

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 30/08/2017)

BLANCA (ESP MURCIA)

Altitude: 240 m.

Latitude: 38°11'N Longitude: 1°20'W

Temperature observation period.: 1945-1969 (25)

Rainfall observation period....: 1945-1969 (25)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	Epi
Jan.	9.70	15.90	3.60	22.30	-1.90	22.0	16.83
Feb.	11.30	18.00	4.70	25.10	-1.10	21.0	22.26
Mar.	13.80	20.50	7.00	27.70	1.80	21.0	39.96
Apr.	16.20	23.00	9.40	30.30	4.70	51.0	57.93
May.	19.70	26.60	12.80	33.70	8.30	35.0	94.07
Jun.	23.10	30.10	16.10	36.80	11.90	23.0	128.49
Jul.	26.90	34.20	19.50	40.20	15.90	4.0	173.38
Aug.	27.10	34.40	19.80	40.30	16.20	12.0	164.16
Sep.	24.10	31.20	17.10	37.10	12.70	33.0	116.83
Oct.	19.00	25.30	12.80	31.70	7.40	53.0	68.53
Nov.	13.80	20.00	7.60	23.10	1.50	28.0	32.58
Dec.	10.70	16.70	4.80	22.30	-1.10	32.0	19.82
Year	17.95	24.66	11.27	30.88	6.36	335	934.84

BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	375
Compensated thermicity index.....(Itc):	375
Simple continentality index.....(Ic):	17.4
Diurnality index.....(Id):	14.7
Annual ombrothermic index.....(Io):	1.56
Monthly estival ombrothermic index.....(Ios1):	0.15
Bimonthly estival ombrothermic index.....(Ios2):	0.30
Threemonthly estival ombrothermic index.....(Ios3):	0.51
Fourmonthly estival ombrothermic index.....(Ios4):	0.76
Annual ombro-evaporation index.....(Ioe):	0.91
Annual positive temperature.....(Tp):	2154
Annual negative temperature.....(Tn):	0
Estival temperature.....(Ts):	771
Positive precipitation.....(Pp):	335

N. of	P>4T	P:2T-4T	PT-2T	P<T	T<0
Months	0	5	4	3	0

Latitudinal Belt...: Low eutemperate

Continentality.....: Oceanic - Low Semicontinental

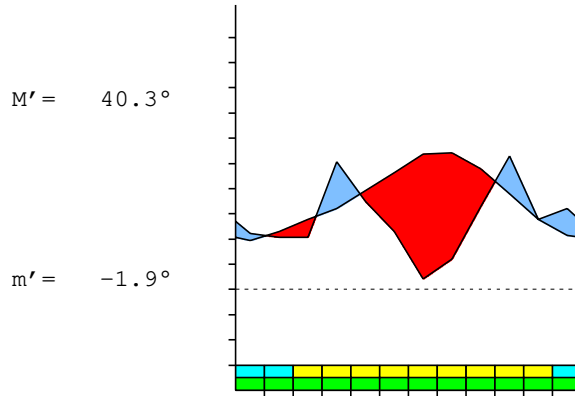
Bioclimate.....: MEDITERRANEAN XERIC-OCEANIC

Bioclimatic Belt...: UPPER THERMOMEDITERRANEAN UPPER SEMIARID

BLANCA (ESP MURCIA)

240 m

P= 335 38° 11'N 1° 20'W 25/25 y.
 T= 18.0° Ic= 17.4 Tp= 2154 Tn= 0
 m= 3.6° M= 15.9° Itc= 375 Io= 1.6



MEDITERRANEAN XERIC-OCEANIC
 UPPER THERMOMEDITERRANEAN UPPER SEMIARID

WATER INDEX CARD
 Altitude: 240 m.

BLANCA (ESP MURCIA)
 Latitude: 38° 11'N

(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jan.	9.7	17	22	5	17	17	0	0	0	0.3
Feb.	11.3	22	21	-1	16	22	0	0	0	0.0
Mar.	13.8	40	21	-16	0	37	3	0	0	-0.4
Apr.	16.2	58	51	0	0	51	7	0	0	-0.1
May.	19.7	94	35	0	0	35	59	0	0	-0.6
Jun.	23.1	128	23	0	0	23	105	0	0	-0.8
Jul.	26.9	173	4	0	0	4	169	0	0	-0.9
Aug.	27.1	164	12	0	0	12	152	0	0	-0.9
Sep.	24.1	117	33	0	0	33	84	0	0	-0.7
Oct.	19.0	69	53	0	0	53	16	0	0	-0.2
Nov.	13.8	33	28	0	0	28	5	0	0	-0.1
Dec.	10.7	20	32	12	12	20	0	0	0	0.6
Year	18.0	935	335	*	*	335	600	0	0	*

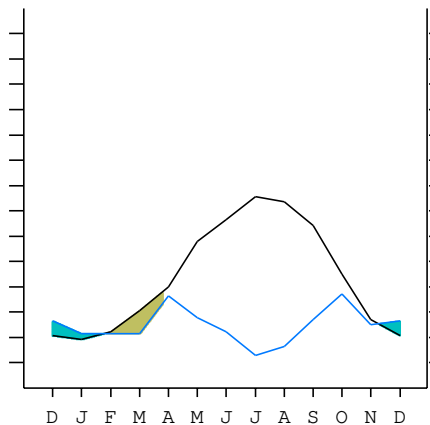
R = Reserve VR = Variation of the reserve RE = Real evapotranspiration
 DR = Drainage HC = Humidity coefficient DF = Deficit SP = Superavit

BLANCA (ESP MURCIA)

38°11'N 1°20'W 240 m 25/25 y.

T= 18.0 Ic= 17.4 MEDITERRANEAN XERIC-OCEANIC
 m= 3.6 Tp= 2154 UPPER THERMOMEDITERRANEAN
 M= 15.9 Tn= 0 UPPER SEMIARID
 M' = 40.3 Itc= 375
 m' = -1.9 Io= 1.6
 P= 335 mm ———
 PE= 935 mm ———

Imbibing	9 Nov.
Saturation	25 Jan.
Reserve Use	26 Mar.
Deficit	



BLANCA (ESP MURCIA)

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SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continental Index [B1a]
 + Type: B. Oceanic
 + Subtype: 1. Semicontinental
 + Variant: a. Low

Thermic types [B1.A3]
 + Latitudinal zone: B. Temperate
 + Latitudinal belt: 1. Low eutemperate
 + Thermic type: A. Warm
 + Thermic subtype: 3. Subwarm

Bioclimatic types [B6.2a.4a]
 + Macrobioclimate: B. MEDITERRANEAN
 + Bioclimate: 6. XERIC-OCEANIC
 + Bioclimatic variant ..:
 + Thermic type.....: 2. THERMOMEDITERRANEAN
 + Thermic subtype.....: a. UPPER
 + Ombrothermic type ...: 4. SEMIARID
 + Ombrothermic subtype : a. UPPER

Bioclimatic Classification: MepDC.Tme.Sar

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 160
 Coldest semester of the year.....(Psw): 175
 Warmest four months period of the year.....(Pcm1): 72
 Following warmest four months period.....(Pcm2): 135
 Positive precipitation dryest 3 months.....(Ppd): 39
 Positive precipitation dryest 2 months.....(Ppd2): 16
 Positive precipitation dryest 1 month.....(Ppd1): 4
 Positive precipitation warmest 3 months.....(Pps): 49
 Positive precipitation warmest 2 months.....(Pps2): 16
 Positive precipitation warmest 1 month.....(Pps1): 12
 Positive precipitation coldest 3 months.....(Ppw): 75
 Positive precipitation coldest 2 months.....(Ppw2): 54
 Positive precipitation coldest 1 month.....(Ppw1): 22

Seasons	Winter Tr1-W	Spring Tr2-P	Summer Tr3-S	Automn Tr4-F
Rainfall	75	107	39	114

Seasonal rainfall rhythms: F > P > W > S

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 27.1
 Average coldest month [T].....(Tmin): 9.7
 Maximum temp. warmest month [M].....(Tmmax): 34.4
 Minimum temp. coldest month [m].....(Tmmin): 3.6
 Absolute Max.temp. warmest month [M'].....(Tamax): 40.3
 Absolute Min.temp. coldest month [m'].....(Tamin): -1.9
 First warmest contrasted month [M].....(Tcmax): 34.2 (7)
 First coldest contrasted month [m].....(Tcmin): 19.5 (7)
 Estival temperature.....(Ts): 771
 Positive temperature dryest 3 months.....(Tpd): 771
 Positive temperature dryest 2 months.....(Tpd2): 540
 Positive temperature dryest 1 month.....(Tpd1): 269
 Positive temperature warmest 3 months.....(Tps): 781
 Positive temperature warmest 2 months.....(Tps2): 540
 Positive temperature warmest 1 month.....(Tps1): 271
 Positive temperature coldest 3 months.....(Tpw): 317
 Positive temperature coldest 2 months.....(Tpw2): 204
 Positive temperature coldest 1 month.....(Tpw1): 97

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

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OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 2.79
 Mediterranean index of July.[PE/P].....(Im1): 43.34
 Mediterranean index of July & August.....(Im2): 21.10
 Mediterranean index of June, July & August....(Im3): 11.95

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp(x10)	320	220	210	210	510	350	230	40	120	330	530	280
Tp	107	97	113	138	162	197	231	269	271	241	190	138
Io (Iom)	2.99	2.27	1.86	1.52	3.15	1.78	1.00	0.15	0.44	1.37	2.79	2.03
Seasons	Winter			Spring			Summer			Autumn		
Pp(x10)/Tp	750 / 317			1070 / 497			390 / 771			1140 / 569		
Io (Iot)	2.366			2.153			0.506			2.004		
Semesters	December-May						June-November					
Pp(x10)/Tp	1820 / 814						1530 / 1340					
Io (Iosm)	2.236						1.142					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 3350/2154=1.56 **There is No Yearly Aridity**

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	320	220	210	210	510	350	230	40	120	330	530	280
Tp [T*10]	107	97	113	138	162	197	231	269	271	241	190	138
Iom [Pp/Tp]	299	227	186	152	315	178	100	15	44	137	279	203
Avm [200-Iom]	***	***	14	48	***	22	100	185	156	63	***	***
Seasons	Winter			Spring			Summer			Autumn		
Pp / Tp	750 / 317			1070 / 497			390 / 771			1140 / 569		
Iot [Pp/Tp]	237			215			51			200		
Avs E[Avm<200]	***			***			441			***		
Upper ultrahyperarid [1]							Strong lower arid [1]					
Weak lower arid [1]							Weak upper arid [1]					
Weak lower semiarid [1]							Strong upper semiarid [1]					
Weak upper semiarid [2]												

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin]	(Sp):	17.40
CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]		27.45
CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]		25.69
+ Oceanic (20<CI<40)		
CI of Currey (1974) [CI=Sp/(1+Lat/3)]		1.27
+ Subcontinental (1.1<CI<1.7)		
Rainfall Index of Lang (1925) [R=P/T]		18.66
+ Steppic (40>R>0)		
Aridity Index of Martonne (1926) [Ia=P/(T+10)]		11.99
+ Arid -steppic- (15>Ia>5)		
I of Emberger (1930) [Q=100*P/(Tmax ² -Tmin ²)]		28.62
+ Arid (30>Q>0)		
I of Dantin & Revenga (1940) [DR=100*T/P]		5.36
+ Arid (6>DR>3)		
Aridity Index of UNEP [I=P/PE]		0.36
+ Semiarid (0.5>Im>0.2)		
Potential Erosion I of Fournier (1960) [K=Pi ² /P]		8.39
+ Very low (K<60)		

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BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)
 + Climate

- + Climate
- + Region
- + Thermic type: 3. Macro-mesothermic

Thornthwaite (1948)												
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	0.10	0.09	0.09	0.22	0.13	0.08	0.01	0.03	0.11	0.21	0.12	0.15
T-E ratio	4.36	5.09	6.21	7.29	8.87	10.40	12.10	12.20	10.85	8.55	6.21	4.81
Precipitation-effectiveness: 13.49						Temperature-efficiency						96.93
Moisture Index [MI=100*(P-PE)/PE]												-64.16
+ D.Semiarid (-66.7<MI<-33.3)												
Index of dryness [DI=100*d/PE]												64.16
+ Strong deficit (33.3<DI)												
Index of humidity [HI=100*s/PE]												0.00
+ No surplus (0<HI<10)												
Potential Evapotranspiration PE												934.84
+ Third mesothermic (855<PE<997)												

