

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 30/08/2017)

CIUDAD RODRIGO (ESP SALAMANCA)

Altitude: 653 m.

Latitude: 40°36'N Longitude: 6°32'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.	5.10	9.40	0.90	14.40	-4.70	59.0	11.25
Feb.	6.50	11.20	1.80	15.70	-2.90	54.0	15.78
Mar.	9.50	14.60	4.50	20.70	-0.50	60.0	33.25
Apr.	12.00	17.50	6.40	23.90	1.90	48.0	49.64
May.	15.10	21.70	8.60	27.40	4.00	53.0	77.03
Jun.	19.20	26.60	11.80	33.10	7.20	33.0	108.57
Jul.	22.40	31.00	13.90	36.30	9.70	11.0	135.69
Aug.	22.30	30.70	14.00	35.30	10.30	12.0	126.35
Sep.	19.00	26.30	11.80	31.30	8.00	48.0	88.31
Oct.	14.60	20.80	8.50	26.90	3.20	51.0	56.44
Nov.	8.90	13.70	4.10	19.60	-1.60	65.0	24.17
Dec.	5.70	9.80	1.60	13.80	-3.40	53.0	12.66
Year	13.36	19.44	7.33	24.87	2.60	547	739.14

BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	237
Compensated thermicity index.....(Itc):	237
Simple continentality index.....(Ic):	17.3
Diurnality index.....(Id):	17.1
Annual ombrothermic index.....(Io):	3.41
Monthly estival ombrothermic index.....(Ios1):	0.49
Bimonthly estival ombrothermic index.....(Ios2):	0.51
Threemonthly estival ombrothermic index.....(Ios3):	0.88
Fourmonthly estival ombrothermic index.....(Ios4):	1.38
Annual ombro-evaporation index.....(Ioe):	0.61
Annual positive temperature.....(Tp):	1603
Annual negative temperature.....(Tn):	0
Estival temperature.....(Ts):	639
Positive precipitation.....(Pp):	547

N. of	P>4T	P:2T-4T	PT-2T	P<T	T<0
Months	5	4	1	2	0

Latitudinal Belt...: Low eutemperate

Continentalty.....: Oceanic - Low Semicontinental

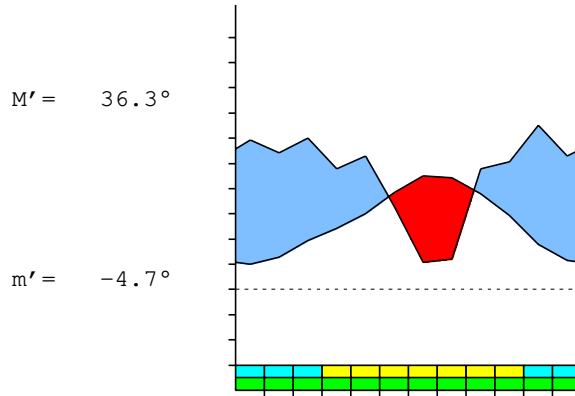
Bioclimate.....: MEDITERRANEAN PLUVISEASONAL-OCEANIC

Bioclimatic Belt...: UPPER MESOMEDITERRANEAN UPPER DRY

CIUDAD RODRIGO (ESP SALAMANCA)

653 m

P= 547 40° 36'N 6° 32'W 28/28 y.
 T= 13.4° Ic= 17.3 Tp= 1603 Tn= 0
 m= 0.9° M= 9.4° Itc= 237 Io= 3.4



MEDITERRANEAN PLUVISEASONAL-OCEANIC
 UPPER MESOMEDITERRANEAN UPPER DRY

WATER INDEX CARD CIUDAD RODRIGO (ESP SALAMANCA)
 Altitude: 653 m. Latitude: 40° 36'N

(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jan.	5.1	11	59	19	100	11	0	29	14	4.2
Feb.	6.5	16	54	0	100	16	0	38	26	2.4
Mar.	9.5	33	60	0	100	33	0	27	27	0.8
Apr.	12.0	50	48	-2	98	50	0	0	13	0.0
May.	15.1	77	53	-24	74	77	0	0	7	-0.3
Jun.	19.2	109	33	-74	0	107	1	0	3	-0.6
Jul.	22.4	136	11	0	0	11	125	0	2	-0.9
Aug.	22.3	126	12	0	0	12	114	0	1	-0.9
Sep.	19.0	88	48	0	0	48	40	0	0	-0.4
Oct.	14.6	56	51	0	0	51	5	0	0	0.0
Nov.	8.9	24	65	41	41	24	0	0	0	1.6
Dec.	5.7	13	53	40	81	13	0	0	0	3.1
Year	13.4	739	547	*	*	453	286	94	94	*

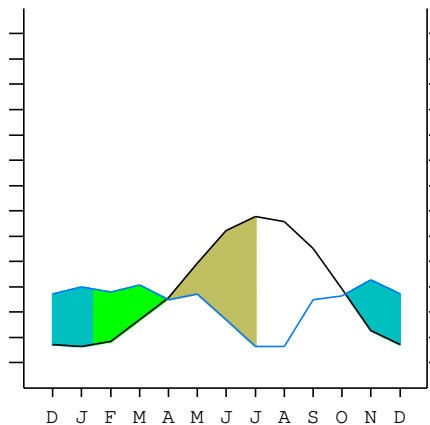
R = Reserve VR = Variation of the reserve RE = Real evapotranspiration
 DR = Drainage HC = Humidity coeficient DF = Deficit SP = Superavit

CIUDAD RODRIGO (ESP SALAMANCA)

40°36'N 6°32'W 653 m 28/28 y.

T= 13.4 Ic= 17.3 MEDITERRANEAN PLUVISEASONAL-OCEANIC
 m= 0.9 Tp= 1603 UPPER MESOMEDITERRANEAN
 M= 9.4 Tn= 0 UPPER DRY
 M' = 36.3 Itc= 237
 m' = -4.7 Io= 3.4
 P= 547 mm ———
 PE= 739 mm ———

Imbibing	4 Oct.
Saturation	12 Jan.
Reserve Use	29 Mar.
Deficit	30 Jun.



CIUDAD RODRIGO (ESP SALAMANCA)

Latitude: 40°36'N Longitude: 6°32'W Altitude: 653 m

SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

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

Thermic types [B1.B4]
 + Latitudinal zone: B. Temperate
 + Latitudinal belt: 1. Low eutemperate
 + Thermic type: B. Temperate
 + Thermic subtype: 4. Temperate

Bioclimatic types [B8.3a.5a]
 + Macrobioclimate: B. MEDITERRANEAN
 + Bioclimate: 8. PLUVISEASONAL-OCEANIC
 + Bioclimatic variant ..:
 + Thermic type.....: 3. MESOMEDITERRANEAN
 + Thermic subtype.....: a. UPPER
 + Ombrothermic type ...: 5. DRY
 + Ombrothermic subtype : a. UPPER
 Bioclimatic Classification: Mehc.Mme.Dry

CIUDAD RODRIGO (ESP SALAMANCA)

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 208
 Coldest semester of the year.....(Psw): 339
 Warmest four months period of the year.....(Pcm1): 104
 Following warmest four months period.....(Pcm2): 228
 Positive precipitation dryest 3 months.....(Ppd): 56
 Positive precipitation dryest 2 months.....(Ppd2): 23
 Positive precipitation dryest 1 month.....(Ppd1): 11
 Positive precipitation warmest 3 months.....(Pps): 56
 Positive precipitation warmest 2 months.....(Pps2): 23
 Positive precipitation warmest 1 month.....(Pps1): 11
 Positive precipitation coldest 3 months.....(Ppw): 166
 Positive precipitation coldest 2 months.....(Ppw2): 112
 Positive precipitation coldest 1 month.....(Ppw1): 59

Seasons	Winter Tr1-W	Spring Tr2-P	Summer Tr3-S	Automn Tr4-F
Rainfall	166	161	56	164

Seasonal rainfall rhythms: W > F > P > S

CIUDAD RODRIGO (ESP SALAMANCA)

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 22.4
 Average coldest month [T].....(Tmin): 5.1
 Maximum temp. warmest month [M].....(Tmmax): 31.0
 Minimum temp. coldest month [m].....(Tmmin): 0.9
 Absolute Max.temp. warmest month [M'].....(Tamax): 36.3
 Absolute Min.temp. coldest month [m'].....(Tamin): -4.7
 First warmest contrasted month [M].....(Tcmax): 31.0 (7)
 First coldest contrasted month [m].....(Tcmin): 13.9 (7)
 Estival temperature.....(Ts): 639
 Positive temperature dryest 3 months.....(Tpd): 639
 Positive temperature dryest 2 months.....(Tpd2): 447
 Positive temperature dryest 1 month.....(Tpd1): 224
 Positive temperature warmest 3 months.....(Tps): 639
 Positive temperature warmest 2 months.....(Tps2): 447
 Positive temperature warmest 1 month.....(Tps1): 224
 Positive temperature coldest 3 months.....(Tpw): 173
 Positive temperature coldest 2 months.....(Tpw2): 108
 Positive temperature coldest 1 month.....(Tpw1): 51

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

CIUDAD RODRIGO (ESP SALAMANCA)

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OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 1.35
 Mediterranean index of July.[PE/P].....(Im1): 12.34
 Mediterranean index of July & August.....(Im2): 11.39
 Mediterranean index of June, July & August....(Im3): 6.62

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp(x10)	530	590	540	600	480	530	330	110	120	480	510	650
Tp	57	51	65	95	120	151	192	224	223	190	146	89
Io (Iom)	9.30	11.6	8.31	6.32	4.00	3.51	1.72	0.49	0.54	2.53	3.49	7.30
Seasons	Winter			Spring			Summer			Autumn		
Pp(x10)/Tp	1660 / 173			1610 / 366			560 / 639			1640 / 425		
Io (Iot)	9.595			4.399			0.876			3.859		
Semesters	December-May						June-November					
Pp(x10)/Tp	3270 / 539						2200 / 1064					
Io (Iosm)	6.067						2.068					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 5470/1603=3.41 **There is No Yearly Aridity**

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	530	590	540	600	480	530	330	110	120	480	510	650
Tp [T*10]	57	51	65	95	120	151	192	224	223	190	146	89
Iom [Pp/Tp]	930	\$\$\$	831	632	400	351	172	49	54	253	349	730
Avm [200-Iom]	***	***	***	***	***	***	28	151	146	***	***	***
Seasons	Winter			Spring			Summer			Autumn		
Pp / Tp	1660 / 173			1610 / 366			560 / 639			1640 / 425		
Iot [Pp/Tp]	960			440			88			386		
Avs E[Avm<200]	***			***			325			***		
Strong lower arid [1]						Weak lower arid [1]						
Weak upper arid [1]						Weak upper semiarid [1]						

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin]	(Sp):	17.30
CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]		24.79
CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]		24.06
+ Oceanic (20<CI<40)		
CI of Currey (1974) [CI=Sp/(1+Lat/3)]		1.19
+ Subcontinental (1.1<CI<1.7)		
Rainfall Index of Lang (1925) [R=P/T]		40.95
+ Semiarid (60>R>40)		
Aridity Index of Martonne (1926) [Ia=P/(T+10)]		23.42
+ Subhumid (30>Ia>20)		
I of Emberger (1930) [Q=100*P/(Tmax ² -Tmin ²)]		56.97
+ Subhumid (90>Q>50)		
I of Dantin & Revenga (1940) [DR=100*T/P]		2.44
+ Semiarid (3>DR>2)		
Aridity Index of UNEP [I=P/PE]		0.74
+ Humid (I>0.65)		
Potential Erosion I of Fournier (1960) [K=Pi ² /P]		7.72
+ Very low (K<60)		

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BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)
 + Climate

- + Climate
- + Region
- + Thermic type: 4. Mesothermic

Thornthwaite (1948)												
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	0.37	0.32	0.32	0.23	0.24	0.12	0.03	0.04	0.19	0.23	0.36	0.32
T-E ratio	2.29	2.93	4.27	5.40	6.80	8.64	10.08	10.03	8.55	6.57	4.00	2.56
Precipitation-effectiveness: 27.68						Temperature-efficiency						72.13
Moisture Index [MI=100*(P-PE)/PE]												-25.99
+ C1.Subhumid dry (-33.3<MI<0)												
Index of dryness [DI=100*d/PE]												38.69
+ Strong deficit (33.3<DI)												
Index of humidity [HI=100*s/PE]												12.70
+ Moderate surplus (10<HI<20)												
Potential Evapotranspiration PE												739.14
+ Second mesothermic (712<PE<855)												

