

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 30/08/2017)

LA PUERTA DE SEGURA (ESP JAEN)

Altitude: 584 m.

Latitude: 38°21'N Longitude: 2°44'W

Temperature observation period.: 1942-1969 (28)

Rainfall observation period....: 1942-1969 (28)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	EPI
Jan.	7.00	12.00	2.10	18.70	-3.10	66.0	11.02
Feb.	8.60	14.00	3.20	20.60	-2.90	79.0	15.63
Mar.	12.20	18.50	6.00	24.90	0.40	83.0	35.45
Apr.	14.80	20.90	8.60	28.40	3.60	60.0	53.17
May.	19.60	26.90	12.30	34.30	6.90	53.0	97.42
Jun.	23.50	31.00	16.00	38.10	10.90	26.0	135.12
Jul.	27.70	36.40	19.00	40.70	15.10	3.0	181.38
Aug.	27.40	36.20	18.60	40.70	14.30	11.0	166.96
Sep.	22.90	31.00	14.70	37.50	10.70	41.0	108.29
Oct.	17.00	23.60	10.40	29.50	4.60	69.0	59.21
Nov.	10.50	15.90	5.10	22.10	-0.10	65.0	22.21
Dec.	7.00	11.50	2.60	17.40	-3.10	83.0	10.76
Year	16.52	23.16	9.88	29.41	4.78	639	896.62

BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	306
Compensated thermicity index.....(Itc):	320
Simple continentality index.....(Ic):	20.7
Diurnality index.....(Id):	17.6
Annual ombrothermic index.....(Io):	3.22
Monthly estival ombrothermic index.....(Ios1):	0.11
Bimonthly estival ombrothermic index.....(Ios2):	0.25
Threemonthly estival ombrothermic index.....(Ios3):	0.51
Fourmonthly estival ombrothermic index.....(Ios4):	0.95
Annual ombro-evaporation index.....(Ioe):	0.47
Annual positive temperature.....(Tp):	1982
Annual negative temperature.....(Tn):	0
Estival temperature.....(Ts):	786
Positive precipitation.....(Pp):	639

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

Latitudinal Belt...: Low eutemperate

Continentalty.....: Oceanic - High Semicontinental

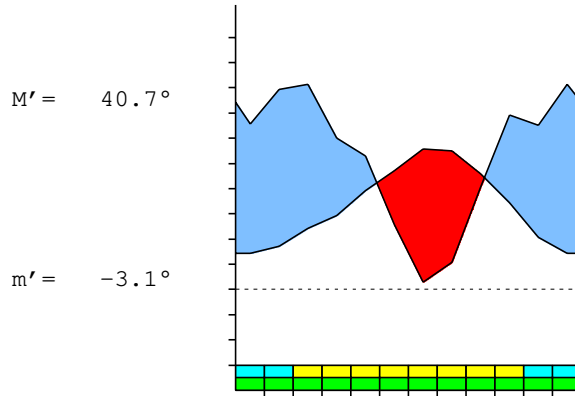
Bioclimate.....: MEDITERRANEAN PLUVISEASONAL-OCEANIC

Bioclimatic Belt...: LOW MESOMEDITERRANEAN UPPER DRY

LA PUERTA DE SEGURA (ESP JAEN)

584 m

P= 639 38° 21'N 2° 44'W 28/28 y.
 T= 16.5° Ic= 20.7 Tp= 1982 Tn= 0
 m= 2.1° M= 12.0° Itc= 320 Io= 3.2



MEDITERRANEAN PLUVISEASONAL-OCEANIC
 LOW MESOMEDITERRANEAN UPPER DRY

WATER INDEX CARD

LA PUERTA DE SEGURA (ESP JAEN)

Altitude: 584 m.

Latitude: 38° 21'N

(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jan.	7.0	11	66	0	100	11	0	55	34	4.9
Feb.	8.6	16	79	0	100	16	0	63	49	4.0
Mar.	12.2	35	83	0	100	35	0	48	48	1.3
Apr.	14.8	53	60	0	100	53	0	7	27	0.1
May.	19.6	97	53	-44	56	97	0	0	14	-0.4
Jun.	23.5	135	26	-56	0	82	54	0	7	-0.8
Jul.	27.7	181	3	0	0	3	178	0	3	-0.9
Aug.	27.4	167	11	0	0	11	156	0	2	-0.9
Sep.	22.9	108	41	0	0	41	67	0	1	-0.6
Oct.	17.0	59	69	10	10	59	0	0	0	0.1
Nov.	10.5	22	65	43	53	22	0	0	0	1.9
Dec.	7.0	11	83	47	100	11	0	25	13	6.7
Year	16.5	897	639	*	*	441	455	198	198	*

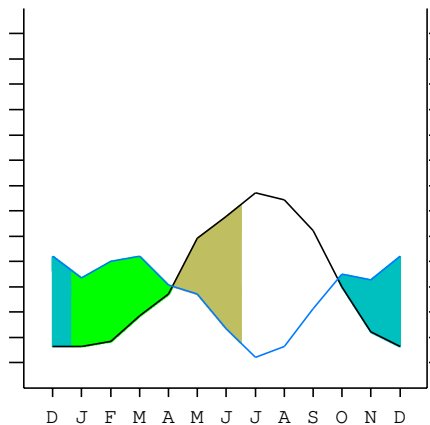
R = Reserve VR = Variation of the reserve RE = Real evapotranspiration
 DR = Drainage HC = Humidity coefficient DF = Deficit SP = Superavit

LA PUERTA DE SEGURA (ESP JAEN)

38°21'N 2°44'W 584 m 28/28 y.

T= 16.5 Ic= 20.7 MEDITERRANEAN PLUVISEASONAL-OCEANIC
 m= 2.1 Tp= 1982 LOW MESOMEDITERRANEAN
 M= 12.0 Tn= 0 UPPER DRY
 M' = 40.7 Itc= 320
 m' = -3.1 Io= 3.2
 P= 639 mm ———
 PE= 897 mm ———

Imbibing	27 Sep.
Saturation	20 Dec.
Reserve Use	4 Apr.
Deficit	16 Jun.



LA PUERTA DE SEGURA (ESP JAEN)

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SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continental Index [B1b]

- + Type: B. Oceanic
- + Subtype: 1. Semicontinental
- + Variant: b. High

Thermic types [B1.A3]

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

Bioclimatic types [B8.3b.5a]

- + Macrobioclimate: B. MEDITERRANEAN
- + Bioclimate: 8. PLUVISEASONAL-OCEANIC
- + Bioclimatic variant ..:
- + Thermic type.....: 3. MESOMEDITERRANEAN
- + Thermic subtype.....: b. LOW
- + Ombrothermic type ...: 5. DRY
- + Ombrothermic subtype : a. UPPER

Bioclimatic Classification: Mehc.Mme.Dry

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 203
 Coldest semester of the year.....(Psw): 436
 Warmest four months period of the year.....(Pcm1): 81
 Following warmest four months period.....(Pcm2): 283
 Positive precipitation dryest 3 months.....(Ppd): 40
 Positive precipitation dryest 2 months.....(Ppd2): 14
 Positive precipitation dryest 1 month.....(Ppd1): 3
 Positive precipitation warmest 3 months.....(Pps): 40
 Positive precipitation warmest 2 months.....(Pps2): 14
 Positive precipitation warmest 1 month.....(Pps1): 3
 Positive precipitation coldest 3 months.....(Ppw): 228
 Positive precipitation coldest 2 months.....(Ppw2): 149
 Positive precipitation coldest 1 month.....(Ppw1): 66

Seasons	Winter Tr1-W	Spring Tr2-P	Summer Tr3-S	Automn Tr4-F
Rainfall	228	196	40	175

Seasonal rainfall rhythms: W > P > F > S

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 27.7
 Average coldest month [T].....(Tmin): 7.0
 Maximum temp. warmest month [M].....(Tmmax): 36.4
 Minimum temp. coldest month [m].....(Tmmin): 2.1
 Absolute Max.temp. warmest month [M'].....(Tamax): 40.7
 Absolute Min.temp. coldest month [m'].....(Tamin): -3.1
 First warmest contrasted month [M].....(Tcmax): 36.2 (8)
 First coldest contrasted month [m].....(Tcmin): 18.6 (8)
 Estival temperature.....(Ts): 786
 Positive temperature dryest 3 months.....(Tpd): 786
 Positive temperature dryest 2 months.....(Tpd2): 551
 Positive temperature dryest 1 month.....(Tpd1): 277
 Positive temperature warmest 3 months.....(Tps): 786
 Positive temperature warmest 2 months.....(Tps2): 551
 Positive temperature warmest 1 month.....(Tps1): 277
 Positive temperature coldest 3 months.....(Tpw): 226
 Positive temperature coldest 2 months.....(Tpw2): 140
 Positive temperature coldest 1 month.....(Tpw1): 70

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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): 1.40
 Mediterranean index of July.[PE/P].....(Im1): 60.46
 Mediterranean index of July & August.....(Im2): 24.88
 Mediterranean index of June, July & August....(Im3): 12.09

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp(x10)	830	660	790	830	600	530	260	30	110	410	690	650
Tp	70	70	86	122	148	196	235	277	274	229	170	105
Io (Iom)	11.9	9.43	9.19	6.80	4.05	2.70	1.11	0.11	0.40	1.79	4.06	6.19
Seasons	Winter			Spring			Summer			Autumn		
Pp(x10)/Tp	2280 / 226			1960 / 466			400 / 786			1750 / 504		
Io (Iot)	10.09			4.206			0.509			3.472		
Semesters	December-May						June-November					
Pp(x10)/Tp	4240 / 692						2150 / 1290					
Io (Iosm)	6.127						1.667					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 6390/1982=3.22 **There is No Yearly Aridity**

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	830	660	790	830	600	530	260	30	110	410	690	650
Tp [T*10]	70	70	86	122	148	196	235	277	274	229	170	105
Iom [Pp/Tp]	\$\$	943	919	680	405	270	111	11	40	179	406	619
Avm [200-Iom]	***	***	***	***	***	***	89	189	160	21	***	***
Seasons	Winter			Spring			Summer			Autumn		
Pp / Tp	2280 / 226			1960 / 466			400 / 786			1750 / 504		
Iot [Pp/Tp]	1009			421			51			347		
Avs E[Avm<200]	***			***			438			***		
Upper ultrahyperarid [1]							Strong lower arid [1]					
Weak lower arid [1]							Strong lower semiarid [1]					
Weak upper semiarid [1]												

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin]	(Sp): 20.70
CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]	36.32
CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]	33.09
+ Oceanic (20<CI<40)	
CI of Currey (1974) [CI=Sp/(1+Lat/3)]	1.50
+ Subcontinental (1.1<CI<1.7)	
Rainfall Index of Lang (1925) [R=P/T]	38.69
+ Steppic (40>R>0)	
Aridity Index of Martonne (1926) [Ia=P/(T+10)]	24.10
+ Subhumid (30>Ia>20)	
I of Emberger (1930) [Q=100*P/(Tmax ² -Tmin ²)]	48.39
+ Semiarid (50>Q>30)	
I of Dantin & Revenga (1940) [DR=100*T/P]	2.58
+ Semiarid (3>DR>2)	
Aridity Index of UNEP [I=P/PE]	0.71
+ Humid (I>0.65)	
Potential Erosion I of Fournier (1960) [K=Pi ² /P]	10.78
+ 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	0.39	0.45	0.42	0.27	0.21	0.09	0.01	0.03	0.14	0.30	0.34	0.50
T-E ratio	3.15	3.87	5.49	6.66	8.82	10.57	12.47	12.33	10.30	7.65	4.72	3.15
Precipitation-effectiveness: 31.51						Temperature-efficiency						89.19
Moisture Index [MI=100*(P-PE)/PE]												
+ C1.Subhumid dry (-33.3<MI<0)												
Index of dryness [DI=100*d/PE]												
+ Strong deficit (33.3<DI)												
Index of humidity [HI=100*s/PE]												
+ Strong surplus (20<HI)												
Potential Evapotranspiration PE												
+ Third mesothermic (855<PE<997)												

