

# Phytosociological Research Center

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## Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 30/08/2017)

LA AZOHIA (ESP MURCIA)

Altitude: 160 m.

Latitude: 37°32'N Longitude: 1°6'W

Temperature observation period.: 1931-1963 (33)

Rainfall observation period....: 1931-1963 (33)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	EPI
Jan.	12.50	16.20	8.80	20.50	4.30	17.0	25.80
Feb.	12.90	16.60	9.10	21.70	4.70	10.0	27.14
Mar.	14.70	18.50	10.90	23.30	7.50	13.0	43.13
Apr.	16.60	20.50	12.80	24.30	9.90	16.0	58.61
May.	19.50	23.70	15.40	27.80	11.80	12.0	90.19
Jun.	21.70	24.90	18.50	28.00	15.20	8.0	112.39
Jul.	24.80	28.10	21.40	31.30	18.90	0.0	147.64
Aug.	25.70	29.00	22.30	32.00	20.10	4.0	148.31
Sep.	24.20	27.50	21.00	30.80	18.00	10.0	117.01
Oct.	20.80	24.30	17.30	27.90	12.60	17.0	80.00
Nov.	17.00	20.50	13.40	25.10	9.10	22.0	46.92
Dec.	14.10	17.70	10.50	21.40	6.20	22.0	32.00
Year	18.71	22.29	15.12	26.18	11.53	151	929.13

### BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	437
Compensated thermicity index.....(Itc):	437
Simple continentality index.....(Ic):	13.2
Diurnality index.....(Id):	8.3
Annual ombrothermic index.....(Io):	0.67
Monthly estival ombrothermic index.....(Ios1):	No
Bimonthly estival ombrothermic index.....(Ios2):	0.08
Three monthly estival ombrothermic index.....(Ios3):	0.17
Four monthly estival ombrothermic index.....(Ios4):	0.26
Annual ombro-evaporation index.....(Ioe):	0.51
Annual positive temperature.....(Tp):	2245
Annual negative temperature.....(Tn):	0
Estival temperature.....(Ts):	722
Positive precipitation.....(Pp):	151

N. of	P>4T	P:2T-4T	PT-2T	P<T	T<0
Months	0	0	3	9	0

Latitudinal Belt...: Low eutemperate

Continentality.....: Oceanic - Low Semihyperoceanic

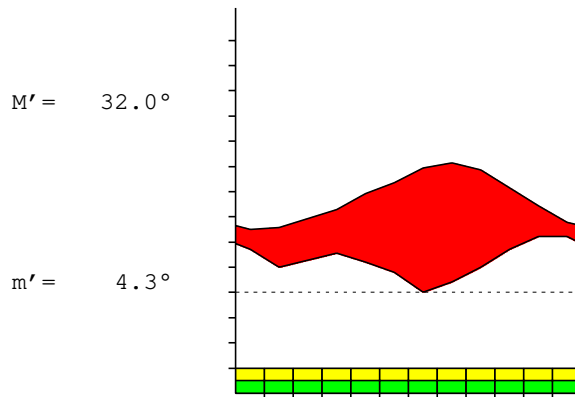
Bioclimate.....: MEDITERRANEAN DESERTIC-OCEANIC

Bioclimatic Belt...: LOW THERMOMEDITERRANEAN LOW ARID

LA AZOHIA (ESP MURCIA)

160 m

P= 151 37° 32'N 1° 6'W 33/33 y.  
 T= 18.7° Ic= 13.2 Tp= 2245 Tn= 0  
 m= 8.8° M= 16.2° Itc= 437 Io= 0.7



MEDITERRANEAN DESERTIC-OCEANIC  
 LOW THERMOMEDITERRANEAN LOW ARID

WATER INDEX CARD LA AZOHIA (ESP MURCIA)  
 Altitude: 160 m. Latitude: 37° 32'N

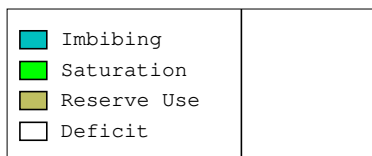
(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jan.	12.5	26	17	0	0	17	9	0	0	-0.3
Feb.	12.9	27	10	0	0	10	17	0	0	-0.6
Mar.	14.7	43	13	0	0	13	30	0	0	-0.6
Apr.	16.6	59	16	0	0	16	43	0	0	-0.7
May.	19.5	90	12	0	0	12	78	0	0	-0.8
Jun.	21.7	112	8	0	0	8	104	0	0	-0.9
Jul.	24.8	148	0	0	0	0	148	0	0	-1.0
Aug.	25.7	148	4	0	0	4	144	0	0	-0.9
Sep.	24.2	117	10	0	0	10	107	0	0	-0.9
Oct.	20.8	80	17	0	0	17	63	0	0	-0.7
Nov.	17.0	47	22	0	0	22	25	0	0	-0.5
Dec.	14.1	32	22	0	0	22	10	0	0	-0.3
Year	18.7	929	151	*	*	151	778	0	0	*

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

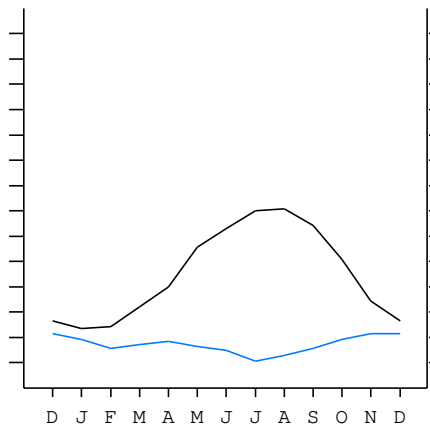
LA AZOHIA (ESP MURCIA)

37°32'N 1°6'W 160 m 33/33 y.

T= 18.7 Ic= 13.2 MEDITERRANEAN DESERTIC-OCEANIC  
 m= 8.8 Tp= 2245 LOW THERMOMEDITERRANEAN  
 M= 16.2 Tn= 0 LOW ARID  
 M' = 32.0 Itc= 437  
 m' = 4.3 Io= 0.7  
 P= 151 mm ———  
 PE= 929 mm ———



All over the year,  
 there is hydric deficit



LA AZOHIA (ESP MURCIA)

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SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continental Index [B1b]

- + Type .....: B. Oceanic
- + Subtype .....: 1. Semihyperoceanic
- + Variant .....: b. Low

Thermic types [B1.A3]

- + Latitudinal zone .....: B. Temperate
- + Latitudinal belt .....: 1. Low eutemperate
- + Thermic type .....: A. Warm
- + Thermic subtype .....: 3. Subwarm

Bioclimatic types [B4.2b.3b]

- + Macrobioclimate .....: B. MEDITERRANEAN
- + Bioclimate .....: 4. DESERTIC-OCEANIC
- + Bioclimatic variant ..:
- + Thermic type.....: 2. THERMOMEDITERRANEAN
- + Thermic subtype.....: b. LOW
- + Ombrothermic type ...: 3. ARID
- + Ombrothermic subtype : b. LOW

Bioclimatic Classification .....: Mexc.Tme.Ari

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 51

Coldest semester of the year.....(Psw): 100

Warmest four months period of the year.....(Pcm1): 22

Following warmest four months period.....(Pcm2): 78

Positive precipitation dryest 3 months.....(Ppd): 12

Positive precipitation dryest 2 months.....(Ppd2): 4

Positive precipitation dryest 1 month.....(Ppd1): 0

Positive precipitation warmest 3 months.....(Pps): 14

Positive precipitation warmest 2 months.....(Pps2): 4

Positive precipitation warmest 1 month.....(Pps1): 4

Positive precipitation coldest 3 months.....(Ppw): 49

Positive precipitation coldest 2 months.....(Ppw2): 27

Positive precipitation coldest 1 month.....(Ppw1): 17

Seasons	Winter Tr1-W	Spring Tr2-P	Summer Tr3-S	Automn Tr4-F
Rainfall	49	41	12	49

Seasonal rainfall rhythms: W > F > P > S

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 25.7

Average coldest month [T].....(Tmin): 12.5

Maximum temp. warmest month [M].....(Tmmax): 29.0

Minimum temp. coldest month [m].....(Tmmin): 8.8

Absolute Max.temp. warmest month [M'].....(Tamax): 32.0

Absolute Min.temp. coldest month [m'].....(Tamin): 4.3

First warmest contrasted month [M].....(Tcmax): 23.7 (5)

First coldest contrasted month [m].....(Tcmin): 15.4 (5)

Estival temperature.....(Ts): 722

Positive temperature dryest 3 months.....(Tpd): 722

Positive temperature dryest 2 months.....(Tpd2): 505

Positive temperature dryest 1 month.....(Tpd1): 248

Positive temperature warmest 3 months.....(Tps): 747

Positive temperature warmest 2 months.....(Tps2): 505

Positive temperature warmest 1 month.....(Tps1): 257

Positive temperature coldest 3 months.....(Tpw): 395

Positive temperature coldest 2 months.....(Tpw2): 254

Positive temperature coldest 1 month.....(Tpw1): 125

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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): 6.15  
 Mediterranean index of July.[PE/P].....(Im1): No  
 Mediterranean index of July & August.....(Im2): 73.99  
 Mediterranean index of June, July & August....(Im3): 34.03

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp(x10)	220	170	100	130	160	120	80	0	40	100	170	220
Tp	141	125	129	147	166	195	217	248	257	242	208	170
Io (Iom)	1.56	1.36	0.78	0.88	0.96	0.62	0.37	0.00	0.16	0.41	0.82	1.29
Seasons	Winter			Spring			Summer			Autumn		
Pp(x10)/Tp	490 / 395			410 / 508			120 / 722			490 / 620		
Io (Iot)	1.241			0.807			0.166			0.790		
Semesters	December-May						June-November					
Pp(x10)/Tp	900 / 903						610 / 1342					
Io (Iosm)	0.997						0.455					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 1510/2245=0.67 [Strong upper arid \(7\) \[1479\]](#)

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	220	170	100	130	160	120	80	0	40	100	170	220
Tp [T*10]	141	125	129	147	166	195	217	248	257	242	208	170
Iom [Pp/Tp]	156	136	78	88	96	62	37	0	16	41	82	129
Avm [200-Iom]	44	64	122	112	104	138	163	200	184	159	118	71
Seasons	Winter			Spring			Summer			Autumn		
Pp / Tp	490 / 395			410 / 508			120 / 722			490 / 620		
Iot [Pp/Tp]	124			81			17			79		
Avs E[Avm<200]	230			354			548			348		
Lower ultrahyperarid [1]							Upper ultrahyperarid [2]					
Upper hyperarid [1]							Strong lower arid [1]					
Weak lower arid [1]							Strong upper arid [1]					
Weak upper arid [5]							Weak lower semiarid [3]					

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin] .....	(Sp):	13.20
CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4] .....		16.43
CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14] .....		16.42
+ Hyperoceanic (-20<CI<20)		
CI of Currey (1974) [CI=Sp/(1+Lat/3)] .....		0.98
+ Oceanic (0.6<CI<1.1)		
Rainfall Index of Lang (1925) [R=P/T] .....		8.07
+ Steppic (40>R>0)		
Aridity Index of Martonne (1926) [Ia=P/(T+10)] .....		5.26
+ Arid -steppic- (15>Ia>5)		
I of Emberger (1930) [Q=100*P/(Tmax <sup>2</sup> -Tmin <sup>2</sup> )] .....		19.78
+ Arid (30>Q>0)		
I of Dantin & Revenga (1940) [DR=100*T/P] .....		12.39
+ Extremely arid (DR>6)		
Aridity Index of UNEP [I=P/PE] .....		0.16
+ Arid (0.2>Im>0.05)		
Potential Erosion I of Fournier (1960) [K=Pi <sup>2</sup> /P] .....		3.21
+ Very low (K<60)		

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BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)

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

Thornthwaite (1948)												
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	0.07	0.04	0.05	0.06	0.04	0.02	0.00	0.01	0.03	0.06	0.08	0.09
T-E ratio	5.63	5.80	6.61	7.47	8.77	9.77	11.16	11.57	10.89	9.36	7.65	6.35
Precipitation-effectiveness: 5.56						Temperature-efficiency .....						101.03
Moisture Index [MI=100*(P-PE)/PE] .....												-83.75
+ E.Dry (-110<MI<-66.7)												
Index of dryness [DI=100*d/PE] .....												83.74
+ Strong deficit (33.3<DI)												
Index of humidity [HI=100*s/PE] .....												0.00
+ No surplus (0<HI<10)												
Potential Evapotranspiration PE .....												929.13
+ Third mesothermic (855<PE<997)												

