ombrothermic index.....(Io):	5.36
Monthly dry ombrothermic index.....(Iod1):	0.29
Bimonthly dry ombrothermic index.....(Iod2):	0.34
Three monthly dry ombrothermic index.....(Iod3):	0.59
Four monthly dry ombrothermic index.....(Iod4):	1.01
Annual ombro-evaporation index.....(Ioe):	4.02
Annual positive temperature.....(Tp):	3023
Annual negative temperature.....(Tn):	0
Dry station temperature.....(Td):	746
Positive precipitation.....(Pp):	1621

N. of	P>4T	P:2T-4T	PT-2T	P<T	T<0
Months	7	2	1	2	0

Latitudinal Belt...: Eutropical

Continentalty.....: Hyperoceanic - Low Ultrahyperoceanic

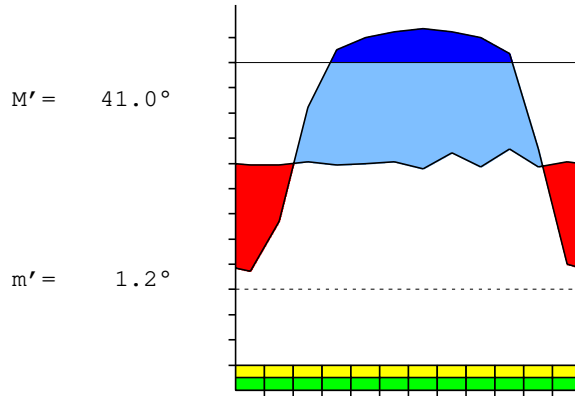
Bioclimate(Variant): TROPICAL PLUVISEASONAL (SUBMESOPHYTIC)

Bioclimatic Belt...: UPPER INFRATROPICAL UPPER SUBHUMID

DIAMANTINO (BRAZIL)

286 m

P= 1621      14° 24'S      56° 27'W      29/29 y.  
 T= 25.2°      Ic= 3.7      Tp= 3023      Tn= 0  
 m= 20.4°      M= 32.3°      Itc= 779      Io= 5.4



TROPICAL PLUVISEASONAL (SUBMESOPHYTIC)  
 UPPER INFRATROPICAL UPPER SUBHUMID

WATER INDEX CARD

DIAMANTINO (BRAZIL)

Altitude: 286 m.

Latitude: 14° 24'S

(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jul.	24.5	102	7	0	0	7	95	0	6	-0.9
Aug.	24.7	109	27	0	0	27	82	0	3	-0.7
Sep.	25.3	116	72	0	0	72	44	0	2	-0.3
Oct.	24.5	112	151	39	39	112	0	0	1	0.3
Nov.	25.0	118	205	61	100	118	0	26	14	0.7
Dec.	25.5	133	248	0	100	133	0	115	64	0.8
Jan.	24.0	108	268	0	100	108	0	160	112	1.4
Feb.	27.0	137	236	0	100	137	0	99	106	0.7
Mar.	24.3	107	203	0	100	107	0	96	101	0.9
Apr.	27.7	142	138	-4	96	142	0	0	51	0.0
May.	24.4	102	56	-46	50	102	0	0	25	-0.4
Jun.	25.4	110	10	-50	0	60	50	0	13	-0.9
Year	25.2	1396	1621	*	*	1124	272	497	497	*

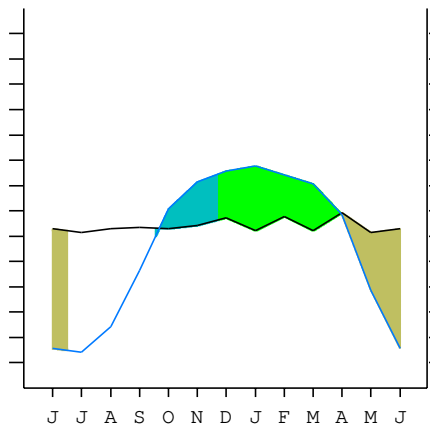
R = Reserve    VR = Variation of the reserve    RE = Real evapotranspiration  
 DR = Drainage    HC = Humidity coefficient    DF = Deficit    SP = Superavit

DIAMANTINO (BRAZIL)

14°24'S    56°27'W    286 m 29/29 y.

T= 25.2      Ic= 3.7      TROPICAL PLUVISEASONAL (SUBMESOPHYTIC)  
 m= 20.4      Tp= 3023      UPPER INFRATROPICAL  
 M= 32.3      Tn= 0      UPPER SUBHUMID  
 M' = 41.0      Itc= 779  
 m' = 1.2      Io= 5.4  
 P= 1621      mm    ———  
 PE= 1396      mm    ———

Imbibing	16 Sep.
Saturation	21 Nov.
Reserve Use	29 Mar.
Deficit	15 Jun.



DIAMANTINO (BRAZIL)

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SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continentality Index [A1b]  
 + Type .....: A. Hyperoceanic  
 + Subtype .....: 1. Ultrahyperoceanic  
 + Variant .....: b. Low

Thermic types [A2.A1]  
 + Latitudinal zone ....: A. Warm  
 + Latitudinal belt ....: 2. Eutropical  
 + Thermic type .....: A. Warm  
 + Thermic subtype .....: 1. Torrid

Bioclimatic types [A4.1a.6a]  
 + Macrobioclimate .....: A. TROPICAL  
 + Bioclimate .....: 4. PLUVISEASONAL  
 + Bioclimatic variant .:  
 + Thermic type.....: 1. INFRATROPICAL  
 + Thermic subtype.....: a. UPPER  
 + Ombrothermic type ...: 6. SUBHUMID  
 + Ombrothermic subtype : a. UPPER

Bioclimatic Classification .....: Trde.Itr.Shu

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 1298  
 Coldest semester of the year.....(Psw): 323  
 Warmest four months period of the year.....(Pcm1): 633  
 Following warmest four months period.....(Pcm2): 116  
 Positive precipitation dryest 3 months.....(Ppd): 44  
 Positive precipitation dryest 2 months.....(Ppd2): 17  
 Positive precipitation dryest 1 month.....(Ppd1): 7  
 Positive precipitation warmest 3 months.....(Pps): 577  
 Positive precipitation warmest 2 months.....(Pps2): 194  
 Positive precipitation warmest 1 month.....(Pps1): 138  
 Positive precipitation coldest 3 months.....(Ppw): 73  
 Positive precipitation coldest 2 months.....(Ppw2): 34  
 Positive precipitation coldest 1 month.....(Ppw1): 268

Seasons	Jun+Jul+Aug Ttr3-3	Sep+Oct+Nov Ttr4-4	Dec+Jan+Feb Ttr1-1	Mar+Apr+May Ttr2-2
Rainfall	44	428	752	397

Tropical rainfall rhythms: 1 > 4 > 2 > 3

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 27.7  
 Average coldest month [T].....(Tmin): 24.0  
 Maximum temp. warmest month [M].....(Tmmax): 34.9  
 Minimum temp. coldest month [m].....(Tmmin): 15.1  
 Absolute Max.temp. warmest month [M'].....(Tamax): 41.0  
 Absolute Min.temp. coldest month [m'].....(Tamin): 1.2  
 First warmest contrasted month [M].....(Tcmax): 32.1 (6)  
 First coldest contrasted month [m].....(Tcmin): 15.1 (6)  
 Dry station temperature.....(Td): 746  
 Positive temperature dryest 3 months.....(Tpd): 746  
 Positive temperature dryest 2 months.....(Tpd2): 499  
 Positive temperature dryest 1 month.....(Tpd1): 245  
 Positive temperature warmest 3 months.....(Tps): 790  
 Positive temperature warmest 2 months.....(Tps2): 521  
 Positive temperature warmest 1 month.....(Tps1): 277  
 Positive temperature coldest 3 months.....(Tpw): 743  
 Positive temperature coldest 2 months.....(Tpw2): 492  
 Positive temperature coldest 1 month.....(Tpw1): 240

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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)												
Agelid.....[m' > 0] (Pf)	o	o	o	o	o	o	o	o	o	o	o	o
HiperAgelid..[all>0] (Pf)	o	o	o	o	o	o	o	o	o	o	o	o

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## OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 0.86  
Mediterranean index of January.....(Im1): No  
Mediterranean index of January & February.....(Im2): No  
Mediterranean index of December to February...(Im3): No

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp(x10)	2480	2680	2360	2030	1380	560	100	70	270	720	1510	2050
Tp	255	240	270	243	277	244	254	245	247	253	245	250
Io (Iom)	9.73	11.2	8.74	8.35	4.98	2.30	0.39	0.29	1.09	2.85	6.16	8.20
Seasons	Dec+Jan+Feb			Mar+Apr+May			Jun+Jul+Aug			Sep+Oct+Nov		
Pp(x10)/Tp	7520 / 765			3970 / 764			440 / 746			4280 / 748		
Io (Iot)	9.830			5.196			0.590			5.722		
Semesters	December-May						June-November					
Pp(x10)/Tp	11490 / 1529						4720 / 1494					
Io (Iosm)	7.515						3.159					

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## Aridity Value Index (AVI)

[10xPP/TP=IO]: 16210/3023=5.36 **There is No Yearly Aridity**

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	2480	2680	2360	2030	1380	560	100	70	270	720	1510	2050
Tp [T*10]	255	240	270	243	277	244	254	245	247	253	245	250
Iom [Pp/Tp]	973	\$\$\$	874	835	498	230	39	29	109	285	616	820
Avm [200-Iom]	***	***	***	***	***	***	161	171	91	***	***	***
Seasons	Dec+Jan+Feb			Mar+Apr+May			Jun+Jul+Aug			Sep+Oct+Nov		
Pp / Tp	7520 / 765			3970 / 764			440 / 746			4280 / 748		
Iot [Pp/Tp]	983			520			59			572		
Avs E[Avm<200]	***			***			423			***		
Lower hyperarid [1]							Upper hyperarid [1]					
Weak lower arid [1]							Strong lower semiarid [1]					

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin] .....	(Sp):	3.70
CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4] .....		4.89
CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14] .....		1.23
+ Hyperoceanic (-20<CI<20)		
CI of Currey (1974) [CI=Sp/(1+Lat/3)] .....		0.64
+ Oceanic (0.6<CI<1.1)		
Rainfall Index of Lang (1925) [R=P/T] .....		64.35
+ Temperate warm (100>R>60)		
Aridity Index of Martonne (1926) [Ia=P/(T+10)] .....		46.06
+ Humid (60>Ia>30)		
I of Emberger (1930) [Q=100*P/(Tmax <sup>2</sup> -Tmin <sup>2</sup> )] .....		163.74
+ Humid (Q>90)		
I of Dantin & Revenga (1940) [DR=100*T/P] .....		1.55
+ Humid (2>DR>0)		
Aridity Index of UNEP [I=P/PE] .....		1.16
+ Humid (I>0.65)		
Potential Erosion I of Fournier (1960) [K=Pi <sup>2</sup> /P] .....		44.31
+ Very low (K<60)		

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BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)  
 + Climate .....

- + Climate .....
- + Region .....
- + Thermic type: 1. Megathermic

Thornthwaite (1948)													
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	
P-E ratio	1.13	0.92	0.82	0.50	0.20	0.03	0.02	0.09	0.25	0.59	0.82	1.00	
T-E ratio	10.80	12.15	10.93	12.47	10.98	11.43	11.02	11.12	11.38	11.02	11.25	11.48	
Precipitation-effectiveness:	63.60					Temperature-efficiency .....							136.03
Moisture Index [MI=100*(P-PE)/PE] .....												16.10	
+ C2.Subhumid humid (0<MI<20)													
Index of dryness [DI=100*d/PE] .....												19.47	
+ Moderate deficit (16.7<DI<33.3)													
Index of humidity [HI=100*s/PE] .....												35.57	
+ Strong surplus (20<HI)													
Potential Evapotranspiration PE .....												1396.17	
+ Forth mesothermic (997<PE<1440)													

