

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 30/08/2017)

ALMONASTER LA REAL (ESP HUELVA)

Altitude: 610 m.

Latitude: 37°52'N Longitude: 6°47'W

Temperature observation period.: 1951-1991 (41)

Rainfall observation period....: 1961-1990 (30)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	EPI
Jan.	9.30	13.70	4.80	19.40	0.40	173.6	19.43
Feb.	9.80	14.60	5.00	20.50	0.40	151.8	20.98
Mar.	11.70	17.00	6.50	23.80	2.20	89.4	34.72
Apr.	13.60	19.50	7.80	26.40	3.30	99.6	47.85
May.	17.20	23.70	10.60	30.70	5.70	65.9	79.64
Jun.	21.20	28.60	13.80	35.40	8.90	39.1	114.40
Jul.	25.30	33.80	16.80	38.70	11.80	5.1	155.59
Aug.	24.80	33.20	16.40	38.70	12.20	10.5	140.79
Sep.	22.60	30.10	15.10	35.80	10.40	37.5	106.93
Oct.	17.30	23.00	11.50	30.00	7.10	120.8	62.77
Nov.	12.90	17.80	8.00	24.20	3.80	156.3	33.41
Dec.	10.20	14.70	5.60	20.30	1.40	176.5	22.18
Year	16.33	22.48	10.16	28.66	5.63	1126	838.69

BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	348
Compensated thermicity index.....(Itc):	348
Simple continentality index.....(Ic):	16.0
Diurnality index.....(Id):	17.0
Annual ombrothermic index.....(Io):	5.75
Monthly estival ombrothermic index.....(Ios1):	0.20
Bimonthly estival ombrothermic index.....(Ios2):	0.31
Three monthly estival ombrothermic index.....(Ios3):	0.77
Four monthly estival ombrothermic index.....(Ios4):	1.36
Annual ombro-evaporation index.....(Ioe):	0.33
Annual positive temperature.....(Tp):	1959
Annual negative temperature.....(Tn):	0
Estival temperature.....(Ts):	713
Positive precipitation.....(Pp):	1126

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 - Low Euoceanic

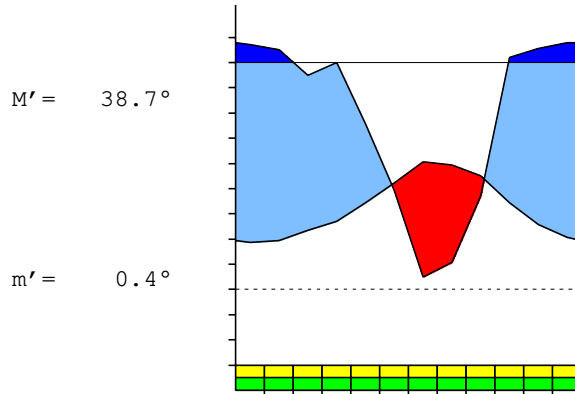
Bioclimate.....: MEDITERRANEAN PLUVISEASONAL-OCEANIC

Bioclimatic Belt...: LOW MESOMEDITERRANEAN UPPER SUBHUMID

ALMONASTER LA REAL (ESP HUELVA)

610 m

P= 1126 37° 52'N 6° 47'W 41/30 y.
 T= 16.3° Ic= 16.0 Tp= 1959 Tn= 0
 m= 4.8° M= 13.7° Itc= 348 Io= 5.7



MEDITERRANEAN PLUVISEASONAL-OCEANIC
 LOW MESOMEDITERRANEAN UPPER SUBHUMID

WATER INDEX CARD

ALMONASTER LA REAL (ESP HUELVA)

Altitude: 610 m.

Latitude: 37° 52'N

(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jan.	9.3	19	174	0	100	19	0	154	126	7.9
Feb.	9.8	21	152	0	100	21	0	131	128	6.2
Mar.	11.7	35	89	0	100	35	0	55	92	1.5
Apr.	13.6	48	100	0	100	48	0	52	72	1.0
May.	17.2	80	66	-14	86	80	0	0	36	-0.1
Jun.	21.2	114	39	-75	11	114	0	0	18	-0.6
Jul.	25.3	156	5	-11	0	16	140	0	9	-0.9
Aug.	24.8	141	11	0	0	11	130	0	4	-0.9
Sep.	22.6	107	38	0	0	38	69	0	2	-0.6
Oct.	17.3	63	121	58	58	63	0	0	1	0.9
Nov.	12.9	33	156	42	100	33	0	81	41	3.6
Dec.	10.2	22	177	0	100	22	0	154	98	6.9
Year	16.3	839	1126	*	*	499	339	627	627	*

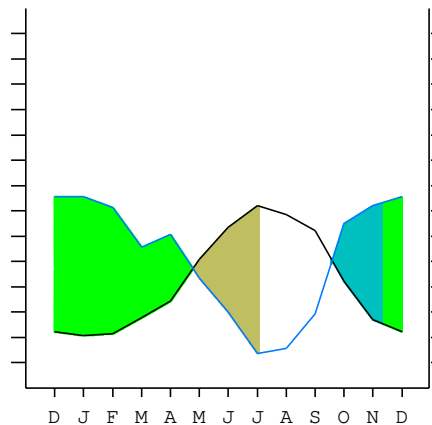
R = Reserve VR = Variation of the reserve RE = Real evapotranspiration
 DR = Drainage HC = Humidity coefficient DF = Deficit SP = Superavit

ALMONASTER LA REAL (ESP HUELVA)

37°52'N 6°47'W 610 m 41/30 y.

T= 16.3 Ic= 16.0 MEDITERRANEAN PLUVISEASONAL-OCEANIC
 m= 4.8 Tp= 1959 LOW MESOMEDITERRANEAN
 M= 13.7 Tn= 0 UPPER SUBHUMID
 M' = 38.7 Itc= 348
 m' = 0.4 Io= 5.7
 P= 1126 mm ———
 PE= 839 mm ———

Imbibing	17 Sep.
Saturation	11 Nov.
Reserve Use	24 Apr.
Deficit	3 Jul.



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SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continental Index [B2b]
 + Type: B. Oceanic
 + Subtype: 2. Euoceanic
 + 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 [B8.3b.6a]
 + Macrobioclimate: B. MEDITERRANEAN
 + Bioclimate: 8. PLUVISEASONAL-OCEANIC
 + Bioclimatic variant ..:
 + Thermic type.....: 3. MESOMEDITERRANEAN
 + Thermic subtype.....: b. LOW
 + Ombrothermic type ...: 6. SUBHUMID
 + Ombrothermic subtype : a. UPPER

Bioclimatic Classification: Mehc.Mme.Shu

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 279
 Coldest semester of the year.....(Psw): 847
 Warmest four months period of the year.....(Pcm1): 92
 Following warmest four months period.....(Pcm2): 627
 Positive precipitation dryest 3 months.....(Ppd): 53
 Positive precipitation dryest 2 months.....(Ppd2): 16
 Positive precipitation dryest 1 month.....(Ppd1): 5
 Positive precipitation warmest 3 months.....(Pps): 53
 Positive precipitation warmest 2 months.....(Pps2): 16
 Positive precipitation warmest 1 month.....(Pps1): 5
 Positive precipitation coldest 3 months.....(Ppw): 502
 Positive precipitation coldest 2 months.....(Ppw2): 325
 Positive precipitation coldest 1 month.....(Ppw1): 174

Seasons	Winter Tr1-W	Spring Tr2-P	Summer Tr3-S	Automn Tr4-F
Rainfall	501	254	54	314

Seasonal rainfall rhythms: W > F > P > S

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 25.3
 Average coldest month [T].....(Tmin): 9.3
 Maximum temp. warmest month [M].....(Tmmax): 33.8
 Minimum temp. coldest month [m].....(Tmmin): 4.8
 Absolute Max.temp. warmest month [M'].....(Tamax): 38.7
 Absolute Min.temp. coldest month [m'].....(Tamin): 0.4
 First warmest contrasted month [M].....(Tcmax): 33.8 (7)
 First coldest contrasted month [m].....(Tcmin): 16.8 (7)
 Estival temperature.....(Ts): 713
 Positive temperature dryest 3 months.....(Tpd): 727
 Positive temperature dryest 2 months.....(Tpd2): 501
 Positive temperature dryest 1 month.....(Tpd1): 253
 Positive temperature warmest 3 months.....(Tps): 727
 Positive temperature warmest 2 months.....(Tps2): 501
 Positive temperature warmest 1 month.....(Tps1): 253
 Positive temperature coldest 3 months.....(Tpw): 293
 Positive temperature coldest 2 months.....(Tpw2): 191
 Positive temperature coldest 1 month.....(Tpw1): 93

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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): 0.74
 Mediterranean index of July.[PE/P].....(Im1): 30.51
 Mediterranean index of July & August.....(Im2): 19.00
 Mediterranean index of June, July & August....(Im3): 7.51

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp(x10)	1765	1736	1518	894	996	659	391	51	105	375	1208	1563
Tp	102	93	98	117	136	172	212	253	248	226	173	129
Io (Iom)	17.3	18.7	15.5	7.64	7.32	3.83	1.84	0.20	0.42	1.66	6.98	12.1
Seasons	Winter			Spring			Summer			Autumn		
Pp(x10)/Tp	5019 / 293			2549 / 425			547 / 713			3146 / 528		
Io (Iot)	17.13			5.998			0.767			5.958		
Semesters	December-May						June-November					
Pp(x10)/Tp	7568 / 718						3693 / 1241					
Io (Iosm)	10.54						2.976					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 11261/1959=5.75 **There is No Yearly Aridity**

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	1765	1736	1518	894	996	659	391	51	105	375	1208	1563
Tp [T*10]	102	93	98	117	136	172	212	253	248	226	173	129
Iom [Pp/Tp]	\$\$	\$\$	\$\$	764	732	383	184	20	42	166	698	\$\$
Avm [200-Iom]	***	***	***	***	***	***	16	180	158	34	***	***
Seasons	Winter			Spring			Summer			Autumn		
Pp / Tp	5019 / 293			2549 / 425			547 / 713			3146 / 528		
Iot [Pp/Tp]	1713			600			77			596		
Avs E[Avm<200]	***			***			353			***		
Lower hyperarid [1]							Strong lower arid [1]					
Weak upper arid [1]							Strong upper semiarid [1]					
Weak upper semiarid [1]												

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin](Sp): 16.00
 CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]: 23.91
 CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]: 22.68
 + Oceanic (20<CI<40)
 CI of Currey (1974) [CI=Sp/(1+Lat/3)]: 1.17
 + Subcontinental (1.1<CI<1.7)
 Rainfall Index of Lang (1925) [R=P/T]: 68.98
 + Temperate warm (100>R>60)
 Aridity Index of Martonne (1926) [Ia=P/(T+10)]: 42.78
 + Humid (60>Ia>30)
 I of Emberger (1930) [Q=100*P/(Tmax²-Tmin²)]: 100.60
 + Humid (Q>90)
 I of Dantin & Revenga (1940) [DR=100*T/P]: 1.45
 + Humid (2>DR>0)
 Aridity Index of UNEP [I=P/PE]: 1.34
 + Humid (I>0.65)
 Potential Erosion I of Fournier (1960) [K=Pi²/P].....: 27.66
 + Very low (K<60)

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BIOCLIMATIC INDICES II

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

Thornthwaite (1948)												
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	1.05	0.89	0.47	0.50	0.28	0.14	0.01	0.03	0.13	0.55	0.83	1.04
T-E ratio	4.19	4.41	5.26	6.12	7.74	9.54	11.38	11.16	10.17	7.78	5.80	4.59
Precipitation-effectiveness:	59.35					Temperature-efficiency: 88.15						
Moisture Index [MI=100*(P-PE)/PE]: 34.27 + B1.Humid low-humid (20<MI<40)												
Index of dryness [DI=100*d/PE]: 40.44 + Strong deficit (33.3<DI)												
Index of humidity [HI=100*s/PE]: 74.71 + Strong surplus (20<HI)												
Potential Evapotranspiration PE: 838.69 + Second mesothermic (712<PE<855)												

